THIRD QUARTER 2014 GROUNDWATER MONITORING REPORT

TASKS 1.0 AND 2.2 OF AQUIFER CHARACTERIZATION PLAN MITIGATION ORDER ON CONSENT DOCKET NO. P-121-07 COCHISE COUNTY, ARIZONA



Prepared for:

FREEPORT MINERALS CORPORATION COPPER QUEEN BRANCH

36 West Highway 92 Bisbee, Arizona 85603

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October 22, 2014

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Approved by:

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted by Freeport Minerals Corporation (formerly Freeport-McMoRan Corporation), Copper Queen Branch (CQB) in the third quarter 2014 in the vicinity of the Concentrator Tailing Storage Area (CTSA). Groundwater monitoring is conducted pursuant to Tasks 1 (well inventory of drinking water wells) and 2.2 (groundwater monitoring) of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2008) (and subsequent modifications) to characterize sulfate in the vicinity of the CTSA. The Work Plan was initially submitted to Arizona Department of Environmental Quality (ADEQ) on December 17, 2007 pursuant to the Mitigation Order on Consent Docket No. P-121-07 (ADEQ, 2007). CQB initiated water sampling prior to work plan approval while ADEQ was commenting on the Work Plan and CQB was responding to their comments. Revision 1 of the Work Plan was submitted to ADEQ on July 3, 2008 and ADEQ approved the Work Plan on August 3, 2008. On January 25, 2010 CQB proposed a revised groundwater monitoring program (CQB, 2010). The revised monitoring program was approved by ADEQ in April 2010 (ADEQ, 2010). Clear Creek Associates (Clear Creek) prepared this groundwater monitoring report on behalf of CQB.

1.1 Scope of Groundwater Monitoring

The objectives of groundwater monitoring are:

- Determination of the sulfate concentration in drinking water supply wells within a one-mile radius of the sulfate plume's outer edge for the purposes of identifying the need for mitigation actions and tracking the plume margin,
- Identification of the plume margin for ongoing delineation of the plume extent and migration,
- Documentation of the sulfate concentration in the plume and at areas distal to the plume to monitor long-term concentration trends, and
- Measurement of water levels in the vicinity of the plume to document potentiometric conditions (CQB, 2010).

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The groundwater sulfate plume consists of groundwater with sulfate in excess of 250 milligrams per liter (mg/L) attributable to the CTSA. The sample collection and analysis methods described in the Work Plan have been retained throughout the groundwater monitoring program. Table 1 provides the schedule for the groundwater monitoring program. Dissolved sulfate is the only constituent monitored.

Figure 1 presents a geologic map (Hayes and Landis, 1964) of the study area and well locations where data reported herein have been collected. The well locations are identified by name on Figure 2. Table 2 lists the sampling status of wells scheduled under the groundwater monitoring program for sampling in the third quarter 2014 and any additional wells where data were collected. The collection of groundwater samples was conducted by CQB and Clear Creek personnel. Groundwater sampling and analysis methods used by CQB and Clear Creek are described in the Quality Assurance Project Plan (QAPP) contained in Appendix F of the Work Plan (HGC, 2008). Results of groundwater monitoring are in Section 2.

The monitoring purpose listed on Table 2 was updated in the first quarter 2014 to reflect the current well usage. Current well usage was based on an updated well inventory submitted to ADEQ in June 2014 (Clear Creek, 2014). Drinking water supply wells are monitored under the Well Inventory task (Task 1.1) of the Mitigation Order Work Plan. All other wells are monitored to determine hydrologic conditions and the plume extent pursuant to the groundwater monitoring task (Task 2.2) of the Work Plan.

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring

Analytical results and groundwater elevation data for the third quarter 2014 are tabulated in Tables 3 and 4, respectively, along with the results of previous monitoring under the Mitigation Order. Figure 3 shows the concentrations of dissolved sulfate in the well water samples. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 4 shows groundwater elevations in the third quarter 2014. Groundwater elevations were calculated using depth to water measurements made under static (non-pumping) conditions whenever possible. The most recent measuring point elevation data for each well was used to calculate groundwater elevations in Table 4. At wells with multiple samples or water levels during the third quarter 2014, the most recent data are shown on the figures.

2.2 Quality Assurance/Quality Control Review

Pursuant to Section 6.4 of the QAPP, a data verification report was prepared for quality assurance and quality control purposes. The data verification report, analytical laboratory reports, and groundwater sampling forms for samples collected by Clear Creek and CQB during the third quarter 2014 are included in Appendices A, B, and C, respectively. As determined by the data verification review, the analytical results for samples collected in the third quarter 2014 are of acceptable quality for use in activities conducted pursuant to the Mitigation Order.

3. FINDINGS

In the third quarter of 2014, groundwater samples were collected from 80 wells and depth to water measurements were collected in 81 wells. The December 2010 Aquifer Characterization Report (Clear Creek, 2010) provides detailed descriptions of the hydrogeology, water quality, and sulfate plume. Findings based on the third quarter 2014 and historical groundwater monitoring are described below.

- Sulfate concentration data indicate that the plume extends from the vicinity of the former evaporation pond (Figure 2) southwest to the vicinity of Naco and south to the vicinity of Bisbee Junction (Figure 3). The groundwater monitoring data indicate that the sulfate plume extends over an oblong area of approximately 2 miles by 3.9 miles and is contained primarily in the basin fill and undifferentiated Bisbee Group except near the former evaporation pond where wells in the Glance Conglomerate have sulfate concentrations greater than 250 mg/L. The extent of the sulfate plume and the sulfate contours as drawn on Figure 3 are based on both historical and current sulfate concentration data. Historical sulfate concentration data are available in this and previous groundwater monitoring reports and in the Aquifer Characterization Report (Clear Creek, 2010).
- Comparison of the third quarter 2014 sulfate concentrations with previous quarters indicates
 no large scale change in the plume geometry (represented by the position of the 250 mg/L
 sulfate concentration contour) since the Mitigation Order sampling began in 2008, although
 concentration contours within the plume have been modified to reflect current
 concentrations.
- Figure 5 shows sulfate concentrations through time at public drinking water supply wells. Sulfate concentrations have remained relatively stable over time at AWC-02, AWC-04, AWC-05, NWC-02, and NWC-06. The sulfate concentration at AWC-03 increased from 41 mg/L to 69.1 mg/L between 2008 and 2014. There is an increasing trend in the sulfate concentrations in NWC-04 from March 2008 to February 2013; however concentrations are highly variable from month to month. The concentration at NWC-04 has shown a decreasing trend since February 2013, and ranged between 163 and 198 mg/L in 2014.
- Groundwater elevations decrease from east to west across the study area, indicating westerly groundwater flow (Figure 4).
- Figures 6 and 7 show groundwater elevations over time for BMO monitor wells with screened intervals in basin fill and bedrock, respectively. Groundwater elevations in BMO monitor wells screened in basin fill have decreased over time. The maximum rate of decline measured in the basin fill through the most recent quarter sampled is 1.22 feet per year in BMO-2008-3B, which declined 7.31 feet between July 2008 and July 2014. Groundwater elevations in most BMO monitor wells screened in bedrock have also declined over time. The maximum rate of decline measured in the bedrock through the most recent quarter

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sampled is 2.05 feet per year in BMO-2008-1G which has declined 12.09 feet between August 2008 and July 2014. Water level declines range from 0.66 to 1.69 feet per year in BMO-2008-5M, BMO-2008-6M, BMO-2008-7M, BMO-2008-8M, BMO-2008-9M, BMO-2008-13M, BMO-2010-2M, and BMO-2010-3M. The groundwater elevations in bedrock wells BMO-2008-10GL, BMO-2008-10GU, BMO-2008-11G, and BMO-2012-1M display increasing trends. Water elevation data for BMO-2010-1M indicates relatively steady conditions over time.

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4. REFERENCES

- Arizona Department of Environmental Quality (ADEQ). 2007. Mitigation Order on Consent Docket No. P-121-07, In the Matter of: Phelps Dodge Corporation, Copper Queen Branch, located at 36 West Highway 92, Bisbee, Arizona, ADEQ Identification Number 100531. November 14, 2007.
- ADEQ. 2010. Correspondence from Cynthia Campbell, ADEQ, to Rebecca Sawyer, CQB, Re: Request to Modify Groundwater Monitoring Program, Mitigation Order on Consent No. P-127-07, Your Letter dated January 25, 2010. April 22, 2010.
- Clear Creek Associates (Clear Creek). 2010. Revision I Aquifer Characterization Report, Task 4.0 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-121-07, Cochise County, Arizona, Volumes I and II. December 15, 2010.
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- Hydro Geo Chem, Inc. (HGC). 2008. Revision 1, Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

TABLES

TABLE 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name ADWR 55 Registry Number Semiannual Sampling First Quarterly Sampling Second Quarterly Sampling Pourth Quarter Pourth Q						
ANDERSON 458 AWC-02 616586 AWC-03 616585 AWC-04 616584 AWC-05 590620 AWC-05 590620 AWC-05 590620 AWC-05 BANKS 986 647986 AY AWC-05 BANKS 987 BANKS 987 BANKS 987 BANKS 987 BANKS 988 BANKS 987 BANKS 987 BANKS 988 BANKS 987 BANKS 988 BANKS 987 BANKS 987 BANG 919 BARTON 908-1G BARTON 909-14 BARTON 908-1G BARTON 908-1A BARTON 908-1A	Well Name	Registry	Sampling First	Sampling	Sampling	Sampling
AWC-02 616586	ANDERSON 396	613396	✓	√	✓	√
AWC-03 616585	ANDERSON 458	221458	✓	√	✓	✓
AWC-04 616584	AWC-02	616586	✓	✓	✓	✓
AWC-05	AWC-03	616585	✓	✓	✓	✓
BANKS 986 647986	AWC-04	616584	✓	✓	✓	✓
BANKS 987 647987 WLO WLO BARTON 919 644919 WLO WLO BF-01 539783	AWC-05	590620	✓	✓	✓	✓
BARTON 919 644919 WLO WLO BF-01 539783	BANKS 986	647986	✓	✓	✓	✓
BF-01	BANKS 987	647987	WLO		WLO	
BIMA 577927	BARTON 919	644919	WLO		WLO	
BMO-2008-1G 909474	BF-01	539783			✓	
BMO-2008-1G 909474	BIMA	577927	✓	✓	✓	✓
BMO-2008-3B 909147	BMO-2008-1G		✓		✓	
BMO-2008-4B 910096		_	✓		✓	
BMO-2008-5B 909653		910096	✓		✓	
BMO-2008-5M 909552 ✓			✓	✓	✓	✓
BMO-2008-6B 909146	BMO-2008-5M	909552	✓	✓	✓	✓
BMO-2008-6M 909019	BMO-2008-6B	909146	✓	√	✓	√
BMO-2008-7M 908794			✓	√	✓	√
BMO-2008-8B 910097			✓		✓	
BMO-2008-8M 909711					✓	
BMO-2008-9M 909255	BMO-2008-8M		✓		✓	
BMO-2008-10GL 909435 BMO-2008-10GU 909272 BMO-2008-11G 909434 BMO-2008-13B 909551 BMO-2008-13M 909760 BMO-2010-1M 219957 BMO-2010-2M 219958 BMO-2010-3B 219970 BMO-2010-3M 219969 BMO-2012-1M 221388 BMO-2012-1M 221388 BMO-2012-1M 914931 BURKE 212268 CHAMBERS 629807 COB MW-1 903992 COB MW-2 COB MW-3 906823			✓		✓	
BMO-2008-11G 909434					✓	
BMO-2008-11G 909434	BMO-2008-10GU	909272			✓	
BMO-2008-13B 909551 BMO-2008-13M 909760 BMO-2010-1M 219957 ✓ ✓ ✓ ✓ ✓ BMO-2010-2M 219958 ✓ ✓ ✓ ✓ ✓ BMO-2010-3B 219970 ✓ ✓ ✓ ✓ ✓ BMO-2010-3M 219969 ✓ ✓ ✓ ✓ ✓ BMO-2012-1M 221388 ✓ ✓ ✓ ✓ ✓ BOOTH 914931 ✓ ✓ ✓ ✓ ✓ BURKE 212268 ✓ ✓ ✓ ✓ ✓ ✓ CHAMBERS 629807 ✓ ✓ ✓ ✓ ✓ ✓ ✓ COB MW-1 903992 COB MW-2 903984 ✓ ✓ ✓ ✓ ✓ ✓ ✓ COB MW-3 906823			✓		✓	
BMO-2010-1M 219957	BMO-2008-13B	909551			✓	
BMO-2010-1M 219957	BMO-2008-13M	909760			✓	
BMO-2010-3B 219970			✓	✓	✓	✓
BMO-2010-3M 219969	BMO-2010-2M	219958	✓	✓	✓	✓
BMO-2012-1M 221388	BMO-2010-3B	219970	✓	✓	✓	✓
BMO-2012-1M 221388 ✓ ✓ ✓ ✓ BOOTH 914931 ✓ ✓ ✓ ✓ BURKE 212268 ✓ ✓ ✓ ✓ CHAMBERS 629807 ✓ ✓ ✓ ✓ COB MW-1 903992 ✓ ✓ ✓ COB MW-2 903984 ✓ ✓ ✓ COB MW-3 906823 ✓ ✓	BMO-2010-3M	219969	✓	✓	✓	✓
BOOTH 914931		221388	✓	✓	✓	✓
CHAMBERS 629807 ✓ ✓ ✓ COB MW-1 903992 ✓ ✓ COB MW-2 903984 ✓ ✓ COB MW-3 906823 ✓	воотн	914931	✓	✓	✓	✓
COB MW-1 903992	BURKE	212268	✓	✓	✓	✓
COB MW-2 903984 ✓ ✓ ✓ COB MW-3 906823 ✓	CHAMBERS	629807	✓	✓	✓	✓
COB MW-2 903984 ✓ COB MW-3 906823 ✓	COB MW-1	903992			✓	
00020	COB MW-2		✓		✓	
COB WL 593116 ✓	COB MW-3	906823			✓	
	COB WL	593116			✓	



TABLE 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name	ADWR 55 Registry Number	Semiannual Sampling First Quarter	Quarterly Sampling Second Quarter	Annual Sampling Third Quarter	Quarterly Sampling Fourth Quarter
COOPER	623564	✓	✓	✓	✓
COOPER C	637069	✓	✓	✓	✓
DODSON	644927	✓	✓	✓	✓
DOUGLASS 791	592791	WLO		WLO	
DOUGLASS 792	592792	WLO		WLO	
DURAZO	NR	✓	✓	✓	✓
EAST	599796	✓	✓	✓	✓
ECHAVE	219449	✓	✓	✓	✓
EPPELE 641	805641	✓	✓	✓	✓
FLEMING	218386	WLO		WLO	
FRANCO 101	500101	✓	✓	✓	✓
FRANCO 383	221383	✓	✓	✓	✓
FULTZ	212447	✓	✓	✓	✓
GARNER 557	558557	WLO		WLO	
GARNER 635	587635	✓	✓	✓	✓
GGOOSE 547	628547	✓		✓	
GOAR RANCH	610695	WLO		WLO	
HOBAN	805290	✓	✓	✓	✓
HOWARD NR	NR	✓	✓	✓	✓
HOWARD 312	221312	✓	✓	✓	✓
KEEFER	209744	✓	✓	✓	✓
MARCELL	NR	✓	✓	✓	✓
MCCONNELL 265	539265	✓	✓	✓	✓
MCCONNELL 459	221459	✓	✓	✓	✓
METZLER	35-71891	✓	✓	✓	✓
MOORE	538847	✓	✓	✓	✓
NESS	509127	✓		✓	
NOTEMAN	212483	✓	✓	✓	✓
NWC-02	562944	✓	✓	✓	✓
NWC-03	203321	✓	✓	✓	✓
NWC-03 CAP	627684	WLO		WLO	
NWC-04	551849	✓	✓	✓	✓
NWC-06	575700	✓	✓	✓	✓
OSBORN	643436	✓		✓	
PALMER	578819	✓	✓	✓	✓
PANAGAKOS	35-76413			✓	
PARRA	576415	✓	✓	✓	✓
PIONKE 395	613395	✓	✓	✓	✓
PIONKE 517	221517	✓	✓	✓	✓



TABLE 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name	ADWR 55 Registry Number	Semiannual Sampling First Quarter	Quarterly Sampling Second Quarter	Annual Sampling Third Quarter	Quarterly Sampling Fourth Quarter
POOL	509518	✓	✓	✓	✓
POWER 639	222639	✓	✓	✓	✓
RAMIREZ	216425	✓	✓	✓	✓
RAY	803772	✓	✓	✓	✓
ROGERS 596	573596	✓	✓	✓	✓
ROGERS 803	641803	✓	✓	✓	✓
ROGERS E	216018	✓	✓	✓	✓
RUIZ	531770	✓	✓	✓	✓
SCHWARTZ	210865	✓	✓	✓	✓
STEPHENS	808560	WLO		WLO	
SUNBELT	201531	WLO		WLO	
SWAN	NR	✓		✓	
THOMPSON 151	612151	WLO		WLO	
THOMPSON 341	218341	✓	✓	✓	✓
TM-02A	522574	✓		✓	
TM-06 MILLER	522695			✓	
TM-07	522576	✓		✓	
TM-15 MILLER	522699			✓	
TM-16	522578			✓	
TM-19A	522580	✓		✓	
TM-42	562554			✓	
TVI 236	802236			✓	
TVI 713	567713	WLO		WLO	
TVI 875	568875	✓	✓	✓	✓
WEED	544535	✓	✓	✓	✓
WEISKOPF 802	641802	✓	✓	✓	✓
WEISKOPF 897	221897	✓	✓	✓	✓
ZANDER	205126	✓	✓	✓	✓

Notes:

35-71891 = ADWR 35 Database

ADWR = Arizona Department of Water Resources

NR = No Record

WLO = Water Level Only



Well Name	ADWR 55 Registry Number	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
ANDERSON 396	613396	Anderson	Plume	236	Y	Y	Water quality sample collected in July 2014.	
ANDERSON 458	221458	Anderson	Well Inventory	734	Υ	Y	Water quality sample collected in July 2014.	
ASLD 435	616435	AZ State Land	Regional	340	Υ	N	Well identified for water level measurements only. Water level measured in September 2014.	
AWC-02	616586	Arizona Water Company	Well Inventory	330	Y	Y	Water quality sample collected in July 2014.	
AWC-03	616585	Arizona Water Company	Well Inventory	269	Y	Y	Water quality sample collected in July 2014.	
AWC-04	616584	Arizona Water Company	Well Inventory	250	Y	Y	Water quality sample collected in July 2014.	
AWC-05	590620	Arizona Water Company	Well Inventory	1183	Υ	Υ	Water quality sample collected in July 2014.	
BANKS 986	647986	Banks	Well Inventory	435	N	Y	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.	
BANKS 987	647987	Banks	Plume	339	Y	N	Well identified for water level measurements only. Water level measured in July 2014.	
BARTON 919	644919	Barton	Plume	130	Υ	N	Well identified for water level measurements only. Water level measured in July 2014.	
BF-01	539783	Copper Queen Branch	Plume	400	N	N	Well abandoned April 2013.	
BIMA	577927	Bisbee Municipal Airport	Well Inventory	465	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.	
BMO-2008-1G	909474	Copper Queen Branch	Plume	310	Υ	Υ	Water quality sample collected in July 2014.	
BMO-2008-3B	909147	Copper Queen Branch	Plume	260	Υ	Υ	Water quality sample collected in July 2014.	
BMO-2008-4B	910096	Copper Queen Branch	Plume	610	Υ	Υ	Water quality sample collected in July 2014.	
BMO-2008-5B	909653	Copper Queen Branch	Well Inventory	285	Υ	Υ	Water quality sample collected in August 2014.	
BMO-2008-5M	909552	Copper Queen Branch	Plume	450	Υ	Υ	Water quality sample collected in August 2014.	
BMO-2008-6B	909146	Copper Queen Branch	Plume	265	Υ	Υ	Water quality sample collected in August 2014.	
BMO-2008-6M	909019	Copper Queen Branch	Plume	450	Υ	Y	Water quality sample collected in August 2014.	
BMO-2008-7M	908794	Copper Queen Branch	Plume	670	Y	Y	Water quality sample collected in July 2014.	
BMO-2008-8B	910097	Copper Queen Branch	Plume	480	Y	Y	Water quality sample collected in July 2014.	
BMO-2008-8M	909711	Copper Queen Branch	Plume	1210	Y	Y	Water quality sample collected in July 2014.	
BMO-2008-9M	909255	Copper Queen Branch	Plume	775	Y	Y	Water quality sample collected in July 2014.	



Well Name	ADWR 55 Registry Number	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status
BMO-2008-10GL	909435	Copper Queen Branch	Plume	810	Y	Y	Water quality sample collected in August 2014.
BMO-2008-10GU	909272	Copper Queen Branch	Plume	449	N	N	Well is not operational.
BMO-2008-11G	909434	Copper Queen Branch	Plume	760	Υ	Υ	Water quality sample collected in August 2014.
BMO-2008-13B	909551	Copper Queen Branch	Plume	474	Y	Y	Water quality sample collected in August 2014.
BMO-2008-13M	909760	Copper Queen Branch	Plume	1030	Y	Y	Water quality sample collected in August 2014.
BMO-2010-1M	219957	Copper Queen Branch	Plume	540	Y	Y	Water quality sample collected in August 2014.
BMO-2010-2M	219958	Copper Queen Branch	Plume	370	Y	Y	Water quality sample collected in August 2014.
BMO-2010-3B	219970	Copper Queen Branch	Plume	330	Y	Y	Water quality sample collected in July 2014.
BMO-2010-3M	219969	Copper Queen Branch	Plume	532	Y	Y	Water quality sample collected in July 2014.
BMO-2012-1M	221388	Copper Queen Branch	Plume	396	Y	Y	Water quality sample collected in July 2014.
воотн	914931	Booth	Well Inventory	240	N	N	Well owner has declined participation in groundwater sampling program.
BURKE	212268	Burke	Well Inventory	781	Y	Y	Water quality sample collected in July 2014.
CHAMBERS	629807	Chambers	Well Inventory	245	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
COB MW-1	903992	City of Bisbee	Plume	420	Υ	Υ	Water quality sample collected in July 2014.
COB MW-2	903984	City of Bisbee	Plume	170	Υ	Υ	Water quality sample collected in July 2014.
COB MW-3	906823	City of Bisbee	Plume	269	Υ	Υ	Water quality sample collected in July 2014.
COB WL	593116	City of Bisbee	Plume	150	Y	Y	Water quality sample collected in July 2014.
COOPER	623564	Cooper	Well Inventory	325	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
COOPER C	637069	Copper Queen Branch	Plume	220	Y	Y	Water quality sample collected in July 2014.
DODSON	644927	Dodson	Well Inventory	200	Υ	Υ	Water quality sample collected in July 2014.
DOUGLASS 791	592791	Douglass	Plume	200	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
DOUGLASS 792	592792	Douglass	Plume	200	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
DURAZO	NR	Durazo	Plume	ND	N	N	Well is not operational. Unable to measure water level because wellhead is inaccessible.
EAST	599796	East	Well Inventory	125	Y	Y	Water quality sample collected in July 2014.
ECHAVE	219449	Echave	Well Inventory	345	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.



Well Name	ADWR 55 Registry Number	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status
EPPELE 641	805641	Eppele	Well Inventory	265	Y	Y	Water quality sample collected in July 2014.
FLEMING	218386	Fleming	Plume	400	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
FRANCO 101	500101	Franco	Plume	200	Y	N	Water level measured in July 2014. Unable to collect water quality sample because well is not operational.
FRANCO 383	221383	Franco	Well Inventory	711	Y	Y	Water quality sample collected in July 2014.
FULTZ	212447	Fultz	Well Inventory	300	N	N	Water quality sample not collected per owner request. Unable to measure water level due to obstruction in well.
GARNER 557	558557	Garner	Plume	300	N	N	Well owner was unable to participate in groundwater sampling program this quarter.
GARNER 635	587635	Garner	Well Inventory	680	N	N	Well owner was unable to participate in groundwater sampling program this quarter.
GGOOSE 547	628547	Copper Queen Branch	Plume	800	N	N	Well abandoned October 2012.
GOAR RANCH	610695	Goar	Plume	250	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
HOBAN	805290	Copper Queen Branch	Plume	316	Y	Y	Water quality sample collected in July 2014.
HOWARD NR	NR	Howard	Plume	200	Y	Y	Water quality sample collected in July 2014.
HOWARD 312	221312	Howard	Well Inventory	980	Y	Y	Water quality sample collected in July 2014.
KEEFER	209744	Keefer	Well Inventory	245	Υ	Υ	Water quality sample collected in July 2014.
LADD 251	520251	Ladd	Regional	280	Y	N	Well identified for water level measurements only. Water level measured in September 2014.
LADD 538	503538	Ladd	Regional	282	Υ	N	Well identified for water level measurements only. Water level measured in September 2014.
LADD 837	519837	AZ State Land	Regional	460	Υ	N	Well identified for water level measurements only. Water level measured in September 2014.
LADD 977	642977	Ladd	Regional	165	Υ	N	Well identified for water level measurements only. Water level measured in September 2014.
MARCELL	NR	Marcell	Well Inventory	220	N	N	Unable to collect water quality sample because well is not operational. Unable to measure water level because port in wellhead is corroded and cannot be opened.
MCCONNELL 265	539265	McConnell	Plume	216	Υ	Υ	Water quality sample collected in July 2014.
MCCONNELL 459	221459	McConnell	Well Inventory	863	Υ	Υ	Water quality sample collected in September 2014.
METZLER	35-71891	Metzler	Plume	351	Y	N	Water level measured in July 2014. Unable to collect water quality sample because well is not operational.
MOORE	538847	Moore	Well Inventory	220	N	N	After repeated attempts, unable to contact well owner for access.
NESS	509127	Ness	Well Inventory	812	Y	Y	Water quality sample collected in July 2014.
NOTEMAN	212483	Bailey	Well Inventory	400	N	Y	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
NSD-02	527587	Naco Sanitary District	Regional	120	Y	N	Well identified for water level measurements only. Water level measured in September 2014.



Well Name	ADWR 55 Registry Number	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status
NSD-03	527586	Naco Sanitary District	Regional	100	Y	N	Well identified for water level measurements only. Water level measured in September 2014.
NWC-02	562944	Naco Water Company	Well Inventory	312	Z	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead port is stuck shut.
NWC-03	203321	Naco Water Company	Well Inventory	312	N	N	Well abandoned in first quarter 2013.
NWC-03 CAP	627684	Naco Water Company	Plume	179	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
NWC-04	551849	Naco Water Company	Well Inventory Sulfate Trend	795	N	Y	Water quality sample collected in July, August, and September 2014. Unable to measure water level because wellhead port is stuck shut.
NWC-06	575700	Naco Water Company	Well Inventory	410	N	Y	Water quality sample collected in July 2014. Unable to measure water level because wellhead port is stuck shut.
OSBORN	643436	Osborn	Well Inventory	258	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
PALMER	578819	Palmer	Well Inventory	220	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
PANAGAKOS	35-76413	Panagakos	Well Inventory	200	Y	Y	Water quality sample collected in July 2014.
PARRA	576415	Parra	Plume	355	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
PIONKE 395	613395	Pionke	Plume	300	Y	N	Water level measured in July 2014. Unable to collect water quality sample because well is not operational.
PIONKE 517	221517	Pionke	Well Inventory	604	Υ	Υ	Water quality sample collected in July 2014.
POOL	509518	Pool	Well Inventory	313	N	N	After repeated attempts, unable to contact well owner for access.
POWER 639	222639	Power	Well Inventory	480	Y	Y	Water quality sample collected in July, August, and September 2014.
RAMIREZ	216425	Ramirez	Well Inventory	300	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
RAY	803772	Ray	Well Inventory	100	Y	Υ	Water quality sample collected in July 2014.
ROGERS 596	573596	Rogers, David	Plume	290	Y	N	Well is turned off. Rogers residence uses ROGERS 803. Water level measured in July 2014.
ROGERS 803	641803	Rogers, David	Well Inventory	140	N	Υ	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
ROGERS E	216018	Rogers, Ernest	Well Inventory	290	N	Υ	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
RUIZ	531770	Ruiz	Well Inventory	312	N	Υ	Water quality sample collected in August 2014. Unable to measure water level due to obstruction in well.
SCHWARTZ	210865	Schwartz	Well Inventory	305	Υ	Υ	Water quality sample collected in July 2014.
STEPHENS	808560	Stephens	Plume	NR	Y	N	Well identified for water level measurements only. Water level measured in July 2014.
SUNBELT	201531	Sunbelt Marketing, Inc.	Plume	380	Y	N	Well identified for water level measurements only. Well confirmed dry in July 2014.
SWAN	NR	Swan	Well Inventory	NR	Y	Y	Water quality sample collected in July 2014.
THOMPSON 151	612151	Thompson	Plume	NR	Y	N	Well identified for water level measurements only. Water level measured in July 2014.



Well Name	ADWR 55 Registry Number	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status
THOMPSON 341	218341	Thompson	Well Inventory	285	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
TM-02A	522574	Copper Queen Branch	Plume	925	Y	Υ	Water quality sample collected in August 2014.
TM-06 MILLER	522695	Miller	Plume	200	Υ	Υ	Water quality sample collected in July 2014.
TM-07	522576	Copper Queen Branch	Plume	350	N	Y	Water quality sample collected in August 2014. Unable to measure water level due to obstruction in well.
TM-10 USBP	522696	USBP	Regional	290	Υ	Y	Water quality sample collected in July 2014.
TM-15 MILLER	522699	Miller	Plume	325	N	Y	Water quality sample collected in July 2014. Unable to measure water level due to obstruction in well.
TM-16	522578	Copper Queen Branch	Plume	115	Y	Y	Water quality sample collected in August 2014.
TM-19A	522580	Copper Queen Branch	Plume	700	Υ	Y	Water quality sample collected in July 2014.
TM-42	562554	Copper Queen Branch	Plume	250	Υ	Υ	Water quality sample collected in July 2014.
TVI 236	802236	Turquoise Valley, Inc.	Well Inventory	222	Υ	Υ	Water quality sample collected in July 2014.
TVI 713	567713	Turquoise Valley, Inc.	Well Inventory	200	Υ	N	Well identified for water level measurements only. Water level measured in July 2014.
TVI 875	568875	Turquoise Valley, Inc.	Plume	330	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
WEED	544535	Weed	Well Inventory	320	N	Υ	Water quality sample collected in July 2014. Unable to measure water level because wellhead is inaccessible.
WEISKOPF 802	641802	Weiskopf	Plume	200	Y	Y	Water quality sample collected in July 2014.
WEISKOPF 897	221897	Weiskopf	Well Inventory	947	Y	Y	Water quality sample collected in July 2014.
ZANDER	205126	Zander	Well Inventory	280	Y	Υ	Water quality sample collected in July 2014.

Notes:

35-71891 = ADWR 35 Database

ADWR = Arizona Department of Water Resources

bls = below land surface

N = No

ND = No Data

NR = No Record

Y = Yes



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/20/08	7.25	21.1	1176	431
		5/5/08	7.03	21.8	1231	452
		7/14/08	7.11	21.6	1260	472
		10/15/08	7.10	21.3	1252	475
		1/27/09	7.27	21.0	965	488
		4/14/09	7.12	21.8	1229	534
		7/14/09	7.03	22.2	1372	550
		10/12/09	6.98	21.5	1375	510
		1/27/10	7.93	20.1	1449	523
		4/21/10	7.40	20.7	1439	627
ANDERSON 396	613396	7/19/10	6.93	24.1	1420	648
		10/19/10	7.03	20.6	1229	416
		1/17/11	7.02	20.6	1334	562
		4/11/11 7/14/11	6.92 7.23	15.1 24.4	1485 1451	609 678
		10/11/11	6.65	24.4	1230	543
		2/1/12	7.28	11.8	1360	551
		4/25/12	7.10	23.9	1380	657
		7/12/12	6.89	24.9	1520	667
		10/10/12	7.40	24.0	1414	574
		4/7/14	7.06	17.4	1057	175
		7/11/14	7.35	21.4	1033	272
		9/9/12	8.34	25.9	406.3	31
		10/10/12	8.13	23.8	412.3	30.3
		1/17/13	8.06	23.7	416.0	30.9
		4/15/13	8.19	23.5	402.7	32.3
ANDERSON 458	221458	7/18/13	8.18	24.3	401.9	23
ANDLINGON 430	221430	10/16/13	8.10	23.8	400.1	25.2
		1/9/14	8.15	22.9	399.3	26.2
		1/9/14 DUP	8.15	22.9	399.3	26.2
		4/7/14	8.16	24.0	401.6	27.5
		7/11/14	8.13	24.5	396.7	25.3
		1/7/08	ND	ND	ND	14
		3/3/08	ND	ND	ND	16
		5/5/08	ND	ND 20.0	ND	13.3
		8/12/08	7.01	22.3	630 464	14.3
		10/23/08	7.31	23.1	464	15.9
		3/11/09 4/22/09	7.19 7.17	21.8 22.6	430	15.5 14.7
		7/22/09	7.17	22.7	444	14.7
		10/21/09	7.19	21.3	468	16.8
		2/3/10	7.19	19.7	449	18.6
		4/23/10	7.56	19.7	526	18.3
		7/20/10	7.27	23.9	450	18.2
		11/4/10	7.72	21.3	465.9	18.8
		1/19/11	7.84	19.0	500	18.4
AWC-02	616586	4/7/11	7.27	20.3	488.5	17.3
AVVC-02	010000	7/13/11	5.93	23.9	431.5	12.9
		10/13/11	6.72	25.1	464.6	17.4
		10/13/11 DUP	6.72	25.1	464.6	17.4
		2/2/12	7.20	20.8	479.5	19.4
		4/24/12	7.23	23.0	430	15.5
		7/5/12	7.25	22.1	437.1	10.1
		10/18/12	7.48	21.6	473.6	13.0
		2/5/13	7.54	19.3	448.9	18.0
		4/11/13	7.53	22.1	471.3	17.2
		7/25/13	7.35	22.1	460.5	14.7
		10/9/13	7.53	21.2	476.4	15.5
		1/7/14	7.45	20.3	503.7	18.8
		1/7/11 DLID	7 15			
		1/7/14 DUP 5/14/14	7.45 7.34	20.3 21.0	503.7 508.4	18.9 19.2



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
	.,		, ,			(mg/L)
		1/7/08	ND	ND	ND	41
		3/3/08	ND	ND	ND	38
		5/5/08	ND 7.00	ND	ND 400	37.3
		8/12/08	7.28 7.48	22.4 21.0	469 462	38.8 41.8
		10/23/08 3/11/09	7.46	21.2	445	64.2
		4/22/09	7.30	21.4	452	42.4
		7/22/09	7.39	22.6	456	41.8
		10/21/09	7.48	21.3	540	50.5
		2/3/10	7.44	19.7	449	42.0
		4/23/10	7.57	19.7	468	44.4
		7/20/10	7.29	23.8	460	46.7
		11/4/10	7.80	20.8	452.3	46.3
		1/19/11	7.07	19.6	560	49
11110 00	040505	4/7/11	7.28	19.9	469.8	46.8
AWC-03	616585	7/13/11	6.33	23.1	458.8	47.6
		7/13/11 DUP	6.33	23.1	458.8	46.2
		10/13/11	6.69	23.8	463.6	48.8
		2/2/12	7.39	20.7	504.8	47.7
		4/24/12	7.28	22.1	450	51.8
		7/5/12	7.32	21.7	474.3	50.7
		10/18/12	7.44	21.3	477.4	51.3
		2/5/13	7.73	19.2	481.2	55
		4/11/13	7.51	22.2	486.4	66.1
		7/16/13	7.61	21.5	489.6	63.6
		10/9/13	7.57	20.5	485.8	49.4
		10/9/13 DUP	7.57	20.5	485.8	51
		1/7/14	7.62	20.4	486.3	56.6
		5/14/14	7.64	20.5	493.0	61.1
		7/16/14	7.68	21.4	506.9	69.1
		2/4/08	ND ND	ND	ND	18 18
		4/7/08 6/2/08	ND ND	ND ND	ND ND	14.3
		8/12/08	7.08	22.5	458	21.6
		10/23/08	6.91	22.2	616	24
		3/11/09	7.02	21.3	539	27.2
		4/22/09	6.93	22.1	560	26.1
		7/22/09	7.13	22.5	587	26.2
		10/21/09	7.00	21.2	607	25.7
		2/3/10	7.35	19.3	438	16.3
		4/23/10	7.14	19.2	625	27.4
		7/20/10	7.02	24.1	600	26.6
		11/4/10	7.41	20.3	593.2	24
		1/19/11	8.15	20.5	690	26.2
AWC-04	616584	4/7/11	7.00	20.4	637.2	25.8
AVVC-04	010304	7/13/11	6.88	20.4	610.1	25.7
		10/13/11	6.38	24.0	619.7	27.6
		2/2/12	6.97	20.1	637.6	27.2
		4/24/12	7.10	22.1	570	25.2
		7/5/12	7.03	21.6	568.0	28.2
		7/5/12 DUP	7.03	21.6	568.0	28.1
		10/18/12	7.20	20.8	606.7	26.6
		2/5/13	7.29	19.7	616.8	26.9
		4/11/13	7.38	21.7	595.4	26.2
		7/16/13	7.30	21.0	585.7	27.0
		10/9/13	7.36	20.4	588.6	24.6
		1/7/14	7.36	19.7	651.4	23.7
		5/14/14	7.38	19.8	674.2	22.7
		7/16/14	7.32	20.7	632.2	24.1
		7/16/14 DUP	7.32	20.7	632.2	22.9



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		0/4/00				(mg/L)
		2/4/08	ND	ND	ND	13
		4/7/08	ND ND	ND ND	ND ND	14 14.3
		6/2/08 8/12/08	6.74	23.3	425	14.3
		10/23/08	7.45	21.0	423	15.4
		3/11/09	7.31	22.1	398	16.5
		6/3/09	7.33	22.0	418	12.1
		7/22/09	7.49	24.4	423	14.1
		10/21/09	7.37	21.1	433	16.5
		2/3/10	7.35	19.3	438	16.3
		4/23/10	7.62	18.9	443	17.6
		7/20/10	7.62	24.2	440	19.1
		11/4/10	7.92	20.7	427.1	18.4
		1/19/11	7.64	20.3	420	17
AWC-05	590620	4/7/11	7.22	20.8	438.3	17.6
		7/13/11	6.52	22.9	419.8	17.9
		10/13/11	6.82	26.0	427.5	19
		2/2/12	7.35	21.4	427.9	19.5
		4/24/12	7.18	21.4	430	15.4
		7/5/12	7.24	22.6	432.1	19.1
		10/18/12	7.66	22.6	436.1	20.1
		2/5/13	7.57	20.2	437.7	20.1
		4/11/13	7.54	21.2	444.5	20.3
		7/16/13	7.56	21.3	454.5	18.0
		7/16/13 DUP	7.56	21.3	454.5	17.7
		10/9/13	7.58	21.3	455.3	15.4
		5/14/14	7.54	21.2	442.3	19.8
		7/16/14	7.60	22.6	470.9	20.3
		2/27/08	7.53	21.8	980	44
		5/12/08	7.40	22.1	1021	65.2
		7/21/08	7.43	22.9	1034	82.2
		10/13/08	7.28	21.7	980	53
		1/21/09	7.66	21.6	872	164
		4/8/09	7.56	22.7	933	47
		7/9/09	7.59	23.1	871	70.9
		10/7/09	7.50	22.2	838	67.7
		2/25/10	7.56	21.1	1020	50.5
		4/20/10	7.71	22.8	1013	53.9
		7/20/10	7.70	23.2	828.3	71.5
		10/20/10	7.60	22.4	948.7	73.4
		1/17/11	7.73	20.6	1038	53.5
		4/5/11	7.66	21.5	965.0	64.5
BANKS 986	647986	7/11/11	7.72	25.4	890.0	68.8
27.11.10 000	0000	10/12/11	7.88	21.2	1551	172
		1/31/12	7.69	20.2	1017	64.3
		1/31/12 DUP	7.69	20.2	1017	64.9
		4/11/12	7.77	22.0	1025	64.0
		7/6/12	7.66	23.7	940	78.6
		7/6/12 DUP	7.66	23.7	940	77.9
		10/4/12	7.73	22.0	845.4	62.6
		1/18/13	7.82	21.9	832.4	70.5
		4/8/13	7.87	20.7	861.7	62.9
		7/9/13	8.04	22.9	769.1	67.9
		10/15/13	7.59	21.7	1158	79.6
		1/14/14	7.77	20.9	967.4	75.2
		4/8/14	7.47	21.4	1337	113
		7/8/14	7.58	22.3	1175	107
		7/8/14 DUP	7.58	22.3	1175	110
		5/23/08	6.41	18.3	2698	1450
		8/5/08	6.11	22.4	3095	1330
		11/5/08	6.33	19.9	3027	1490
		2/20/09	6.42	19.2	1477	1330
		5/6/09	5.98	23.9	2632	1280
BF-01	539783	8/17/09	6.21	29.7	2948	1250
ו -0 ו	229102	11/4/09	6.24	23.0	2846	1280
		3/1/10 4/7/10	6.34	21.1	2945	1260
			5.83	20.4	1853	1450
		7/6/10	5.93	22.6	1403	1310
		7/13/11 2/1/12	6.26	21.3	2960	1350
	1	2/1/12	6.18	19.8	2910	1480



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/6/08	6.69	22.2	1335	210
		4/25/08 ¹	6.37	23.1	1521	190
		5/13/08 ¹	6.58	22.7	1489	195
		6/23/08 ¹	6.30	23.3	1572	225
		6/23/08 DUP	6.30	23.3	1572	196
		7/29/081	6.44	23.0	1647	204
		8/28/08	M	23.0	1776	256
		9/23/081	6.29	23.0	1741	296
		10/22/08	6.41	22.3	1801	285
		1/20/09	6.40	21.7	1233	190 200
		1/20/09 DUP	6.40 6.45	21.7	1233 1436	
		4/7/09 7/8/09	6.31	23.4 23.4	1483	212 189
		10/5/09	6.34	22.7	1525	233
		1/20/10	6.88	17.0	M	222
		4/19/10	6.70	21.9	1533	256
BIMA	577927	7/12/10	6.70	24.0	1577	273
		10/18/10	6.47	24.3	1702	296
		1/19/11	6.65	21.2	1672	283
		4/4/11	6.61	24.0	1643	282
		8/25/11	6.27	25.9	1460	300
		10/10/11	6.5	24.1	1520	322
		2/3/12	6.48	18.5	1540	312
		4/23/12	6.57	23.9	1790	303
		7/10/12	6.06	23.7	1200	301
		11/29/12	6.51	20.6	1664	310
		3/13/13	7.29	19.8	1175	317
		4/10/13	6.64	13.9	1569	308
		7/8/13	6.62	28.0	1580	301
		10/11/13	6.57	21.8	1749	301
		1/10/14	6.63	10.7	1664	297
		4/10/14	6.62	15.8	1685	300
		7/8/14	6.56	21.6	1653	297
		2/5/08	7.43	20.2	714	206
		4/21/08 ¹	7.06	21.9	753	201
		5/15/08 ¹	7.16	22.2	845	211
BLOMMER	633472	6/23/08 ¹	6.93	21.5	903	193
DECIVIIVIEN	033472	7/29/08 ¹	7.21	22.2	921	203
		8/27/08 ¹	7.12	22.1	864	189
		9/23/08 ¹	7.16	22.3	818	193
		10/22/08	7.17	21.3	873	200
		8/27/08	7.09	24.2	808	107
		11/11/08	7.00	20.8	721	143
		2/25/09	7.01	22.0	860	109
		4/28/09	7.04	22.2	762	198
		8/4/09	7.23	22.8	950	104
		10/27/09	7.11	21.9	922	103
		2/17/10	7.36	20.5	899.3	98.4
		4/15/10	7.04	22.2	711	95.2
BMO-2008-1G	909474	7/7/10	6.91	21.5	640	88.1
		7/7/10 DUP	6.91	21.5	640	87.1
		2/10/11	6.80	21.0	916	105
		7/12/11	7.2 7.02	26.6	1015 869	121 116
		2/8/12 8/14/12	6.97	20.2 21.9	959	116
		2/14/13	7.09	21.9	986	112
		8/14/13	6.96	21.6	1009	120
		2/13/14	6.76	21.1	1010	114
		7/22/14	6.87	22.0	1010	117
	+	7/18/08	7.35	23.9	615	106
		11/4/08	7.36	21.4	599	179
		11/4/08 DUP	7.36	21.4	599	177
		2/19/09	7.24	21.4	664	155
		5/11/09	7.23	22.1	631	149
		8/6/09	7.33	21.4	718	151
		8/6/09 DUP	7.33	21.4	718	156
		10/26/09	7.32	21.8	684	153
		3/3/10	7.38	21.4	695	164
BMO-2008-3B	909147	4/8/10	6.47	21.3	585	162
		7/1/10	6.92	21.4	541	157
		2/14/11	6.98	20.6	698	169
		7/12/11	7.04	21.4	672	148
		2/23/12	6.92	21.0	695	173
		7/10/12	7.02	21.5	651	150
		2/15/13	6.63	20.4	692	163
		8/27/13	7.1	21.1	725	170
		2/11/14	7.01	20.7	729	162
		7/21/14		21.0	706	163



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		12/11/08	7.34	22.8	374	(mg/L) 9.4
		2/18/09	7.17	23.2	370	13.4
		4/30/09	7.33	24.5	376	11.4
		4/30/09 DUP	7.33	24.5	376	11.8
		8/6/09	7.53	24.6	397	11.5
		10/27/09	7.53	23.7	379	11.2
		2/24/10	7.48	21.8	362	9.7
		4/16/10	7.70	23.4	330	9.73
BMO-2008-4B	910096	7/2/10	7.25	23.6	323	10.10
BIVIO-2008-4B	910096	2/15/11 7/22/11	7.65 7.33	22.2 23.7	362 371	8.90 10.2
		2/23/12	7.33	22.3	354	10.2
		8/15/12	6.96	23.6	380	9.5
		1/15/13	7.63	22.7	370.2	10.3
		1/15/13 DUP	7.63	22.7	370.2	9.5
		4/15/13	7.75	23.0	368.2	11.2
		9/18/13	7.69	23.4	384.6	9.8
		1/9/14	7.81	22.2	371.4	11.1
		7/18/14	7.78	23.3	379.1	11.6
		9/30/08	7.08	22.0	688	193
		2/18/09	7.03	21.5	691	192
		4/27/09 8/4/09	7.32	22.1	605	177 174
		10/29/09	7.35 7.29	22.3 21.8	724 731	174
		10/29/09 DUP	7.29	21.8	731	185
		2/15/10	7.22	21.7	720	185
		4/15/10	7.21	23.0	571	194
		7/7/10	6.94	22.2	551	183
		10/5/10	6.85	22.3	722	201
		2/14/11	6.90	21.8	725	203
		5/12/11	7.06	21.5	722	195
BMO-2008-5B	909653	7/13/11	6.99	22.0	712	200
50 2000 05	00000	12/7/11	6.95	19.9	730	213
		2/3/12	7.16	20.2	726	215
		4/18/12	6.96	21.7	712	192 218
		7/10/12 10/16/12	6.87 6.69	21.5 21.4	726 712	207
		2/7/13	7.40	21.4	771.4	229
		2/12/13	6.49	20.7	752	227
		5/15/13	7.01	21.8	742	220
		8/20/13	7.00	21.7	792	226
		11/1/13	6.92	21.5	792	233
		2/11/14	6.88	21.5	804	230
		5/7/14	6.87	21.5	800	228
		8/19/14	6.99	21.6	795	221
		10/2/08 2/18/09	7.13 7.06	23.6 22.5	551 562	107 122
		4/27/09	7.50	22.9	501	111
		8/4/09	7.53	23.1	605	122
		10/29/09	7.35	22.4	610	123
		2/15/10	7.31	22.5	581	123
		4/16/10	7.28	22.6	509	125
		4/16/10 DUP	7.28	22.6	509	124
		7/7/10	7.02	23.5	482	123
		10/5/10	6.81	22.5	602	127
		2/14/11	6.95	22.2	591	124
BMO-2008-5M	909552	5/12/11 7/12/11	7.16 7.22	23.0 22.7	558	119 126
DIVIC-2000-DIVI	30900Z	12/7/11	7.22	22.7	590 601	126
		2/3/12	6.99	21.5	589	130
		4/18/12	6.71	22.4	587	120
		7/10/12	6.82	22.4	592	135
		10/16/12	6.86	21.9	591	134
		2/12/13	6.65	21.6	610	139
		5/15/13	6.73	22.4	603	135
		8/20/13	7.18	22.5	640	138
		11/1/13	7.07	22.0	641	142
		2/11/14	6.84	22.1	646	138
		5/7/14	6.85	22.1	648	140
	1	8/19/14	6.97	22.1	645	143



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		7/40/00		24.1		(mg/L)
		7/16/08 11/4/08	7.36 7.41	21.5	475 398	53.3 60.3
		2/19/09	7.23	21.1	444	54.3
		4/27/09	7.55	21.7	389	52.7
		8/4/09	7.48	23.4	470	48.5
		10/26/09	7.29	22.5	448	48.7
		2/15/10	7.53	21.2	391	33.5
		4/15/10	7.47	21.0	362	37.0
		7/1/10	7.24	22.2	361	40.1
		10/5/10	7.05	21.0	407	37.2
		2/14/11	7.27	21.8	397	40.2
BMO-2008-6B	909146	5/12/11 7/12/11	7.32 7.27	21.5 21.1	380 390	35.0 37.8
DIVIO-2000-0D	303140	12/7/11	7.28	20.8	330	21.8
		2/3/12	7.28	20.1	346	23.0
		4/18/12	7.25	21.4	336	19.7
		7/10/12	6.86	21.2	328	21.9
		10/16/12	6.79	21.5	342	19.9
		2/12/13	6.87	20.7	339	16.2
		5/15/13	6.87	21.2	297	12.7
		8/20/13	7.36	21.5	310	10.6
		11/1/13	7.04	21.0	340	13.9
		2/11/14	7.38	21.6	290	20.1
		5/7/14 8/19/14	7.48 7.08	21.1 21.6	297 298	13.6 13.4
		7/10/08	7.06 M	22.1	702	182
		11/4/08	7.33	21.8	621	199
		2/20/09	7.11	22.0	702	193
		4/28/09	7.34	22.4	595	119
		8/4/09	7.40	23.3	750	189
		10/26/09	7.18	22.4	727	187
		2/15/10	7.29	20.8	733	193
		4/15/10	7.36	20.2	619	208
		7/1/10	7.15	22.0	571	198
		10/5/10	6.87	21.3	720	202
		2/14/11	6.80	21.3	731	202
BMO-2008-6M	909019	5/12/11 7/12/11	7.12 7.06	21.9 21.8	709 709	189 194
DIVIO-2000-0IVI	303013	12/7/11	6.94	21.3	710	200
		2/3/12	7.03	21.2	720	206
		4/18/12	7.01	21.4	701	188
		7/10/12	6.67	21.4	702	208
		10/16/12	6.89	21.8	708	207
		2/12/13	6.71	20.5	740	204
		5/8/13	7.01	21.9	726	212
		8/20/13	6.99	21.7	772	213
		11/1/13 2/11/14	6.83 6.81	21.5 21.8	773 786	223 217
		5/7/14	6.77	21.3	788	220
		8/19/14	6.90	21.9	774	210
		7/14/08	7.63	25.2	500	31.4
		11/6/08	7.53	22.6	380	34.5
		2/18/09	7.31	23.3	452	27.6
		5/11/09	7.43	24.4	426	26.0
		8/6/09	7.81	24.1	486	25.1
		10/27/09	7.53	23.0	470	26.1
		2/17/10 2/17/10 DUP	7.57 7.57	23.4	452 452	25.4 25.0
		4/15/10	7.52	23.4 23.2	452	26.0
B110 00		7/6/10	7.28	23.5	391	22.8
BMO-2008-7M	908794	2/14/11	7.18	22.0	465	27.5
		2/14/11 DUP	7.18	22.0	465	26.4
		7/15/11	7.1	22.8	466	26.5
		1/30/12	7.16	22.0	454	26.4
		7/11/12	7.18	22.7	455	28.1
		2/15/13	7.23	21.8	471	25.8
		8/28/13	7.15	22.9	494	27.7
		8/28/13 DUP 2/13/14	7.15 7.09	22.9 22.6	494 494	27.8 27.8



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		12/5/08	6.47	20.1	2480	1890
		2/19/09	6.19	21.0	2958	1570
		5/5/09	6.18	21.3	2888	1370
		8/10/09	6.42	21.5	2897	1250
		11/9/09	6.33	21.8	2889	1510
		11/9/09 DUP	6.33	21.8	2889	1520
		3/3/10	6.51	20.4	3016	1320
BMO-2008-8B	910097	4/16/10	6.06	21.4 21.4	1682	1470 1440
		7/1/10 7/15/11	6.10 6.21	21.4	1594 2940	1380
		1/30/12	6.22	21.2	2880	1480
		1/30/12 DUP	6.22	21.2	2880	1480
		7/12/12	6.41	21.1	2860	1440
		2/13/13	6.25	20.7	2830	1330
		8/12/13	6.38	21.3	2780	1420
		7/24/14	6.26	21.2	2520	1380
		12/9/08	7.16	23.4	852	197
		2/19/09	7.27	23.5	758	147
		2/19/09 DUP	7.27	23.5	758	149
		5/5/09	7.19	25.1	680	122
		8/10/09	7.49	24.8	673	107
		11/5/09	7.30	25.4	675	104
		3/3/10 4/16/10	7.70 7.29	24.1 24.5	641 541	99.5 97.0
		7/1/10	6.99	25.0	502	94.7
BMO-2008-8M	909711	1/24/11	7.05	23.4	595	98.2
DIVIO 2000 01VI	303711	7/15/11	6.89	22.1	590	79.9
		1/30/12	7.36	23.9	565	77.6
		7/12/12	7.15	24.2	554	73.1
		7/12/12 DUP	7.15	24.2	554	73.2
		2/14/13	7.1	24.3	565	64.9
		8/12/13	7.19	24.6	585	65.0
		2/19/14	7.07	24.3	579	63.3
		2/19/14 DUP	7.07	24.3	579	63.4
		7/24/14	7.07	24.7	569	66.8
		8/8/08	7.72	25.7	415	47.3
		11/5/08	7.89	21.4	444	54.4
		2/26/09	7.71	24.5	482	28.8
		5/12/09	7.76	24.8	449 534	51.7
		8/17/09 11/3/09	7.76 7.82	25.6 24.9	552	53.4 56.9
		3/4/10	8.07	22.4	520	58.6
		4/6/10	6.74	23.8	484	60.1
BMO-2008-9M	909255	7/1/10	7.40	24.6	425	61.0
		2/10/11	6.79	24.0	520	64.2
		7/15/11	7.56	24.3	516	67.0
		2/1/12	7.54	22.4	516	67.4
		7/12/12	7.68	24.2	513	68.9
		2/13/13	7.37	23.8	531	68.2
		8/12/13	7.47	24.2	553	71.1
		2/18/14	7.26	23.8	569	74.1
		7/24/14	7.36	24.4	571	74.2
		8/20/08 11/5/08	6.22 6.47	29.5 25.3	2924 2573	1320 1290
		2/25/09	6.34	26.8	2646	1180
		5/12/09	6.35	26.2	2402	1120
		8/11/09	6.52	27.3	2661	1030
		11/2/09	6.52	26.7	2565	1100
		3/4/10	6.76	24.1	2937	1080
BMO-2008-10GL	909435	4/8/10	6.03	25.6	1575	1260
DIVIO-2000-10GL	303433	7/2/10	6.16	26.3	1338	1020
		7/13/11	6.32	24.8	1726	644
		2/2/12	6.45	24.8	1600	624
		7/13/12	6.71	25.7	1571	545
		2/18/13	6.45	25.4	1530	498
		2/18/13 DUP	6.45	25.4	1530	494
		8/13/13 8/7/14	6.57	25.5	1586 1417	520 442
		8/4/08	6.56 6.41	25.8 23.6	3660	2210
		11/5/08	6.15	20.2	3343	1890
		2/25/09	5.96	22.7	3426	1740
		5/6/09	5.99	23.2	3359	1710
		8/11/09	6.28	22.5	3348	1690
DMO 0000 40011	000070	11/2/09	6.27	21.8	3157	1730
BMO-2008-10GU	909272	3/10/10	6.67	19.1	3951	1700
		4/7/10	5.96	20.4	3210	1510
		7/6/10	5.90	21.8	1610	1670
		7/13/11	6.12	22.3	3890	1670
		2/1/12	6.09	19.2	3820	1870
		8/19/13	6.10	21.0	3630	1780



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		8/22/08	8.02	28.2	359	14.2
		11/12/08	7.96	24.2	257	13.9
		2/26/09	7.92	25.1	319	12.3
		4/28/09	8.14	25.5	273	11.8
		8/12/09	8.24	25.3	365	11.2
		11/9/09	8.03	25.5	339	13.9
		3/1/10	8.37	23.2	338	13.0
		4/9/10	6.88	24.5	301	13.0
BMO-2008-11G	909434	7/1/10	6.97	25.4	298	12.3
DIVIO-2000-110	909454	2/10/11	6.99	24.0	327	11.7
		7/22/11	7.26	24.6	331	12.1
		7/22/11 DUP	7.26	24.6	331	12.0
		1/31/12	7.41	24.1	328	11.9
		8/14/12	7.35	24.6	337	12.3
		2/13/13	7.54	24.2	343	11.9
		8/27/13	7.48	24.9	363	12.2
		2/19/14	7.51	24.2	363	12.2
		8/14/14	7.58	24.7	360	12.4
		10/3/08	6.49	21.6	2180	980
		2/17/09	6.51	20.9	1941	1000
		5/6/09	6.55	22.0	1891	930
		8/5/09	6.63	21.5	2137	950
		10/28/09	6.81	19.7	2259	1010
		2/16/10	6.87	20.8	2093	997
DMO 0000 100	000==1	4/14/10	6.38	21.2	1346	974
BMO-2008-13B	909551	7/6/10	6.37	21.8	1208	972
		7/15/11	6.44	20.8	2160	1010
		2/9/12	6.68	20.3	2180	1060
		7/11/12	6.55	21.2	2190	1080
		2/27/13	6.54	20.3	2160	1090
		9/4/13	6.57	20.8	2070	1050
		8/19/14	6.63	21.2	1890	1070
			7.73	24.1	1463	494
		12/3/08				
		2/17/09	8.21	22.7	1340	441
		4/29/09	8.04	24.8	1126	217
		8/5/09	8.04	25.4	1392	387
		10/28/09	8.12	21.4	1347	403
		2/16/10	8.07	24.9	1297	375
BMO-2008-13M	909760	4/13/10	8.06	23.2	1130	398
		7/2/10	8.30	23.9	1027	386
		7/15/11	8.4	23.4	1331	388
		2/6/12	8.47	23.2	1300	ND
		8/13/12	8.75	24.2	1311	397
		2/15/13	8.8	22.4	1280	383
		9/6/13	8.81	23.8	1300	402
		8/20/14	8.48	23.6	1362	410
		9/9/10	7.82	24.6	727.0	150
		11/11/10	8.68	19.9	570	98
		2/11/11	8.15	20.8	589	138
		5/12/11	7.74	23.0	710	129
		8/31/11	7.74	23.2	562	154
		12/13/11	7.63	21.3	713	149
		2/8/12	7.69	22.0	605	158
D140 0010 111	0400==	4/24/12	7.08	23.4	701	150
BMO-2010-1M	219957	7/9/12	6.37	24.3	715	161
		10/17/12	7.40	23.9	699	154
		2/13/13	7.09	22.2	712	152
		5/8/13	7.12	22.5	725	160
		8/15/13	7.39	23.5	767	156
		11/4/13	7.38	22.6	774	163
		2/12/14	8.33	22.0	672	161
		6/2/14	7.55	23.3	771	165
		8/4/14	7.38	23.8	772	179
		9/15/10	6.66	22.6	2054	915
		11/11/10	6.97	20.6	1800	935
		2/10/11	6.53	20.8	2120	950
		5/13/11	6.54	21.1	2160	887
		7/14/11	6.62	21.5	2160	917
		12/13/11	6.59	20.3	2140	984
		1/30/12	6.41	21.4	2180	989
		4/18/12	6.48	21.2	2170	893
BMO 2040 2M	210050	7/9/12	6.41	21.8	2190	1030
BMO-2010-2M	219958	10/17/12	6.60	21.3	2200	998
		2/13/13	6.45	21.0	2190	962
		5/8/13	6.42	21.0	2160	996
		8/15/13	6.58	21.2	2157	978
		11/4/13	6.53	21.9	2120	998
		2/12/14	6.52	21.0	2160	1000
		5/8/14	6.46	21.0	1990	1010
		8/14/14	6.48	21.0	1940	1040



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

	Registry Number	Sample Date	(SU)	(deg C)	(µS/cm)	dissolved (mg/L)
		7/29/10	7.48	23.1	420	16.0
		11/10/10	7.43	21.2	370	14.9
		1/20/11	7.44	20.9	416.1	14.4
		4/7/11	7.38	20.1	424.6	14.9
		7/13/11	7.68	22.3	404.5	13.8
		10/13/11	7.63	23.4	411.2	15.9
		2/2/12	7.52	20.4	400.2	16.9
		2/2/2012 DUP	7.52	20.4	400.2	17.1
		4/24/12	7.30	21.8	390	16.0
BMO-2010-3B	219970	7/5/12	7.51	22.4	419.1	15.7
		10/18/12	7.58	21.6	411.9	17.0
		1/16/13	7.58	20.8	420.5	17.4
		4/16/13 7/23/13	7.65 7.67	21.2 21.8	415.1 420	17.5 19.8
		10/8/13	7.72	20.9	420.3	16.8
		1/15/14	7.65	20.2	431.2	18.8
		5/13/14	7.66	21.0	421.2	18.0
		5/13/2014 DUP	7.66	21.0	421.2	18.0
		7/15/14	7.63	21.8	419.1	19.0
		7/31/10	7.73	24.3	390	14.8
		11/10/10	7.66	21.8	340	12.6
		11/10/10 DUP	7.66	21.8	340	12.7
		1/20/11	7.72	22.6	380.4	11.5
		4/7/11	7.38	23.5	376.5	12.3
		8/25/11	7.17	24.3	340	10.4
		10/13/11	7.73	23.6	375.8	10.5
		2/2/12	7.68	22.0	367.1	10.6
		4/24/12	7.49	23.9	370	10.1
BMO-2010-3M	219969	7/5/12	7.66	23.7	381.8	10.3
		10/18/12	7.71	23.3	379.9	10.4
		1/16/13	7.68	22.1	383.1	10.0
		4/16/13	7.83	22.3	383.7	10.2
		4/16/2013 DUP 7/23/13	7.83 7.80	22.3 23.4	383.7 386.0	10.2 10.7
		10/8/13	7.76	22.8	384.8	9.4
		1/15/14	7.76	22.1	389.8	9.1
		5/13/14	7.75	22.9	387.1	10.4
		7/15/14	7.74	23.1	386.9	10.2
		11/13/12	7.55	21.3	933.7	231
		2/27/13	6.97	22.4	793	205
		5/8/13	6.77	22.9	814	197
BMO-2012-1M	221388	8/14/13	7.09	22.9	858	202
DIVIO-2012-11VI	221300	11/1/13	6.98	22.4	850	210
		2/13/14	7.00	22.2	883	214
		5/8/14	6.90	22.9	875	207
		7/22/14	6.99	22.6	857	210
		1/5/13	7.67	18.5	574.3	91.4
DOOTH	04.4004	6/14/13	7.61	51.1	604.2	95
воотн	914931	6/14/13 DUP	7.61	51.1	604.2	92.5
		7/17/13	7.75	23.2	497.6	75
		10/18/13	7.66 7.17	19.3 23.0	597.6 411	92.6 29.5
		2/7/08 4/22/08	7.17	23.0	411	29.5
		8/5/08	7.13	26.8	496	21.9
		10/20/08	7.57	26.0	466	20.5
		2/11/09	7.23	25.0	363	23.9
		4/28/09	7.16	26.1	369	24.2
		8/19/09	7.36	26.7	486	22.5
BURKE	212268	12/16/09	7.28	25.7	488	26
		3/2/10	7.56	12.3	432	23.8
		4/22/10	7.49	16.4	452	24.8
		7/21/10	7.56	25.6	423.7	33.1
		10/10/13	7.87	21.9	469.6	27.5
		10/10/13 1/8/14 4/16/14	7.87 8.17 7.80	21.9 10.9 21.1	469.6 464.9 471.0	27.5 28.6 28.3



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/6/08	7.73	17.8	408	7.7
		5/5/08	7.15	22.1	421	6
		7/14/08	7.43	23.2	434	5.8
		10/15/08	7.41	22.5	420	4
		1/27/09	7.57	21.5	312	5.3
		4/14/09	7.42	22.4	384	6.8
		7/15/09	7.83	23.4	414	4.3
		10/13/09	7.41 7.31	22.6	410 416	6.5 5.7
		1/26/10 4/23/10	7.47	21.3 20.9	427.5	8.34
		7/21/10	7.49	23.1	430	7.75
		10/19/10	8.00	23.0	440	7.04
		1/18/11	7.47	22.4	390	7.30
CHAMBERS	629807	4/11/11	7.18	22.0	427.3	7.74
CHAINDERS	029007	7/18/11	7.18	23.8	420.2	8.18
		10/12/11	7.33	22.6	425.8	7.8
		2/6/12	7.43	21.8	434.6	9.08
		4/23/12	7.46	22.7	460	8.84
		7/17/12	7.31 7.44	22.4 22.4	410	8.41
		10/8/12 1/10/13	7.44	22.4	430.0 440.8	10.1 9.64
		4/18/13	7.49	21.7	434.1	9.78
		7/15/13	7.40	22.7	434.6	9.81
		7/15/13 DUP	7.40	22.7	434.6	10.2
		10/10/13	7.51	21.8	439.7	10.3
		1/13/14	7.56	21.0	431.3	10.7
		4/14/14	7.48	22.2	435.9	10.9
		7/10/14	7.50	22.9	436.4	11.0
		2/22/08	6.93	21.2	1401	720
		5/20/08 7/30/08	6.88 6.88	22.0 21.7	2050 1780	980 730
		10/23/08	6.95	21.7	1690	750
		2/12/09	6.92	21.1	1313	750
		4/21/09	7.15	22.7	1366	720
		7/22/09	6.94	21.6	1570	680
		7/22/09 DUP	6.94	21.6	1570	730
COB MW-1	903992	10/22/09	6.81	22.3	1582	820
002	000002	2/4/10	7.04	21.1	1653	680
		4/20/10	6.92	21.8	1836	783
		7/13/10	7.02 6.78	22.3 21.4	2004 1924	919 927
		7/14/11 7/12/12	6.74	23.4	1760	805
		2/5/13	6.95	21.5	1773	877
		7/11/13	7.17	21.4	1858	842
		7/9/14	6.95	21.5	2000	1000
		7/9/14 DUP	6.95	21.5	2000	1020
·		5/20/08	7.32	21.2	490	40.5
		7/30/08	7.34	20.8	511	37.6
		10/23/08	7.36	20.3	498	34.9
		2/12/09	7.35	20.2	379	35.6
		4/23/09 7/22/09	7.33 7.36	21.8 21.3	431 483	34 33.5
		10/22/09	7.24	21.0	483	33.5
		3/3/10	7.55	19.7	454	33.5
		4/26/10	7.28	21.3	479.6	34.8
COB MW-2	903984	7/13/10	6.91	21.2	479.5	30.4
		7/13/10 DUP	6.91	21.2	479.5	30.6
		1/20/11	7.47	20.7	440	29.6
		7/14/11	7.11	21.1	472.6	29.8
		1/31/12	7.53	20.3	466.6	30.0
		7/12/12	7.36	21.2	630	29.2
		1/9/13	7.48	20.0	473.5	35.8
		7/25/13 1/6/14	7.34 7.58	20.9 19.9	485.4 487.8	40.6 40.5
				13.5	+0/.0	40.5



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/28/08	7.39	21.0	416	57.8
		3/27/08	ND	ND	ND	57.7
		4/30/08	ND	ND	ND	37
		5/20/08	7.56	22.3	473	35.8
		7/24/08	ND	ND	ND	64.9
		7/30/08	7.64	22.3	541	67.3
		10/9/08	ND	ND	ND	52.5
		10/23/08	7.43	20.8	507	76.6
		2/12/09	7.35	21.1	432	112
		4/23/09	7.35	22.6	407	43.7
COB MW-3	906823	7/22/09	7.38	21.5	460	52.3
		10/22/09	7.40	21.3	466	74.2
		10/22/09 DUP 3/3/10	7.40 7.36	21.3 21.1	466 480	73.9 102
		4/26/10	7.35	22.0	497.9	77.6
		7/13/10	7.41	21.7	456.7	46.5
		7/14/11	7.19	21.8	440.0	40.1
		7/12/12	7.34	21.4	450	39.5
		2/5/13	7.60	20.4	476.4	65.1
		2/5/13 DUP	7.60	20.4	476.4	64.7
		7/25/13	7.42	21.4	485.0	66.6
		7/9/14	7.61	21.4	525.3	90.9
		2/22/08	6.99	20.6	919	90
		3/24/08	ND	ND	ND	98.2
		4/28/08	ND	ND	ND	98.7
		5/20/08	7.30	21.9	1053	98
		7/30/08	7.17	22.0	1098	97.1
		7/30/08	ND	ND	ND	100
		10/15/08	ND	ND	ND	107
		10/23/08	7.23	21.4	1075	104
		2/12/09	6.98	20.6	814	94
		4/23/09	7.29	22.2	923	98
COB WL	593116	7/22/09	7.17	22.5	1037	97.3
		10/22/09	7.17	22.4	988	96.1
		3/3/10	7.48	21.1	1030	97.1
		4/26/10	7.36	21.9	1038	97.7
		4/26/10 DUP	7.36	21.9	1038	97.9
		7/13/10	7.18	22.3	1013	88.7
		7/14/11	6.91	21.6	1019	87.3
		7/12/12	7.07	23.2	1060	92.0
		2/5/13	7.91	21.5	1057	98.3
		7/25/13	7.23	22.7	1074	97.6
		7/9/14	7.42	21.8	1132	81.5
		2/12/08	6.88	21.6	1470	520
		5/29/08	7.01	22.0	1459	520
		7/31/08	6.86 8.44	21.6	1502	536
		10/20/08		24.7	1510	518
		2/11/09	6.68	21.4 22.5	1147 1150	567 499
COLLINS	565260	4/21/09		22.4	1413	460
		7/22/09	7.00		1432	
		10/20/09 2/2/10	6.60 6.98	21.9 21.2	1432	513 471
		4/23/10	6.99	20.6	1439	561
		7/20/10	6.69	25.0	1472	569
		7/17/13	6.97	21.6	1409	519
		2/14/08	7.02	20.8	371	33
		5/14/08	8.08	22.1	419	34.2
		7/31/08	7.81	28.4	455	33.7
		10/20/08	8.44	24.7	448	31.2
		2/11/09	7.32	19.2	333	34.3
		4/21/09	8.19	24.9	346	33.4
		7/20/09	8.45	29.8	430	32.3
		10/14/09	7.85	24.6	423	33.6
		2/1/10	7.83	13.6	433	32.4
		4/22/10	7.82	17.9	433	34.5
		7/19/10	7.98	29.3	420	35.0
		10/18/10	7.12	73.1	450	33.1
		1/19/11	8.83	18.4	410	32.1
COOPER	623564	4/11/11	7.65	21.0	442.6	34.3
		7/11/11	7.45	24.2	426.5	32.1
		11/22/11	7.86	20.6	426.1	33.7
		2/1/12	7.97	21.8	429.2	34.1
		4/10/12	7.41	22.4	426.8	32.5
		7/18/12	7.45	22.9	430	33.4
		10/9/12	7.70	22.1	432.8	34.3
		1/11/13	7.76	21.5	434.1	32.7
		4/10/13	7.72	21.1	427.5	31
		7/11/13	7.65	23.2	432.5	31.9
		7/11/13 10/7/13	7.68	22.7	430.5	31.4
		7/11/13				



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		2/20/00	6.93	21.3	2004	(mg/L)
		3/20/08		21.3	2081 2139	880 990
		5/5/08 7/15/08	6.78 6.86	22.3	2162	1040
		7/15/08 DUP	6.86	22.3	2162	960
		10/16/08	6.80	21.4	2078	1020
		1/27/09	6.92	20.5	1489	950
		4/14/09	6.85	21.6	1833	930
		7/14/09	6.75	22.1	1972	910
		10/12/09	6.70	21.8	1858	830
		1/27/10	7.27	19.6	1930	620
		4/22/10	6.76	19.5	1921	884
		7/21/10	6.84	22.9	1761	921
		10/20/10	7.16	20.9	1980	829
COOPER C	637069	1/17/11	6.95	20.5	1880	756
		4/11/11	6.82	21.0	1942	834
		8/26/11	6.84	21.8	1800	847
		2/1/12	7.13	20.5	2024	867
		4/25/12	6.83	21.5	1960	817
		7/11/12	6.48	22.8	2030	834
		10/10/12	6.98	21.2	1985	863
		2/27/13	6.58	20.9	1805	821
		5/8/13 8/13/13	6.41	20.7 21.2	1744 1739	798 756
		11/1/13	6.61	21.2	1624	738
		2/10/14	6.69	21.6	1616	715
		5/7/14	6.48	22.5	1612	686
		7/21/14	6.63	23.1	1548	671
		2/20/08	7.61	17.3	857	54
		5/12/08	7.11	21.1	1118	34.2
		7/24/08	7.25	21.6	1233	49.3
		10/13/08	7.15	20.5	1095	56.9
		1/22/09	7.20	20.4	892	51.8
		4/9/09	7.09	21.4	1103	50.1
		7/8/09	7.18	21.1	1153	55.9
		10/6/09	7.07	21.1	1140	49.3
		1/21/10	7.15	18.9	1227	44.6
		4/19/10	7.46	19.9	1261	48.8
		4/19/10 DUP	7.46	19.9	1261	48.6
		7/20/10	7.16	22.7	1260	47.5
		10/18/10	6.43	21.2	1260	49.3
		1/19/11	7.88	19.5	1120	57.9
DODSON	644927	4/5/11	7.03	20.9	1300	49.0
		7/12/11	6.86	23.7	1352	52.9
		10/10/11	6.79	20.9	1280	50.9
		10/10/11 DUP	6.79	20.9	1280	49.6
		1/31/12	7.17	20.3	1454	50.4
		4/12/12 7/11/12	7.06 7.10	20.6	1492	45.4
		10/4/12	7.10	21.5	1790 1626	54.0 48.7
		1/18/13	7.27	20.6 20.2	1743	51.8
		1/18/13 DUP	7.27	20.2	1743	51.6
		4/9/13	7.33	19.6	1886	74.4
		7/9/13	7.39	21.0	1825	53.6
		10/9/13	7.24	20.2	1612	63.3
		1/9/14	7.31	19.7	1586	61.4
		4/15/14	7.24	20.7	1636	58.5
		7/14/14	7.27	21.9	1651	54.4
		2/10/09	7.22	18.8	848	386
		4/20/09	7.37	22.7	901	367
		7/15/09	7.57	22.8	1102	332
		10/14/09	7.17	21.9	1048	377
		2/1/10	7.30	21.1	1105	344
		4/26/10	7.22	23.1	1099	388
DURAZO	NR	7/20/10	7.28	23.0	1070	405
DONALO	INIX	10/19/10	7.28	21.9	1112	398
		1/19/11	7.94	21.6	1050	360
	1	4/4/11	7.20	21.9	1119	383
		7/14/11	7.01	23.6	1101	409
			7.01 7.23 7.26	23.6 24.9 25.3	1101 1000 1152	409 396 404



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/8/08	7.45	19.9	423	10.6
		5/14/08	7.31	20.9	595	14.8
		7/23/08	7.34	20.8	605	11.8
		10/14/08	7.33	20.3	531	8.9
		1/20/09	7.33	20.0	482	12.5
		4/8/09	7.32	20.6	555	15.9
		7/13/09	7.33	21.2	613	13.8
		10/8/09	7.29	20.8	593	13.4
		1/25/10	7.08	19.0	585	10.7
		4/21/10	7.42	20.5	616	14.4
		4/21/10 DUP	7.42	20.5	616	13.9
		7/14/10	7.45	22.2	577.1	12.1
		10/20/10	7.64	21.2	650	12.1
		1/18/11	7.44	21.0	615.9	13.1
EAST	599796	4/5/11	7.19	20.8	612.5	13.8
		7/12/11	7.23	21.7	595.1	12.7
		10/12/11	7.31	21.4	599.7	15.1
		10/12/11 DUP	7.31	21.4	599.7	15.1
		1/31/12	7.24	20.0	610	12.8
		4/11/12	7.53	20.6	609.3	14.6
		7/9/12	7.20	21.1	580	14.2
		10/4/12	7.49	20.4	623.8	15.0
		1/17/13	7.46	20.0	613.0	13.1
		4/9/13	7.54	19.6	597.7	12.2
		7/9/13	7.46	21.2	603.6	12.1
		10/15/13	7.51	20.2	622.6	17.2
		1/14/14	7.54	20.2	632.2	15.5
		1/14/14 DUP	7.54	20.2	632.2	15.5
		4/8/14	7.44	20.5	634.7	15.3
		7/8/14	7.43	20.7	618.8	13.1
		2/1/12	7.39	20.7	390.0	26.7
		4/23/12	7.50	22.5	440.0	26.4
		7/17/12	7.44	22.2	430	26.1
					404.7	
		10/9/12	7.69	21.9		26.1
		10/9/12 DUP	7.69	21.9	404.7	26.0
ECHAVE	219449	1/18/13	7.61	21.7	408.5	25.4
		5/14/13	7.74	22.2	400.2	25.2
		7/17/13	7.81	22.1	406.4	24.3
		10/8/13	7.66	21.4	404.3	24.5
		1/13/14	7.68	21.0	412.4	25.7
		4/10/14	7.67	21.4	409.3	26.4
		7/17/14	7.68	21.6	405.0	26.7
		3/11/08	7.98	21.4	646	21.7
		5/12/08	7.21	21.7	667	24.7
		7/21/08	7.49	23.9	605	19
		10/14/08	7.56	20.4	642	21.8
		1/21/09	7.60	21.1	500	22.7
		4/8/09	7.56	22.4	538	19.7
		7/9/09	7.43	24.3	550	17.5
		7/20/10	7.58	23.3	529.2	21.1
		10/20/10	7.66	21.0	572.1	17.2
		1/17/11	7.43	21.0	576.4	17.3
		4/5/11	7.43	21.5	569.2	16.7
		7/11/11	7.27	23.5	563.1	18.6
		7/11/11 DUP	7.27	23.5	563.1	18.3
EPPELE 641	805641	10/12/11	7.38	20.9	500.0	19.6
		1/31/12	7.68	19.9	560.8	18.2
		4/11/12	7.74	20.6	563.8	19.5
		4/11/12 DUP	7.74	20.6	563.8	19.6
		7/6/12	7.60	21.7	560	18.8
		10/3/12	7.84	20.7	558.8	19.5
		1/17/13	7.76	19.1	559.6	18.8
		4/8/13	7.71	20.4	564.1	17.5
		4/8/13 DUP	7.71	20.4	564.1	17.4
		7/9/13	7.66	21.9	570.1	17.5
		10/15/13	7.86	21.1	682.5	31.9
		1/14/14	7.97	19.1	602.8	29.0
		4/8/14	7.60	19.4	600.2	21.5
		7/8/14	7.65	21.0	596.9	21.6
FLEMING	218386	7/15/10		24.2	1390	573
LLIVIING	410300		6.98			
		2/6/08	7.47	19.6	1301	670
		5/5/08	6.93	23.1	1557	680
		7/14/08	7.00	22.7	1586	680
		10/15/08	7.20	20.5	1560	680
EDANICO (C)	F00101	1/22/09	7.19	20.1	1178	740
FRANCO 101	500101	4/14/09	7.24	23.1	1416	690
		7/13/09	7.30	27.3	1532	670
		10/12/09	7.16	24.2	1493	650
					4500	0.40
		1/26/10	6.91 7.43	18.5	1529	640



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
					" '	(mg/L)
		9/13/12	7.66	25.0	1005	318
		10/5/12	7.63	24.4	1002	324
		11/13/12	7.67	19.8	988.2	349
		12/3/12	7.54	19.4	1001	332
		1/15/13 2/6/13	7.52	13.5	1010 1004	333 353
			7.55 7.4	18.9		
FRANCO 383	221383	3/7/13		20.5	979.9	338
		4/10/13	7.7 7.69	20.4	1000	335
		7/10/13		25.7	1018	335
		10/16/13	7.63 7.68	21.9	1018 1039	350 345
		1/14/14 4/8/14		20.1 24.3	1044	
		4/8/14 DUP	7.68 7.68			351
		7/14/14	7.63	24.3 26.5	1044 1030	330 349
		2/27/08	6.76			152
			6.74	21.1 22.0	1827 1739	137
		4/21/08 ¹	6.88	22.3	1532	131
		5/14/08 ¹	6.74	22.0	1788	111
		6/23/08 ¹				
		7/29/081	6.74 M	22.2	1989	152
		8/28/08 ¹		21.6	1889	137
		9/23/081	6.82 6.80	21.9	1821 1940	137 145
		10/22/08	6.80	21.4		
		1/21/09		21.2	1481	82
		4/9/09	6.78	21.5	1695	138
FULTZ	212447	7/13/09	7.04	23.4	1452	81
		10/8/09	7.00	21.6	1262	72
		10/8/09 DUP	7.00	21.6	1262	71.8
		1/25/10	7.11	21.8	1282	66.7
		4/20/10	7.32	21.2	1202	68.3
		7/14/10	7.75	22.2	1132	57.0
		10/20/10	7.27	20.5	1091	54.7
		1/18/11	7.23	20.4	1136	56.9
		4/5/11	7.08	22.1	1082	49.5
		4/5/11 DUP	7.08	22.1	1082	51.7
		8/25/11	6.45	23.3	940	50.6
		10/12/11	7.22	21.7	870	48.5
GALLANT	502527	2/11/08	7.46	20.2	604	17.9
		7/23/08	7.26	21.2	925	20.9
		2/4/08	7.61	22.7	479	37.8
		5/5/08	7.26	24.9	468	35.8
		7/15/08	7.63	25.6	480	37.4
		10/15/08	7.65	24.1	472	36
		1/28/09	7.69	23.4	368	37.4
		4/15/09	7.83	24.1	412	36.9
		7/16/09	7.56	25.1	445	
		10/14/09	7.58		440	35.7
				25.2	446	36.1
		2/2/10	7.79	22.8	465	36.1 35.1
		2/2/10 4/22/10	7.79 7.84	22.8 23.7	465 464.1	36.1 35.1 36.9
		2/2/10 4/22/10 7/20/10	7.79 7.84 7.57	22.8 23.7 25.3	465 464.1 458.2	36.1 35.1 36.9 38.8
		2/2/10 4/22/10 7/20/10 10/19/10	7.79 7.84 7.57 8.23	22.8 23.7 25.3 25.4	465 464.1 458.2 510	36.1 35.1 36.9 38.8 37.9
		2/2/10 4/22/10 7/20/10 10/19/10 1/19/11	7.79 7.84 7.57 8.23 7.82	22.8 23.7 25.3 25.4 24.1	465 464.1 458.2 510 463.4	36.1 35.1 36.9 38.8 37.9 35.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP	7.79 7.84 7.57 8.23 7.82 7.82	22.8 23.7 25.3 25.4 24.1 24.1	465 464.1 458.2 510 463.4 463.4	36.1 35.1 36.9 38.8 37.9 35.7 35.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11	7.79 7.84 7.57 8.23 7.82 7.82 7.76	22.8 23.7 25.3 25.4 24.1 24.1 23.4	465 464.1 458.2 510 463.4 463.4 467.4	36.1 35.1 36.9 38.8 37.9 35.7 35.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0	465 464.1 458.2 510 463.4 463.4 467.4 457.40	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2 22.7	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2 22.7 24.0	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38 39.2
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2 22.7 24.0 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38 39.2 33.5 37.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/3/12 7/11/12 DUP	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 7.52	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9	465 464.1 458.2 510 463.4 467.4 467.4 457.40 400.0 469.5 460.0 520 520	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 23.1	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520 472.9	36.1 35.1 36.9 38.8 37.9 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 7.52 8.09 7.83	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 24.9 23.1 23.7	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2 39.1 38.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 1/19/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 7.52 8.09 7.83 7.79	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 23.1 23.7 23.4	465 464.1 458.2 510 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8	36.1 35.1 36.9 38.8 37.9 35.7 35.7 36.8 37.7 38 39.2 33.5 37.7 37.2 39.1 40
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 11/9/11 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.9	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 23.1 23.7 23.4 25.0	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 520 472.9 471.5 469.5	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2 39.1 38.7
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13	7.79 7.84 7.57 8.23 7.82 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.78	22.8 23.7 25.3 25.4 24.1 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 23.1 23.7 23.4 25.0 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 520 472.9 470.8 471.5 469.5 469.5 469.5	36.1 36.1 36.9 38.8 37.9 35.7 35.7 35.8 39.2 33.5 37.7 37.2 39.1 38.7 40 36.7 38.8
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 11/19/11 11/19/11 11/19/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 11/17/14	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 7.52 8.09 7.83 7.79 7.9 7.78 7.81	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 23.1 23.7 23.4 25.0 24.9 24.9 24.9 23.1 23.7 23.4 25.0 24.9	465 464.1 458.2 510 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8 471.5 469.5 476.7	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 39.2 33.5 37.7 37.2 39.1 40 36.7 40 38.8
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 1/19/11 1/19/11 10/11/11 2/2/12 4/13/12 7/11/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 1/17/14	7.79 7.84 7.57 8.23 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.9 7.78 7.81 7.74	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 23.1 23.7 23.7 23.4 25.0 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520 472.9 470.8 471.5 469.5 470.7	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 37.7 38.3 39.2 33.5 37.7 37.2 39.1 38.7 40 36.7 38.8
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 1/17/14 4/15/14 5/2/108	7.79 7.84 7.57 8.23 7.82 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.78 7.81 7.74 7.08	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 23.1 23.7 23.4 25.0 24.9 23.1 23.7 23.4 25.0 24.9 23.1 23.7 23.4 25.0 24.9 23.1 23.7 23.4 25.0 24.9 25.0 24.9 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 520 520 472.9 470.8 471.5 469.5 470.7 856	36.1 36.1 36.9 38.8 37.9 35.7 35.7 35.8 39.2 33.5 37.7 37.2 39.1 38.7 40 40.4 40.4
GARNER 635	587635	2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 1/19/11 1/19/11 1/19/11 10/11/11 10/11/11 2/2/12 4/13/12 7/11/12 DUP 10/5/12 1/11/12 DUP 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 11/17/14 4/15/14 5/21/08 8/15/08	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 7.52 8.09 7.83 7.79 7.9 7.78 7.81 7.74 7.08 7.02	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 24.9 23.1 23.7 23.4 25.0 24.9 24.9 22.7 24.9 23.1 23.7 23.4 25.0 24.9 24.9 25.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	465 464.1 458.2 510 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8 471.5 469.5 476.7 473.6 470.7 856 915	36.1 35.1 36.9 38.8 37.9 35.7 35.7 35.8 39.2 33.5 37.7 37.2 39.1 40 36.7 38.8 41 40.4 199
		2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 1/19/11 1/19/11 1/19/11 1/19/11 10/11/11 2/2/12 4/13/12 7/11/12 7/11/12 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 11/17/14 4/15/14 5/21/08 8/15/08 10/29/08	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.9 7.78 7.78 7.78 7.78 7.79 7.79	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.9 24.9 23.1 23.7 23.4 25.0 24.9 24.9 23.1 23.7 23.4 25.0 24.9 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8 471.5 469.5 470.7 856 915 897	36.1 35.1 36.9 38.8 37.9 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2 39.1 40 40.4 199 178 216
GARNER 635 GGOOSE 547	587635 628547	2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 1/19/11 1/19/11 DUP 4/6/11 7/15/11 10/11/11 2/2/12 4/13/12 7/11/12 7/11/12 DUP 10/5/12 11/11/13 4/15/13 7/10/13 10/11/13 11/17/14 4/15/14 5/21/08 8/15/08 10/29/08 2/24/09	7.79 7.84 7.57 8.23 7.82 7.82 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.9 7.78 7.81 7.74 7.08 7.02 7.06	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.0 24.9 23.1 23.7 23.4 25.0 24.9 23.1 23.7 23.4 25.0 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 520 472.9 470.8 470.7 469.5 470.7 856 915 897 851	36.1 35.1 36.9 38.8 37.9 35.7 35.8 37.7 38.3 39.2 33.5 37.7 37.2 39.1 38.7 40 40.4 199 178 216
		2/2/10 4/22/10 7/20/10 10/19/10 11/19/11 1/19/11 1/19/11 1/19/11 1/19/11 10/11/11 2/2/12 4/13/12 7/11/12 7/11/12 10/5/12 1/11/13 4/15/13 7/10/13 10/11/13 11/17/14 4/15/14 5/21/08 8/15/08 10/29/08	7.79 7.84 7.57 8.23 7.82 7.76 7.19 7.57 7.38 7.62 7.52 8.09 7.83 7.79 7.9 7.78 7.78 7.78 7.78 7.79 7.79	22.8 23.7 25.3 25.4 24.1 23.4 25.0 24.2 22.7 24.9 24.9 23.1 23.7 23.4 25.0 24.9 24.9 23.1 23.7 23.4 25.0 24.9	465 464.1 458.2 510 463.4 463.4 467.4 457.40 400.0 469.5 460.0 520 520 472.9 470.8 471.5 469.5 470.7 856 915 897	36.1 35.1 36.9 38.8 37.9 35.7 35.8 37.7 38 39.2 33.5 37.7 37.2 39.1 40 40.4 199 178 216



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/4/08	7.43	25.7	417	20.3
		5/22/08	7.06	25.3	647	43.3
		8/4/08	7.10	26.8	673	36.1
		11/12/08	7.21	25.2	478	34.9
		2/26/09	7.05	26.5	603	54.8
		5/5/09	6.91	28.1	682	43.9
GL-03	539782	8/1/09	7.12	27.4	768	43.1
		11/10/09	6.96	27.0	692	49
		3/2/10	7.36	24.9	693	43.4
		3/2/10 DUP	7.36	24.9	693	45.1
		4/9/10	6.17	25.6	556	48.1
		7/7/10	6.48	26.3	546	44.4
HARDT	NR	2/1/12	6.57	24.1	559	42.0
ПАКИ	INK	2/5/13 2/27/08	7.15 6.93	17.5 22.1	670.6 1359	17.7 510
		5/7/08	6.88	22.3	1532	670
		7/14/08	6.88	23.1	1719	690
		10/16/08	6.98	22.4	1624	692
		1/28/09	6.82	21.3	1220	580
		4/15/09	7.07	21.7	1423	700
		7/14/09	6.78	22.6	1551	670
		10/15/09	6.75	22.7	1487	670
		10/15/09 DUP	6.75	22.7	1487	780
		3/2/10	7.12	19.8	1575	580
		8/31/11	6.64	22.3	1772	893
HOBAN	805290	12/14/11	6.68	20.2	1870	944
		2/1/12	6.74	20.9	1900	993
		4/19/12	6.81	21.5	1805	868
		7/11/12	6.86	21.4	1906	1110
		10/17/12	6.74	22.0	1846	1040
		2/15/13	6.64	20.7	1934	954
		5/8/13	6.6	21.4	1903	1060
		8/13/13	6.85	21.6	1925	1030
		11/1/13	6.74	21.0	1920	1070
		2/10/14	6.64	21.0	1950	991
		5/7/14	6.69	21.1	1958	1030
		7/21/14	6.69	21.6	1903	1030
		8/14/12	8.35	26.3	629.3	69.2
		10/16/12 2/6/13	8.18 8.18	26.6 24.1	648.3 650.3	68.1 71.9
		4/9/13	8.2	24.1	621	67.5
		7/12/13	8.25	26.8	624.9	67.9
HOWARD 312	221312	10/16/13	8.12	25.6	623.7	70.2
		1/8/14	8.22	24.8	620.1	70.8
		4/10/14	8.14	26	621.7	66.1
		4/10/14 DUP	8.14	26	621.7	68.2
		7/14/14	8.16	26.6	618.3	69.1
		3/4/08	7.06	20.4	1280	571
		5/8/08	6.95	21.0	1494	673
		7/14/08	7.00	21.1	1566	610
		10/15/08	7.00	20.6	1598	683
		1/28/09	6.82	21.0	1203	640
		1/28/09 DUP	6.82	21.0	1203	640
		4/15/09	7.02	21.5	1397	620
		7/15/09	7.16	21.5	1539	640
		10/12/09	6.89	21.4	1414	600
		1/27/10 1/27/10 DUB	7.35	20.0	1714	440 520
		1/27/10 DUP 4/21/10	7.35 7.16	20.0 20.8	1714 1490	520 710
		7/19/10 10/18/10	6.94 6.47	24.6 21.4	1350 1420	548 568
		1/17/11	7.12	19.8	1370	520
HOWARD NR	NR	4/11/11	7.12	20.6	1489	616
	,	8/26/11	7.11	23.2	1160	498
		10/11/11	7.1	21.0	1220	545
		10/11/11 DUP	7.1	21.0	1220	538
		2/1/12	7.29	20.6	1367	630
		4/13/12	6.99	21.2	1508	632
		9/13/12	7.12	21.9	1576	699
		10/16/12	7.06	21.1	1417	576
		2/6/13	7.06	20.3	1499	679
		4/9/13	7.38	19.4	1319	521
		7/12/13	7.40	21.6	1430	590
		10/16/13	7.15	20.3	1319	522
		1/8/14	7.24	20.3	1267	462
		4/10/14	7.23	20.6	1262	471
		7/14/14	7.18	21.1	1300	496
		7/14/14 DUP	7.18	21.1	1300	495



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/6/08	7.70	19.0	378	6.8
KEEFER		5/6/08	7.19	20.3	512	9
		7/16/08	7.21	21.4	539	8
		10/28/08	7.32	20.1	534	21.2
		1/28/09	7.42	19.5	356	6.1
		4/16/09	7.29	20.0	452	7.7
	209744	7/14/09	7.35	22.1	533	7
		10/13/09	7.24	20.7	516	8.7
		1/26/10	7.15	18.8	483	7.3
		4/20/10	7.44	20.5	540.9	8.77
		7/15/10	7.50	22.2	535.8	8.84
		10/19/10	6.72	20.2	470	7.89
		1/18/11	7.45	20.6	450	7.24
		4/6/11	7.48	19.1	546.2	8.04
		7/18/11	7.19	23.2	492.3	7.79
		10/11/11	7.39	20.7	486.9	7.98
		2/6/12	7.36	20.3	482.0	6.84
		4/23/12	7.23	21.6	500	7.14
		7/17/12	7.40	21.0	500	7.29
		10/9/12	7.58	20.1	506.6	8.47
		1/10/13 4/18/13	7.55 7.58	19.3 20	466.3 475.9	6.37 7.3
		7/11/13	7.58	20.8	485.1	7.23
		7/11/13 7/11/13 DUP	7.67	20.8	485.1	7.24
		10/7/13	7.53	20.6	458.9	6.39
		1/7/14	7.61	19.7	464.8	6.54
		4/9/14	7.59	20.2	473.3	6.61
		7/10/14	7.49	21.6	460.5	6.66
		8/26/11	7.12	25.1	1390	669
		9/26/11	6.63	22.1	1502	638
		11/22/11	7.29	21.0	1536	687
		2/1/12	7.42	20.8	1557	705
		4/13/12	7.15	21.8	1560	668
		7/13/12	6.86	22.3	1730	650
MARCELL	NR	10/17/12	7.18	21.3	1546	660
		10/17/12 DUP	7.18	21.3	1546	657
		2/6/13	7.25	19.8	1553	714
		2/6/13 DUP	7.25	19.8	1553	714
		4/10/13	7.07	19.9	1578	695
		7/15/13	7.09	21.4	1617	724
		2/20/08	7.21	21.1	1435	720
		5/6/08	6.77	21.6	1668	737
		7/15/08	6.91	22.3	1775	700
		10/15/08	6.82	21.3	1686	703
		1/28/09	6.85	21	1274	660
		4/15/09	7.04	21.3	1472	657
MCCONNELL 265		7/15/09	7.01	22.2	1607	662
		10/12/09	6.77	21.7	1594	666
		1/26/10	6.71	21.5	1641	685
	539265	4/22/10	6.95	20.1	1691	811
		7/21/10	6.86	23.5	1560	805
		10/18/10	6.97	22.0	1704	775
		1/19/11	7.38	20.6	1610	711
		4/8/11	7.04	19.8	1775	810
		7/12/11 10/11/11	6.60 7.18	23.7 21.8	1702 1590	790 845
		2/7/12	7.16	20.6	1842	847
		4/11/12	6.82	21.4	1781	833
		7/6/12	6.88	22.4	1827	851
		10/8/12	7.07	20.9	1862	934
		1/10/13	6.89	20.9	1854	902
		1/10/13 DUP	6.89	20.9	1854	889
		4/18/13	7.11	20.4	1889	884
		7/10/13	7.14	22.1	1897	898
		10/14/13	7.00	21.0	1911	908
		1/8/14	7.23	20.9	1942	985
		4/14/14	6.99	20.7	1913	963
		7/14/14	6.95	21.8	1941	975
		7/27/12	8.25	26.5	510.0	41
		10/8/12	8.12	25.3	517.3	43.4
		1/15/13	8.06	24.5	512.6	37.4
	221459	4/10/13	8.14	23.5	487.0	35.5
MCCONNELL 459		7/10/13	8.10	25.5	480.7	34.5
		10/14/13	8.04	24.9	486.7	34.6
		1/8/14	8.20	23.7	489.4	37.1
	· ·	4/14/14	8.08	24.6	474.3	35.9
				25.1	465.7	33.0



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/5/08	7.27	21.6	1055	(mg/L) 317
		5/15/08	7.12	22.8	1055	329
		7/31/08	7.16	22.5	1078	317
		10/20/08	7.24	22.2	1080	305
		10/20/08 DUP	7.24	22.2	1080	326
		2/11/09	7.12	21.3	818	321
		4/20/09	7.22	23.2	845	313
		7/15/09	7.41	22.9	1031	293
		7/15/09 DUP	7.41	22.9	1031	309
METZLER	35-71891	10/14/09	7.1	22.7	989	315
WEIZEEK	5555 .	2/1/10	7.22	21.7	1021	286
		5/18/10	7.56	21.0	1053	330
		7/16/10	7.20	24.1	1007	330
		10/19/10 1/19/11	7.15 7.55	22.6 21.1	1006 930	319 298
		4/4/11	7.03	23.3	1018	323
		7/12/11	7.07	22.3	993.0	312
		10/12/11	7.27	22.1	910	301
		2/7/12	7.36	21.5	1019	326
		4/12/12	7.34	21.1	1009	320
		2/20/08	7.69	22.2	362	7.1
		5/8/08	7.09	22.4	432	7.5
		7/16/08	7.34	23.0	482	9.8
		10/29/08	7.32	22.4	452	19.2
		1/29/09	7.11	21.7	328	6.6
		4/16/09	7.40	22.1	374	6.4
		7/15/09	7.44	23.3	439	5.8
		10/13/09	7.36	22.6	429	7.1
		1/26/10	7.54	19.6	423	6.3
		4/22/10 7/15/10	7.47 7.44	20.6 24.1	433 431.3	7.40 7.54
		7/15/10 DUP	7.44	24.1	431.3	7.54
		10/19/10	6.79	22.1	430	7.11
MOORE	538847	1/18/11	7.48	21.1	390	6.42
	000011	4/6/11	7.39	21.4	426.3	6.70
		7/13/11	6.91	23.2	423.4	7.62
		10/11/11	7.31	22.5	419.0	7.31
		1/31/12	7.35	21.7	430	7.21
		4/23/12	7.34	22.8	470	6.99
		4/23/12 DUP	7.34	22.8	470	7.05
		7/17/12	7.36	22.9	430	7.01
		7/17/12 DUP	7.36	22.9	430	6.99
		10/8/12	7.64	21.4	433.2	7.51
		1/10/13	7.50	20.8	439.9	7.16
		4/19/13	7.68	21.6	434.7	7.25
		7/11/13 10/7/13	7.56 7.59	22.9 21.5	442.2 431.8	7.14 6.99
	+	7/24/08	7.35	26.5	563	50.2
NESS	509127	10/16/08	7.47	21.4	542	48.9
		1/26/09	7.39	17.2	422	52.3
		5/11/09	7.52	28.8	472	45.9
		8/11/09	7.56	28.7	525	39.8
		11/12/09	7.53	24.5	537	51.3
		2/2/10	7.67	19.7	535	48.7
		4/21/10	7.70	23.5	518.9	42.1
		7/19/10	7.58	28.9	524.7	48.1
		1/18/11	7.49	21.8	536.6	50.1
		7/12/11	7.48	26.3	520.0	43.5
		2/3/12	7.58	21.1	538.2	49.0
		7/10/12	7.20	26.8	380	40.1
		7/10/12 DUP 1/9/13	7.20 7.57	26.8 19.1	380 549.6	39.2 53.9
		7/8/13	7.57	27.9	549.6	46.8
		1/6/14	7.61	20.3	542.4	53.4
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TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/5/08	6.70	19.9	1317	310
		5/13/08	6.67	23.0	1445	272
		7/24/08	6.68	24.2	1539	274
		10/23/08	6.57	23.2	1643	356
		1/19/09	6.38	22.9	1098	322
		4/7/09	6.56	23.8 24.6	1375	303 260
		7/8/09	6.55 6.48	24.6	1405 1442	281
		10/5/09	6.79	20.3	1450	289
		1/20/10 4/19/10	6.81	22.4	1446	307
		7/19/10	6.77	24.6	1438	309
		10/18/10	6.08	24.6	1430	280
		1/19/11	6.84	22.3	1446	266
NOTEMAN	212483	4/4/11	6.72	22.9	1446	276
		4/4/11 DUP	6.72	22.9	1446	279
		7/11/11	6.78	23.9	1406	272
		10/11/11	6.96	23.4	1250	286
		2/3/12	6.68	21.3	1370	301
		4/23/12	6.68	24.0	1580	291
		7/9/12	6.57	24.7	1360	265
		7/9/12 DUP	6.57	24.7	1360	265
		10/4/12	6.80	23.6	1412	287
		1/17/13	6.69	23.3	1417	288
		4/8/13	6.90	22.3	1409	280
		7/9/13	6.89	24.3	1400	278
		10/14/13	6.75	23.2	1528	355
		1/10/14	6.83	22.2	1440	311
		4/10/14	6.84	23.2	1426	301
		7/7/14	6.80	23.2	1423	289
NOTEMAN HOUSE	212483	2/3/12	7.06	13.5	1520	324
NSD-02	527587	2/5/08	ND	ND	ND	43
NOD-02	321301	7/7/08	8.02	21.0	609	44
NSD-03	527586	2/5/08	ND	ND	ND	70.7
1100 00	027000	7/7/08	7.64	21.0	570	58.9
		10/27/08	7.47	22.2	438	5.1
		2/12/09	7.58	21.6	330	6.6
		4/23/09	7.39	23.8	373	6.4
		7/21/09	7.62	23.9	408	5
		10/21/09	7.32	22.6	436	6.8
		2/3/10	7.68	19.6	423	8.5
		4/21/10	7.57	22.1	413	7.26
		7/20/10	7.36	23.7	412.5	6.87
		10/19/10	7.42	22.5	416.2	7.39
		1/18/11	7.47	23.2	390	6.43
		4/6/11	7.27	22.9	413.5	6.4
NII 10 00	500044	7/15/11	7.03	22.5	416.3	7.24
NWC-02	562944	10/13/11	7.45	21.9	370	7.31
		1/30/12	7.39	21.2	431.3	7.78
		4/25/12	7.42	22.4	370	8.42
		7/18/12	7.33	22.5	430	6.99
		10/10/12	7.58	21.7	423.9	7.46
		1/10/13	7.58	21.8	396.4	9.02
		4/17/13 7/12/13	7.64 7.65	21.2 22.0	426.2 429.3	7.52 6.91
		10/10/13	7.65	21.2	429.3	7.05
		10/10/13 10/10/13 DUP	7.49	21.2	433.4	7.05
		1/13/14	7.6	21.2	426.7	7.14
		4/7/14	7.59	21.3	432.9	7.34
		7/10/14	7.57	22.0	431.6	7.65
		3/4/08	ND	ND	ND	560
NWC-03	203321	6/9/08	ND	ND	ND	524
		10/27/08	7.07	21.9	1374	489
		2/12/09	7.06	20.2	1023	412
		4/23/09	6.98	21.9	1129	466
		4/23/09 DUP	6.98	21.9	1129	460
		7/21/09	7.21	22.9	1194	458
		10/21/09	6.94	21.8	1224	444
		2/3/10	7.24	20.7	1214	444
		4/21/10	7.22	21.6	1178	433
		7/20/10	7.04	22.8	1229	477
		10/19/10	7.22	21.3	1172	432
		1/18/11	7.09	22.8	1120	386
		4/6/11	7.19	21.7	1114	361
		7/15/11	6.91	21.8	1094	386
		10/13/11	7.23	21.6	960	353
		1/30/12	7.15	21.5	1061	379
		4/25/12	7.17	21.6	920	346
		4/25/12 DUP	7.17	21.6	920	347
		7/18/12	7.05	22.1	1080	354
		10/10/12	7.31	21.1	1029	354
		10/10/12 DUP	7.31	21.1	1029	353



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		0/4/00	ND	ND	ND	(mg/L)
		3/4/08	ND ND	ND	ND	240
		6/9/08		ND 25.0	ND	231
		10/27/08 1/22/09	7.32 7.23	25.0 22.9	856 688	162 184
		2/12/09	7.20	19.8	699	181
		2/12/09 DUP	7.20	19.8	699	198
		3/11/09	7.15	23.4	846	197
		4/23/09	7.21	24.1	797	188
		5/28/09	7.01	24.1	933	210
		6/24/09	6.93	25.6	792	169
		7/21/09	7.48	24.3	859	193
		8/19/09	7.12	24.5	906	183
		9/23/09	7.16	23.8	953	202
		10/21/09	7.18	24.3	875	191
		11/18/09	7.24	22.9	909	191
		12/16/09	7.28	22.3	926	193
		2/3/10	7.49	22.3	844	167
		3/8/10	7.33	22.5	880	182
		4/21/10	7.34	22.8	913	218
		5/18/10	7.68	25.8	901.3	210
		6/15/10	7.31	24.5	917.5	212
		7/20/10	7.28	28.3	873.2	188
		8/25/10	7.55	24.8	820.9	196
		9/29/10	7.38	24.5	920.2	205
		10/19/10	7.34	23.6	870.2	195
		11/4/10	7.53	23.9	853.2	197
		12/14/10	7.41	23.6	856.8	182
		1/18/11	7.31	24.1	860	194
		2/17/11	7.46	22.3	848.6	169
		3/17/11	7.44	24.1	888.1	182
		4/5/11	7.32	23.4	878.7	196
		5/11/11	7.32	23.1	868.1	175
		6/17/11	7.28	23.7	856.3	204
		7/15/11 8/25/11	7.06 7.32	23.5 25.1	875.1 780	202 195
		9/26/11	6.56	26.2	875.4	198
		9/26/11 DUP	6.56	26.2	875.4	199
NWC-04	551849	10/13/11	7.46	23.3	770	198
		11/22/11	7.36	22.9	853.5	201
		12/8/11	7.33	22.3	872.2	207
		1/30/12	7.34	23.4	914.4	217
		2/17/12	7.45	22.9	898.1	203
		3/15/12	7.39	23.9	888.2	207
		4/25/12	7.16	23.4	870	204
		5/22/12	7.25	23.9	970	178
		6/6/12	7.27	24.4	1040	195
		7/18/12	7.25	23.7	880	205
		8/28/12	7.49	24.2	893.3	208
		9/13/12	7.40	23.9	883.7	205
		10/10/12	7.48	23.2	883.6	207
		11/13/12	7.56	21.7	849.8	211
		12/3/12	7.40	23.0	898.6	208
		1/10/13	7.37	22.2	903.1	210
		2/7/13	7.54	23.0	917.5	228
		3/7/13	7.49	22.4	892.4	222
		4/17/13	7.43	22.6	903.8	223
		5/14/13	7.53	23.2	881.7	214
		6/5/13	7.29	33.9	862.7	201
		7/12/13	7.29	23.5	897.2	211
		7/12/13 DUP 8/9/13	7.29 7.43	23.5 23.5	897.2 898.6	200 207
		9/5/13	7.56	23.8	893.6	214
		10/10/13	7.39	22.6	873.7	197
		11/6/13	7.58	21.8	852.3	202
		12/3/13	7.50	23.1	843.4	199
		1/13/14	7.12	21.9	885.6	197
		2/5/14	7.46	22.4	833.3	198
		3/5/14	7.59	22.8	813.3	168
		4/7/14	7.49	22.9	834.2	187
		5/13/14	7.56	23.4	819.8	186
		6/23/14	7.62	24.5	806.7	188
		7/10/14	7.57	23.8	826.2	194
	1					
		8/11/14	7.59	23.5	824.0	187



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		6/9/08	ND	ND	ND	(mg/L) 7.2
		10/27/08	7.35	23.3	414	6.4
		2/12/09	7.54	21.8	306	8
		4/23/09	7.30	24.5	354	7.3
		7/21/09	7.63	23.5	388	6.4
		10/21/09	7.26	23.2	413	8
		2/3/10	7.61	20.5	404	7.5
		2/3/10 DUP	7.61	20.5	404	7.4
		4/21/10	7.54	22.4	387	8.49
		7/20/10	7.33	26.0	388.6	8.59
		10/19/10	7.49	22.7	394.5	8.32
		1/18/11	7.45	23.4	380	8.24
		4/6/11	7.42	23.1	388.3	7.76
NWC-06	575700	4/6/11 DUP	7.42	23.1	388.3	7.73
		7/15/11	7.09	22.9	394.3	8.36
		10/13/11	7.51	22.3	340	8.48
		1/30/12 4/25/12	7.47 7.34	22.1	402.7 410	8.44 7.11
		7/18/12	7.39	22.5 22.8	380	8.60
		10/10/12	7.62	21.9	393.6	9.33
		1/10/13	7.47	21.3	429.2	7.55
		4/17/13	7.66	21.1	404.1	8.82
		7/12/13	7.59	22.4	404.1	8.40
		10/10/13	7.56	21.6	403.3	8.38
		1/13/14	7.64	21.3	401.8	8.78
		4/7/14	7.65	21.7	403.7	8.62
		7/10/14	7.68	22.4	405.9	8.97
		7/10/14 DUP	7.68	22.4	405.9	8.99
		2/25/08	7.35	22.4	508	16.4
		5/13/08	7.22	22.2	576	17.2
		7/22/08	7.24	22.9	618	17.7
		7/22/08 DUP	7.24	22.9	618	17.5
		10/16/08	7.39	22.4	595	15.9
		1/20/09	7.33	22.4	469	16
		4/7/09	7.25	24.0	542	17
	643436	8/18/09	7.16	24.6	643	17.4
OSBORN		10/5/09	7.14 7.47	22.9	599	17.9
		1/21/10 4/19/10	7.60	19.5 21.5	591 601.9	15.6 19.3
		7/12/10	7.69	24.2	594.0	18.4
		7/12/11	7.87	29.8	575.9	19.5
		2/3/12	8.15	15.3	390	19.2
		1/8/13	7.88	10.5	544.4	20.4
		7/8/13	7.56	39.2	510.3	19.2
		1/10/14	7.89	18.1	580.5	18.7
		7/7/14	7.84	29.2	496.3	18.0
		2/14/08	7.91	17.5	435	15.9
		5/13/08	7.92	22.9	508	16.6
		7/22/08	7.64	25.8	548	16.2
		10/16/08	7.61	17.0	527	15.9
		1/20/09	7.33	19.4	441	14.3
		4/8/09	7.65	19.1	475	15.4
		7/8/09	7.47	27.2	521	14.3
		10/5/09	7.81	22.2	538	16.2
	}	1/20/10 4/22/10	7.72 7.97	11.9 13.6	510 520	13.8 16.7
		7/12/10	7.62	30.2	518.8	15.7
		10/18/10	8.13	22.1	511.9	16.5
		1/18/11	7.24	17.1	517.0	15.7
DALMES	F70010	4/5/11	8.04	19.0	499.2	15.8
PALMER	578819	7/12/11	7.65	26.6	517.6	16.4
		10/11/11	7.85	22.0	510.4	17
		2/3/12	7.94	10.0	521.4	17.1
		4/11/12	7.52	18.7	519.8	17.3
		7/10/12	7.30	27.9	390	16.6
			8.09	25.7	526.7	17.6
		10/3/12				
		10/3/12 DUP	8.09	25.7	526.7	17.5
		10/3/12 DUP 1/9/13	8.09 7.9	17.5	532.8	16.8
		10/3/12 DUP 1/9/13 4/8/13	8.09 7.9 8.07	17.5 18.4	532.8 534.1	16.8 17
		10/3/12 DUP 1/9/13 4/8/13 7/17/13	8.09 7.9 8.07 7.74	17.5 18.4 22.3	532.8 534.1 531.0	16.8 17 17.2
		10/3/12 DUP 1/9/13 4/8/13 7/17/13 10/14/13	8.09 7.9 8.07 7.74 8.03	17.5 18.4 22.3 20.1	532.8 534.1 531.0 533.1	16.8 17 17.2 16.9
		10/3/12 DUP 1/9/13 4/8/13 7/17/13	8.09 7.9 8.07 7.74	17.5 18.4 22.3	532.8 534.1 531.0	16.8 17 17.2



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		4/21/08	6.80	20.5	1228	410
		7/21/08	6.95	21.9	1390	444
		10/13/08	6.86	21.2	1386	480
		10/13/08 DUP	6.86	21.2	1386	500
		1/22/09	6.92	19.7	997	397
		4/9/09	6.81	21.7	1228	431
		4/9/09 DUP	6.81	21.7	1228	426
		7/9/09	6.89	22.3	1469	490
		10/6/09	6.83	21.1	1328	472
		1/21/10	7.06	18.8	1291	318
		4/20/10	7.25	21.0	1528	608
		7/20/10	6.90	24.0	1560	706
		10/18/10	6.38	22.1	1530	568
		7/14/11	6.93	23.3	1070	223
PANAGAKOS	35-76413	8/25/11	7.17	23.4	1170	222
		2/6/12	6.98	20.8	1017	166
		2/29/12	7.09	20.3	1080	362
		3/15/12	7.02	21.4	1138	282
		4/12/12	6.90	20.9	1265	346
		4/12/12 DUP 7/9/12	6.90	20.9 22.2	1265 1140	352 292
		11/27/2012	6.82 7.51	22.2	1140	292
		2/6/13	7.05	19.9	1054	212
		4/9/13	7.24	19.7	1105	232
		7/10/13	7.26	21.4	1218	329
		10/15/13	7.14	20.5	1109	240
		1/10/14	7.23	19.6	1079	227
		4/16/14	7.17	20.4	1103	228
		7/17/14	7.13	21.4	1357.0	467
		2/11/08	7.08	21.8	1067	360
		5/15/08	7.10	21.8	1200	405
		7/31/08	7.00	22.4	1248	423
		7/31/08 DUP	7.00	22.4	1248	404
		10/20/08	7.07	22.9	1246	387
		2/13/09	7.24	22.1	965	405
		4/20/09	7.10	22.6	971	372
		7/20/09	7.17	23.9	1174	375
		10/20/09	6.80	22.5	1188	388
		2/1/10	7.07	21.5	1197	353
		4/22/10	6.91	20.3	1219	417
		7/14/10	7.13	22.2	1201	403
		7/14/10 DUP	7.13	22.2	1201	391
		10/20/10	7.51 7.49	21.4	1270	411 391
PARRA	576415	1/19/11	6.90	20.8	1130	391
FANKA	3/0413	4/4/11 7/12/11	6.90	22.6 23.7	1207 1156	382 404
		10/12/11	7.44	22.3	1070	404
		2/7/12	7.64	21.4	1212	428
		4/13/12	7.49	21.1	1204	402
		4/13/12 DUP	7.49	21.1	1204	390
		7/18/12	7.03	22.6	1210	418
		7/18/12 DUP	7.03	22.6	1210	419
		10/9/12	7.30	21.3	1209	428
		1/11/13	7.64	20.3	1217	413
		4/11/13	7.29	21.2	1206	427
		7/17/13	7.21	21.9	1212	411
		10/18/13	7.18	21.3	1212	406
		1/8/14	7.21	20.8	1221	437
		4/15/14	7.18	21.5	1213	416
		7/21/14	7.30	22.4	1193	432



Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/6/08	7.53	19.9	910	394
		5/7/08	7.08	21.4	1100	391
		7/17/08	6.99	21.9	1209	420
		10/27/08 1/29/09	7.03 7.13	20.8 19.9	1175 847	460 385
		4/14/09	7.13	20.7	1053	411
		7/13/09	7.35	21.5	1165	472
		10/7/09	7.43	21.1	1100	403
		3/8/10	7.72	18.6	1201	406
		4/26/10	7.22	21.9	1224	438
PIONKE 395	613395	7/15/10	7.32	22.3	1158	474
		10/18/10 10/18/10 DUP	7.33 7.33	21.3 21.3	1277 1277	473 487
		1/19/11	7.32	19.9	1222	471
		4/8/11	7.13	19.2	1232	467
		7/12/11	7.30	23.8	1226	500
		10/11/11	6.98	20.8	1100	502
		2/1/12	7.25	17.5	1230	481
		2/1/12 DUP	7.25	17.5	1230	495
		4/12/12	7.17	22.1	1218	508 439
		7/11/12 10/17/12	6.59 7.16	22.9 22.3	1280 1136	419
	+	9/18/12	7.10	23.4	395.8	14
		10/11/12	7.75	22.8	394.7	14.9
		1/9/13	7.79	22.6	389.9	14.3
		4/17/13	7.74	22.1	391.9	14.6
PIONKE 517	221517	7/16/13	7.84	22.9	391.5	13.9
		10/17/13	7.73	22.7	391.5	13.8
		2/5/14	7.75	21.5	394.2	14.9
		4/9/14	7.71	22.9 23.7	400.9	14.0 14.6
		7/11/14 2/20/08	7.76 7.95	20.9	388.9 497	134
		5/19/08	7.40	22.2	585	122
		7/31/08	7.47	22.3	599	117
		10/21/08	7.51	21.4	598	120
	509518	2/13/09	7.62	20.8	473	141
		4/21/09	7.73	22.6	470	124
		7/20/09	7.76	22.9	579	122
POOL		10/20/09	7.22	21.2	577	122
		2/24/10	7.56	22.4	577	110
		4/22/10	7.75	20.2	606.5	130
		7/14/10	7.38 7.79	21.7 21.3	580.9 620	117 115
		10/20/10 1/20/11	7.79	20.5	530	112
		1/20/11 DUP	7.71	20.5	530	114
		4/6/11	7.37	21.6	567.4	114
POWER	624535	2/12/08	7.11	18.9	428	15.5
POWER	024555	7/22/08	7.10	21.7	795	20.2
		1/16/14	7.38	20.9	1004	234
		2/5/14	7.35	20.8	1004	328
		3/5/14	7.39	21.3	991.4	187
POWER 639	222639	4/15/14	7.38 7.40	21.6 21.4	999.4 990.9	249 206
FOWER 039	222039	5/13/14 6/23/14	7.40	21.4	886.4	117
		7/17/14	7.40	22.1	861.3	168
		8/11/14	7.50	21.8	864.9	136
	<u> </u>	9/9/14	7.49	21.7	850.4	105
		2/4/08	7.47	21.7	408	7.6
		= 10.10.0	7.19	20.7	405	8.3
		5/6/08		22.7		
		7/17/08	7.32	24.5	439	8.8
		7/17/08 10/27/08	7.32 7.41	24.5 22.2	439 412	8.8 7.3
		7/17/08 10/27/08 1/29/09	7.32 7.41 7.24	24.5 22.2 22.2	439 412 301	8.8 7.3 8.3
		7/17/08 10/27/08 1/29/09 4/16/09	7.32 7.41 7.24 7.49	24.5 22.2 22.2 22.4	439 412 301 344	8.8 7.3 8.3 7.6
		7/17/08 10/27/08 1/29/09 4/16/09 7/10/09	7.32 7.41 7.24 7.49 7.52	24.5 22.2 22.2 22.4 23.9	439 412 301 344 411	8.8 7.3 8.3 7.6 6.4
		7/17/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09	7.32 7.41 7.24 7.49	24.5 22.2 22.2 22.4	439 412 301 344	8.8 7.3 8.3 7.6
		7/17/08 10/27/08 1/29/09 4/16/09 7/10/09	7.32 7.41 7.24 7.49 7.52 7.30	24.5 22.2 22.2 22.4 23.9 23.8	439 412 301 344 411 388	8.8 7.3 8.3 7.6 6.4 8.4
		7/17/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38	24.5 22.2 22.2 22.4 23.9 23.8 22.4	439 412 301 344 411 388 390	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98
		7/17/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 10/19/10	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7	439 412 301 344 411 388 390 397 420 450	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8
		7/17/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 1/19/10	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.7	439 412 301 344 411 388 390 397 420 450 380	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18
RAMIREZ	216425	7/17/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 10/19/10 1/18/11 4/11/11	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2	439 412 301 344 411 388 390 397 420 450 380 408.5	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18
RAMIREZ	216425	7/17/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 10/19/10 1/18/11 4/11/11 7/18/11	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.7 23.1 23.2	439 412 301 344 411 388 390 397 420 450 380 408.5	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65
RAMIREZ	216425	7/17/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 10/19/10 1/18/11 4/11/11 1/18/11	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7	8.8 7.3 8.3 7.6 6.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55
RAMIREZ	216425	7/17/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 10/19/10 11/18/11 4/11/11 7/18/11 10/12/11	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 10/19/10 1/18/11 1/18/11 10/12/11 10/12/11 1/30/12 4/10/12	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.7 23.1 23.2 25.4 23.3 22.3	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 7/21/10 10/19/10 1/18/11 4/11/11 10/12/11 1/30/12 4/10/12 7/6/12	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.3 22.4 24.2	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5 415.7	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 1/29/09 4/16/09 7/10/09 10/6/09 1/25/10 4/21/10 10/19/10 1/18/11 1/18/11 10/12/11 10/12/11 1/30/12 4/10/12	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.3 24.2 22.5	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 11/29/09 4/16/09 7/10/09 11/25/10 4/21/10 7/21/10 10/19/10 11/18/11 4/11/11 7/18/11 11/30/12 4/10/12 17/6/12	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40 7.32 7.61	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.3 22.4 24.2	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5 415.7	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70 9.14
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 11/25/10 4/21/10 7/21/10 10/19/10 1/18/11 4/11/11 10/12/11 11/30/12 4/10/12 7/6/12 10/8/12 DUP 1/17/13 4/19/13	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40 7.38 7.40 7.32 7.61 7.61 7.61 7.62 7.66	24.5 22.2 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.2 24.2 24.2 22.5 22.5	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5 415.7 412.0	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70 8.97 9.14
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 11/25/10 4/21/10 10/19/10 11/8/11 10/12/11 10/12/11 11/30/12 4/10/12 7/6/12 10/8/12 DUP 1/17/13 4/19/13 7/15/13	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40 7.32 7.61 7.61 7.52	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.2 24.2 24.2 22.5 22.5 22.5 22.1 23.6	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5 415.7 412.0 413.9 416.2	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70 8.97 9.14 9.07
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 11/25/10 4/21/10 10/19/10 11/18/11 4/11/11 7/18/11 10/12/11 1/30/12 4/10/12 10/8/12 10/8/12 10/8/12 10/8/12 10/8/13 10/7/13	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.40 7.38 7.40 7.32 7.61 7.52 7.6 7.58 7.68	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 24.2 22.5 22.5 22.5 22.2 22.1 23.6 22.6	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.0 409.6 413.9 416.2 412.7	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 8.98 10.8 8.18 8.65 8.65 8.80 8.70 8.97 9.14 9.07 8.82 8.63 8.63
RAMIREZ	216425	7/17/08 10/27/08 10/27/08 11/29/09 4/16/09 7/10/09 10/6/09 11/25/10 4/21/10 10/19/10 11/8/11 10/12/11 10/12/11 11/30/12 4/10/12 7/6/12 10/8/12 DUP 1/17/13 4/19/13 7/15/13	7.32 7.41 7.24 7.49 7.52 7.30 7.48 7.45 7.38 7.91 7.52 7.24 7.27 7.40 7.38 7.40 7.32 7.61 7.61 7.52	24.5 22.2 22.4 23.9 23.8 22.4 22.6 25.1 23.7 23.1 23.2 25.4 23.3 22.3 22.2 24.2 24.2 22.5 22.5 22.5 22.1 23.6	439 412 301 344 411 388 390 397 420 450 380 408.5 402.6 412.7 412.2 404.5 415.7 412.0 413.9 416.2	8.8 7.3 8.3 7.6 6.4 8.4 7.8 9.04 9.04 8.98 10.8 8.18 8.65 8.44 8.55 8.80 8.70 8.97 9.14 9.07



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
						(mg/L)
		2/15/08	7.30	19.1	1540	159
		4/21/081	6.92	21.3	1418	125
		5/13/08	7.05	20.9	1418	123
		6/23/08	6.87	21.1	1593	130
		7/29/081	6.98	21.8	1411	120
		8/28/081	6.90	21.1 22.2	1519	129 125
		9/23/08 ¹ 10/22/08	6.96	20.8	1519 1604	145
		1/20/09	6.92	20.6	1355	88
		4/8/09	6.85	21.4	1759	178
		7/9/09	6.93	22.3	1434	126
		10/7/09	6.98	21.3	1288	127
		1/26/10	6.82	20.6	1352	125
		4/20/10	7.14	21.5	1318	134
		7/14/10	7.11	23.8	1313	137
		10/20/10	7.14	19.6	1368	127
RAY	803772	1/17/11	7.04	20.8	1451	132
		1/17/11 DUP	7.04	20.8	1451	125
		4/5/11	7.03	20.8	1387	132
		7/11/11	7.07	22.8	1345	126
		10/12/11	7.06	21.6	1250	130
		1/31/12	7.28	20.5	1360	131
		4/11/12	7.03	20.6	1359	131
		7/6/12	7.11	22.1	1430	129
		10/3/12	7.12	21.1	1464	130
		1/17/13	7.05	19.5	1527	126
		1/17/13 DUP	7.05	19.5	1527	140
		4/8/13	7.32	20	1476	131
		7/9/13	7.18	21.4	1451	128
		10/15/13	7.13	20.8	1487	135
		1/14/14 4/8/14	7.25 7.09	19.2 20.8	1433 1502	133 146
		7/8/14	7.09	21.4	1409	146
		10/19/09	6.89	23.3	1360	590
	573596	11/5/09	6.79	21.9	1418	540
ROGERS 596		2/25/10	6.99	19.6	1603	520
		4/22/10	7.21	18.2	1641	710
		2/7/08	7.45	18.6	601	138
		4/21/08 ¹	7.32	21.4	552	128
		5/8/08 ¹	7.14	21.2	622	141
		6/23/08 ¹	7.06	22.9	660	129
		7/29/08 ¹	6.78	23.1	339	134
		8/28/08 ¹	7.18	21.6	635	128
		9/23/08 ¹	7.24	21.9	599	133
		10/22/08	7.36	21.3	650	144
		2/10/09	7.42	17.9	475	141
		4/29/09	7.52	21.9	506	211
		8/3/09	7.39	24.2	674	150
		7/16/10	7.46	23.9	643.4	169
		10/19/10	7.32	21.1	643.8	154
		10/19/10 DUP	7.32	21.1	643.8	154
ROGERS 803	641803	1/20/11 4/8/11	7.44 7.30	18.1 20.2	610 658.2	143 160
		7/14/11	7.30	20.2	653.5	166
		10/12/11	7.12	23.5	665.3	175
		1/30/12	7.40	20.0	580	173
		4/23/12	7.32	23.9	720	166
		7/13/12	7.26	24.0	820	171
		7/13/12 DUP	7.26	24.0	820	166
		10/10/12	7.41	24.3	671.4	177
		1/15/13	7.37	16.9	681.1	174
		4/15/13	7.57	23.8	698	190
		7/15/13	7.39	23.6	697.8	184
		10/16/13	7.47	25.4	710.6	185
		1/9/14	7.46	21.4	701.8	190
		4/11/14	7.52	26.1	711.3	190
	1	7/18/14	7.48	24.9	709.2	192



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

24/408	Sulfate, dissolved (mg/L)	SC (µS/cm)	Temp (deg C)	pH (SU)	Sample Date	ADWR 55 Registry Number	Well Name
FORCERS E 1577/08 7.18 22.2 415 717/08 7.28 23.0 446 717/08 7.28 23.0 446 717/08 7.28 23.0 24.4 434 271009 7.51 20.7 32.2 27.7 32.2 32.5 361 771309 7.34 22.6 420 361 771309 7.34 22.6 420 420 472/10 7.34 22.6 420 472/10 7.52 20.6 414 421 722/10 7.37 23.8 430 430 109/940 7.80 22.8 460 119/940 7.80 22.8 460 119/940 7.80 22.8 460 119/940 7.80 22.8 460 119/940 7.80 22.8 460 119/940 7.80 22.2 370 4712/2 7718/11 7.12 24.3 418.5 107/311 7.52 22.2 370 4710/12 7.38 20.8 4272 4710/12 7.38 20.8 4272 4710/12 7.38 20.8 4272 4710/12 7.38 20.8 4272 4710/12 7.38 20.8 4272 4710/12 7.35 21.1 421.8 4710/12 7.35 21.1 421.8 4710/12 7.35 21.7 429.0 107/71/2 7.55 21.7 429.0 107/71/2 7.55 21.7 429.0 107/71/3 7.99 22.1 427.7 4717/3 7717/3 7.99 22.1 427.7 4717/3 7.79 22.1 427.7 4717/3 7.79 22.1 427.7 4717/3 7.79 22.1 427.7 4717/3 7.59 22.1 427.7 4717/3 7.59 22.1 427.7 4717/3 7.59 22.1 427.7 4717/3 7.79 2.2 42.8 4718/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/3 4714/4 7.59 22.1 427.7 4717/4 4714/4 7.59 22.1 427.7 4717/4 4714/4 7.59 22.1 4718/4 4714/4 4714/4 4715/4 4714/4 4714/4 4714/4 4714/4 471	4.6	435	21.0	7.40	2/4/08		
ROGERS E 17/17/108 17/18/108 17/18/109 18/18/18/18/18/18/18/18/18/18/18/18/18/1	5.9						
### Total Process 10/27/08 7.38 21.4 434 21/009 7.51 20.7 322 24/16/09 7.48 22.0 361 7/13/09 7.34 22.6 420 10/6/09 7.31 22.3 407 1/25/10 7.52 20.6 414 421/10 7.44 21.1 421 7/21/10 7.37 23.8 430 10/19/10 7.80 22.8 460 1/18/11 7.72/110 7.37 23.8 440 10/19/10 7.80 22.8 460 1/18/11 7.19 22.7 427.2 7/18/11 7.12 24.3 418.5 10/13/11 7.52 22.2 370 1/30/12 7.38 20.8 427.2 4470/12 7.37 22.1 421.8 1/30/12 7.38 20.8 427.2 4470/12 7.37 22.1 421.8 4470/12 7.37 22.1 421.8 4470/12 7.35 22.7 420 10/17/12 7.55 21.7 429.0 11/17/13 7.46 21.5 431.5 4478/13 7.63 21.3 433.5 7/17/13 7.99 22.1 427.7 7/17/14 7.99 21.9 436.9 7/18/12 2.20 995 2.20	7.1	446			7/17/08		
### Affelon	15.7						
1/13/09	5.4	322	20.7	7.51	2/10/09		
10/6/09	4.9	361	22.0		4/16/09		
ROGERS E 1/25/10 1/25/10 1/25/10 1/25/10 1/24 1/21/10 1/37 23.8 1/30 10/19/10 1/30 10/19/10 1/30 22.8 160 1/18/11 1/39 21.5 390 1/18/11 1/39 21.5 390 1/18/11 1/19 22.7 1/22 1/22 370 1/30/12	3.8	420	22.6	7.34	7/13/09		
ROGERS E 216018 2160	5.8	407	22.3		10/6/09		
ROGERS E 216018 7/21/10 7/37 10/19/10 7.80 22.8 460 1/18/11 7.39 21.5 390 4/11/11 7.19 22.7 427.2 427.2 1/18/11 7.19 22.7 427.2 370 1/13/11 7.52 22.2 370 1/30/12 7.37 22.1 421.8 7/17/12 7.32 22.7 420 10/17/12 7.35 22.1 11/17/13 7.46 21.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.5 431.6 431.6 431.7 71/17/13 7.59 22.1 427.7 71/17/13 7.59 22.1 427.7 71/17/14 7.59 21.1 427.7 71/17/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 431.2 71/10/14 7.59 21.4 428.5 5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/22/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 22.3 759 10/28/09 7.05 22.9 10/28/09 7.06 22.9 10/28/09 7.07 1/18/11 7.19 20.2 860 10/3/11 7.19 21.5 810 27/12 7.28 20.7 915.6 27/12 7.28 20.7 915.6 27/12 7.28 20.7 915.6 718/12 6.87 21.6 900 10/9/12 7.18 21.4 880.6 10/13/11 7.21 20.7 885.8	5.1	414	20.6	7.52	1/25/10		
ROGERS E 216018 10/19/10 7.80 22.8 460 1/18/11 7.39 21.5 390 22.7 427.2 7/18/11 7.19 22.7 427.2 7/18/11 7.12 24.3 418.5 10/13/11 7.52 22.2 370 1/30/12 7.38 20.8 427.2 4/10/12 7.37 22.1 421.8 7/17/12 7.32 22.7 420 10/17/12 7.55 21.7 429.0 10/17/12 7.55 21.7 429.0 10/17/13 7.46 21.5 431.5 4/18/13 7.63 21.3 433.5 7/17/13 7.59 22.1 427.7 10/10/13 7.51 21.9 436.9 17/14 7.49 21.0 434.0 4/14/14 7.59 21.4 431.2 7/10/14 7.54 22.4 428.5 2/5/08 7.73 18.2 445 5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/20/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 23.3 759 10/20/08 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 394 4/26/10 7.01 22.5 920.1 7/20/10 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 10/3/11 7.19 21.5 880 10/20/10 7.52 20.7 975.6 27/12 DUP 7.28 20.7 915.6 27/12 20.7 915.6 27/12 7.18 21.4 890.6 10/3/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 10/19/12 7.18	6.04						
ROGERS E 216018 1/18/11 7.39 21.5 390 4/11/11 7.19 22.7 427.2 427.2 427.2 4/11/11 7.12 24.3 418.5 10/13/11 7.52 22.2 370 13/30/12 7.38 20.8 427.2 4/10/12 7.37 22.1 421.8 7/17/12 7.32 22.7 420 10/17/12 7.55 21.7 429.0 11/17/13 7.46 21.5 431.5 4/18/13 7.46 21.5 431.5 4/18/13 7.63 21.3 433.5 7/17/13 7.59 22.1 427.7 7/17/13 7.59 22.1 427.7 10/10/13 7.51 21.9 436.9 17/714 7.49 21.0 434.0 4/14/14 7.59 21.4 431.2 7/10/14 7.54 22.4 428.5 2/5/08 7.73 18.2 445 5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/20/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 22.3 759 8/30/9 7.05 22.9 1029 10/28/09 7.09 20.6 920 2/1/10 7.08 20.9 934 4/26/10 7.08 20.9 934 4/26/10 7.08 20.9 934 4/26/10 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 RUIZ 531770 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 7.28 20.7 915.6 2/7/12 7.28 20.7 915.6 2/7/12 7.28 20.7 915.6 2/7/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.04 21.1 896.5 7/18/12 7.18 21.4 890.6 10/17/13 7.21 20.7 895.8	6.47		23.8		7/21/10		
ROGERS E 216018 4/11/11	5.92						
Title	5.50						
7/18/11 7.12 24.3 418.5 10/13/11 7.52 22.2 370 1/30/12 7.38 20.8 427.2 4/10/12 7.37 22.1 421.8 7/17/12 7.37 22.1 421.8 7/17/12 7.32 22.7 420 10/17/12 7.55 21.7 429.0 11/17/13 7.46 21.5 431.5 4/18/13 7.66 21.5 431.5 4/18/13 7.69 22.1 427.7 7/17/13 DUP 7.59 22.1 427.7 7/17/13 DUP 7.59 22.1 427.7 10/10/13 7.51 21.9 436.9 17/1/4 7.49 21.0 434.0 4/14/4 7.49 21.0 434.0 4/14/4 7.59 21.4 431.2 7/10/14 7.54 22.4 428.5 2/5/08 7.73 18.2 445 2/5/08 7.73 18.2 445 5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/20/08 7.04 22.0 995 10/20/08 7.04 22.0 995 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.09 20.6 920 2/1/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 20.9 934 4/26/10 7.01 22.5 880 10/20/10 7.52 20.7 970 11/18/11 7.19 20.2 860 10/20/10 7.52 20.7 970 11/18/11 7.19 20.2 860 10/20/10 7.52 20.7 970 11/18/11 7.19 20.2 860 10/3/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 2/7/12 UP 7.28 20.7 915.6 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6	6.13					216018	ROGERS E
1/30/12	6.00						
## A/10/12	5.99						
7/17/12	6.22						
10/17/12	6.31						
1/17/13	5.85						
4/18/13 7.63 21.3 433.5 7/17/13 7.59 22.1 427.7 7/17/13 DUP 7.59 22.1 427.7 10/10/13 7.51 21.9 436.9 17/14 7.49 21.0 434.0 4/14/14 7.59 21.4 431.2 7/10/14 7.54 22.4 428.5 2/5/08 7.73 18.2 445 5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/20/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 22.3 759 8/3/09 7.05 22.9 1029 10/28/09 7.05 22.9 1029 10/28/09 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 10/9/12 7.18 21.4 890.6 10/19/12 7.18 21.4 890.6 10/19/12 7.18 21.4 890.6 10/19/12 7.18 21.4 890.6 10/19/12 7.18 21.4 890.6 1/111/13 7.21 20.7 895.8	6.04						
7/17/13	6.01						
T/17/13 DUP	6.26						
10/10/13	6.05 6.28						
1/7/14	5.8						
## A	6.24						
7/10/14	6.11						
RUIZ 2/5/08	6.41						
5/15/08 7.23 25.9 965 7/30/08 6.99 22.1 999 10/20/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 22.3 759 8/3/09 7.05 22.9 1029 10/28/09 7.09 20.6 920 2/1/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 10/9/12 7.18 21.4 890.6 1/11/1/13 7.21 20.7 895.8	263						
RUIZ 531770 RUIZ 531770 PUZ 2.1 999 PUZ 2.1 999 PUZ 2.1 999 PUZ 2.1 999 PUZ 2.0 995 PUZ 2.1 999 PUZ 2.0 995 PUZ 2.1 999 PUZ 2.1 999 PUZ 2.0 995 PUZ 2.1 PUZ 2.0 PUZ 2.	265						
RUIZ 10/20/08 7.04 22.0 995 2/12/09 6.94 20.9 748 4/21/09 7.18 22.3 759 8/3/09 7.05 22.9 10/28 10/28/09 7.09 20.6 920 2/1/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.09 19.8 923.3 RUIZ 531770 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	243						
RUIZ 531770 RUIZ 531770 RUIZ 6.94 20.9 7.48 20.9 7.48 20.9 7.18 22.3 759 8/3/09 7.05 22.9 10/29 10/28/09 7.09 20.6 920 21/1/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 22.5 880 10/20/10 7.52 20.7 970 11/8/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 RUIZ 531770 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	238						
RUIZ 531770 ## Fig. 10	254						
RUIZ 531770 8/3/19 7.05 22.9 1029 10/28/09 7.09 20.6 920 934 4/26/10 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 27/1/12 7.28 20.7 915.6 27/1/12 0.97 2.8 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/1/3 7.21 20.7 895.8	227	759			4/21/09		
RUIZ 531770	221						
RUIZ 531770 7.08 20.9 934 4/26/10 7.01 22.5 920.1 7/20/10 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/1/13 7.21 20.7 895.8	227	920	20.6	7.09	10/28/09		
RUIZ 531770 7.08 22.5 880 10/20/10 7.52 20.7 970 1/18/11 7.19 20.2 860 4/8/11 7.09 19.8 923.3 RUIZ 531770 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 1/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	236	934	20.9	7.08			
RUIZ 531770	240	920.1	22.5	7.01	4/26/10		
RUIZ 531770	240	880	22.5	7.08	7/20/10		
RUIZ 531770 4/8/11 7.09 19.8 923.3 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	231	970	20.7	7.52	10/20/10		
RUIZ 531770 8/26/11 6.85 22.6 800 10/13/11 7.19 21.5 810 21/7/12 7.28 20.7 915.6 21/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	213	860	20.2	7.19	1/18/11		
10/13/11 7.19 21.5 810 27/12 7.28 20.7 915.6 2//1/2 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/1/3 7.21 20.7 895.8	236				4/8/11		
2/7/12 7.28 20.7 915.6 2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	220					531770	RUIZ
2/7/12 DUP 7.28 20.7 915.6 4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	230	810	21.5				
4/13/12 7.04 21.1 896.5 7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	230						
7/18/12 6.87 21.6 900 10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	228						
10/9/12 7.18 21.4 890.6 1/11/13 7.21 20.7 895.8	203						
1/11/13 7.21 20.7 895.8	214						
	229						
1/11/12 [11] 721 207 205 0	219						
	211	895.8	20.7	7.21	1/11/13 DUP		
4/11/13 7.26 21.9 876.8	229						
7/25/13 7.13 21.4 887.3	228						
10/17/13 7.23 20.8 891.9	210						
1/8/14 7.32 20.5 886.8	220						
4/15/14 7.26 21.2 873.5 8/11/14 7.32 21.2 869.2	215 221						



Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/8/08	7.52	21.5	506	158
		4/21/081	7.23	21.7	563	122
		5/19/081	7.38	22.4	629	130
		6/23/08 ¹ 7/29/08 ¹	7.02	22.1	674	129
		8/28/08 ¹	7.25 M	22.4 22.3	955 669	245 131
		9/23/08	7.27	22.2	607	124
		10/22/08	7.31	22.0	653	135
		11/19/08 ¹	7.38	21.1	612	140
		12/17/08 ¹	6.78	21.6	472	144
		1/29/09	7.08	22.0	475	124
		2/23/09	7.33	22.1	610	123
		4/17/09 7/10/09	7.46	22.2	520	120
		7/10/09 DUP	7.52 7.52	22.8 22.8	651 651	116 117
		10/6/09	7.27	22.5	613	120
		1/22/10	7.79	19.5	664	133
SCHWARTZ	210865	4/21/10	7.50	20.9	638	129
SCHWARTZ	210003	7/21/10	7.43	22.0	650	134
		10/19/10	7.76	21.2	710	147
		1/17/11	7.15	21.2	620	116
		4/11/11	7.20	21.5	656.9	128
		7/18/11 10/12/11	7.36	23.7	612.4	116
		2/6/12	7.35 7.32	22.4 21.3	635.8 629.7	124 116
		2/6/12 DUP	7.32	21.3	629.7	114
		4/10/12	7.48	21.6	626.1	120
		7/16/12	7.31	21.9	710	117
		10/17/12	7.48	21.6	645	121
		3/13/13	7.57	20.7	623.6	118
		5/14/13	7.61	21.5	629.7	112
		7/15/13	7.49	22.1	770.2	198
		10/14/13	7.55	20.9	633.3	109
		1/13/14	7.61	20.6	663.1	125
		4/9/14 7/18/14	7.48 7.45	21.5	635.9	110 216
		4/23/08	7.45	21.8 25.8	790.5 380	19
SRC	211345	8/5/08	7.40	27.2	452	15.4
		2/13/08	7.28	20.7	467	24.1
		5/14/08	7.24	21.2	479	23.7
		7/24/08	7.35	22.4	506	18
		10/16/08	7.32	20.7	488	19
		1/20/09	7.05	20.4	391	19.8
		4/7/09	7.21	21.5	447	19.9
		7/8/09	7.18	23.1	473	18.5
		10/5/09 1/21/10	7.18 7.49	21.4	496 501	19.7 18.4
	NR	4/21/10	7.49	19.5 20.3	512.1	20.9
SWAN		7/19/10	7.13	23.8	518.6	22.2
		1/18/11	7.19	17.8	483.6	18.7
		7/12/11	7.05	22.4	478.2	19.1
		2/3/12	7.40	20.5	484.5	20.1
		2/3/12 DUP	7.40	20.5	484.5	19.5
		7/10/12	7.00	22.7	370	19.4
		1/11/13	7.38	20.0	489.0	19.3
		7/8/13 1/10/14	7.45 7.65	22.8 19.7	489.7 428.6	19.4 19.2
		7/714	7.44	21.8	464.7	19.4
		5/29/13	7.22	24.4	415.9	7.32
		8/9/13	7.57	22.2	420.0	7.62
THOMPSON 341	218341	10/9/13	7.49	21.6	425.2	7.54
THOWN DOIN 341	210041	1/16/14	7.53	21.5	432.7	7.48
		4/14/14	7.50	21.6	425.8	7.68
		7/21/14	7.48	22.3	414.2	8.02
		3/4/08 5/23/08	8.67 7.75	22.6	302 321	12.3 14.7
		8/15/08	7.75	22.9 26.4	369	14.7
		10/30/08	8.07	23.9	375	21.9
		2/24/09	8.10	24.8	340	20.3
		5/6/09	8.06	26.7	320	18.7
		8/12/09	8.34	26.9	398	20
		11/4/09	8.16	26.3	381	21.8
		3/10/10	8.13	25.2	351	21.4
TM-02A	522574	3/10/10 DUP	8.13	25.2	351	21.3
		4/6/10	6.96	24.6	363	25.6
		7/6/10 2/10/11	7.38 6.93	24.6	343 359	22.1 22.9
		7/13/11	7.92	20.2 24.8	349	22.9
		2/2/12	7.89	22.2	360	23.0
		8/14/12	7.65	24.6	366	23.4
		2/15/13	7.72	22.2	369	22.1
		8/27/13	7.72	24.7	414	23.5
		2/18/14 8/12/14	7.54 7.62	24.3 24.7	388 395	24.5 25.6



Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		F/00/00	, ,	, , ,		(mg/L)
		5/20/08	7.51 7.08	22.2	778 828	110 97
		8/6/08	7.08	21.6		
		11/12/08		20.5	590	128
		2/26/09 2/26/09 DUP	7.21 7.21	21.8 21.8	737 737	107 102
		5/13/09	7.47	22.2	695	102
TM-03	522575	8/18/09	7.48	22.4	822	98
		11/10/09	7.55	21.8	761	106
		3/2/10	7.56	21.6	748	99
		4/14/10	7.55	20.6	635	103
		7/7/10	7.19	21.4	566	103
		2/1/12	7.48	21.1	744	112
		2/27/08	7.44	19.6	457	13.9
		5/20/08	7.50	20.7	506	32.7
		8/4/08	7.41	20.7	529	31.3
		10/29/08	7.55	20.2	531	34.5
		2/26/09	7.18	20.4	574	32.7
		5/13/09	7.35	20.9	465	30.6
		8/18/09	7.50	20.9	560	30.9
TM 00 MULTED	500005	8/18/09 DUP	7.50	20.9	560	29.9
TM-06 MILLER	522695	11/12/09	7.53	20.4	530	31.1
		4/14/10	7.35	19.4	461	29.0
		7/2/10	7.24	20.1	438	29.8
		7/21/11	7.1	20.1	516	31.7
		7/9/12	6.82	20.8	505	33.5
		2/14/13	6.92	19.6	527	31.1
		8/19/13	7.21	19.9	556	32.5
		7/21/14	7.17	19.9	551	33.0
		3/6/08	7.54	20.8	726	22.5
		5/22/08	6.96	20.1	385	22.9
		8/6/08	7.04	22.8	519	22.2
		11/4/08	7.76	20.6	347	31.2
		2/20/09	7.77	19.9	376	22.5
		5/13/09	7.30	22.9	559	130
		8/17/09	7.60	22.6	442	134
		11/3/09	7.85	21.8	441	134
		3/2/10	7.67	21.6	422	124
TM-07	522576	5/25/10	7.77	21.2	398	42.6
		7/6/10	7.58	22.0	350	44.7
		2/11/11	6.87	20.1	393	24.9
		7/21/11	6.90	21.4	402	41.7
		2/9/12	7.15	23.0	670	171
		8/13/12	6.83	21.7	415	25.4
		2/27/13	6.81	19.9	380	25.6
		8/28/13	7.36	21.2	369	25.0
		2/13/14 8/21/14	6.99 7.35	20.4 20.6	372 358	27.4 48.5
		2/13/08	7.63	24.1	511	24.1
TM-08 SWAN	522817	5/14/08	7.44	24.4	480	12.6
1111 00 0117111	022017	7/23/08	7.76	28.1	522	12.6
		12/8/11	6.95	19.6	381	16.8
		3/15/12	7.85	20.2	382.3	15.1
		4/24/12	7.88	21.0	280	13.4
		4/24/12 DUP	7.88	21.0	280	13.3
		9/13/12	8.09	21.1	407	13.3
		10/19/12	8.17	21.0	428.2	12.8
TM-10 USBP	522696	3/7/13	8.33	21.2	415.1	12.7
		4/17/13	8.27	20.3	423.9	12.8
		7/23/13	8.16	21.4	426.1	13.2
		11/6/13	7.90	21.3	386.5	4.81
		11/6/13 DUP	7.90	21.3	386.5	4.64
		1/15/14	7.91	21.1	424.4	3.98
		5/15/14	7.98	20.4	410.6	5.12
		7/15/14	7.86	21.4	421.9	5.46
		2/27/08	7.66	21.9	344	14
		5/23/08	7.54	22.1	371	14.4
		8/5/08	7.42	23.3	413	13.7
		10/28/08	7.63	22.6	387	18.6
		10/28/08 DUP	7.63	22.6	387	18.8
		2/26/09	7.57	22.0	373	14.6
		5/13/09	7.61	23.1	344	13.7
		8/17/09	7.73	23.2	398	14.2
TM-15 MILLER	522699	11/3/09	7.73	23.4	414	14.8
		2/24/10	7.66	22.8	381	14.4
		4/27/10	7.71	23.0	383.6	14.9
		7/20/10	7.77	23.0	324	14.3
		7/12/11	7.36	23.2	380	14.2
		7/10/12	7.04	23.7	379	14.9
		2/12/13	6.96	21.7	393	14.6
	1	9/4/13	7.2	22.8	412	14.8
		7/22/14	7.18		407	14.6



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/5/08	7.17	20.6	1351	497
		5/22/08	7.05	20.5	1304	522
		8/6/08	6.67	20.9	1410	466
		11/5/08	7.14	19.8	1162	547
		2/20/09	6.90	21.1	1292	492
		5/13/09	6.93	21.1	1179	484
		8/19/09	7.08	21.2	1354	468
TM-16	522578	11/10/09	7.02	21.0	1310	505
I IVI- I O	322376	3/2/10	7.13	20.4	1313	451
		4/14/10	6.90	19.9	987	484
		7/2/10	6.81	20.8	858	474
		7/14/11	6.97	20.5	1285	511
		7/16/11	6.97	20.5	1285	513
		7/9/12	6.95	21.0	1292	544
		8/15/13	6.86	20.3	1374	539
		8/4/14	6.79	20.6	1368	550
		3/6/08	8.02	22.2	240	56.1
		5/22/08	7.36	24.0	501	64.5
		8/6/08	7.32	22.6	494	55.3
		11/18/08	7.79	24.3	365	66.3
		3/3/09	7.41	24.5	489	66.2
		4/22/09	7.44	24.3	494	62.5
		8/12/09	7.61	24.4	554	61.3
		11/4/09	7.47	24.2	522	63
TM 404	500504	3/10/10	7.54	22.9	511	60.6
TM-19A	522581	4/9/10	6.49	23.0	435	66.5
		7/7/10	6.93	23.8	428	63.2
		2/14/11	6.69	21.4	511	61.9
		7/15/11	7.11	24.1	499	62.1
		2/2/12	7.13	22.5	498	62.2
		7/10/12	7.12	23.5	505	63.7
		2/15/13	6.74	23.2	522	60.1
		9/4/13	7.11	23.8	538	61.3
		2/12/14	6.93	23.6	548	62.8
		7/21/14	7.06	24.2	542	63.3
		3/5/08 5/22/08	7.10	20.8	1342	482
			7.05 6.69	21.4	1270	483 467
		8/6/08 11/6/08	6.90	22.0 21.0	1388 1025	477
		2/18/09	6.72	22.3	1245	429
		5/7/09	6.88	24.5	1155	430
		5/7/09 DUP	6.88	24.5	1155	445
		8/18/09	7.04	24.4	1336	428
		11/3/09	7.07	23.1	1266	430
TM-42	562554	2/24/10	7.13	22.7	1236	390
		4/19/10	6.87	21.5	985	444
		7/2/10	6.81	23.9	827	407
		7/12/11	6.83	22.0	1205	441
		2/9/12	6.76	20.5	1172	444
		7/11/12	6.72	21.1	1155	449
		2/12/13	6.69	20.2	1185	400
		8/28/13	6.89	21.3	1212	416
		7/21/14	6.85	21.4	1205	418
TM 40	E6 4700	3/3/08	8.57	21.0	341	2.1
TM-43	564729	8/4/08	8.14	25.7	436	<5
TM 424	564706	3/3/08	6.17	19.9	2788	1420
TM-43A	564726	8/4/08	6.03	21.6	3149	1320
		3/3/08	6.79	20.6	514	0.7
TM-43B	565004	8/5/08	6.89	21.0	507	31.8
		8/5/08 DUP	6.89	21.0	507	32.5
<u>-</u>		3/20/08	7.48	20.0	488	31.3
		5/7/08	7.13	20.4	494	32.6
		7/15/08	7.39	21.9	532	37.6
		10/15/08	7.45	22.3	490	36.6
		2/11/09	7.32	20.1	391	27.6
		4/17/09	7.36	19.3	418	28.1
		4/17/09 DUP	7.36	19.3	418	28.3
		7/21/09	7.59	22.9	484	31.3
TVI 236	802236	10/19/09	7.31	22.1	513	33.2
		2/2/10	7.39	20.4	497	26
		4/23/10	7.46	20.0	504.6	30.9
		7/15/10	7.37	21.5	499.4	39.3
		7/15/11	6.80	22.4	499.6	42.9
		7/16/12	7.30	21.1	500	36.3
		10/9/12	7.56	20.4	513.7	40.9
		7/18/13	7.38	20.9	514.4	42.4
		7/16/14	7.41	21.1	517.3	43.9



TABLE 3
Compilation of Analytical Results For Sulfate and Field Parameters

Well Name	ADWR 55 Registry Number	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/21/08	7.28	21.1	739	244
		5/7/08	7.09	21.2	833	250
		7/15/08	7.27	22.4	925	274
		10/15/08	7.26	22.1	878	245
		2/11/09	7.20	20.7	738	312
		4/17/09	7.31	21.5	690	251
		7/21/09	7.47	22.2	812	236
		10/19/09	7.23	21.9	822	247
		2/2/10	7.32	20.8	939	250
		4/23/10	7.34	20.2	930.4	294
		7/15/10	7.46	21.8	842.5	262
		10/20/10	7.79	21.9	890	242
		1/20/11	7.39	21.0	780	226
T) (1.075	500075	4/11/11	7.20	21.1	820.6	235
TVI 875	568875	7/15/11	6.75	22.2	791.9	239
		10/12/11	7.35	22.7	868.5	262
		2/3/12	7.20	20.5	850	299
		4/25/12	7.19	21.3	840	267
		7/16/12	7.13	22.2	860	261
		7/16/12 DUP	7.13	22.2	860	267
		10/9/12	7.39	20.9	882.8	281
		2/6/13	7.23	20.8	946.1	335
		4/10/13	7.35	20.9	907.6	296
		7/18/13	7.31	21.4	994.2	355
		10/8/13	7.35	21.0	894.6	275
		1/9/14	7.23	20.3	917.4	305
		4/9/14	7.31	20.9	910.7	296
		7/16/14	7.30	21.6	940.2	328
WALKED	000000	2/13/08	7.05	20.2	650	20
WALKER	200393	7/23/08	7.25	20.7	740	45.4
		2/14/08	7.74	21.7	323	11.1
		5/15/08	7.22	22.7	365	12.6
		7/30/08	7.42	32.0	407	11.5
		10/20/08	8.10	31.6	405	10.2
		2/13/09	7.66	21.0	303	12.6
		4/22/09	7.46	22.2	368	11.6
		7/16/09	7.50	21.9	365	10.8
		10/20/09	7.34	21.6	381	12.7
		2/1/10	7.60	20.8	382	12.2
		4/26/10	7.69	22.1	366	13.4
		7/21/10	7.36	22.1	354.9	13.6
		7/21/10 DUP	7.36	22.1	354.9	13.5
		10/19/10	7.63	21.2	378.8	11.7
		1/19/11	7.62	21.1	383.6	12.2
WEED	544535	4/11/11	7.44	21.5	386.6	13
		7/18/11	7.56	22.0	379.3	12.7
		10/12/11	7.02	21.7	382.8	13.3
		2/6/12	7.60	21.4	385.0	13.5
		4/25/12	7.60	22.1	360	12.7
		7/5/12	7.64	21.7	385.8	12.9
		10/9/12	7.66	21.5	385.1	14.0
		2/7/13	7.7	21.4	389.7	14.0
		2/7/13 DUP	7.7	21.4	389.7	13.2
		4/10/13	7.76	20.6	383.9	13.0
		7/19/13	7.63	21.3	386.6	14.2
		10/18/13	7.72	21.1	387.3	13.1
		1/15/14	7.73	20.7	388.4	13.4
		4/10/14	7.85	21.5	387.1	13.5
		7		21.4		



Well Name	ADWR 55	Sample Date	pH	Temp	sc	Sulfate, dissolved
	Registry Number		(SU)	(deg C)	(µS/cm)	(mg/L)
		2/15/08	7.48	20.0	1072	500
		5/7/08	7.10	21.8	1251	483
		7/16/08	7.07	22.2	1399	560
		10/28/08	6.98	20.8	1401	602
		1/29/09	6.79	20.7	1014	503
		4/15/09	7.53	21.1	1164	503
		7/15/09	7.84	22.1	1317	486
		10/15/09	6.89	21.4	1216	484
		2/2/10	7.22	20.4	1319	451
		4/22/10	7.30	19.3	1329	572
		7/19/10	7.06	23.1	1330	573
		10/20/10	7.64	21.6	1360	515
		10/20/10 DUP	7.64	21.6	1360	529
		1/17/11	7.16	22.0	1270	481
WEISKOPF 802	641802	4/11/11	6.88	22.4	1365	557
		8/26/11	6.83	23.5	1200	549
		10/13/11	7.07	22.8	1299	539
		2/3/12	7.35	21.5	1363	583
		4/25/12	7.07	23.5	1300	575
		7/13/12	6.83	22.2	1530	552
		10/11/12	7.26	21.3	1369	572
		10/11/12 DUP	7.26	21.3	1369	577
		1/16/13	7.14	20.5	1298	523
		4/17/13	7.22	20.1	1337	558
		7/18/13	7.45	21.3	1131	420
		10/17/13	7.29	22.5	1131	437
		1/16/14	7.28	22.7	1323	563
		4/11/14	7.29	23.0	1304	558
		7/18/14	7.17	23.3	1375	608
		12/6/12	7.93	23.6	398.3	18.5
		1/16/13	7.88	23.1	398.9	18.2
		1/16/13 DUP	7.88	23.1	398.9	18.2
		4/17/13	7.86	22.6	394.4	19.0
WEISKOPF 897	221897	7/18/13	7.84	24.3	393.2	18.0
WEIGHOIT 037	221037	10/17/13	7.90	23.3	392.2	18.3
		1/16/14	7.90	23.3	395.8	18.4
		4/11/14	7.92	23.5		17.9
			7.87	23.9	390.5 387.4	18.4
WMD-2011-03M	913037	7/18/14 2/2/12	6.66	22.0	1190	391
VVIVID-2011-03IVI	913037	2/4/08	7.24	19.7	392	5.7
		5/6/08	7.26	21.2	404	6.3
		7/16/08	6.92	22.9	441	6.9
		10/28/08	7.40	21.2	415	15
		2/10/09	7.50 7.47	20.4	317	6
		4/16/09		21.7	352	5.5
		7/14/09	7.36	22.9	418 407	4.5
		10/13/09	7.41	21.7	407	6.3
		1/26/10	7.49	20.3		5.7
		4/2/10	7.55	20.0	416	6.70
		7/21/10	7.38	22.7	388.2	6.78
		10/19/10	6.78	21.3	430	6.56
		1/18/11	7.59	18.9	380	6.14
744955		1/18/11 DUP	7.59	18.9	380	6.06
ZANDER	205126	4/6/11	7.20	19.7	425.8	6.12
		7/13/11	7.29	22.9	410.10	6.43
		10/12/11	7.35	22.2	426.2	6.38
		1/31/12	7.29	20.3	420	6.59
		4/10/12	7.49	21.9	420.1	6.90
		4/10/12 DUP	7.49	21.9	420.1	6.65
		7/17/12	7.34	22.2	430	6.38
		10/8/12	7.58	20.8	431.4	7.03
		1/10/13	7.58	20.7	436.1	6.52
		4/18/13	7.65	20.8	436.7	6.66
		7/15/13	7.55	21.8	431.1	6.49
		10/7/13	7.59	21.5	430.2	6.41
		1/7/14	7.50	20.9	435.4	6.77
		4/9/14	7.57	21.5	434.4	6.57
	1	7/17/14	7.61	21.5	432.0	6.99

Notes: 35-71891 = ADWR 35 Database

ADWR = Arizona Department of Water Resources

ADWR = AltZona Department
deg C = degrees Celsius
DUP = Blind duplicate
M = Multi-Meter Malfunction
mg/L = milligrams per liter
ND = No Data
NR = No Record



SC = Specific Conductance
SU = Standard Units
μS/cm = microsiemens per centimeter

1 Verified drinking water supply well, sample collected for sulfate trend analysis and interim action evaluation

Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/20/08	145.46	4443.05
					5/5/08	145.84	4442.67
					7/14/08	146.16	4442.35
					10/15/08	146.21	4442.30
					1/27/09	145.97	4442.54
					4/14/09	146.21	4442.30
					7/14/09	146.88	4441.63
					10/12/09	147.31	4441.20
					1/27/10	147.31	4441.20
					4/21/10	147.57	4440.94
					7/19/10	148.34	4440.17
					10/19/10	147.75	4440.76
					1/17/11	148.63	4439.88
ANDERSON 396	613396	601134.729	729 3468816.065 4588.51	4588.51	4/11/11	149.46	4439.05
				7/14/11	149.92	4438.59	
					10/11/11	150.19	4438.32
					2/1/12	150.19	4438.32
					4/25/12	150.69	4437.82
					7/12/12	151.34	4437.17
					10/10/12	151.50	4437.01
					1/17/13	151.24	4437.27
					4/15/13	152.08	4436.43
					7/18/13	152.19	4436.32
					10/16/13	152.41	4436.10
					1/9/14	152.14	4436.37
					4/7/14	152.56	4435.95
					7/11/14	152.02	4436.49
					9/7/12	173.76	4411.61
					10/10/12	151.82	4433.55
					1/17/13	152.17	4433.20
					4/15/13	158.42	4426.95
ANDERSON 458	221458	601118.690	3468826.284	4585.37	7/18/13	157.56	4427.81
					10/16/13	156.24	4429.13
					1/9/14	152.58	4432.79
					4/7/14	153.54	4431.83
					7/11/14	156.66	4428.71
					6/27/13	250.85	4220.49
				1	9/24/13	250.85	4220.49
ASLD 435	616435	593496.865	3468879.791	4471.34	12/3/13	250.79	4220.55
AOLD 400	010433	J9J 4 90.003	J-100013.131	7771.34	2/25/14	250.75	4220.59
					6/4/14	250.93	4220.41
					9/10/14	250.97	4220.37
·					8/27/08	121.12	4426.52
					4/8/08	116	4431.64
				1	10/23/08 ¹	115	4432.64
				1	4/22/09 ¹	118	4429.64
				1	10/9/09 ¹	117	4430.64
AWC-02	616586	598907.911	3468540 357	4547.64	4/23/10 ¹	119	4428.64
AVVO=02	010000	598907.911 3468549.357	70-7.04	4/11/13	127.64	4420.00	
					7/25/13	128.89	4418.75
					10/7/13 ¹	125.00	4422.64
					1/7/14	125.36	4422.28
					5/14/14 ⁴	124.89	4422.75
					7/16/14	124.49	4423.15



Well Name Registry Number (meters) UTM East (meters) Elevation (ft amsl) Date (feet)	Groundwater Elevation (ft amsl)
8/27/08 119.40	4420.12
4/8/08 112	4427.52
10/23/08 ¹ 106	4433.52
4/22/09 ¹ 114	4425.52
10/9/09 ¹ 116	4423.52
AWC-03 616585 599090.322 3468681.898 4539.52 4/23/10 ¹ 116	4423.52
4/11/13 ¹ 125 7/16/13 ¹ 126	4414.52
7/16/13 ¹ 126 10/7/13 ¹ 122	4413.52 4417.52
1/7/14 ¹ 121	4418.60
5/14/14 ^{1,4} 121.50	4418.02
7/16/14 ¹ 123.50	4416.02
8/18/08 112.56	4427.92
4/8/08 108	4432.48
10/23/08 ¹ 111.31	4429.17
4/22/09 ¹ 110	4430.48
10/9/09 ¹ 110	4430.48
AWC-04 616584 598949.929 3468717.084 4540.48 4/23/10 ¹ 109	4431.48
4/11/13 120.93	4419.55
7/16/13 123.76	4416.72
10/7/13 ¹ 116.00 1/7/14 115.98	4424.48 4424.50
5/14/14 ⁴ 115.32	4425.16
7/16/14 118.44	4422.04
8/27/08 299.65	4242.86
4/8/08 284	4258.51
10/23/08 284	4258.51
4/22/09 286	4256.51
6/3/09 125	4417.51
10/9/09 ¹ 289	4253.51
AWC-05 590620 599269.904 3468541.692 4542.51 4/23/10 ¹ 278	4264.51
4/11/13 229.56	4312.95
7/16/13 203.17 10/7/13 ¹ 142.00	4339.34 4400.51
10/7/13 ¹ 142.00 1/7/14 123.09	4419.42
5/14/14 ⁴ 346.75	4195.76
7/16/14 346.34	4196.17
2/27/08 208.00	4440.18
5/12/08 216.30	4431.88
7/21/08 228.95	4419.23
10/13/08 228.20	4419.98
1/21/09 206.64	4441.54
4/8/09 205.50	4442.68
7/9/09 235.68	4412.50
10/7/09 236.71 2/25/10 216.98	4411.47 4431.20
4/20/10 219.35	4428.83
7/20/10 235.60	4412.58
10/20/10 230.24	4417.94
1/17/11 215.28	4432.90
BANKS 987 647987 606981.921 3469206.175 4648.18 4/5/11 221.68	4426.50
7/11/11 237.39	4410.79
10/12/11 237.34	4410.84
1/31/12 228.95	4419.23
4/11/12 219.39	4428.79
7/6/12 232.59	4415.59
10/4/12 237.16	4411.02
1/18/13 237.81 4/8/13 237.92	4410.37 4410.26
7/9/13 238.32	4409.86
10/15/13 239.48	4408.70
1/14/14 239.53	4408.65
4/8/14 231.49	4416.69
7/8/14 228.85	4419.33



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					5/12/08	113.71	4578.65
					7/23/08	113.56	4578.80
					10/16/08	113.20	4579.16
					3/11/09	112.92	4579.44
BARTON 919	644919	606243.850	3469076.689	4692.36	4/10/09	112.89	4579.47
					7/7/09	112.86	4579.50
					7/17/13	114.18	4578.18
					1/14/14	113.96	4578.40
					7/17/14	113.42	4578.94
					3/4/08	348.99	4486.24
					5/23/08	348.80	4486.43
					8/5/08	348.66	4486.57
					11/5/08	348.94	4486.29
					2/20/09	348.78	4486.45
					5/6/09	348.73	4486.50
BF-01	539783	604169.077	3472151.593	4835.23	8/17/09	348.73	4486.50
5. 0.	000700	001100.011	01121011000	1000.20	11/4/09	348.65	4486.58
					3/1/10	348.84	4486.39
					4/7/10	348.70	4486.53
					7/6/10	348.69	4486.54
					7/13/11	348.67	4486.56
					2/1/12	347.84	4487.39
					8/13/12	343.95	4491.28
					5/13/08	367.31	4434.74
					8/18/08	370.24	4431.81
				-	10/23/08	353.96	4448.09
				-	1/20/09	353.07	4448.98
					4/7/09 7/8/09	357.76	4444.29 4436.61
BIMA	577927	606001.245	3471852.804	4802.05	10/5/09	365.44 370.11	4436.61
				-	4/19/10	382.25	4419.80
				-	7/21/10	386.89	4415.16
				-	10/18/10	387.39	4414.66
					1/19/11	391.47	4410.58
					4/4/11	395.22	4406.83
	+			+	8/27/08	62.05	4743.05
					11/11/08	60.95	4744.15
					2/25/09	61.43	4743.67
					4/28/09	62.01	4743.09
					8/4/09	62.96	4742.14
					10/27/09	63.61	4741.49
					2/17/10	64.51	4740.59
					4/15/10	65.05	4740.05
BMO-2008-1G	909474	606467.681	3471723.644	4805.10	7/7/10	65.83	4739.27
					2/10/11	67.74	4737.36
					7/12/11	69.37	4735.73
					2/8/12	70.33	4734.77
					8/14/12	71.73	4733.37
					2/14/13	72.95	4732.15
					8/14/13	73.82	4731.28
					2/13/14	73.79	4731.31
			I	1	7/22/14	74.14	4730.96



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					7/18/08	138.05	4445.92
					11/4/08	137.95	4446.02
					2/19/09	138.19	4445.78
					5/11/09	138.46	4445.51
					8/6/09	139.02	4444.95
					10/26/09	139.60	4444.37
					3/3/10	140.03	4443.94
					4/8/10	140.07	4443.90
BMO-2008-3B	909147	602012.923	3467919.582	4583.97	7/1/10	140.70	4443.27
					2/14/11	141.41	4442.56
				-	7/12/11	142.21	4441.76
					2/23/12	143.90	4440.07
				-	7/10/12	143.70	4440.27
					2/15/13	144.53	4439.44
					8/27/13	145.10	4438.87 4438.89
				-	2/11/14 7/21/14	145.08 145.36	4438.89
					12/11/08	130.77	4442.40
					2/18/09	130.58	4442.59
					4/30/09	131.24	4441.93
					8/6/09	131.96	4441.21
					10/27/09	132.04	4441.13
				1	2/24/10	131.82	4441.35
					4/16/10	132.65	4440.52
					7/2/10	133.20	4439.97
BMO-2008-4B	910096	601099.405	3468383.430	4573.17	2/15/11	133.78	4439.39
					7/22/11	134.80	4438.37
					2/23/12	134.64	4438.53
					9/17/12	136.15	4437.02
					1/15/13	136.13	4437.04
					4/15/13	136.78	4436.39
					9/18/13	137.04	4436.13
					1/9/14	136.96	4436.21
					7/18/14	137.49	4435.68
					9/30/08	145.10	4440.00
					2/18/09	144.35	4440.75
					4/27/09	144.78	4440.32
					8/4/09	145.36	4439.74 4439.22
					10/29/09 2/15/10	145.88	4439.68
					4/15/10	145.42 145.80	4439.88
					7/7/10	146.59	4439.50
					10/5/10	147.00	4438.10
					2/14/11	147.56	4437.54
					5/12/11	148.04	4437.06
					7/13/11	148.31	4436.79
BMO-2008-5B	909653	600438.159	3468994.715	4585.10	12/7/11	148.45	4436.65
					2/3/12	148.47	4436.63
					4/18/12	149.02	4436.08
					7/10/12	148.65	4436.45
					10/16/12	149.91	4435.19
					2/7/13	149.94	4435.16
					2/12/13	150.06	4435.04
					5/15/13	150.55	4434.55
					8/20/13	150.82	4434.28
					11/1/13	150.77	4434.33
					2/11/14	150.33	4434.77
					5/7/14	150.83	4434.27
					8/19/14	151.13	4433.97



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					10/2/08	146.65	4438.37
					2/18/09	145.97	4439.05
					4/27/09	146.46	4438.56
					8/4/09	147.13	4437.89
					10/29/09	147.68	4437.34
					2/15/10	147.07	4437.95
					4/16/10	147.34	4437.68
					7/7/10	148.28	4436.74
					10/5/10	148.68	4436.34
					2/14/11	148.74	4436.28
					5/12/11	149.66	4435.36
					7/12/11	150.20	4434.82
BMO-2008-5M	909552	600445.071	3468994.282	4585.02	12/7/11	150.30	4434.72
					2/3/12	150.05	4434.97
					4/18/12	150.70	4434.32
					7/10/12	151.65	4433.37
					10/16/12	151.77	4433.25
					2/12/13	152.00	4433.02
					5/15/13	152.42	4432.60
					8/20/13	152.76	4432.26
					11/1/13	152.53	4432.49
					2/11/14	151.78	4433.24
					5/7/14	152.26	4432.76
					8/19/14	152.78	4432.24
					7/16/08	190.13	4437.31
					11/4/08	190.23	4437.21
					2/19/09	189.71	4437.73
					4/27/09	189.99	4437.45
					8/4/09	190.80	4436.64
					10/26/09	191.04	4436.40
					2/15/10	190.82	4436.62
					4/15/10	190.75	4436.69
					7/1/10	191.43	4436.01
					10/5/10	192.50	4434.94
					2/14/11	192.19	4435.25
					5/12/11	192.70	4434.74
BMO-2008-6B	909146	600366.523	3469820.644	4627.44	7/12/11	193.30	4434.14
					12/7/11	193.85	4433.59
					2/3/12	193.60	4433.84
					4/18/12	193.90	4433.54
					7/10/12	194.75	4432.69
					10/16/12	195.71	4431.73
					2/12/13	195.42	4432.02
			I .	1 +	5/15/13		
				1		195.91	4431.53
						195.91 196.23	4431.53 4431.21
					8/20/13	196.23	4431.21
					8/20/13 11/1/13	196.23 195.77	4431.21 4431.67
					8/20/13	196.23	4431.21



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					7/10/08	191.63	4435.27
					11/4/08	190.25	4436.65
					2/20/09	190.70	4436.20
					4/28/09	190.98	4435.92
					8/4/09	191.77	4435.13
					10/26/09	192.14	4434.76
					2/15/10	191.78	4435.12
				-	4/15/10	191.64	4435.26
					7/1/10	192.53	4434.37
					10/5/10	192.96	4433.94
				-	2/14/11 5/12/11	193.14 193.68	4433.76 4433.22
BMO-2008-6M	909019	600367.943	3469813.885	4626.90	7/12/11	194.47	4433.22
DIVIO-2000-0IVI	303013	000307.543	3409013.003	4020.90	12/7/11	194.92	4431.98
					2/3/12	194.65	4432.25
					4/18/12	195.00	4431.90
					7/10/12	196.10	4430.80
					10/16/12	196.53	4430.37
					2/12/13	196.45	4430.45
					5/15/13	196.90	4430.00
					8/20/13	197.43	4429.47
					11/1/13	196.53	4430.37
					2/11/14	196.18	4430.72
					5/7/14	196.33	4430.57
					8/19/14	197.40	4429.50
					7/14/08	238.31	4450.02
					11/6/08	239.69	4448.64
					2/18/09	238.90	4449.43
					5/11/09	239.03	4449.30
					8/6/09	239.17	4449.16
					10/27/09	239.55	4448.78
					2/17/10	239.98	4448.35
D140 0000 714	000704	000000 105	0.470000 000	4000.00	4/15/10	240.13	4448.20
BMO-2008-7M	908794	603099.165	3470029.283	4688.33	7/6/10	240.28	4448.05
					2/14/11	241.26	4447.07
				-	7/15/11 1/30/12	241.81 242.44	4446.52 4445.89
				-	7/11/12	243.0	4445.33
					2/15/13	243.8	4444.53
					8/28/13	244.32	4444.01
					2/13/14	244.31	4444.02
					7/22/14	244.66	4443.67
					12/5/08	297.94	4455.31
					2/19/09	297.63	4455.62
					5/5/09	297.37	4455.88
					8/10/09	297.53	4455.72
					11/9/09	297.85	4455.40
					3/3/10	298.37	4454.88
					4/16/10	298.46	4454.79
BMO-2008-8B	910097	604171.347	3471141.719	4753.25	7/1/10	298.64	4454.61
20 2000 05	3.3007	33 1.047	3141.713	55.25	2/11/11	299.56	4453.69
					5/13/11	299.78	4453.47
					7/15/11	300.00	4453.25
					1/30/12	300.52	4452.73
			1	1	7/12/12	301.15	4452.10
					2/13/13 8/12/13	302.05 302.48	4451.20 4450.77



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					12/9/08	299.79	4452.66
					2/19/09	298.32	4454.13
					5/5/09	298.27	4454.18
					8/10/09	298.57	4453.88
					11/5/09	298.81	4453.64
					3/3/10	299.18	4453.27
					4/16/10	299.42	4453.03
					7/1/10	299.70	4452.75
BMO-2008-8M	909711	604167.912	3471127.902	4752.45	1/24/11	300.46	4451.99
					5/13/11	301.00	4451.45
					7/15/11	300.96	4451.49
					1/30/12	301.60	4450.85
					7/12/12	302.45	4450.00
					2/14/13	303.07	4449.38
					8/12/13	303.60	4448.85
					2/19/14	303.11	4449.34
					7/24/14	303.48	4448.97
					8/8/08	287.17	4475.44
					11/5/08	287.65	4474.96
					2/26/09	285.65	4476.96
					5/12/09	285.28	4477.33
					8/17/09	286.09	4476.52
					11/3/09	286.55	4476.06
					3/4/10	287.45	4475.16
					4/6/10	287.81	4474.80
					7/1/10	288.26	4474.35
BMO-2008-9M	909255	604668.669	3471121.675	4762.61	2/10/11	289.77	4472.84
					5/13/11	290.47	4472.14
					7/15/11	290.95	4471.66
					2/1/12	293.44	4469.17
					7/12/12	294.65	4467.96
					2/13/13	296.67	4465.94
					8/12/13	297.63	4464.98
					2/18/14	293.68	4468.93
					7/24/14	293.53	4469.08
					8/20/08	521.75	4270.46
					11/5/08	520.50	4271.71
					2/25/09	516.72	4275.49
					5/12/09	514.68	4277.53
					8/11/09	513.23	4278.98
					11/2/09	509.43	4282.78
					3/4/10	510.88	4281.33
BMO-2008-10GL	909435	605264.072	3471702.043	4792.21	4/8/10	506.31	4285.90
					7/2/10	511.80	4280.41
					7/13/11	512.16	4280.05
					2/2/12	511.34	4280.87
					7/13/12	510.90	4281.31
					2/18/13	509.91	4282.30
					8/13/13	509.32	4282.89
				1	8/7/14	507.21	4285.00



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)		
					8/4/08	299.28	4494.17		
					11/5/08	295.89	4497.56		
					2/25/09	289.84	4503.61		
					5/6/09	289.35	4504.10		
					8/11/09	289.09	4504.36		
					11/2/09	289.77	4503.68		
BMO-2008-10GU	909272	605267.551	3471731.866	4793.45	3/10/10	289.58	4503.87		
					4/7/10	289.5	4503.95		
					7/6/10	288.93	4504.52		
					7/13/11	301.02	4492.43		
					2/1/12	326.51	4466.94		
					7/13/12	328.7	4464.75		
					8/19/13	283.97	4509.48		
					8/22/08	577.76	4266.91		
					11/12/08	576.80	4267.87		
				-	2/26/09	575.91	4268.76		
					4/8/09	575.46	4269.21		
					8/12/09	574.84	4269.83		
					11/9/09	573.41	4271.26		
					3/1/10	573.68	4270.99		
					4/9/10	573.56	4271.11		
BMO-2008-11G	909434	603800.995	3472626.482	4844.67	7/1/10	572.97	4271.70		
					2/10/11	571.61	4273.06		
					7/22/11	571.20	4273.47		
					1/31/12	569.83	4274.84		
					8/14/12	569.70	4274.97		
					2/13/13	568.75	4275.92		
					8/27/13	566.50	4278.17		
				İ			2/19/14	564.68	4279.99
					8/14/14	564.24	4280.43		
					10/3/08	206.42	4442.79		
				1	2/17/09	206.11	4443.10		
				1	5/6/09	206.32	4442.89		
				1	8/5/09	206.79	4442.42		
					10/28/09	207.08	4442.13		
					2/16/10	207.26	4441.95		
				1	4/14/10	207.27	4441.94		
BMO-2008-13B	909551	601657.612	3470076.358	4649.21	7/6/10	207.68	4441.53		
DIVIO-2000-13B	909001	001007.012	3470076.338	4049.21	2/10/11	208.51	4440.70		
					5/13/11	208.95	4440.26		
					7/15/11	209.36	4439.85		
					2/9/12	209.78	4439.43		
				1	7/11/12	210.60	4438.61		
				1	2/27/13	211.40	4437.81		
				1	9/4/13	212.15	4437.06		
			1		8/19/14	212.68	4436.53		



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)	
					12/3/08	206.00	4441.15	
					2/17/09	208.74	4438.41	
					4/29/09	208.53	4438.62	
				-	8/5/09	208.85	4438.30	
				-	10/28/09	208.91	4438.24	
				-	2/16/10 4/13/10	209.16 209.20	4437.99 4437.95	
				-	7/2/10	209.30	4437.85	
BMO-2008-13M	909760	601650.495	3470040.455	4647.15	2/10/11	210.36	4436.79	
					5/13/11	210.50	4436.65	
					7/15/11	210.67	4436.48	
				_	2/6/12	210.90	4436.25	
					8/13/12	211.42	4435.73 4435.02	
				-	2/15/13 9/6/13	212.13 212.52	4435.02 4434.63	
				-	8/20/14	213.14	4434.01	
					9/7/10	224.13	4494.42	
					11/10/10	222.97	4495.58	
					2/11/11	222.01	4496.54	
				-	5/12/11	223.08	4495.47	
					8/31/11	224.38	4494.17	
				-	12/13/11 2/8/12	222.86 222.97	4495.69 4495.58	
				-	4/24/12	223.87	4494.68	
BMO-2010-1M	219957	605581.263	3469935.750	4718.55	7/9/12	225.05	4493.50	
					10/17/12	225.63	4492.92	
					2/13/13	226.85	4491.70	
				-	5/8/13	227.45	4491.10	
				-	8/15/13	228.10 224.41	4490.45 4494.14	
				-	11/4/13 2/12/14	222.90	4494.14	
				-	6/2/14	222.80	4495.75	
					8/4/14	223.14	4495.41	
			3470564.646	4746.16	9/7/10	264.13	4482.03	
					11/11/10	263.94	4482.22	
					2/10/11	264.13	4482.03	
					5/13/11 7/14/11	266.97 268.05	4479.19 4478.11	
					12/13/11	270.98	4475.18	
					1/30/12	271.50	4474.66	
					4/18/12	272.31	4473.85	
BMO-2010-2M	219958	605685.549			7/9/12	273.20	4472.96	
					10/17/12	274.27	4471.89	
					2/13/13	275.52	4470.64	
					5/8/13 8/15/13	276.05 278.76	4470.11 4467.40	
				-	11/4/13	273.26	4472.90	
					2/12/14	271.44	4474.72	
					5/8/14	270.65	4475.51	
					8/14/14	270.78	4475.38	
				1	7/28/10	115.38	4435.21	
					11/10/10	115.80	4434.79	
					1/20/11	115.46	4435.13	
				}	4/7/11 7/13/11	116.11 117.30	4434.48 4433.29	
					10/13/11	117.72	4432.87	
					2/2/12	117.18	4433.41	
					4/24/12	117.92	4432.67	
BMO-2010-3B	219970	599977.962	3468347.363	4550.59	7/5/12	118.84	4431.75	
					10/18/12	119.13	4431.46	
					1/16/13	118.89	4431.70	
					4/16/13	119.36 120.02	4431.23 4430.57	
					7/23/13 10/8/13	119.63	4430.57	
					1/15/14	118.96	4431.63	
					5/13/14	119.40	4431.19	



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					7/30/10	118.63	4431.90
					11/10/10	118.75	4431.78
					1/20/11	118.32	4432.21
					4/7/11	119.09	4431.44
					8/25/11	120.74	4429.79
					10/13/11	120.67	4429.86
					2/2/12	119.91	4430.62
					4/24/12	120.93	4429.60
BMO-2010-3M	219969	599970.801	3468353.543	4550.53	7/5/12	122.05	4428.48
					10/18/12	122.06	4428.47
					1/16/13	121.86	4428.67
					4/16/13	122.26	4428.27
					7/23/13	122.97	4427.56
					10/8/13	121.91	4428.62
					1/15/14	120.91	4429.62
					5/13/14	121.90	4428.63
					7/15/14	121.92	4428.61
					11/13/12	231.90	4487.86
					2/27/13	233.20	4486.56
					5/8/13	233.97	4485.79
					8/14/13	233.96	4485.80
BMO-2012-1M	221388	606097.384	3469746.747	4719.76	11/1/13	230.44	4489.32
					2/13/14	229.85	4489.91
					5/8/14	229.89	4489.87
					7/22/14	229.94	4489.82
		601132.466 3468049.945			1/15/13	131.47	4436.74
BOOTH	914931		3468049.945	4568.21	4/19/13	132.04	4436.17
					10/18/13	132.56	4435.65
					4/22/08	606.55	4249.75
					8/5/08	605.86	4250.44
				-	10/28/08	604.88	4251.42
					2/19/09	603.91	4252.39
					4/28/09	603.70	4252.60
BURKE	212268	602230.087	602230.087 3473029.816	4856.30	8/19/09	602.66	4253.64
					10/10/13	601.06	4255.24
					1/8/14	592.90	4263.40
					4/16/14	592.51	4263.79
					7/21/14	592.35	4263.95
	+				2/22/08	232.47	4450.79
					5/20/08	233.12	4450.14
					7/30/08	233.37	4449.89
					10/23/08	233.62	4449.64
				-	2/12/09	234.05	4449.21
					4/21/09	234.99	4449.21
				-	7/22/09	234.34	4448.92
					10/22/09	234.69	4448.57
COB MW-1	903992	603153.259	3469889.889	4683.26	2/4/10	235.15	4448.11
					4/20/10	235.15	4448.11
							4447.79
					7/13/10	235.68	
					7/14/11 7/12/12	236.98 238.24	4446.28 4445.02
					//1://12	738 74	4445 02
					2/5/13 7/11/13	239.11 239.67	4444.15 4443.59



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/22/08	122.85	4443.36
					5/20/08	123.00	4443.21
					7/30/08	123.53	4442.68
					10/23/08	124.02	4442.19
					2/12/09	123.39	4442.82
					4/23/09	124.16	4442.05
					7/22/09	124.91	4441.30
					10/22/09	125.33	4440.88
					3/3/10	124.93	4441.28
COB MW-2	903984	600973.257	3468114.836	4566.21	4/26/10	125.47	4440.74
					7/13/10	126.54	4439.67
					1/20/11	126.46	4439.75
					7/14/11	128.17	4438.04
					1/31/12	128.04	4438.17
					7/12/12	129.58	4436.63
					1/9/13	129.28	4436.93
					7/25/13	130.21	4436.00
					1/6/14	130.11	4436.10
					7/9/14	131.32	4434.89
					2/28/08	120.84	4417.79
					5/20/08	125.00	4413.63
					7/30/08	118.50	4420.13
					10/23/08	117.93	4420.70
					2/12/09	110.91	4427.72
					4/23/09	125.13	4413.50
					7/22/09	124.09	4414.54
COD MIN O	000000	500400 005	0400700 000	4500.00	10/22/09	118.03	4420.60
COB MW-3	906823	599169.225	3468726.000	4538.63	3/3/10	120.14	4418.49
				 - - - -	4/26/10	123.12	4415.51
					7/13/10	128.60	4410.03
					7/14/11 7/12/12	132.41 133.89	4406.22 4404.74
					2/5/13	123.68	4414.95
					7/25/13	129.05	4414.95
					1/6/14	127.52	4411.11
					7/9/14	124.19	4414.44
					2/22/08	56.50	4775.56
				1	5/20/08	57.50	4774.56
				1	7/30/08	58.64	4773.42
				1	10/23/08	58.76	4773.30
					2/12/09	58.89	4773.17
				1	4/23/09	59.73	4772.33
					7/22/09	61.27	4770.79
000 144	500445	000057.505	0.470500.015	4000.00	10/22/09	62.82	4769.24
COB WL	593116	606357.506	3472502.012	4832.06	3/3/10	65.24	4766.82
					4/26/10	66.13	4765.93
				1	7/13/10	67.52	4764.54
				1	7/14/11	73.86	4758.20
				1	7/12/12	78.85	4753.21
					2/5/13	82.41	4749.65
					7/25/13	81.36	4750.70
			I	1	7/9/14	78.12	4753.94



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/12/08	289.47	4444.25
				1	5/29/08	288.53	4445.19
					7/31/08	290.08	4443.64
					10/20/08	290.15	4443.57
COLLINS	565260	602551.286	3471341.335	4733.72	4/21/09	290.66	4443.06
					7/20/09	290.78	4442.94
					10/20/09	290.52	4443.20
					2/2/10 4/23/10	291.64 291.96	4442.08 4441.76
					7/20/10	292.21	4441.51
					3/4/08	155.08	4444.06
					5/5/08	155.34	4443.80
				1	7/15/08	156.01	4443.13
					10/16/08	155.85	4443.29
					1/27/09	155.62	4443.52
					4/14/09	155.86	4443.28
					7/14/09	156.50	4442.64
					10/12/09	156.89	4442.25
					1/27/10	157.03	4442.11
					4/22/10 7/21/10	157.31 158.00	4441.83 4441.14
				 	10/20/10	158.41	4440.73
				 	1/17/11	158.37	4440.77
COOPER C	637069	601349.987	3468913.011	4599.14	4/11/11	158.74	4440.40
					8/26/11	159.51	4439.63
					10/13/11	159.81	4439.33
				1	2/1/12	159.80	4439.34
					4/25/12	160.26	4438.88
					7/12/12	160.88	4438.26
					10/10/12	161.10	4438.04
					2/27/13	161.40	4437.74
					5/8/13	161.70	4437.44
					8/13/13	162.07	4437.07
				 	11/1/13 2/10/14	162.23 161.90	4436.91 4437.24
				 	5/7/14	162.63	4437.24
					7/21/14	162.67	4436.47
					5/12/08	81.38	4604.96
				1	7/24/08	82.20	4604.14
					10/13/08	81.82	4604.52
					1/22/09	82.33	4604.01
					4/9/09	82.84	4603.50
					7/8/09	86.88	4599.46
					10/6/09	87.27	4599.07
					1/21/10	88.54	4597.80
					4/19/10	89.53	4596.81
					7/20/10 10/18/10	90.79 90.33	4595.55 4596.01
					1/19/11	90.34	4596.01
DODSON	644927	605594.560	3469063.772	4686.34	4/5/11	91.05	4595.29
					7/12/11	92.07	4594.27
					10/10/11	93.11	4593.23
					1/31/12	93.68	4592.66
					4/12/12	94.19	4592.15
					10/4/12	97.80	4588.54
					1/18/13	99.73	4586.61
					4/9/13	98.09	4588.25
					7/9/13	98.38	4587.96
			1	1	10/9/13	92.69	4593.65
						02.04	
					1/9/14 4/15/14	93.21 94.64	4593.13 4591.70



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwate Elevation (ft amsl)			
					2/13/08	22.11	4681.16			
					5/13/08	24.60	4678.67			
					7/22/08	27.00	4676.27			
					10/16/08	23.60	4679.67			
					1/19/09	26.51	4676.76			
					4/8/09	28.53	4674.74			
					7/7/09	31.04	4672.23			
					10/5/09	31.49	4671.78			
								1/21/10	34.55	4668.72
DOUGLASS 791	592791	607632.993	3470222.677	4703.27	4/19/10	36.40	4666.87			
					7/12/10	36.74	4666.53			
					1/18/11	25.96	4677.31			
					1/30/12	27.72	4675.55			
					4/11/12	29.99	4673.28			
					7/5/12	32.67	4670.60			
					1/9/13	27.24	4676.03			
					7/8/13	32.70	4670.57			
					1/6/14	23.56	4679.71			
					7/7/14	28.22	4675.05			
					2/13/08	87.76	4593.97			
					5/13/08	87.21	4594.52			
				7/22/08	86.90	4594.83				
							10/16/08	86.45	4595.28	
						1/20/09	86.26	4595.47		
					4/8/09	86.04	4595.69			
					7/7/09	86.16	4595.57			
					10/5/09	86.19	4595.54			
					1/21/10	86.45	4595.28			
DOUGLASS 792	592792	607607.541	3469829.115	4681.73	4/19/10	87.19	4594.54			
DOUGLAGG 192	352152	307007.341	3403023.113	4001.73	7/12/10	87.55	4594.18			
					1/18/11	87.8	4593.93			
					7/12/11	88.38	4593.35			
					1/30/12	88.92	4592.81			
					4/11/12	89.18	4592.55			
					7/5/12	95.64	4586.09			
					1/9/13	82.60	4599.13			
					7/8/13	83.66	4598.07			
					1/6/14	83.55	4598.18			
					7/7/14	82.43	4599.30			



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/8/08	50.20	4575.81
					5/14/08	52.45	4573.56
					7/23/08	52.16	4573.85
					10/14/08	52.19	4573.82
					1/20/09	50.52	4575.49
					4/8/09	51.91	4574.10
					7/13/09	56.93	4569.08
					10/8/09	60.95	4565.06
					1/25/10	59.35	4566.66
					4/21/10	58.88	4567.13
					7/14/10	61.86	4564.15
					10/20/10	61.20	4564.81
					1/18/11	59.79	4566.22
EAST	599796	607076.365	3468712.215	4626.01	4/5/11	59.73	4566.28
					7/12/11	63.79	4562.22
					10/12/11	63.64	4562.37
					1/31/12	63.82	4562.19
					4/11/12	65.72	4560.29
					7/9/12	70.50	4555.51
					10/4/12	73.34	4552.67
					1/17/13	75.04	4550.97
					4/9/13	78.05	4547.96
					7/9/13	78.37	4547.64
					10/15/13	72.38	4553.63
					1/14/14	71.88	4554.13
					4/8/14	71.03	4554.98
		9449 599701			7/8/14	72.03	4553.98
ECHAVE	219449		3470168	4648	2/1/12	216.71	4431.29
					1/18/13	218.41	4429.59
					3/11/08	29.52	4613.34
					5/12/08	30.64	4612.22
					7/21/08	25.59	4617.27
					10/14/08	24.53	4618.33
					1/21/09	27.35	4615.51
					4/8/09	29.08	4613.78
					7/9/09	31.51	4611.35
					10/7/09	29.92	4612.94
					7/20/10	50.38	4592.48
					10/20/10	48.88	4593.98
					1/17/11	51.13	4591.73
					4/5/11	53.81	4589.05
EPPELE 641	805641	607165.354	3469229.942	4642.86	7/11/11	56.82	4586.04
					10/12/11	37.62	4605.24
					1/31/12	46.80	4596.06
					4/11/12	52.07	4590.79
					7/6/12	62.39	4580.47
				 	10/3/12	71.66	4571.20
				 	1/17/13	59.73	4583.13
				 	4/8/13	83.98	4558.88
					7/9/13	92.84	4550.02
					10/15/13	28.50	4614.36
				 - -			



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/18/09	299.30	4394.38
					4/8/09	301.81	4391.87
					7/7/09	304.60	4389.08
					10/6/09	307.84	4385.84
					1/21/10	311.73	4381.95
					4/20/10	315.26 318.32	4378.42 4375.36
				 	7/15/10 11/4/10	349.62	4375.36
FLEMING	218386	605565.701	3469342.523	4693.68	1/19/11	356.89	4336.79
					7/12/11	364.72	4328.96
					2/3/12	370.84	4322.84
					7/9/12	373.86	4319.82
					1/18/13	373.96	4319.72
					7/17/13	374.88	4318.80
					1/10/14	379.63	4314.05
					7/17/14	372.97	4320.71
					4/10/13	196.05	4440.70
					7/10/13	196.19	4440.56 4440.10
FRANCO 101	500101	602848.756	3468830.905	4636.75	10/16/13	196.65 196.77	4440.10
					4/8/14	196.86	4439.89
					7/14/14	197.08	4439.67
					9/13/12	195.19	4441.69
					10/5/12	195.00	4441.88
					12/3/12	196.70	4440.18
		602817.854			1/15/13	196.30	4440.58
			3468831.563		2/6/13	195.62	4441.26
FRANCO 383	221383			4636.88	3/7/13	196.20	4440.68
					4/10/13	196.25	4440.63
		212447 607153.306			7/10/13 10/16/13	196.13 196.30	4440.75 4440.58
				 	1/14/14	196.46	4440.42
				 	4/8/14	196.89	4439.99
				 	7/14/14	196.87	4440.01
					10/22/08	40.59	4602.33
			3469063.892	4642.92	1/21/09	40.66	4602.26
					4/9/09	42.88	4600.04
FULTZ	212447				7/13/09	54.94	4587.98
				101.2.02	10/8/09	56.16	4586.76
					1/25/10	53.45	4589.47
				-	4/20/10	63.82	4579.10
					7/14/10	119.86	4523.06
					2/21/08 5/5/08	191.05 191.28	4447.40 4447.17
					7/15/08	191.44	4447.01
					10/16/08	191.83	4446.62
					1/28/09	191.92	4446.53
				1	4/15/09	192.09	4446.36
					7/16/09	192.52	4445.93
					10/14/09	192.82	4445.63
					2/2/10	193.33	4445.12
					4/22/10	193.49	4444.96
					7/20/10	193.93	4444.52
					10/19/10	194.29	4444.16
GARNER 557	558557	602659.240	3468962.415	4638.45	1/19/11 4/6/11	194.61 194.86	4443.84 4443.59
				H	7/15/11	194.86	4443.59
				1	10/11/11	195.72	4442.73
					2/2/12	196.09	4442.36
	1				4/13/12	196.30	4442.15
				Ī	7/11/12	196.72	4441.73
					10/5/12	197.08	4441.37
					1/11/13	197.51	4440.94
					1/11/13 4/15/13	197.51 197.76	4440.94 4440.69
					1/11/13 4/15/13 7/10/13	197.51 197.76 197.87	4440.94 4440.69 4440.58
					1/11/13 4/15/13	197.51 197.76	4440.94 4440.69



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/4/08	193.20	4447.54
					5/5/08	195.90	4444.84
					7/15/08	193.58	4447.16
					10/15/08	194.35	4446.39
					1/28/09	194.80	4445.94
					4/15/09	195.54	4445.20
					7/16/09	194.88	4445.86
					10/14/09	196.36	4444.38
					2/2/10	195.32	4445.42
					4/22/10	196.01	4444.73
					8/25/10	195.57	4445.17
					10/19/10	225.83	4414.91
GARNER 635	587635	602665.352	3468967.902	4640.74	1/19/11	196.89	4443.85
GARNER 033	367635	002005.352	3400907.902	4040.74	4/6/11	197.40	4443.34
					7/15/11	198.07	4442.67
					10/11/11	197.75	4442.99
					2/2/12	199.50	4441.24
					4/13/12	200.40	4440.34
					7/11/12	199.15	4441.59
					10/5/12	202.71	4438.03
					1/11/13	199.38	4441.36
					4/15/13	200.53	4440.21
					7/10/13	200.13	4440.61
					10/11/13	200.27	4440.47
					1/17/14	201.83	4438.91
					4/15/14	200.67	4440.07
					5/21/08	220.91	4496.20
					8/15/08	238.48	4478.63
					10/29/08	235.90	4481.21
					2/24/09	236.13	4480.98
GGOOSE 547	628547	606256.657	3469820,260	4717.11	5/14/09	236.17	4480.94
000002 047	020047	000200.007	0403020.200	4,1,,,,,	8/19/09	236.01	4481.10
					8/19/09	236.01	4481.10
					11/11/09	237.66	4479.45
					3/9/10	238.84	4478.27
					4/27/10	239.17	4477.94
				1	5/22/08	660.15	4264.16
					8/4/08	659.79	4264.52
					12/2/08	658.25	4266.06
					2/26/09	658.62	4265.69
					5/5/09	657.23	4267.08
GL-03	539782	604386.940	3473747.943	4924.31	8/12/09	656.56	4267.75
02 00	000.02	50 1000.0 10	3.7.5540	.02	8/12/09	656.56	4267.75
					11/10/09	655.31	4269.00
					3/2/10	655.52	4268.79
					4/9/10	655.35	4268.96
					7/7/10	655.05	4269.26
					2/1/12	651.72	4272.59



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/21/08	183.90	4447.23
					5/5/08	188.11	4443.02
					7/16/08	184.41	4446.72
					10/22/08	184.68	4446.45
					1/27/09	184.87	4446.26
					4/15/09	184.96	4446.17
					7/7/09	185.36	4445.77
					10/12/09	185.72	4445.41
					2/2/10	186.25	4444.88
GOAR RANCH	610695	602454.751	3468892.471	4631.13	4/22/10	186.44	4444.69
					7/13/10	186.76	4444.37
					1/19/11	187.52	4443.61
					7/12/11	188.24	4442.89
					2/6/12	189.02	4442.11
					9/13/12	190.08	4441.05
					1/11/13	190.48	4440.65
				9/18/13	191.21	4439.92	
					1/17/14	191.48	4439.65
					7/21/14	191.73	4439.40
					2/27/08	163.05	4444.55
					5/7/08	163.28	4444.32
					7/14/08	163.87	4443.73
					10/16/08	163.95	4443.65
				-	1/28/09	163.82	4443.78
				-	4/15/09	164.16	4443.44
				-	7/14/09	164.16	4443.44
				-	10/15/09	165.00	4443.01
					3/2/10	165.32	4442.28
					5/18/10	165.71	4441.89
					7/20/10	166.17	4441.43
LIODAN	005000	004705.040	0.400000 000	4007.00	10/19/10	166.45	4441.15
HOBAN	805290	601705.848	3468880.329	4607.60	8/31/11	167.76	4439.84
					12/14/11	168.13	4439.47
					2/1/12	168.09	4439.51
					4/19/12	168.32	4439.28
					7/11/12	169.10	4438.50
					10/17/12	169.40	4438.20
					2/15/13	169.70	4437.90
					5/8/13	169.95	4437.65
					8/13/13	170.31	4437.29
					11/1/13	170.54	4437.06
					2/10/14	170.22	4437.38
					5/7/14	170.61	4436.99
					7/21/14	170.90	4436.70



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/4/08	150.10	4443.81
					5/8/08	150.70	4443.21
					7/14/08	150.91	4443.00
					10/15/08	150.67	4443.24
					1/28/09	150.67	4443.24
					4/15/09	151.15	4442.76
					7/15/09	151.76	4442.15
				-	10/12/09 1/27/10	152.08 152.20	4441.83 4441.71
					4/21/10	152.30	4441.61
					7/19/10	153.16	4440.75
					10/18/10	153.53	4440.38
					1/17/11	153.51	4440.40
HOWARD NR	NR	601281.159	3468770.377	4593.91	4/11/11	154.24	4439.67
					8/26/11	154.79	4439.12
					10/11/11	155.02	4438.89
					2/1/12	155.08	4438.83
					4/13/12	155.40	4438.51
					9/13/12	156.29	4437.62
				-	10/16/12	156.43	4437.48
					2/6/13	156.27	4437.64
				-	4/9/13 7/12/13	156.71 157.18	4437.20 4436.73
					10/16/13	157.52	4436.39
					1/8/14	157.16	4436.75
					4/10/14	157.55	4436.36
					7/14/14	157.92	4435.99
					8/14/12	188.36	4406.58
					10/16/12	193.33	4401.61
					2/6/13	193.74	4401.20
					4/9/13	195.30	4399.64
HOWARD 312	221312	601308.920	3468772.630	4594.9356	7/12/13	198.27	4396.67
					10/16/13	201.08	4393.86
					1/8/14	202.61	4392.33
				-	4/10/14 7/14/14	204.64	4390.30 4387.97
					2/6/08	206.97 134.67	4437.36
					5/6/08	135.28	4436.75
					7/16/08	136.24	4435.79
					10/28/08	135.87	4436.16
					1/28/09	134.88	4437.15
					4/16/09	135.00	4437.03
					7/14/09	136.07	4435.96
					10/13/09	136.67	4435.36
					1/26/10	136.26	4435.77
					4/20/10	136.26	4435.77
					7/15/10	137.29	4434.74
					10/19/10	137.68	4434.35
KEEFER	209744	599879.175	3468119.015	4572.03	1/18/11 4/6/11	137.42 137.91	4434.61 4434.12
NLLFER	203144	333013.113	3-100119.013	7372.03	7/18/11	137.91	4434.12
					10/11/11	141.68	4431.04
					2/6/12	139.27	4432.76
					4/23/12	139.76	4432.27
					7/17/12	140.69	4431.34
					10/9/12	141.00	4431.03
					1/10/13	140.80	4431.23
					4/8/13	141.32	4430.71
					7/11/13	141.81	4430.22
					10/7/13	141.63	4430.40
					1/7/14	141.10	4430.93
					4/9/14	140.91	4431.12
					7/10/14	141.97	4430.06



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/22/13	221.32	4222.51
					6/14/13	221.78	4222.05
					9/24/13	219.6	4224.23
LADD 251	520251	594788.933	3470348.534	4443.83	12/3/13	217.44	4226.39
					2/25/14	217.59	4226.24
					6/4/14	218.27	4225.56
					9/10/14	219.04	4224.79
					2/9/10	253.10	4273.95
					4/28/10	253.83	4273.22
					7/28/10	254.05	4273.00
					12/8/10	252.87	4274.18
					3/17/11	252.76	4274.29
					6/24/11	288.00	4239.05
					9/29/11	276.58	4250.47
					12/16/11	250.68	4276.37
1 A D D 500	505500	500700 075	0.400000 570	4507.05	2/15/12	253.80	4273.25
LADD 538	505538	596790.675	3469638.573	4527.05	6/11/12	258.90	4268.15
					9/26/12	255.76	4271.29
					12/19/12	249.43	4277.62
					3/22/13	250.51	4276.54
					6/27/13	270.00	4257.05
					9/24/13	250.80	4276.25
					12/3/13	251.36	4275.69
					2/25/14 6/4/14	253.36	4273.69 4267.42
						259.63	
					9/10/14	248.68	4278.37 4207.31
					2/9/10	262.80	
					4/28/10	262.65	4207.46
					7/28/10	265.75 262.38	4204.36
				-	12/8/10 3/17/11	262.65	4207.73 4207.46
				-	6/24/11		4207.60
				-	9/29/11	262.51	4207.83
					12/16/11	262.28 264.32	4205.79
			3470817.194	4470.11	2/15/12	262.24	4207.87
LADD 837	519837	594757.700			6/11/12	264.04	4207.87
L100 001	013007	004707.700	0470017.104	4470.11			4208.36
					9/26/12 12/19/12	261.75 261.94	4208.17
					3/27/13	266.68	4203.43
					6/14/13	261.51	4208.60
					9/24/13	261.38	4208.73
					12/3/13	260.85	4209.26
					2/25/14	261.04	4209.07
					6/4/14	262.53	4207.58
					9/10/14	263.68	4206.43
					3/17/11	82.32	4431.08
					6/24/11	84.00	4429.40
					9/29/11	83.62	4429.78
					12/16/11	84.8	4428.60
					2/15/12	84.67	4428.73
					6/11/12	85.7	4427.70
					9/26/12	84.96	4428.44
LADD 977	642977	597619.168	3468714.011	4513.40	12/19/12	86.27	4427.13
					3/22/13	85.18	4428.22
					6/14/13	86.54	4426.86
					9/24/13	82.66	4430.74
					12/3/13	84.48	4428.92
					2/25/14	85.27	4428.13
					6/4/14	85.88	4427.52
	1			1	9/10/14	86.15	4427.25



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/20/08	156.15	4444.55
					5/6/08	156.40	4444.30
					7/15/08	157.07	4443.63
					11/19/08	157.17	4443.53
					1/28/09	156.70	4444.00
					4/15/09	157.22	4443.48
					7/15/09	157.59	4443.11
					10/12/09	158.13	4442.57
					1/26/10	158.35	4442.35
					4/22/10	158.68	4442.02
					7/21/10	159.37	4441.33
				-	10/18/10	159.63	4441.07
MCCONNELL 265	539265	601463.094	3468840.139	4600.70	1/19/11 4/8/11	159.69 159.10	4441.01 4441.60
					7/12/11	160.77	4439.93
					10/11/11	161.17	4439.53
					2/7/12	161.31	4439.39
					4/11/12	161.57	4439.13
					7/6/12	162.36	4438.34
					10/8/12	162.43	4438.27
					1/10/13	162.57	4438.13
					4/18/13	163.08	4437.62
					10/14/13	163.61	4437.09
					1/8/14	163.42	4437.28
					4/14/14	163.79	4436.91
					7/14/14	164.03	4436.67
					7/27/12	170.50	4431.05
					10/8/12	166.81	4434.74
					1/15/13 4/10/13	166.32 166.79	4435.23 4434.76
MCCONNELL 459	221459	601471.708	3468840.682	4601.55	7/19/13	167.53	4434.76
MOCONIVELE 400	221400	001471.700	0400040.002	4001.00	10/14/13	167.13	4434.42
					1/8/14	167.90	4433.65
					4/14/14	167.28	4434.27
					9/9/14	167.37	4434.18
					3/5/08	288.30	4440.23
					5/15/08	286.53	4442.00
					7/31/08	286.82	4441.71
					10/20/08	287.09	4441.44
					2/11/09	287.74	4440.79
					4/20/09	287.47	4441.06
					7/15/09	287.58	4440.95
					10/14/09	287.99	4440.54
					2/1/10	288.38	4440.15
					5/18/10	288.65	4439.88
					7/16/10	288.88	4439.65
					10/19/10	289.09 289.54	4439.44 4438.99
METZLER	35-71891	602091.308	3471381.176	4728.53	4/4/11	289.87	4438.66
			2303	20.00	7/12/11	289.98	4438.55
					10/12/11	290.47	4438.06
					2/7/12	290.92	4437.61
					4/12/12	291.15	4437.38
					7/18/12	291.37	4437.16
					10/4/12	291.63	4436.90
					1/11/13	292.15	4436.38
					4/11/13	292.29	4436.24
					7/17/13	292.43	4436.10
					10/17/13	292.86	4435.67
					1/16/14	293.20	4435.33
					4/15/14	293.20	4435.33
					7/21/14	293.45	4435.08



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					7/24/08	557.90	4203.33
					10/16/08	549.30	4211.93
					2/25/09	536.40	4224.83
					5/11/09	544.64	4216.59
					8/11/09	566.87	4194.36
					11/12/09	537.34	4223.89
					2/2/10	531.85	4229.38
NESS	509127	607866.391	3471419.494	4761.23	4/21/10	568.11	4193.12
					7/19/10	573.02	4188.21
					1/18/11	541.80	4219.43
					7/12/11	597.71	4163.52
					2/3/12	591.24	4169.99
					1/9/13	551.35	4209.88
					1/6/14	538.84	4222.39
					7/7/14	594.42	4166.81
					5/13/08	339.77	4460.91
NOTEMAN	212483	606053.800	3471576.400	4800.68	8/27/08	344.34	4456.34
NOTEWAN	212403	000053.000	3471576.400	4000.00	11/22/08	322.26	4478.42
					2/25/09	327.54	4473.14
					10/7/09	101.17	4430.21
					3/16/10	99.43	4431.95
					5/25/10	101.63	4429.75
					8/25/10	102.38	4429.00
					3/17/11	102.68	4428.70
					6/17/11	109.29	4422.09
					12/7/11	104.41	4426.97
NSD-02	527587	500000 054	3468821.474	4531.38	3/6/12	104.30	4427.08
NSD-02	52/58/	598820.051	3468821.474	4531.38	12/14/12	107.24	4424.14
					3/22/13	107.20	4424.18
					6/24/13	113.50	4417.88
					9/23/13	105.00	4426.38
					12/19/13	103.45	4427.93
					3/24/14	103.12	4428.26
					6/23/14	107.06	4424.32
					9/23/14	104.77	4426.61
					10/7/09	85.62	4432.66
					3/16/10	83.51	4434.77
					5/25/10	84.49	4433.79
					8/25/10	85.70	4432.58
					3/17/11	86.76	4431.52
					6/17/11	88.76	4429.52
					12/7/11	89.30	4428.98
NSD-03	527586	598070.538	3468694.259	4518.28	3/6/12	89.24	4429.04
	02.000	3333.0.000	0.00004.200	.5.0.20	12/14/12	90.83	4427.45
					3/22/13	88.65	4429.63
					6/24/13	91.70	4426.58
					9/23/13	86.88	4431.40
					12/19/13	89.11	4429.17
					3/24/14	89.48	4428.80
					6/23/14	90.77	4427.51
	1				9/23/14	89.10	4429.18
					10/27/08	160.51	4439.93
					4/29/09 ²	160.5	4439.94
NWC-02	562944	600177.435	3467474.673	4600.44	9/10/092	155	4445.44
					4/2010 ²	131	4469.44
					3/1/2013 ²	131	4469.44
					11/3/08	131.48	4443.51
NWC-03	203321	601153.857	3468350.838	4574.99	4/29/09 ²	130	4444.99
5 00			2.11300.000		9/10/09 ²	126	4448.99
	1		I		10/9/09 ⁵	125	4449.99



Well Name Registry Number Contents C								
NWC-03 CAP 627684 601151.704 3468343.653 4572.82	Well Name	Registry			Point Elevation	Date	Water	
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 17311/12 134.50 4443.82 1718/11 132.91 4438.40 1718/11 132.91 134.86 1443.80 1718/11 132.91 134.80 1443.80 1718/11 132.91 134.80 1443.80 1718/11 132.91 134.80 1443.80 1718/11 132.91 134.80 1443.80 1718/11 132.91 134.80 1443.80 1718/11 132.91 134.80 1443.80 1718/11 134.42 1438.40 1438.60 1438.30 1718/11 134.42 1438.40 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.30 1435.50 1438.60 1438.30 1435.50 1438.60 1438.30 1435.50 1438.60 1438.30 1435.50 1438.60 1438.30 1435.50 1438.6						2/2/09	130.03	4442.79
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 1715/11 132.91 4439.91 1715/11 132.91 4438.09 1715/11 132.91 4438.09 1715/11 132.91 4438.09 1715/11 132.91 4438.09 1715/11 132.91 4438.09 1731/12 135.09 4437.73 4438.09 1715/11 132.91 1731/12 135.09 4437.73 1718/12 135.09 4437.73 1718/12 135.09 4437.73 1718/12 135.59 4437.09 1710/10/12 135.597 4436.65 1710/10/13 135.60 4437.22 14717/13 136.32 4436.04 1717/13 136.32 4436.04 1713/14 136.33 4435.09 1715/13 136.78 4436.04 1713/14 136.33 4435.99 1710/14 137.30 4435.52 1715/13 136.43 4436.04 1713/14 136.93 4435.59 1710/14 137.30 4435.52 1715/13 136.43 4436.04 1713/14 136.93 4435.59 1710/14 137.30 4435.52 1715/13 136.43 4436.04 1713/14 136.93 4435.59 1710/14 137.30 4435.52 1715/13 136.43 4436.04 1713/14 136.93 4435.59 1710/14 137.30 4435.52 1715/13 1715/						4/23/09	130.62	4442.20
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 131.91 131.34 4441.48 4421/10 131.86 4440.95 7750/10 131.86 4440.95 1750/11 131.50 4441.32 14438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.73 4438.40 1013/11 134.50 4438.32 4425/12 135.50 4437.79 1010/12 135.97 4436.85 170/10/12 135.97 4436.85 170/10/13 136.78 4436.04 1010/10/13 135.60 4437.22 110/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.04 1010/10/13 136.78 4436.60 4437.27 12008 352.11 4338.66 4436.39 4771/14 136.33 438.86 4436.39 4771/14 137.30 4435.89 120/10/10/12 126 4474.77 37 472002 216 4474.77 472002						7/21/09	131.26	4441.56
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 101311 134.42 4438.40 101311 134.42 4438.40 101311 134.42 4438.80 101311 134.73 4438.09 1435.73 101311 134.73 4438.09 1435.73 10101012 135.97 4436.85 11001012 135.97 4436.85 11001013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 4436.04 10101013 136.78 1435.89 1010101013 136.78 1435.89 10101013 136.78 1435.89 10101013 136.78 1435.89 10101013 136.78 1435.59 10101013 136.78 1435.						10/21/09	131.60	4441.22
NWC-03 CAP 627884 601151.704 3468343.653 4572.82 1/1/8/11 134.52 91 4439.91 134.91 134.92 4438.40 10/13/11 134.72 4438.40 10/13/11 134.73 4438.40 10/13/11 134.73 4438.40 10/13/11 134.73 4438.09 136.00 10/13/11 134.73 4438.09 136.00 1						2/3/10	131.34	4441.48
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 427512 134.50 4438.40 4438.40 101/31/11 134.73 4438.90 4437.73 4438.80 447572 17/18/12 134.50 4438.32 427512 135.53 4437.09 101/01/2 135.57 4436.85 11/10/3 136.60 4437.73 4437.09 101/01/2 135.57 4436.85 11/10/3 136.78 4436.60 77/12/3 136.78 4436.40 100/10/13 136.78 4436.40 100/10/13 136.78 4436.40 100/10/13 136.78 4436.89 77/10/14 136.93 4435.89 77/10/14 136.93 4435.89 77/10/14 136.93 4435.89 77/10/14 136.93 4435.89 77/10/14 137.30 4435.50 4436.70 91009 ² 328 4362.77 91009 ² 328 4362.77 91009 ² 328 4362.77 91009 ² 326 4474.77 4/2010 ² 216 4474.77 4/2010 ² 216 4474.77 4/2010 ² 156 433.55 101/909 ² 148 4444.50 4445.50 442010 ² 140 4452.50 5/13/08 68.65 4643.30 69.53 4642.42 100/09 69.23 4642.42 100/09 69.23 4642.72 100/09 69.23 4636.86 77/200 77/200 78/2						4/21/10	131.86	4440.96
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 17/15/11 134.42 4438.40 1013/11 134.73 4438.09 17/18/12 134.50 4438.32 4/25/12 135.09 4437.73 7/18/12 135.73 4437.09 1010/12 135.97 4436.85 11/10/13 135.60 4437.23 4437.09 1010/12 135.97 4436.85 11/10/13 136.78 4436.04 10/10/13 136.78 4436.04 10/10/13 136.78 4436.04 10/10/13 136.78 4436.04 11/13/14 136.43 4436.39 47/14 136.93 4435.89 7/10/14 137.30 4435.52 12/20/8 352.11 438.66 4/29/09 328 4362.77 12/12 35.73 4437.09 12/20/8 352.11 438.66 4/29/09 328 4362.77 12/20 352.11 438.66 4/29/09 328 4362.77 12/20 352.11 438.67 12/20/8 352.11 438.67 12/20/8 352.11 438.67 12/20/8 352.11 438.67 12/20/8 352.11 438.67 12/20/9 328 4362.77 12/20/9 324 436.77 12/20/9 324 436.77 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 156 437.50 12/20/9 148 4444.50 12/20/9 149 4445.50 12/20/9 149 4444.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4445.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 4455.50 12/20/9 149 445						7/20/10	131.50	4441.32
NWC-03 CAP 627684 601151.704 3468343.653 4572.82 10/13/11 134.73 4438.09 1/3/11/2 135.09 4437.73 7/18/12 135.09 4437.73 7/18/12 135.73 4437.09 10/10/12 135.60 4437.22 4/17/13 136.32 4436.04 10/10/13 135.60 4437.22 4/17/13 136.32 4436.04 10/10/13 135.67 4436.04 10/10/13 136.78 4436.04 11/13/14 136.43 4436.03 477/14 136.93 4436.93 477/14 136.93 4436.93 477/14 136.93 4436.93 477/14 136.93 4436.93 477/14 136.93 436.93 477/14 136.93 436.97 10/10/13 136.78 4436.04 1/13/14 136.43 4436.09 10/10/13 136.78 136.78 4436.09 10/10/13 136.78 136.7						1/18/11	132.91	4439.91
NWC-03 CAP 627684						7/15/11	134.42	4438.40
A						10/13/11	134.73	4438.09
NWC-04 551849 605829.808 3469071.959 4690.77 9/10/09 324 4365.07 1/2/10 436.50 1/2/2009 148 4444.50 1/2/2010 149 4452.50 1/2/10/2 140 4452.50 1/2/2010 140 4452.50 1/2/2010 140 4452.50 1/2/2010 140 4452.50 1/2/2010 163.44 1445.20 1/2/2010 163.44 1445.20 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 140 1452.50 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 1642.35 1/2/2010 148 1/2/2010 14444.50 1/2/2010 149 1452.50 1/2/2010 149 1452.50 1/2/2010 149 1452.50 1/2/2010 1642.35 1/2/2010 149 1452.50 1/2/2010 1642.35 1/2/2010	NWC-03 CAP	627684	601151.704	3468343.653	4572.82	1/31/12	134.50	4438.32
NWC-04 551849 605829.808 3469071.959 4690.77 41910 81.59 4637.35 4636.50 4437.50 10/10/12 135.97 4436.85 11/10/13 136.60 4437.22 44/17/13 136.32 4436.50 44/17/13 136.78 4436.04 10/10/13 136.78 4436.04 11/13/14 136.43 4436.39 7/10/14 137.30 4435.89 7/10/14 137.30 4435.52 12/2/2/8 352.11 4338.66 44/2/9/9² 328 4362.77 41/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 31.00 462.50 41/2/9/9² 155 4437.50 41/2/9/9² 156 4436.50 91/2/9/9² 148 4444.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 149 4452.50 41/						4/25/12	135.09	4437.73
NWC-04 551849 605829.808 3469071.959 4690.77 41910 81.59 4637.35 4636.50 4437.50 10/10/12 135.97 4436.85 11/10/13 136.60 4437.22 44/17/13 136.32 4436.50 44/17/13 136.78 4436.04 10/10/13 136.78 4436.04 11/13/14 136.43 4436.39 7/10/14 137.30 4435.89 7/10/14 137.30 4435.52 12/2/2/8 352.11 4338.66 44/2/9/9² 328 4362.77 41/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 216 4474.77 31/2/10² 31.00 462.50 41/2/9/9² 155 4437.50 41/2/9/9² 156 4436.50 91/2/9/9² 148 4444.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4444.50 41/2/9/9² 148 4445.50 41/2/9/9² 148 4445.50 41/2/9/9² 149 4452.50 41/						7/18/12	135.73	4437.09
March Marc							135.97	4436.85
March Marc							135.60	4437.22
NWC-04 551849 605829.808 3469071.959 4690.77 NWC-04 557700 599822.821 3467749.954 4592.50 NWC-06 575700 599822.821 3467749.954 4592.50 NWC-08 607031.823 3470270.548 4711.95 OSBORN 643436 607031.823 3470270.548 4711.95 10/10/13 136.78 4436.04 1436.04 1136.43 4436.04 1136.43 4436.09 1436.93 14436.09 1436.93 14436.39 14436.39 14436.39 14436.39 14436.39 14436.39 14436.67 142010 ² 324 4366.77 142010 ² 216 4474.77 142010 ² 216 4474.77 142010 ² 216 4474.77 142010 ² 155 4437.50 10/9/09 ² 155 4437.50 10/9/09 ² 148 4444.50 142010 ² 140 4452.50 142010 ² 140010							136.32	4436.50
NWC-04 551849 605829.808 3469071.959 4690.77 12/10 328 436.77 10/14 136.93 4435.89 7/10/14 137.30 4435.52 12/208 352.11 4338.66 4/29/09 ² 328 4362.77 31/2013 ² 216 4474.77 31/2010 ² 216 4474.77 31/2010 ² 156 4436.50 9/10/09 ² 155 4437.50 10/9/09 ² 155 4437.50 10/9/09 ² 148 4444.50 4452.50 3/1/13 ² 140 4452.50 3/1/13 ² 1							136.78	4436.04
NWC-04 551849 605829.808 3469071.959 4690.77 12/10 328 436.77 10/14 136.93 4435.89 7/10/14 137.30 4435.52 12/208 352.11 4338.66 4/29/09 ² 328 4362.77 31/2013 ² 216 4474.77 31/2010 ² 216 4474.77 31/2010 ² 156 4436.50 9/10/09 ² 155 4437.50 10/9/09 ² 155 4437.50 10/9/09 ² 148 4444.50 4452.50 3/1/13 ² 140 4452.50 3/1/13 ² 1								
NWC-04 551849 605829.808 3469071.959 4690.77 12010 324 436.57 438.66 NWC-04 551849 605829.808 3469071.959 4690.77 12010 324 4366.77 NWC-06 575700 599822.821 3467749.954 4592.50 10/909² 156 4436.50 NWC-06 575700 599822.821 3467749.954 4592.50 10/909² 148 4444.50 A 472010² 140 4452.50 A 472010² 140 A 4452.50 A 472010² 140 A 452.50 A 472010² 140 A								
NWC-04 551849 605829.808 3469071.959 4690.77						4/7/14	136.93	4435.89
NWC-04 551849 605829.808 3469071.959 4690.77						7/10/14		
NWC-04						12/2/08	352.11	4338.66
NWC-04							328	
NWC-06 575700 599822.821 3467749.954 4592.50 4470.77 44/29/09 ² 156 4436.50 4436.50 9/10/90 ² 155 4437.50 10/9/09 ² 148 4444.50 44/2010 ² 140 4452.50 3/11/3 ² 140 4452.50 5/13/08 68.65 4643.30 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 67.35 10/5/09 75.09 4636.86 11/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38	NWC-04	551849	605829.808	3469071.959	4690.77			
NWC-06 575700 599822.821 3467749.954 4592.50 4429/092 156 4436.50 9/10/092 155 4437.50 10/9/092 148 4444.50 4452.50 3/1/132 140 4452.50 3/1/132 140 4452.50 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 477/09 69.60 4642.35 7/8/09 96.61 4615.34 10/16/08 75.09 4636.86 11/21/10 75.37 4636.58 11/21/10 75.37 4636.58 11/21/10 83.00 4628.95 7/12/11 74.60 4637.35 12/3/12 74.57 4637.38								
NWC-06 575700 599822.821 3467749.954 4592.50 442/9/09 ² 155 4437.50 4437.50 10/9/09 ² 148 4444.50 4442.50 4/2010 ² 140 4452.50 3/1/13 ² 140 4452.50 5/13/08 68.65 4643.30 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 4615.34 67.36 68.65 463.08 68.65 60 69.60 4642.35 7/8/09 96.61 4615.34 663.68 67.031.823 3470270.548 4711.95 10/5/09 75.09 4636.88 67.12/110 75.37 4636.58 67.12/110 75.37 4630.36 67.12/110 83.00 4628.95 7/12/11 74.60 4637.35 67.12/11 74.60 4637.35 67.12/111 74.60 4637.35								
NWC-06 575700 599822.821 3467749.954 4592.50 9/10/99 ² 155 4437.50 10/9/09 ² 148 4444.50 4452.50 3/1/13 ² 140 4452.50 3/1/13 ² 140 4452.50 5/13/08 68.65 4643.30 8/5/08 69.53 4642.42 10/6/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 67.35 4/19/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 7/12/11 74.60 4637.35 12/3/12 74.57 4637.38		+						
NWC-06 575700 599822.821 3467749.954 4592.50 10/9/09 ² 148 4444.50 4452.50 3/11/3 ² 140 4452.50 3/11/3 ² 140 4452.50 5/13/08 68.65 4643.30 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 67.34 67.35 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
OSBORN 643436 607031.823 3470270.548 4711.95 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 140 4452.50 140 4452.50 151/30/8 68.65 4643.30 1462.42 10/16/08 69.83 4642.42 10/16/08 69.83 4642.12 11/20/09 69.23 4642.72 11/20/09 69.23 4642.72 11/20/09 69.60 4642.35 11/20/09 69.60 4642.35 11/20/10 83.00 462.85 11/20/10 83.00 462.85 11/20/10 83.00 4628.95 17/12/11 74.60 4637.35 12/3/12 74.57 4637.38	NWC-06	575700	599822.821	3467749.954	4592.50			
OSBORN 643436 607031.823 3470270.548 4711.95 10/5/09 75.09 4636.86 7/1/2/10 83.00 4628.95 7/1/2/11 74.60 4637.35 2/3/12 74.57 4637.38								
OSBORN 643436 607031.823 3470270.548 4711.95 5/13/08 68.65 4643.30 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38						_		
OSBORN 643436 607031.823 3470270.548 4711.95 8/5/08 69.53 4642.42 10/16/08 69.83 4642.12 1/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38		1						
OSBORN 643436 607031.823 3470270.548 4711.95 11/20/09 69.23 4642.72 4/7/09 69.60 4642.35 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
OSBORN 643436 607031.823 3470270.548 4711.95 4636.60 4642.35 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38						10/16/08	69.83	4642.12
OSBORN 643436 607031.823 3470270.548 4711.95 4636.60 4642.35 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38						1/20/09	69.23	4642.72
OSBORN 643436 607031.823 3470270.548 4711.95 7/8/09 96.61 4615.34 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
OSBORN 643436 607031.823 3470270.548 4711.95 10/5/09 75.09 4636.86 1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
1/21/10 75.37 4636.58 4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38	OSBORN	643436	607031.823	3470270.548	4711.95			
4/19/10 81.59 4630.36 7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
7/12/10 83.00 4628.95 7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
7/12/11 74.60 4637.35 2/3/12 74.57 4637.38								
2/3/12 74.57 4637.38								
1/3/14 14.03 4037.32						7/9/12	74.63	4637.32



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					1/22/09	155.28	4536.12
					4/9/09	156.15	4535.25
					7/9/09	161.61	4529.79
					10/6/09	167.20	4524.20
					1/21/10	166.92	4524.48
				-	4/20/10	167.11	4524.29
				-	7/20/10 10/18/10	171.78	4519.62
				-	7/14/11	176.39 173.78	4515.01 4517.62
				-	8/25/11	173.76	4518.51
				-	2/6/12	169.09	4522.31
DANIA GALCOO	05.70440	005004004	0.400000 4.40	4004.40	2/29/12	169.32	4522.08
PANAGAKOS	35-76413	605304.234	3469323.140	4691.40	3/15/12	169.64	4521.76
					4/12/12	168.85	4522.55
					7/9/12	170.38	4521.02
					11/27/12	169.82	4521.58
					1/18/13	169.12	4522.28
					2/6/13	168.76	4522.64
				-	4/9/13	167.79	4523.61
				-	7/10/13	168.51	4522.89
				-	10/15/13	164.49 160.32	4526.91 4531.08
				-	4/16/14	158.75	4532.65
				-	7/17/14	159.69	4531.71
					5/15/08	279.78	4447.43
					8/18/08	280.06	4447.15
PARRA	576415	602170.716	3471263.549	4727.21	11/3/08	280.39	4446.82
PARKA	576415	602170.716	3471263.549	4/2/.21	2/13/09	280.75	4446.46
					4/28/09	280.88	4446.33
					7/20/09	280.99	4446.22
					7/17/08	149.88	4442.25
				-	11/3/08	150.99	4441.14 4442.45
					2/25/09 4/14/09	149.68 150.01	4442.45
				-	7/13/09	150.47	4441.66
				-	10/7/09	150.96	4441.17
					3/8/10	151.11	4441.02
					4/26/10	151.32	4440.81
					7/15/10	151.90	4440.23
					10/18/10	152.38	4439.75
					1/19/11	152.38	4439.75
					4/8/11	153.04	4439.09
PIONKE 395	613395	601045.471	3468960.981	4592.13	7/12/11	153.57	4438.56
				-	10/11/11	153.87	4438.26
					2/1/12 4/12/12	153.92 154.35	4438.21 4437.78
				-	7/11/12	154.97	4437.16
				-	10/17/12	155.31	4436.82
				-	1/9/13	155.25	4436.88
					4/17/13	155.76	4436.37
					7/18/13	156.09	4436.04
					10/17/13	156.39	4435.74
					2/5/14	155.84	4436.29
					4/9/14	156.21	4435.92
					7/11/14	156.66	4435.47
					9/18/12	152.00	4435.21
				}	10/11/12	152.15	4435.06
			I	1	1/9/13	152.23	4434.98
				1	1/17/10	150 50	1121 62
PIONKE 517	221517	600909 967	3468866 654	4587 20702	4/17/13	152.58	4434.63
PIONKE 517	221517	600909.967	3468866.654	4587.20792	7/16/13	153.11	4434.10
PIONKE 517	221517	600909.967	3468866.654	4587.20792	7/16/13 10/17/13	153.11 153.27	4434.10 4433.94
PIONKE 517	221517	600909.967	3468866.654	4587.20792	7/16/13	153.11	4434.10



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/20/08	204.22	4434.87
					5/19/08	204.72	4434.37
					7/31/08	205.56	4433.53
					10/21/08	205.06	4434.03
					2/13/09	204.74	4434.35
POOL	509518	599683.603	3470013.823	4639.09	4/21/09	204.87	4434.22
					7/20/09 10/20/09	205.69	4433.40
					2/24/10	206.06 205.59	4433.03 4433.50
				-	4/22/10	205.48	4433.61
					7/14/10	206.58	4432.51
				1	10/20/10	206.74	4432.35
					1/16/14	294.07	4440.31
					2/5/14	294.07	4440.31
					3/5/14	294.20	4440.18
					4/15/14	294.14	4440.24
POWER 639	222639	602146.123	3471373.655	4734.38	5/13/14	294.25	4440.13
					6/23/14	294.28	4440.10
					7/17/14	294.32	4440.06
					8/11/14	294.44	4439.94
					9/9/14	294.47	4439.91
					10/27/08	159.45	4437.16
					1/29/09	158.74	4437.87
					4/16/09	158.66	4437.95
					7/10/09	159.64	4436.97
					10/6/09	160.36	4436.25
					1/25/10	160.10	4436.51
					4/21/10	159.96	4436.65
					7/21/10	161.05	4435.56
RAMIREZ	216425	599730.649	3467584.363	4596.61	10/19/10	161.23	4435.38
RAWIREZ	210425	599730.649	3407504.303	4596.61	1/18/11 4/11/11	161.22 161.48	4435.39 4435.13
				-	7/18/11	162.39	4435.13
					10/12/11	163.04	4434.22
					4/10/12	163.22	4433.39
					7/6/12	163.85	4432.76
					10/8/12	164.38	4432.23
					4/19/13	164.96	4431.65
					1/13/14	165.26	4431.35
					4/14/14	164.85	4431.76
					2/15/08	40.85	4607.06
					5/13/08	43.82	4604.09
					7/29/08	45.25	4602.66
					10/22/08	44.54	4603.37
					1/20/09	44.31	4603.60
					4/8/09	44.68	4603.23
					7/9/09	48.99	4598.92
					10/7/09	49.87	4598.04
					1/26/10	47.61	4600.30
					4/20/10	49.78	4598.13
					7/14/10	51.36	4596.55
					10/20/10	49.85	4598.06
DAY	000770	007000 400	0.400.405.4.47	10.17.01	1/17/11	50.51	4597.40
RAY	803772	607083.422	3469195.147	4647.91	4/5/11	51.84	4596.07
					7/11/11	55.74	4592.17
					10/12/11	53.63	4594.28
					1/31/12	53.21	4594.70
					4/11/12 7/6/12	54.50 58.75	4593.41 4589.16
					10/3/12	60.98	4586.93
					1/17/13	56.57 56.32	4591.34 4591.59
					4/18/13 7/9/13	56.32	4591.59 4587.61
					10/15/13	60.30 44.33	4603.58
					1/14/14	34.50	4613.41
					4/8/14		
					7/8/14	36.72	4611.19 4604.53
			1		1/0/14	43.38	4004.53



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					11/11/09	135.46	4441.89
					2/25/10	135.89	4441.46
					4/22/10	135.62	4441.73
					7/16/10	136.63	4440.72
					10/19/10	136.61	4440.74
					1/20/11	134.21	4443.14
					4/8/11	137.68	4439.67
					7/14/11	138.09	4439.26
					10/12/11	138.09	4439.26
ROGERS 596	573596	601001.503	3468491.639	4577.35	1/30/12	137.91	4439.44
KOGEKS 590	373390	001001.503	3400491.039	4577.35	4/23/12	138.61	4438.74
					7/13/12	139.65	4437.70
					10/10/12	139.55	4437.80
					1/15/13	139.23	4438.12
					4/15/13	139.97	4437.38
					7/15/13	139.94	4437.41
					10/16/13	140.50	4436.85
					1/9/14	140.12	4437.23
					4/11/14	140.56	4436.79
					7/18/14	140.64	4436.71
					2/7/08	129.85	4449.17
					7/29/08	131.86	4447.16
ROGERS 750 ³	641750	600977.690	3468417.386	4579.02	10/22/08	132.08	4446.94
11002110100					2/10/09	130.62	4448.40
					4/29/09	131.33	4447.69
					8/3/09	135.07	4443.95
					7/17/08	149.65	4441.01
					11/3/08	150.15	4440.51
					2/10/09	149.02	4441.64
					4/16/09	149.53	4441.13
					7/13/09	150.31	4440.35
				4590.66	10/6/09	150.76	4439.90
					1/25/10	150.64	4440.02
			3 3467636.029		4/21/10	150.97	4439.69
ROGERS E	216018	216018 600449.648			8/25/10	151.15	4439.51
					10/19/10	151.57	4439.09
					10/13/11	153.79	4436.87
					1/30/12	153.56	4437.10
					4/10/12	154.13	4436.53
					7/17/12	155.10	4435.56
				-	1/17/13	154.56	4436.10
				}	4/18/13 7/17/13	155.66 155.71	4435.00 4434.95
				}	4/14/14	155.71	4434.69
			1	+	2/5/08	293.29	4441.89
				 	5/15/08	293.29	4441.61
				}	7/30/08	293.86	4441.32
				}	10/20/08	294.18	4441.00
					2/12/09	294.62	4440.56
					4/21/09	294.66	4440.52
					8/3/09	294.98	4440.20
				1	10/28/09	295.33	4439.85
					10/20/09		
					2/1/10	295.70	4439.48
RUIZ	531770	602857.357	3471424.219	4735.18			4439.48 4439.22
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10	295.70	
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10	295.70 295.96	4439.22
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10 4/8/11	295.70 295.96 297.20	4439.22 4437.98
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10 4/8/11 4/13/12	295.70 295.96 297.20 298.47	4439.22 4437.98 4436.71
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10 4/8/11 4/13/12 1/11/13	295.70 295.96 297.20 298.47 299.39	4439.22 4437.98 4436.71 4435.79
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10 4/8/11 4/13/12 1/11/13 4/11/13	295.70 295.96 297.20 298.47 299.39 299.72	4439.22 4437.98 4436.71 4435.79 4435.46
RUIZ	531770	602857.357	3471424.219	4735.18	2/1/10 4/26/10 4/8/11 4/13/12 1/11/13 4/11/13 7/25/13	295.70 295.96 297.20 298.47 299.39 299.72 300.06	4439.22 4437.98 4436.71 4435.79 4435.46 4435.12



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/8/08	121.80	4442.69
					5/19/08	123.49	4441.00
					7/29/08	122.64	4441.85
					10/22/08	123.39	4441.10
					1/29/09	122.87	4441.62
					4/17/09	123.53	4440.96
					7/10/09	124.15	4440.34
					10/6/09	124.55	4439.94
					1/22/10	124.32	4440.17
					4/21/10	124.65	4439.84
					7/21/10	125.80	4438.69
					10/19/10	126.30	4438.19
			3468269.622	4504.40	1/17/11	125.35	4439.14
SCHWARTZ	210865	600811.014		4564.49	4/11/11	127.50	4436.99
					7/18/11	127.67	4436.82
					10/12/11	127.51	4436.98
					2/6/12	127.34	4437.15
					4/10/12	127.78	4436.71
					7/16/12	128.84	4435.65
					10/17/12	128.98	4435.51
					3/13/13	128.81	4435.68
					5/14/13	129.60	4434.89
					7/15/13	129.05	4435.44
					10/14/13	130.15	4434.34
					4/9/14	129.77	4434.72
					7/18/14	129.81	4434.68
					5/13/08	44.94	4606.28
					8/5/08	46.61	4604.61
					10/16/08	46.60	4604.62
					1/21/09	47.19	4604.03
					4/8/09	48.45	4602.77
					7/7/09	49.41	4601.81
					10/7/09	50.33	4600.89
					1/26/10	51.13	4600.09
					4/20/10	51.24	4599.98
STEPHENS	808560	606981.766	3469072.799	4651.22	7/14/10	51.91	4599.31
					1/18/11	52.98	4598.24
					7/11/11	54.44	4596.78
					1/31/12	55.65	4595.57
					7/9/12	10.69	4640.53
					1/18/13	10.50	4640.72
					7/10/13	58.16	4593.06
					1/14/14	45.51	4605.71
	1		l .	1			



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/6/08	352.10	4454.42
					5/15/08	358.97	4447.55
					8/5/08	Dry	<4426
					10/16/08	347.00	4459.52
					1/21/09	344.78	4461.74
					4/10/09	349.64	4456.88
					7/8/09	356.99	4449.53
				-	10/5/09	Dry	<4426
				-	1/21/10 4/19/10	Dry	<4426 <4426
SUNBELT	201531	605998.250	3471735.149	4806.52	7/12/10	Dry Dry	<4426 <4426
					1/19/11	Dry	<4426
					8/25/11	Dry	<4426
					2/3/12	Dry	<4426
					7/9/12	Dry	<4426
					9/13/12	Dry	<4426
					1/17/13	Dry	<4426
					7/9/13	Dry	<4426
					1/10/14	Dry	<4426
					7/8/14	Dry	<4426
					2/13/08	26.50	4690.09
					5/14/08	30.69	4685.90
					7/24/08	32.06	4684.53
					10/16/08	27.53	4689.06
					1/20/09	29.77	4686.82
					4/7/09	31.47	4685.12
					7/8/09	33.61	4682.98
				-	10/5/09 1/21/10	35.12 36.64	4681.47 4679.95
SWAN	NR	607378.547	3470648.298	4716.59	4/21/10	38.06	4678.53
OWA	l l	007070.047	0470040.200	47 10.00	7/19/10	39.67	4676.92
					1/18/11	35.06	4681.53
					7/12/11	39.32	4677.27
					2/3/12	37.86	4678.73
					7/10/12	40.39	4676.20
					1/9/13	38.51	4678.08
					7/8/13	42.26	4674.33
					1/10/14	29.43	4687.16
					7/7/14	33.68	4682.91
					8/9/13	167.86	4429.76
THOMPOON	040151	500540 504	0.407007.00.4	4507.00	10/10/13	167.68	4429.94
THOMPSON 151	612151	599543.561	3467387.294	4597.62	1/16/14	167.19	4430.43
					4/14/14 7/21/14	166.98 167.78	4430.64 4429.84
			 		3/4/08	346.62	4429.84
					5/23/08	346.16	4462.27
					8/15/08	353.91	4454.52
					10/30/08	349.45	4458.98
					2/24/09	348.64	4459.79
					5/6/09	349.38	4459.05
					8/12/09	349.13	4459.30
					11/4/09	348.97	4459.46
					3/10/10	348.19	4460.24
TM-02A	522574	604152.059	3472008.794	4808.43	4/6/10	353.86	4454.57
					7/6/10	349.20	4459.23
					2/10/11	347.60	4460.83
					7/13/11	348.14	4460.29
					2/2/12	346.94	4461.49
					8/13/12	344.53	4463.90
					2/14/13	343.50	4464.93
					8/27/13	343.84	4464.59
					2/18/14	341.47	4466.96
					8/12/14	338.50	4469.93



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/12/08	127.14	4770.71
					5/20/08	127.40	4770.45
					8/6/08	128.02	4769.83
					11/12/08	128.00	4769.85
				4897.85	2/26/09	126.94	4770.91
T14.00	500575	222222 122	0.470744.040		5/13/09	113.86	4783.99
TM-03	522575	606366.130	3473711.046	4897.85	8/18/09	128.80	4769.05
					11/10/09	125.38	4772.47
					3/2/10	128.02	4769.83
					4/14/10	130.56	4767.29
					7/7/10	131.25	4766.60
					2/1/12	135.04	4762.81
					2/26/08	158.78	4549.10
					5/20/08	158.76	4549.12
				1	8/4/08	158.80	4549.08
				4707.88	10/29/08	158.85	4549.03
					2/16/09	159.28	4548.60
					5/13/09	158.81	4549.07
		606055.975	3468376.658		8/18/09	158.91	4548.97
TM-06 MILLER	522695				11/12/09	158.96	4548.92
I WI-UO WILLER	522695			4/0/.00	3/8/10	158.99	4548.89
					4/14/10	159.02	4548.86
					7/2/10	159.13	4548.75
					7/21/11	159.88	4548.00
					7/9/12	161.40	4546.48
					2/14/13	161.05	4546.83
					8/19/13	161.30	4546.58
					7/21/14	162.60	4545.28
			3471816.397	-	3/15/12	279.30	4461.88
					4/24/12	279.03	4462.15
					9/13/12	278.30	4462.88
					10/19/12	277.45	4463.73
					3/7/13	276.55	4464.63
TM-10 USBP	522696	601586.268		4741.18	4/17/13	276.42	4464.76
					7/23/13	275.99	4465.19
					11/6/13	254.20	4486.98
					1/15/14	262.00	4479.18
					5/15/14	269.39	4471.79
					7/15/14	271.03	4470.15
					3/5/08	81.00	4636.71
					5/22/08	81.24	4636.47
					8/6/08	81.65	4636.06
					11/5/08	81.75	4635.96
					2/26/09	81.88	4635.83
					5/13/09	82.01	4635.70
					8/19/09	82.37	4635.34
TM-16	522578	605588.075	3469842.199	4717.71	11/10/09	82.83	4634.88
					3/2/10	83.09	4634.62
					4/14/10	83.22	4634.49
					7/2/10	83.51	4634.20
					7/14/11	80.41	4637.30
					7/9/12	72.55	4645.16
					8/15/13	61.42	4656.29
			1		8/4/14	62.55	4655.16



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/6/08	199.85	4446.02
					5/22/08	199.50	4446.37
					8/6/08	199.19	4446.68
					11/18/08	199.46	4446.41
					3/3/09	199.81	4446.06
					4/22/09	200.57	4445.30
					8/12/09	201.46	4444.41
					11/4/09	201.16	4444.71
					3/10/10	201.34	4444.53
TM-19A	522581	602458.710	3469197.426	4645.87	4/9/10	201.55	4444.32
TW-19A	322361	002438.710	3409197.420	4045.87	7/7/10	202.35	4443.52
					2/14/11	203.00	4442.87
					7/15/11	203.30	4442.57
					2/2/12	203.84	4442.03
					7/11/12	204.75	4441.12
					10/16/12	205.02	4440.85
					2/15/13	205.30	4440.57
					9/4/13	205.73	4440.14
					2/12/14	207.47	4438.40
					7/21/14	210.56	4435.31
					3/5/08	211.04	4455.63
					5/22/08	210.98	4455.69
		603698.271	3469104.903		8/6/08	211.55	4455.12
					11/6/08	207.05	4459.62
					2/18/09	212.31	4454.36
				4666.67	5/7/09	212.37	4454.30
					8/18/09	212.77	4453.90
TM-42	562554				11/3/09	213.05	4453.62
					2/24/10	213.36	4453.31
					4/19/10	213.51	4453.16
					7/2/10	213.52	4453.15
					7/12/11	214.62	4452.05
					7/11/12 2/12/13	216.10	4450.57
						216.55	4450.12
					8/28/13	217.38	4449.29
	1				7/21/14 5/7/08	218.33	4448.34 4438.68
				1	7/15/08	123.30 121.55	4438.68
				1	10/15/08	121.55	4440.43
				 	2/11/09	122.35	4440.70
				1	4/17/09	121.28	4439.25
				1	7/21/09	123.96	4439.23
				1	10/19/09	123.88	4438.10
TVI 236	802236	600552.215	3467978.431	4561.98	2/2/10	122.26	4439.72
					4/23/10	122.70	4439.28
				1	7/15/10	125.08	4436.90
				1	7/15/11	127.23	4434.75
				1	7/16/12	127.81	4434.17
				1	10/9/12	128.45	4433.53
				1	7/18/13	127.38	4434.60
					7/16/14	129.24	4432.74



## 15708 127.10 4440.12	Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
TVI 713						5/7/08	127.10	4440.12
TVI 713								4440.92
## A						10/15/08	130.00	4437.22
TVI 713						2/11/09	149.87	4417.35
TVI 713						4/17/09	126.73	4440.49
## 22/10 126.71 4440.51 ## 24/39.00 127.53 4433.60 ## 24/39.00 127.53 4433.60 ## 24/39.00 127.53 4433.60 ## 24/39.00 128.14 4433.60 ## 24/39.00 128.14 4433.60 ## 24/39.00 128.14 130.84 4436.83 ## 24/39.00 143.30 4436.83 ## 24/39.00 130.84 4436.83 ## 24/39.11 130.84 4436.83 ## 24/39.11 130.84 4436.80 ## 24/39.11 130.84 4436.80 ## 24/39.12 130.01 130.33 4436.80 ## 24/39.12 130.01 130.33 4436.80 ## 24/39.12 130.01 130.33 4436.80 ## 24/39.12 131.31 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.13 131.14 133.20 4436.80 ## 24/39.14 133.20 4436.80 ##								
TVI 713								
TVI 713 567713 600729.095 3468412.946 4567.22 445111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 4432.86 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 120111 136.36 1433.60 14								
TVI 713					-			
TVI 713 600729.095 3468412.946 4567.22 411/11 134.36 4432.86 4435.72 7/15/11 131.81 443.66 4436.89 2/3/12 130.01 4437.21 4/25/12 131.33 4435.89 7/16/12 131.79 4435.25 109/12 132.16 4435.09 2/6/13 131.14 4436.09 4/10/13 132.09 4/435.10 7/18/13 133.10 4434.12 1/9/14 132.93 4434.12 1/9/14 132.93 4434.29 7/16/14 132.93 4434.29 7/16/14 132.57 4434.65 5/7/08 143.90 4442.91 7/16/18 144.22 4442.67 7/16/19 144.22 4442.67 7/16/19 144.38 4442.51 7/16/09 144.39 4/15/09 144.39 4/1					-			
TVI 713								
## ASS 61 ## ASS 62 ## ASS								
101/211 130.33	TVI 713	567713	600729.095	3468412.946	4567.22			
WEISKOPF 897 221897 601096.780 3468647.358 4488.24 449814 4150.31 4435.63 4441.63 442.70 444.63 442.70 445.72 444.13 446.63 444.13 446.64 4440.43 447.71 446.66 4436.65 4436.65 4436.67 771873 4436.67 4437.63 4436.65 1017773 150.08 4436.63 4436.65 1017773 150.08 4436.63 4436.65 1017773 150.08 4436.63 4436.63 4436.65 1017773 150.08 4436.63 4436.63 4436.65 1017773 150.08 4436.63 4436.63 4436.65 1017773 150.08 4436.63 4436.65 1017773 150.08 4436.63 4436.65 1017773 150.08 4436.63 4436.63 116674 148.90 4436.63 4436.63 116674 148.90 4436.63 116674 148.90 4436.63 116674 148.90 4436.63 116773 116874 148.90 4436.53 1017773 150.08 4436.53 1017773 150.08 4436.53 1017773 150.08 4436.53 1017773 150.08 4436.53 1017773 150.08 150.06 160.08 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788.78 1788								
## VEISKOPF 802 WEISKOPF 807 WEISKOPF 897 WEISKOPF 897 PUBBAR A 1921						2/3/12	130.01	4437.21
WEISKOPF 897 VEISKOPF 897 VE						4/25/12	131.33	4435.89
WEISKOPF 802 WEISKOPF 807 WE						7/16/12	131.97	4435.25
WEISKOPF 897 WEISKOPF 897 VEISKOPF 897 VE								
## Page 18								
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4/11/14 150.50 4435.20								
						4/11/14	150.50	4435.20
7/18/14 150.55 4435.15						7/18/14	150.55	4435.15



Well Name	ADWR 55 Registry Number	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
WMD-2011-03M	913037	605360.830	3470671.273	4746.28	2/2/12	226.66	4519.62
					2/4/08	144.85	4436.09
					5/6/08	145.33	4435.61
					7/16/08	146.40	4434.54
					10/28/08	146.01	4434.93
					2/10/09	144.83	4436.11
					4/16/09	144.94	4436.00
			3467998.486		7/14/09	146.14	4434.80
		599678.880			10/13/09	146.77	4434.17
					1/26/10	146.34	4434.60
					4/22/10	146.27	4434.67
					7/21/10	147.81	4433.13
					10/19/10	147.80	4433.14
					1/18/11	147.52	4433.42
ZANDER	205126			4580.94	4/6/11	147.84	4433.10
					7/13/11	148.91	4432.03
					10/12/11	149.50	4431.44
					1/31/12	149.31	4431.63
					4/10/12	149.64	4431.30
					7/17/12	150.63	4430.31
					10/8/12	150.92	4430.02
					1/10/13	150.89	4430.05
					4/18/13	151.36	4429.58
					7/15/13	152.14	4428.80
					10/7/13	151.65	4429.29
					1/7/14	151.10	4429.84
					4/9/14	150.81	4430.13
					7/17/14	152.02	4428.92

Notes:

35-71891 = ADWR 35 Database

ADWR = Arizona Department of Water Resources

ft amsl = feet above mean sea level

NR = No Record

UTM = Universal Transverse Mercator Zone 12, North American Datum 1983 (NAD83)



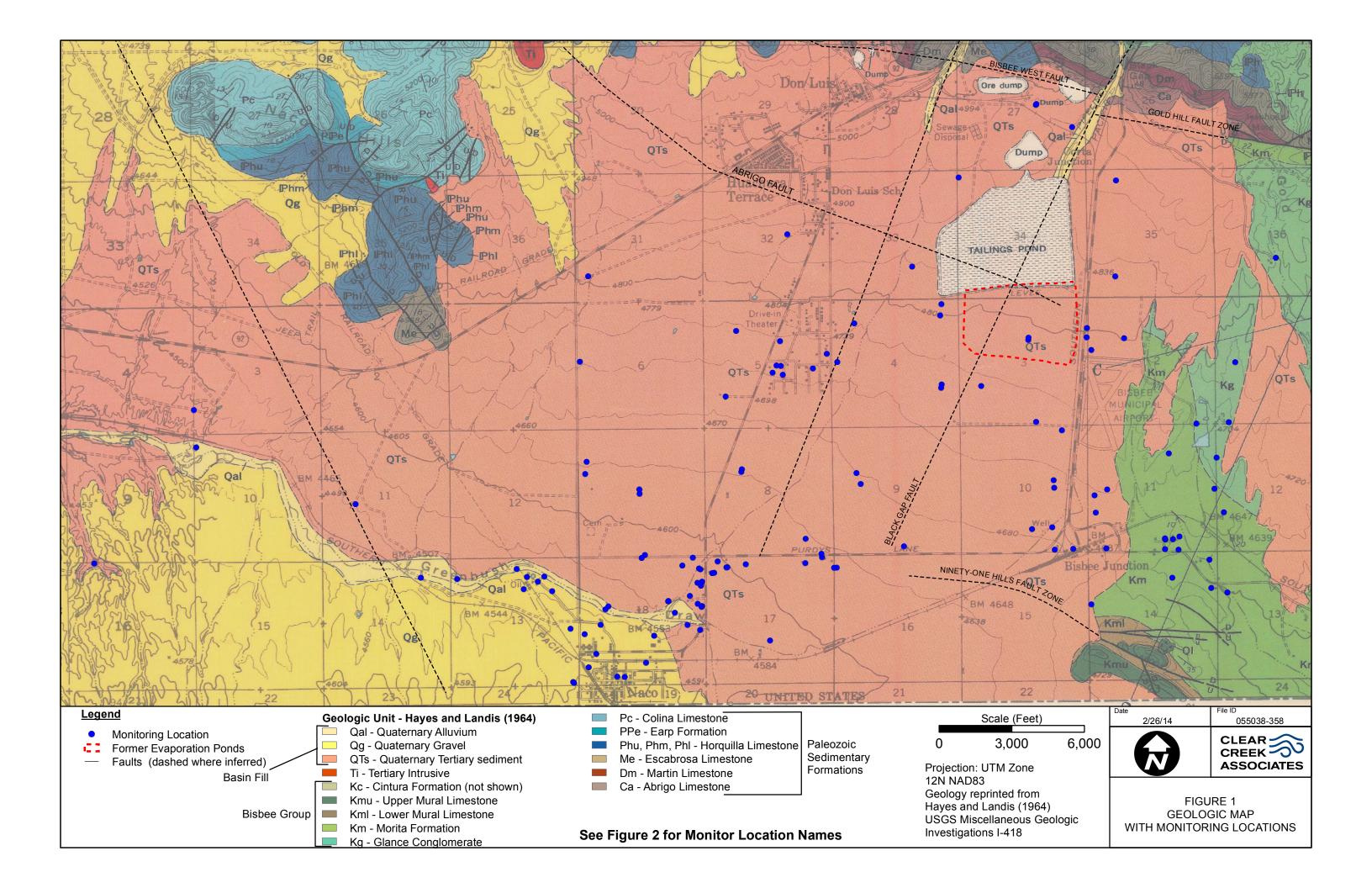
¹ Depth to water measurement provided by Arizona Water Company

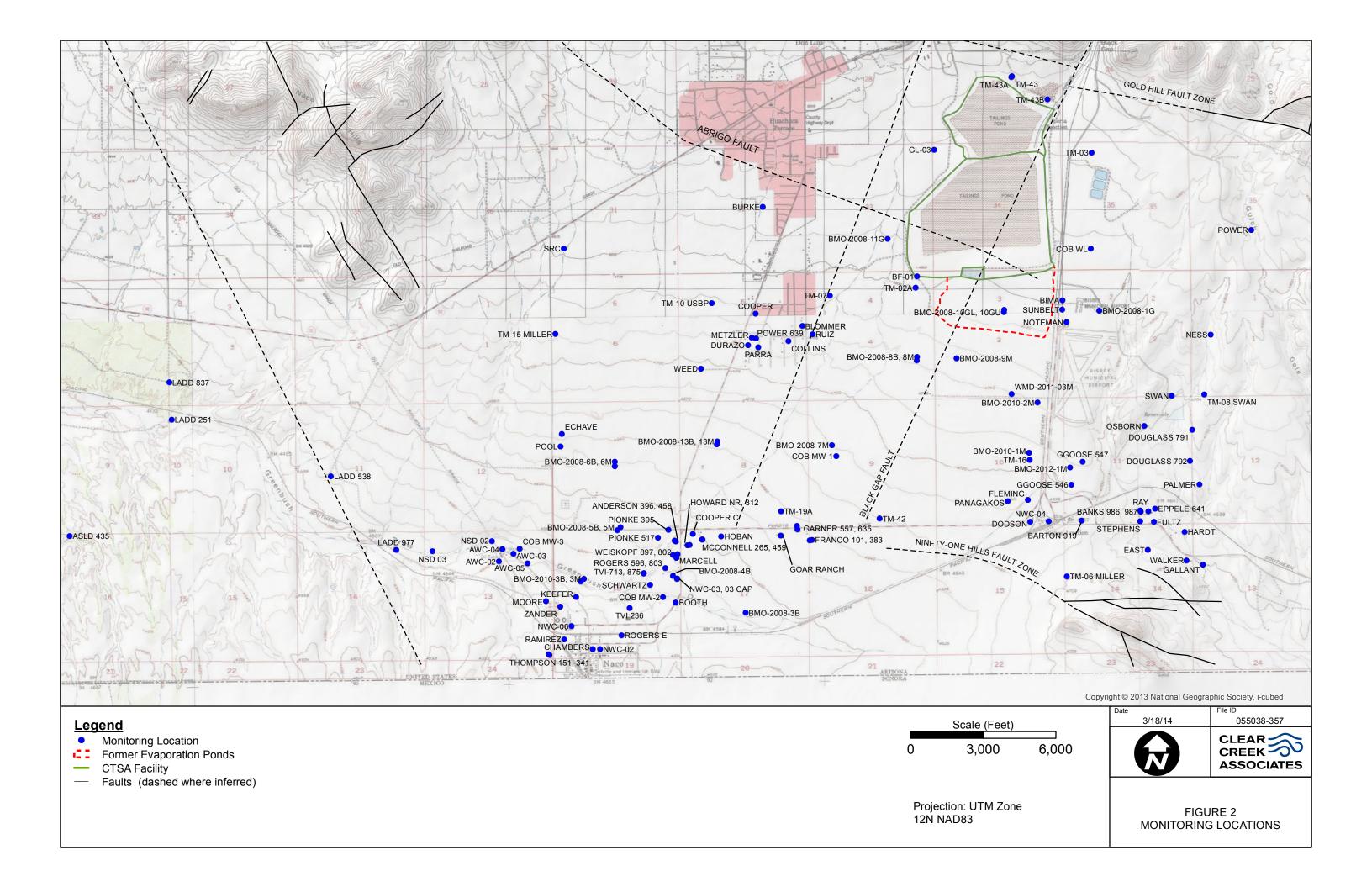
² Depth to water measurement provided by Naco Water Company

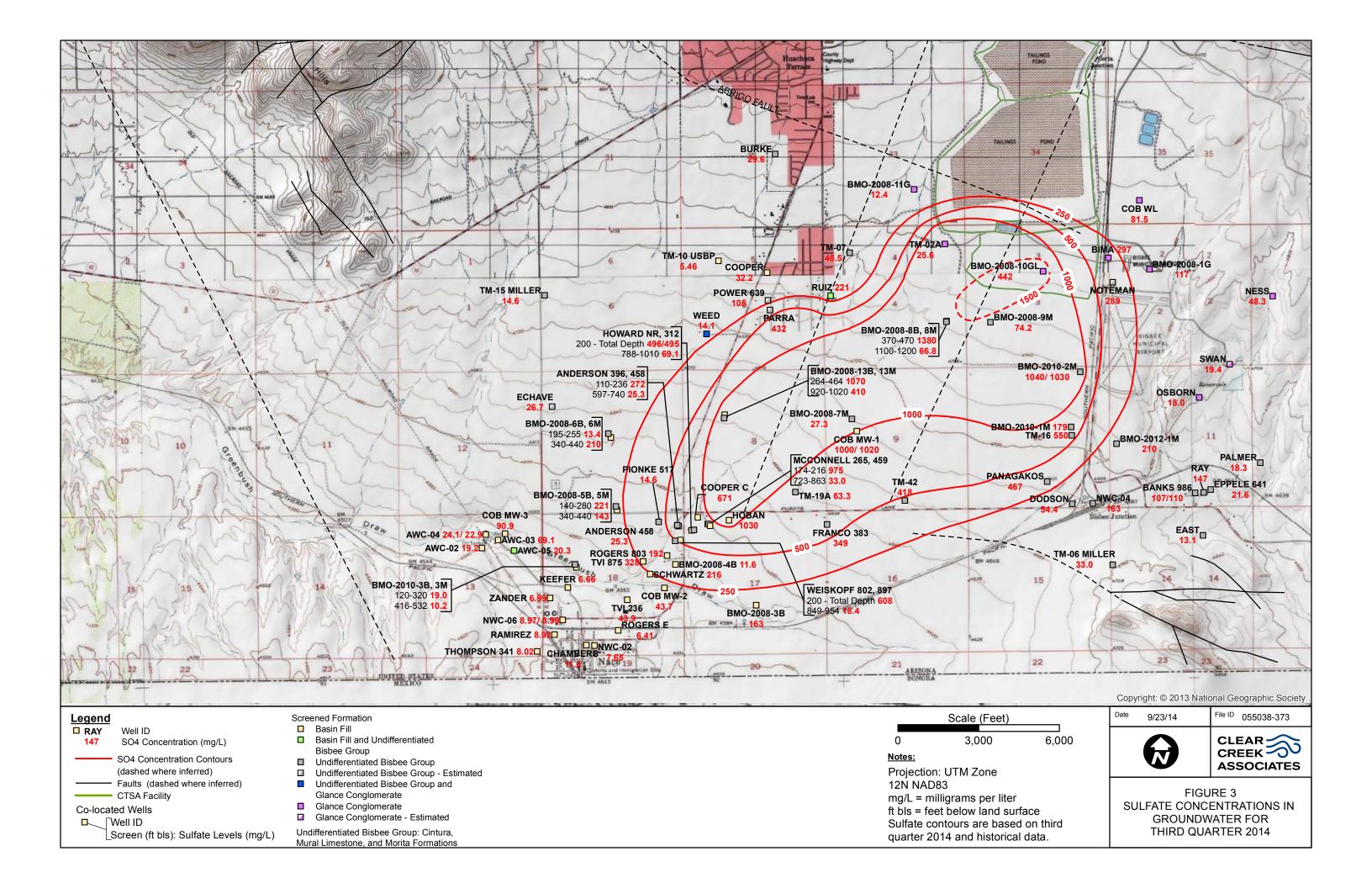
 $^{^{\}rm 3}$ Well previously identified as ROGERS 803

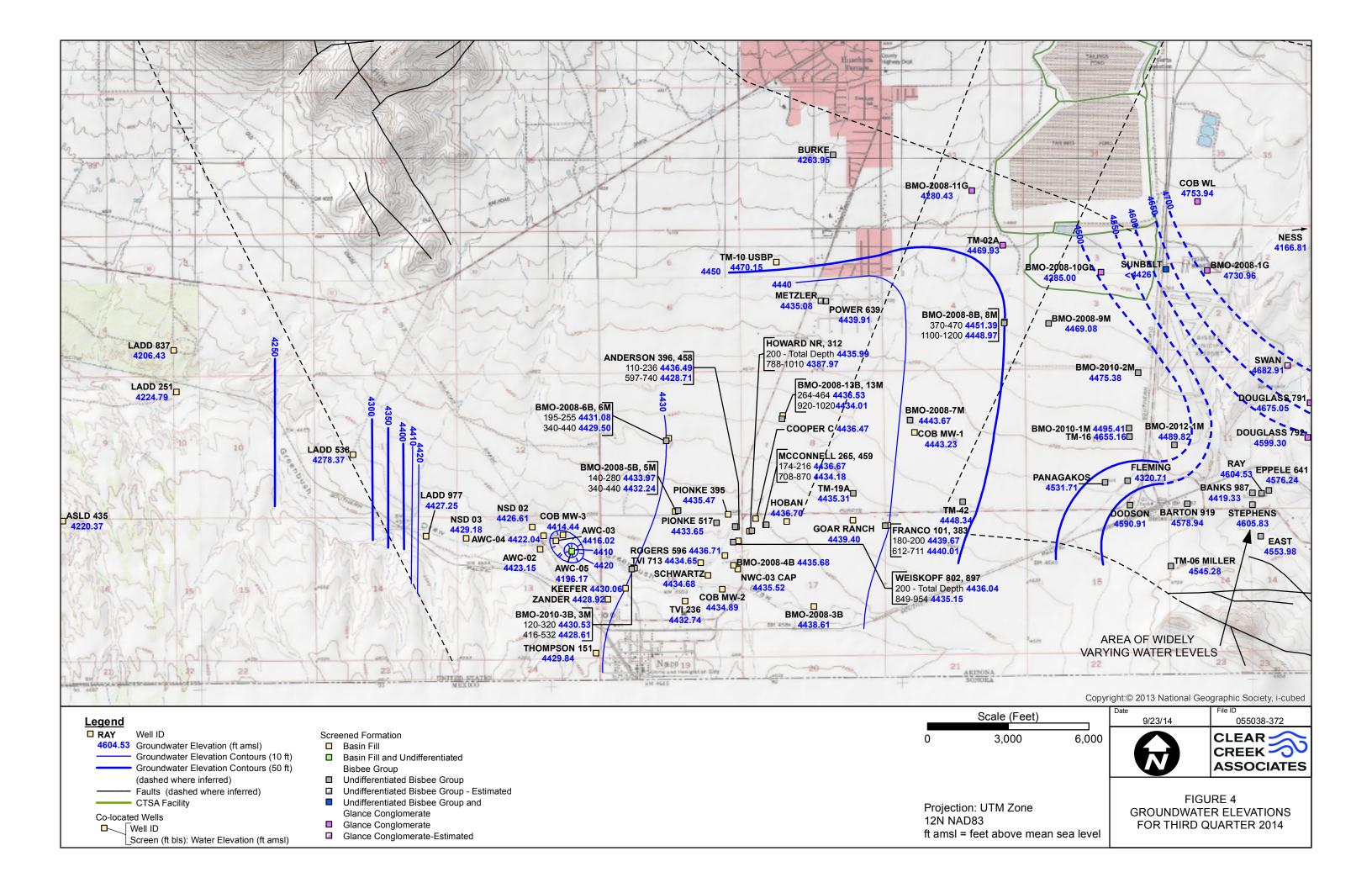
⁴ Well shut off at 6 am per AWC. See Table 2 for timing details.

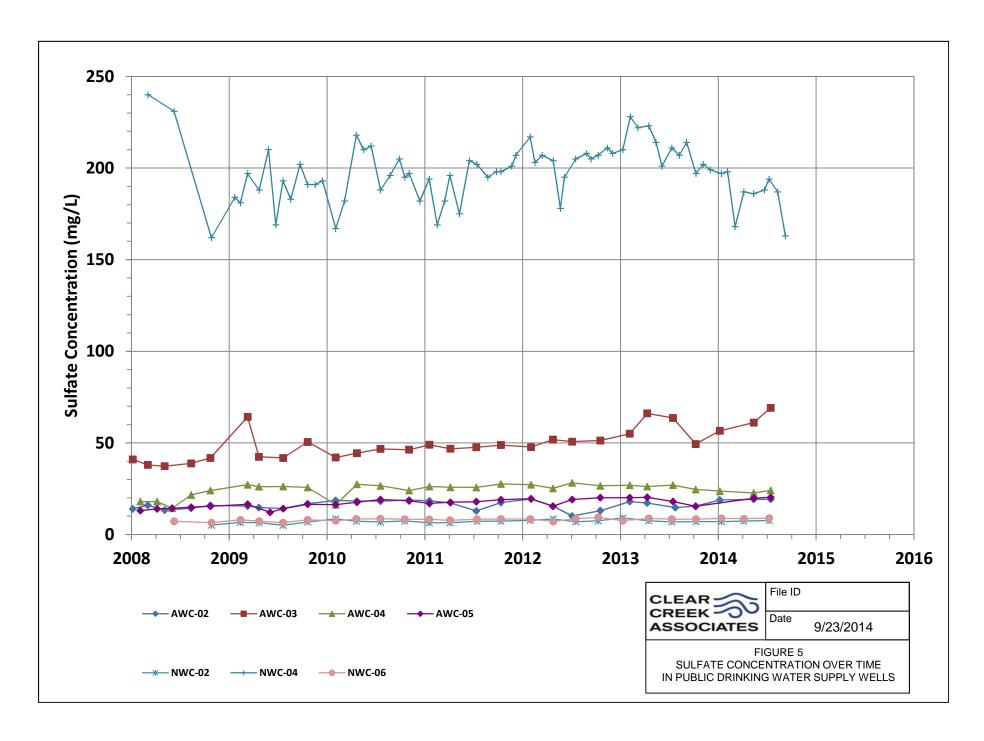
FIGURES

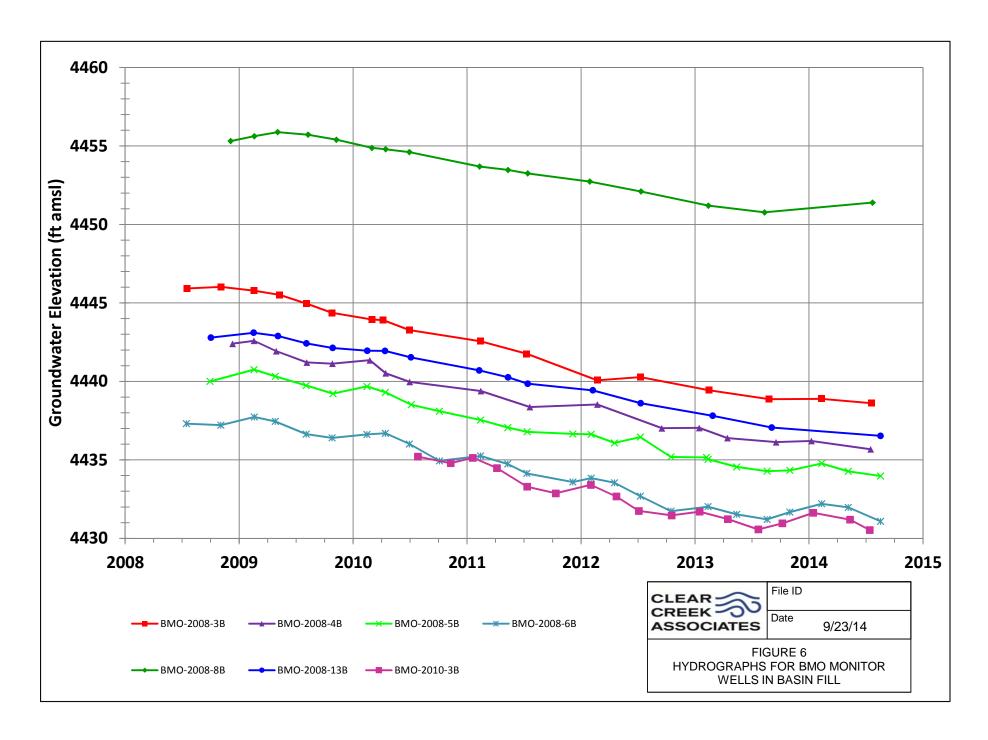


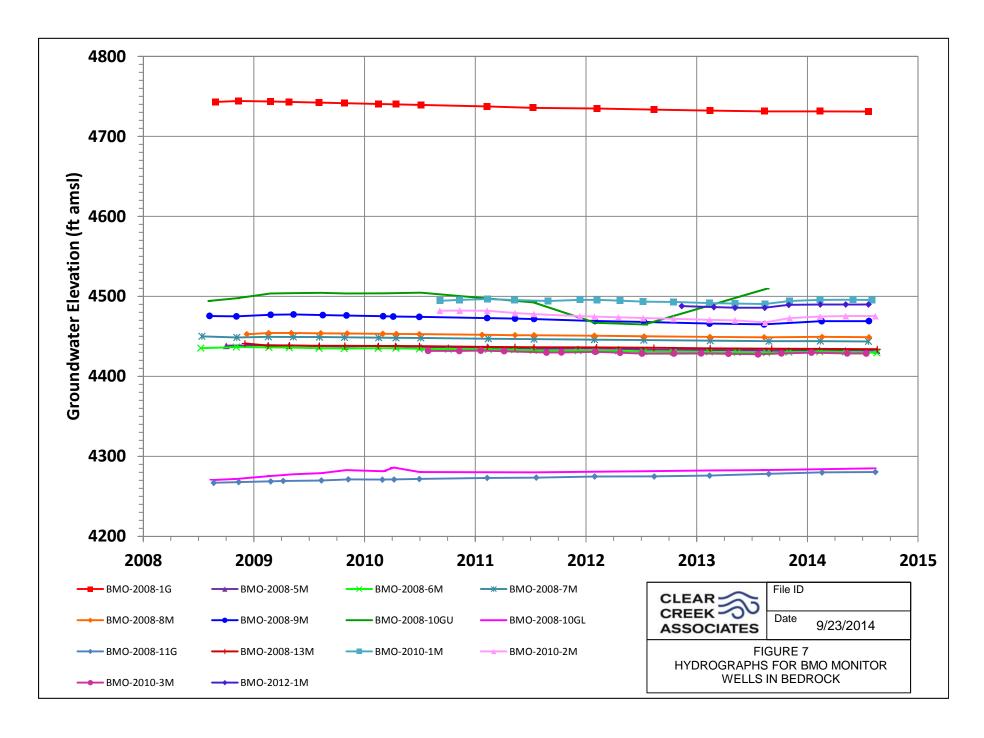












APPENDIX A DATA VERIFICATION REPORT

APPENDIX A

DATA VERIFICATION REPORT

THIRD QUARTER 2014 GROUNDWATER MONITORING REPORT

Prepared for:

FREEPORT MINERALS CORPORATION COPPER QUEEN BRANCH

36 West Highway 92 Bisbee, Arizona 85603

Prepared by:

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221 North Court Avenue, Suite 101 Tucson, Arizona 85701

October 22, 2014

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1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected during the third quarter 2014 by Clear Creek Associates (Clear Creek) and Freeport Minerals Corporation, Copper Queen Branch (CQB) and analyzed pursuant to Mitigation Order on Consent Docket No. P-121-07 (ADEQ, 2007). Clear Creek and CQB collected groundwater samples pursuant to the groundwater monitoring program approved by ADEQ in April 2010 (CQB, 2010 and ADEQ, 2010). Analytical results for groundwater samples collected for this project during the third quarter 2014 were provided to Clear Creek by SVL Analytical, Inc. (SVL) of Kellogg, Idaho for preparation of the third quarter 2014 Groundwater Monitoring Report.

Quality assurance (QA) and quality control (QC) procedures are specified in the *Quality Assurance Project Plan for Aquifer Characterization Plan* (QAPP) (Appendix F of HGC, 2008) for field sampling, chain-of-custody (COC) documentation, laboratory analysis, and reporting. This report reviews field sampling for samples collected by Clear Creek and CQB. Additionally, sample handling and laboratory QA/QC data are evaluated according to the data quality indicators (DQIs) given in the QAPP.

The laboratory reports for the third quarter 2014 samples are in Appendix B, including COC forms, laboratory correspondence, QC summaries, data qualifiers, and internal QA/QC tests performed by the laboratory. Based on the results of laboratory control samples, matrix spike/recovery and blank spikes, SVL did not advise any modifications regarding the usability and data validation status of the laboratory test results. The analytical results for 102 samples collected by Clear Creek and CQB in third quarter 2014 are contained in 11 reports with the SVL laboratory identification numbers listed in the following table.

SVL ID	WELLS REPORTED							
Number of Number of of Number of f	Number of wells sampled: 80 Number of well samples collected (including duplicates and multiple samples from one well): 90 Number of duplicate samples collected: 6 Number of field and equipment blanks collected: 12 Total number of samples collected: 102							
W4G0248	PALMER, NESS, SWAN, OSBORN, NOTEMAN, BIMA, EPPELE 641, RAY, BANKS 986, EAST, COB MW-3, COB MW-2, COB MW-1, COB WL, NWC-04, NWC-06, NWC-02, ROGERS E, KEEFER, DUP20140708							
W4G0249	DUP20140709, DUP20140710, FB20140708, EQB20140708, FB20140709, EQB20140709, FB20140710, EQB2014710							
W4G0401	RAMIREZ, CHAMBERS, COOPER, ANDERSON 396, ANDERSON 458, PIONKE 517, HOWARD NR, FB20140714, EQB20140714, HOWARD 312, DUP20140714, MCCONNELL 265, FRANCO 383, DODSON, BMO-2010-3B, BMO-2010-3M, TM-10, DUP20140716, AWC-05, AWC-03							
W4G0402	AWC-04, AWC-02, TVI 875, TVI 236, FB20140716, EQB20140716, ECHAVE, ZANDER, POWER 639							
W4G0594	COOPER C, HOBAN, TM-19A, TM-42, BMO-2008-3B, TM-6, BMO-2012-1M, BMO-2008-1G, TM-15, BMO-2008-7M, BMO-2008-8M, BMO-2008-8B, BMO-2008-9M							
W4G0486	PANAGAKOS, SCHWARTZ, ROGERS 803, BMO-2008-4B, WEISKOPF 802, WEISKOPF 897, WEED, BURKE, THOMPSON 341, PARRA							
W4H0241	POWER 639, NWC-04, RUIZ							
W4H0350	BMO-2010-1M, TM-16, BMO-2008-10GL							
W4H0495	BMO-2010-2M, TM-2A, BMO-2008-11G, BMO-2008-6M, BMO-2008-6B, BMO-2008-5M, BMO-2008-5B, BMO-2008-13B, DUP081414							
W4H0613	BMO-2008-13M, TM-7, EQB-082114, FB-082114							
W4I0197	NWC-04, MCCONNELL 459, POWER 639							

2. FIELD OPERATIONS

Field operations for this project consisted of the following for all monitoring wells sampled by Clear Creek and CQB:

- Static water level measurement if possible,
- Well purging,
- Collection of water quality field parameters (pH in standard units [SU], specific conductance [SC] in microSiemens per centimeter [μS/cm], and temperature in degrees Celsius [°C]),
- Collection of groundwater samples for water quality analysis,
- Collection of groundwater QA and QC samples per requirements in the QAPP, and
- Equipment decontamination.

Field notebook entries and sampling forms were evaluated for quality assurance and met the documentation requirements stated in the QAPP.

2.1 Water Level Monitoring

Static water level measurements were attempted at each well that was sampled (where there are no known obstructions or lack of wellhead access to prevent static water level measurement) and at all wells where water level monitoring was conducted by Clear Creek and CQB. Water levels were measured while the well pump was off. Because it is not always possible to ascertain how long the pump had been off prior to water level measurements (for wells equipped with pumps), some water levels may be affected by residual drawdown. Before measuring the water level at each well, the battery on the water level indicator was checked and the sensitivity level was adjusted, if necessary. Each measurement was collected and verified by measuring the depth to water multiple times in order to obtain a consistent reading and accurate measurement.

2.2 Groundwater Sampling

Groundwater samples were collected from operable wells designated in the monitoring program approved by ADEQ (ADEQ, 2010). Construction and location information for the wells sampled for water quality and water level measurements is listed in Tables 2 and 4 of the main text.

2.2.1 Pre-Sampling Field Activities

On each day of sampling, the pH¹ and SC² multipurpose meter was calibrated. In addition, the water level indicator was checked for a signal, which indicates a working meter and sufficient battery strength. On each day where sampling extended for more than half a day, a mid-day calibration check was performed on the pH and SC probes. In addition to calibrating the instruments each day, measures were taken to 1) properly decontaminate field equipment, 2) ensure the appropriate storage and transport temperature of the samples, and 3) document activities related to the collection of groundwater samples as part of this project. These objectives were met by 1) replenishing or obtaining supplies of distilled water and ice daily, 2) use of the proper preservative and sample collection containers, 3) properly packing the samples on ice during field activities, 4) using distilled water to properly decontaminate field equipment prior to the start of sampling each day and after sampling at each well, and 5) obtaining the appropriate field notebook in order to document field activities related to the groundwater monitoring program.

2.2.2 Well Purging, Field Measurements, and Sample Collection

Three wetted casing volumes were purged from each well prior to sampling, when possible. However, when three casing volumes could not be purged, this information was noted on the groundwater sampling form (Appendix C) at each well for which this was the case. Purge water was discharged to the ground surface.

Field measurements were collected at varying intervals during well purging at each well where a water quality sample was collected. If possible, field parameters were monitored until the measurements stabilized within 0.3 standard units for pH, 2 °C for temperature and 100 μ S/cm for specific conductance as described in Section 4.2.1.2 of the QAPP.

During this monitoring period, 90 groundwater samples (duplicate and multiple samples included) were collected for analysis from 80 wells. Groundwater samples were collected by filtering the sample into a 250-milliliter bottle using a clean filtration apparatus and one disposable 0.45-micron filter. All bottles were provided by the laboratory and maintained in a clean and secure work area until used in the field.

² Field SC meters were calibrated using standard stock solutions



1

¹ Field pH meters were calibrated using a three point calibration

2.2.3 Post-Sampling Field Activities

Post-sampling field activities consisted of equipment decontamination, sample storage, and sample shipping. Field equipment that came into contact with the sample was decontaminated using Alconox[®] detergent and distilled water. After washing, the equipment was rinsed with distilled water. After sample collection, samples from each well were placed into a plastic bag to prevent the label from becoming illegible and stored on ice until they could be packed securely for shipping to SVL.

3. SAMPLE HANDLING

All third quarter 2014 samples collected by Clear Creek and CQB were shipped to SVL for analysis. COC documentation accompanied all samples submitted and included the sample name, collection date and time. Laboratory reports include the date and time the samples were received by SVL. As noted on the analytical data reports from SVL, all of the sample bottles were received intact, properly preserved, and in good condition. The samples were shipped within one to nine days of sample collection and the time between sample collection and receipt of samples by SVL was two to ten days. The samples were collected, shipped, and received by SVL within the established holding time for dissolved sulfate analysis in accordance with United States Environmental Protection Agency (EPA) Method 300.0

4. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analyses through proper licensure, the use of approved analytical methods, QC measurements, appropriate turn-around-time for analysis (timeliness), method detection limits (MDLs), and practical quantitation limits (PQLs). Each of these controls is discussed in the following subsections.

The review of laboratory QC included a review to identify any qualified data and an assessment to determine their significance. Additionally, the laboratory QC summaries were reviewed to verify that results met QA criteria.

4.1 Licensure

SVL is licensed with the Arizona Department of Health Services (license number AZ0538) and is accredited in accordance with the National Environmental Laboratory Accreditation Conference.

4.2 Analytical Method

EPA method 300.0 was used for sulfate analysis during this monitoring period.

4.3 Method Detection Limit (MDL) and Reporting Limit (RL)

The MDL and RL of the analytical method used by SVL are shown in the following table. The MDL for analyses of samples is equal to or less than the target MDL identified in the QAPP.

Lab	Method	MDL (mg/L)	RL (mg/L)	Target MDL ¹ (mg/L)	
SVL	EPA 300.0	0.06	0.30	10	

mg/L = milligrams per liter

Target MDL from Table F.2 of QAPP

4.4 Timeliness

2014 Q3 CQB DVR

All samples submitted for sulfate analysis were analyzed within the twenty-eight day holding time specified by EPA Method 300.0

4.5 Quality Control Measurements

The following QC samples were prepared and analyzed:

- Calibration blanks and calibration verification standards
- Analytical spike samples
- Laboratory duplicate samples
- Field blank samples

4.5.1 Calibration Blanks and Calibration Verification Standards

Results from the analyses of the initial calibration blanks and initial calibration verification standards conducted by EPA Method 300.0 were reviewed. The results of each initial calibration blank analyzed showed no detections of the target analyte. All analytical results for the initial calibration verification standards and laboratory-fortified blanks showed percent recoveries that were within the acceptance criteria specified by the SVL QA Plan and the QAPP.

4.5.2 Analytical Spike

Analytical spike and spike duplicate samples were analyzed for 10 percent of the samples analyzed. The spike samples were prepared by adding a sulfate spike to one randomly chosen sample out of every ten samples analyzed. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were high or unusable are qualified with an "M1", or "M3" flag, respectively. The "M1" flag was used on reports W4G0248, W4G0249, W4G0401, W4G0402, W4G0594, W4G0486, W4H0241, and W4H0350. The "M3" qualifier was used on reports W4G0248, W4G0401, W4G0402, and W4G0594. In all cases where a qualifier was used, the method control sample recovery was checked by SVL to ensure that it was acceptable within the criteria specified by their QA Plan. The method control samples were prepared by adding a sulfate spike to de-ionized water.

4.5.3 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were reviewed as part of this data verification report. In all cases where the relative percent difference (RPD) could be calculated for laboratory duplicate samples, the RPD was within 20 percent, which is the tolerance range set by the laboratory. The results met QA criteria and demonstrate an appropriate level of precision in laboratory analysis of these samples. Field duplicate samples are discussed in Section 5.1.

4.5.4 Sample Re-Analysis

No samples were reanalyzed in the third quarter 2014.

4.5.5 Blank Samples

During the third quarter 2014, twelve blank samples were collected, including six field blanks (FB20140708, FB20140709, FB20140710, FB20140714, FB20140716, and FB-082114) and six field equipment blanks (EQB20140708, EQB20140709, EQB20140710, EQB20140714, EQB20140716, and EQB-082114). Field and equipment blank samples were collected in accordance with procedures described in Section 4.2.1.5 of the QAPP. Field and equipment blank samples were collected and submitted along with other samples to evaluate the potential for contaminant introduction under field conditions. As required by Section 4.2.1.5 of the QAPP, a minimum of one field blank and one equipment blank sample was collected for every twenty samples

Sulfate was detected in two field blanks, FB20140714 and FB20140716, at concentrations of 0.54 mg/L and 0.59 mg/L, respectively. The field blank samples were collected at 10:47 on July 14, 2014, and at 16:31 on July 16, 2014 with commercial distilled water. The field blank FB20140714 was collected after the HOWARD NR and DUP20140714 samples, and prior to the HOWARD 312 sample collection. The field blank FB20140716 was collected after the TVI 236 sample. Sulfate was not detected in the equipment blanks collected at 10:49 on July 14, 2014 and 16:33 on July 16, 2014 with commercial distilled water. Due to the small amount of sulfate detected in the field blanks, no corrective action is needed.

5. DATA QUALITY INDICATORS

The QAPP provides several DQIs for assessing the overall quality of the data. These DQIs include the following:

- Precision
- Bias
- Accuracy
- Representativeness
- Comparability
- Completeness
- Sensitivity

Each of these DQIs is discussed below in relation to the third quarter 2014 groundwater sampling and analysis conducted by Clear Creek and CQB.

5.1 Precision

Precision indicates how well a measurement can be reproduced. Precision is quantified by calculating the RPD between duplicate samples and by measuring the water level multiple times before recording the result.

For the QA/QC of analytical data, precision was quantified by calculating the RPDs between duplicates among the following groups of duplicate samples:

- Laboratory duplicate samples
- Field duplicate samples

As discussed in Section 4.5.3 there were no exceedances of RPD QA criteria for any laboratory duplicates. During this monitoring period six field-filtered duplicate samples (DUP20140708, DUP20140709, DUP20140710, DUP20140714, DUP20140716, and DUP081414) were collected for analysis. The collection of six duplicate samples meets the QA/QC method and quantity goal stated in Section 4.2.1.5 of the QAPP.

Sulfate results for the duplicate samples collected are provided in the table below. The range of RPD values was between 0.20 and 5.11 percent, all within the 20 percent acceptance criteria for

field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is met for the analytical data.

SVL Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
<u>W4G0248</u>	BANKS 986	DUP20140708	107	110	2.76%
W4G0248 & W4G0249	COB MW-1	DUP20140709	1000	1020	1.98%
W4G0248 & W4G0249	NWC-06	DUP20140710	8.97	8.99	0.22%
<u>W4G0401</u>	HOWARD NR	DUP20140714	496	495	0.20%
W4G0402 & W4G0401	AWC-04	DUP20140716	24.1	22.9	5.11%
<u>W4H0495</u>	BMO-2010-2M	DUP081414	1040.0	1030.0	0.97%

mg/L = milligrams per liter

RPD = Relative Percent Difference

For the QA/QC of water level monitoring, precision was met by measuring the water level repeatedly until readings were within 0.03 feet of one another. Readings within that range were obtained from all wells where groundwater measurements were collected, so the DQI for precision is met.

5.2 Bias

Bias is a systematic distortion of measurements causing consistent errors in one direction. Bias is managed in this data set by the consistent application of standardized sample collection and analysis procedures. As discussed in Section 4.5.5, ten (10) of the twelve (12) blank samples had no measurable concentrations of sulfate. Only low concentration of sulfate (0.54 mg/L and 0.59 mg/L) were measured in two (2) of the blank samples. These data indicate that the sampling collection and analysis procedures did not contribute sulfate to the results.

5.3 Accuracy

Accuracy is a measure of the agreement of a measurement to a known value and is measured using the recoveries from laboratory control samples. As discussed in Sections 4.5.1, 4.5.2, and 4.5.3 there were no significant exceedances of the recovery QA criteria for any of the calibration standards, analytical spikes, or laboratory duplicates, respectively. As discussed in Section 4.5.5, two (2) of the twelve (12) blank samples had low concentrations of sulfate indicating that the sampling collection and analysis procedures did not significantly contribute sulfate to the results. Water level measurements for the third quarter 2014 were compared to previous quarters to

ensure that the measurements were within the expected ranges. Based on this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

5.4 Representativeness

All samples and water level measurements were taken from locations specified in the revised groundwater monitoring program (ADEQ, 2010) following sampling procedures specified in the QAPP. Therefore, they provide a good representation of groundwater quality at the sampled locations. The sampling procedures are representative of groundwater quality at the sampled locations because no or little sulfate was detected in the field or equipment blanks. The analytical data are representative of groundwater conditions because the analyses used standard procedures and methods that met QA/QC guidelines of the QAPP.

5.5 Comparability

All samples were collected using standardized procedures (HGC, 2008) and were analyzed by SVL using standardized methods. Insofar as standardized sample collection and analytical methods are adhered to, the sample results should be comparable.

5.6 Completeness

All samples collected and subsequently analyzed and reported by SVL satisfy the QA/QC criteria for this project. The completeness of analytical results is 100 percent, which exceeds the minimum 90 percent completeness in Section 3.3.6 of the QAPP.

5.7 Sensitivity

The analytical method used to analyze the samples meets the MDL requirements specified in Table F.2 of the QAPP. The water level sounder was accurate to 0.01 feet as specified in Section 4 of the QAPP. Therefore, the analytical sensitivity is considered acceptable for use in aquifer characterization.

6. REFERENCES

- Arizona Department of Environmental Quality (ADEQ). 2007. Mitigation Order on Consent Docket No. P-121-07, In the Matter of: Phelps Dodge Corporation, Copper Queen Branch, located at 36 West Highway 92, Bisbee, Arizona, ADEQ Identification Number 100531. November 14, 2007.
- ADEQ. 2010. Correspondence from Cynthia Campbell, ADEQ, to Rebecca Sawyer, CQB, Re: Request to Modify Groundwater Monitoring Program, Mitigation Order on Consent No. P-127-07, Your Letter Dated January 25, 2010. April 22, 2010.
- Freeport-McMoRan Copper Queen Branch (CQB). 2010. Correspondence from Rebecca Sawyer, CQB, to Cynthia Campbell, ADEQ, Re: Request to Modify Groundwater Monitoring Program Mitigation Order on Consent No. P-121-07. January 25, 2010.
- Hydro Geo Chem, Inc. 2008. Revision 1, Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

APPENDIX B ANALYTICAL REPORTS



<u>www.svl.net</u> One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4I0197
Reported: 17-Sep-14 08:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
NWC-04	W4I0197-01	Ground Water	09-Sep-14 08:55	VH	10-Sep-2014	
MCCONNELL 459	W4I0197-02	Ground Water	09-Sep-14 10:50	VH	10-Sep-2014	
POWER 639	W4I0197-03	Ground Water	09-Sep-14 12:34	VH	10-Sep-2014	

 $Solid\ samples\ are\ analyzed\ on\ an\ as\text{-received},\ wet\text{-weight}\ basis,\ unless\ otherwise\ requested.\ Non\text{-}Detects\ are\ reported\ at\ the\ MDL.$

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



John Ken

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4I0197
Reported: 17-Sep-14 08:48

Client Sample ID: NWC-04

SVL Sample ID: W4l0197-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID: W4I0197-01 (Ground Water)				Sample Report Page 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	163	mg/L	3.00	0.55	10	W437294	AEW	09/11/14 18:00	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern

Laboratory Director



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W410197

Reported: 17-Sep-14 08:48

Client Sample ID: MCCONNELL 459

SVL Sample ID: W4I0197-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes		SVL Sample ID: W410	Sample Report Page 1 of 1 Sampled By: VH								
	Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 33.0 mg/L 0.30 0.06 W437294 AEW 09/11/14 18:33

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern

Laboratory Director



John Ken

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4I0197
Reported: 17-Sep-14 08:48

Client Sample ID: POWER 639

SVI. Sample ID: W4I0197-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	STESUMPICIE: 11-110	3	Sampled By: VH							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 105
 mg/L
 3.00
 0.55
 10
 W437294
 AEW
 09/11/14 18:44
 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern

Laboratory Director



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Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4I0197**Reported: 17-Sep-14 08:48

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogr Sulfate as SO4	raphy mg/L	<0.30	0.06	0.30	W437294	11-Sep-14	

Quality Contr	rol - LABORATORY (CONTROL SAM	PLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatogr Sulfate as SO4	raphy mg/L	9.86	10.0	98.6	90 - 110	W437294	11-Sep-14	

Quality Contro	ol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogr	anhv								
EPA 300.0	Sulfate as SO4	mg/L	38.5	27.6	10.0	109	90 - 110	W437294	11-Sep-14	

Quality Cont	rol - MATRIX SPIKE	DUPLICATE	Data								
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	38.6	38.5	10.0	110	0.1	20	W437294	11-Sep-14	

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

A result is less than the detection limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable

UDL



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4H0613**Bisbee, AZ 85603 Reported: 10-Sep-14 11:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2008-13M	W4H0613-01	Ground Water	20-Aug-14 16:35	CL	27-Aug-2014
TM-7	W4H0613-02	Ground Water	21-Aug-14 14:08	CL	27-Aug-2014
EQB-082114	W4H0613-03	Ground Water	21-Aug-14 14:30	CL	27-Aug-2014
FB-082114	W4H0613-04	Ground Water	21-Aug-14 14:40	CL	27-Aug-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4H0613**Bisbee, AZ 85603 Reported: 10-Sep-14 11:04

Client Sample ID: BMO-2008-13M Sampled: 20-Aug-14 16:35
Received: 27-Aug-14

SVL Sample ID: W4H0613-01 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CL

Analyse

Result Units RL MDL Dilution Batch Analyst Analysed Notes

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	410	mg/L	3.00	0.55	10	W436180	AEW	09/05/14 14:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4H0613**Bisbee, AZ 85603 Reported: 10-Sep-14 11:04

Client Sample ID: TM-7

Sampled: 21-Aug-14 14:08
Received: 27-Aug-14

SVL Sample ID: W4H0613-02 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CL

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 48.5
 mg/L
 0.30
 0.06
 W436180
 AEW
 09/05/14 14:27

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0613 Bisbee, AZ 85603 Reported: 10-Sep-14 11:04

Sampled: 21-Aug-14 14:30 Client Sample ID: EQB-082114 Received: 27-Aug-14

SVL Sample ID: W4H0613-03 (Ground Water) Sample Report Page 1 of 1 Sampled By: CL

Method Units RLMDL Dilution Batch Analyst Analyzed

Dissolved Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4 < 0.30 W436180 mg/L 0.30 0.06 AEW 09/05/14 14:38

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern

John Ken Laboratory Director



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0613 Bisbee, AZ 85603 Reported: 10-Sep-14 11:04

Sampled: 21-Aug-14 14:40 Client Sample ID: FB-082114 Received: 27-Aug-14

SVL Sample ID: W4H0613-04 (Ground Water) Sample Report Page 1 of 1 Sampled By: CL

Method Units RLMDL Dilution Batch Analyst Analyzed

Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4 < 0.30 W436128 09/04/14 21:17 mg/L 0.30 0.06 AEW

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



One Government Gulch - PO Box 929

Bisbee, AZ 85603

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Freeport McMoRan - Bisbee

36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W4H0613

Reported: 10-Sep-14 11:04

Quality Cont	trol - BLANK Data										
Method	Analyte	Units	Re	sult	MDL		M	RL	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	<0	.30	0.06		0.3	80	W436128	04-Sep-14	
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	mg/L	<0	.30	0.06		0.3	60	W436180	05-Sep-14	
Quality Cont	trol - LABORATORY C	ONTROL SA		a							
Method	Analyte	Units	LCS Resu	lt	LCS True		% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	9.91		10.0		99.1	90 - 110	W436128	04-Sep-14	
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	mg/L	10.0		10.0		100	90 - 110	W436180	05-Sep-14	
Quality Cont	trol - MATRIX SPIKE I	Data									
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Leve		% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography										
EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	mg/L mg/L	73.2 13.8	64.2 3.11	10.0 10.0		90.0 107	90 - 110 90 - 110	W436128 W436128	04-Sep-14 05-Sep-14	D2,M3
Dissolved Ani	ons by Ion Chromatogra	ıphy									
EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	mg/L mg/L	16.9 30.5	6.10 30.1	10.0 10.0		108 3.68	90 - 110 90 - 110	W436180 W436180	05-Sep-14 05-Sep-14	M2
Quality Cont	trol - MATRIX SPIKE I	DUPLICATE		G 1	G 7			pan			
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Anions by Io	n Chromatography Sulfate as SO4	mg/L	72.7	73.2	10.0	R > 4S	0.7	20	W436128	04-Sep-14	D2,M3

Dissolved Anions by Ion Chromatography

Sulfate as SO4

EPA 300.0

mg/L

17.1

16.9

10.0

110

0.9

W436180

05-Sep-14



Freeport McMoRan - BisbeeProject Name: Copper Queen Branch Sulfate Mitigation Order36 West Hwy 92Work Order:W4H0613Bisbee, AZ 85603Reported:10-Sep-14 11:04

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was

acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4H0495**Bisbee, AZ 85603 Reported: 29-Aug-14 11:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2010-2M	W4H0495-01	Ground Water	14-Aug-14 09:15	CLS	21-Aug-2014
DUP081414	W4H0495-02	Ground Water	14-Aug-14 09:15	CLS	21-Aug-2014
TM-2A	W4H0495-03	Ground Water	14-Aug-14 10:50	CLS	21-Aug-2014
BMO-2008-11G	W4H0495-04	Ground Water	14-Aug-14 13:30	CLS	21-Aug-2014
BMO-2008-6M	W4H0495-05	Ground Water	19-Aug-14 08:40	CLS	21-Aug-2014
BMO-2008-6B	W4H0495-06	Ground Water	19-Aug-14 09:35	CLS	21-Aug-2014
BMO-2008-5M	W4H0495-07	Ground Water	19-Aug-14 10:55	CLS	21-Aug-2014
BMO-2008-5B	W4H0495-08	Ground Water	19-Aug-14 12:35	CLS	21-Aug-2014
BMO-2008-13B	W4H0495-09	Ground Water	19-Aug-14 13:40	CLS	21-Aug-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0495 Bisbee, AZ 85603 Reported: 29-Aug-14 11:07

Sampled: 14-Aug-14 09:15 Client Sample ID: BMO-2010-2M Received: 21-Aug-14 SVL Sample ID: W4H0495-01 (Ground Water) Sample Report Page 1 of 1

Sampled By: CLS Method Result RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 1040 W434305 08/22/14 16:03 mg/L 15.0 2.75 50 AEW D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: DUP081414

SVL Sample ID: W4H0495-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample By: CLS

	F			٥.	mpie rieport	r uge r or r	Sampled by. CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	1030	mg/L	15.0	2.75	50	W434305	AEW	08/22/14 16:14	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: TM-2A

SVL Sample ID: W4H0495-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample By: CLS

SVL Sample ID: W4H0495-03 (Ground Water)

Sample Report Page 1 of 1

Analyte

Result

Units

RL

MDL

Dilution

Batch

Analyst

Analyzed

Notes

Method Analyte Result Units RL MDL Dilution Batch Analy

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 25.6
 mg/L
 0.30
 0.06
 W434305
 AEW
 08/22/14 16:24

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: BMO-2008-11G Sample Report Page 1 of 1 Sample BMO-2008-11G SVL Sample ID: W4H0495-04 (Ground Water) Sample Report Page 1 of 1 Sample BV: CLS

SVL Sample ID: W4HU495-U4 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

EPA 300.0 **Sulfate as SO4** 12.4 mg/L 0.30 0.06 W434305 AEW 08/22/14 16:35

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: BMO-2008-6M Sample Report Page 1 of 1

SVL Sample ID: W4H0495-05 (Ground Water) Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample By: CLS

	F i i i i i i i i i i i i i i i i i i i			٥.	mpie rieport	r uge r or r	Sampled by. CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	210	mg/L	7.50	1 38	25	W434305	AEW	08/22/14 17:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0495 Bisbee, AZ 85603 Reported: 29-Aug-14 11:07

Sampled: 19-Aug-14 09:35 Client Sample ID: BMO-2008-6B Received: 21-Aug-14 SVL Sample ID: W4H0495-06 (Ground Water) Sample Report Page 1 of 1

Sampled By: CLS Method Result Units RLMDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 13.4 W434305 08/22/14 17:26 mg/L 0.30 0.06 AEW

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: BMO-2008-5M Sample Report Page 1 of 1 Sample BMO-2008-5M Supple ID: W4H0495-07 (Ground Water) Sample Report Page 1 of 1 Sample Bv: CLS

					ишри тероге	Tuge I of I	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	143	mg/L	3.00	0.55	10	W434305	AEW	08/22/14 17:37	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

Client Sample ID: BMO-2008-5B Sample ID: W4H0495-08 (Ground Water) Sample Report Page 1 of 1 Sampled By: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 221
 mg/L
 7.50
 1.38
 25
 W434305
 AEW
 08/22/14 17:47
 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0495
Reported: 29-Aug-14 11:07

 Client Sample ID:
 BMO-2008-13B
 Sample Report Page 1 of 1
 Sample Received:
 19-Aug-14 13:40

 SVL Sample ID:
 W4H0495-09 (Ground Water)
 Sample Report Page 1 of 1
 Sample Report Page 1 of 1
 Sample Report Page 1 of 1

	SVL Sample ID: W4H0495-09 (Ground Water)				ample Report	Page 1 of 1	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	1070	mg/L	15.0	2.75	50	W434305	AEW	08/22/14 17:58	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4H0495**Reported: 29-Aug-14 11:07

Quality Contr	ol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anion EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W434305	22-Aug-14	

Quality Contr	Quality Control - LABORATORY CONTROL SAMPLE Data											
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes			
Dissolved Anio EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	raphy mg/L	10.5	10.0	105	90 - 110	W434305	22-Aug-14				

Quality Cont	rol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogi	raphy								
EPA 300.0	Sulfate as SO4	mg/L	10.6	< 0.30	10.0	106	90 - 110	W434305	22-Aug-14	
EPA 300.0	Sulfate as SO4	mg/L	10.7	< 0.30	10.0	107	90 - 110	W434305	22-Aug-14	

Quality Cont	rol - MATRIX SPIKE	DUPLICATE	Data								
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatog	raphy									
EPA 300.0	Sulfate as SO4	mg/L	10.7	10.6	10.0	107	0.6	20	W434305	22-Aug-14	

Notes and Definitions

D2	Sample required dilution	n due to high concentratio	n of target analyte.
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LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

< RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



Freeport McMoRan - Bisbee

36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W4H0350

Bisbee, AZ 85603 Reported: 28-Aug-14 09:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2010-1M	W4H0350-01	Ground Water	04-Aug-14 14:00	CL	14-Aug-2014
TM-16	W4H0350-02	Ground Water	04-Aug-14 14:55	CL	14-Aug-2014
BMO-2008-106L	W4H0350-03	Ground Water	07-Aug-14 12:45	CL	14-Aug-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0350 Bisbee, AZ 85603 Reported: 28-Aug-14 09:24

Sampled: 04-Aug-14 14:00 Client Sample ID: BMO-2010-1M Received: 14-Aug-14

SVL Sample ID: W4H0350-01 (Ground Water) Sample Report Page 1 of 1 Sampled By: CL

Method Result Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 179 W434198 mg/L 3.00 0.55 10 AEW 08/20/14 23:50 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0350
Reported: 28-Aug-14 09:24

Client Sample ID: TM-16 Sampled: 04-Aug-14 14:55
Received: 14-Aug-14

SVL Sample ID: W4H0350-02 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CL

		•	•					Sump	ca By. CE	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	550	mg/L	15.0	2.75	50	W434198	AEW	08/21/14 00:01	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4H0350
Reported: 28-Aug-14 09:24

Client Sample ID: **BMO-2008-106L**Sampled: 07-Aug-14 12:45

Received: 14-Aug-14

SVL Sample ID: W4H0350-03 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CL

Method Result Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 442 W434198 D2 mg/L 15.0 2.75 50 AEW 08/21/14 00:32

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W4H0350**Reported: 28-Aug-14 09:24

Quality Contr	ol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anion EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W434198	20-Aug-14	

Quality Cont	rol - LABORATORY (CONTROL SAM	IPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	raphy mg/L	10.7	10.0	107	90 - 110	W434198	20-Aug-14	

Quality Cont	rol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogr	aphy								
EPA 300.0	Sulfate as SO4	mg/L	12.3	1.06	10.0	113	90 - 110	W434198	20-Aug-14	M1
EPA 300.0	Sulfate as SO4	mg/L	7.42	< 0.30	10.0	72.3	90 - 110	W434198	20-Aug-14	M2

Quality Cont	Quality Control - MATRIX SPIKE DUPLICATE Data												
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes		
Dissolved Anie	ons by Ion Chromatog	raphy											
EPA 300.0	Sulfate as SO4	mg/L	12.5	12.3	10.0	115	1.6	20	W434198	20-Aug-14	M1		

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
$R \ge 4S$	% recovery not applicable, sample concentration more than four times greater than spike level
<rl< td=""><td>A result is less than the reporting limit</td></rl<>	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit

Not Applicable

N/A



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4H0241**Bisbee, AZ 85603 Reported: 25-Aug-14 17:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
POWER-639	W4H0241-01	Ground Water	11-Aug-14 09:49	VH	12-Aug-2014
NWC-04	W4H0241-02	Ground Water	11-Aug-14 10:28	VH	12-Aug-2014
RUIZ	W4H0241-03	Ground Water	11-Aug-14 11:25	VH	12-Aug-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0241 Bisbee, AZ 85603 Reported: 25-Aug-14 17:48

Sampled: 11-Aug-14 09:49 Client Sample ID: POWER-639 Received: 12-Aug-14

SVL Sample ID: W4H0241-01 (Ground Water) Sample Report Page 1 of 1 Sampled By: VH Method Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 136 W434198 D2 mg/L 3.00 0.55 10 AEW 08/20/14 21:01

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0241 Bisbee, AZ 85603 Reported: 25-Aug-14 17:48

Sampled: 11-Aug-14 10:28 Client Sample ID: NWC-04 Received: 12-Aug-14 SVL Sample ID: W4H0241-02 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Result Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 187 W434198 mg/L 3.00 0.55 10

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern

Laboratory Director

D2

AEW

08/20/14 21:12



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4H0241 Bisbee, AZ 85603 Reported: 25-Aug-14 17:48

Sampled: 11-Aug-14 11:25 Client Sample ID: RUIZ Received: 12-Aug-14

SVL Sample ID: W4H0241-03 (Ground Water) Sample Report Page 1 of 1 Sampled By: VH Method Result Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 221 W434198 D2 mg/L 3.00 0.55 10 AEW 08/20/14 21:23

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4H0241**Reported: 25-Aug-14 17:48

Quality Cont	trol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogr Sulfate as SO4	raphy mg/L	<0.30	0.06	0.30	W434198	20-Aug-14	

Quality Cont	rol - LABORATORY (CONTROL SAM	IPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	raphy mg/L	10.7	10.0	107	90 - 110	W434198	20-Aug-14	

Quality Control - MATRIX SPIKE Data											
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes	
Dissolved Anio	Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	mg/L	12.3	1.06	10.0	113	90 - 110	W434198	20-Aug-14	M1	
EPA 300.0	Sulfate as SO4	mg/L	7.42	< 0.30	10.0	72.3	90 - 110	W434198	20-Aug-14	M2	

Quality Control - MATRIX SPIKE DUPLICATE Data											
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	12.5	12.3	10.0	115	1.6	20	W434198	20-Aug-14	M1

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<rl< td=""><td>A result is less than the reporting limit</td></rl<>	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W4G0594

Reported: 11-Aug-14 08:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
COOPER C	W4G0594-01	Ground Water	21-Jul-14 10:00	CLS	29-Jul-2014
HOBAN	W4G0594-02	Ground Water	21-Jul-14 10:55	CLS	29-Jul-2014
TM-19A	W4G0594-03	Ground Water	21-Jul-14 11:55	CLS	29-Jul-2014
TM-42	W4G0594-04	Ground Water	21-Jul-14 13:15	CLS	29-Jul-2014
BMO-2008-3B	W4G0594-05	Ground Water	21-Jul-14 14:10	CLS	29-Jul-2014
TM-6	W4G0594-06	Ground Water	21-Jul-14 15:15	CLS	29-Jul-2014
BMO-2012-1M	W4G0594-07	Ground Water	22-Jul-14 09:30	CLS	29-Jul-2014
BMO-2008-1G	W4G0594-08	Ground Water	22-Jul-14 11:15	CLS	29-Jul-2014
TM-15	W4G0594-09	Ground Water	22-Jul-14 13:00	CLS	29-Jul-2014
BMO-2008-7M	W4G0594-10	Ground Water	22-Jul-14 15:05	CLS	29-Jul-2014
BMO-2008-8M	W4G0594-11	Ground Water	24-Jul-14 10:40	CLS	29-Jul-2014
BMO-2008-8B	W4G0594-12	Ground Water	24-Jul-14 11:40	CLS	29-Jul-2014
BMO-2008-9M	W4G0594-13	Ground Water	24-Jul-14 14:00	CLS	29-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0594 Bisbee, AZ 85603 Reported: 11-Aug-14 08:57

Sampled: 21-Jul-14 10:00 Client Sample ID: COOPER C Received: 29-Jul-14 SVL Sample ID: W4G0594-01 (Ground Water) Sample Report Page 1 of 1

Sampled By: CLS Method Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 671 W431236 DT 08/04/14 15:38 mg/L 7.50 1.38 25 D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken

John Kern Laboratory Director



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0594 Bisbee, AZ 85603 Reported: 11-Aug-14 08:57

Sampled: 21-Jul-14 10:55 Client Sample ID: HOBAN Received: 29-Jul-14 SVL Sample ID: W4G0594-02 (Ground Water) Sample Report Page 1 of 1

Sampled By: CLS Method Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 1030 W431236 DT 08/04/14 16:09 mg/L 15.0 2.75 50 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0594 Bisbee, AZ 85603 Reported: 11-Aug-14 08:57

Sampled: 21-Jul-14 11:55 Client Sample ID: TM-19A Received: 29-Jul-14 SVL Sample ID: W4G0594-03 (Ground Water) Sample Report Page 1 of 1

	SVE Sample 12: VV40004 00 (Ground Vator)				ampic Kepori	i age i oi i	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp									
EPA 300.0	Sulfate as SO4	63.3	mg/L	1.50	0.28	5	W431236	DT	08/04/14 16:20	D2

 $mg\!/\!L$

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0594 Bisbee, AZ 85603 Reported: 11-Aug-14 08:57

Sampled: 21-Jul-14 13:15 Client Sample ID: TM-42 Received: 29-Jul-14 SVL Sample ID: W4G0594-04 (Ground Water)

Sample Report Page 1 of 1 Sampled By: CLS Method Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 418 25 W431236 DT 08/04/14 16:30 mg/L 7.50 1.38 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

 Client Sample ID:
 BMO-2008-3B
 Sample Report Page 1 of 1
 Sampled:
 21-Jul-14 14:10

 SVL Sample ID:
 W4G0594-05 (Ground Water)
 Sample Report Page 1 of 1
 Sampled Bv: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 163
 mg/L
 3.00
 0.55
 10
 W431236
 DT
 08/04/14 16:41
 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: TM-6 Sample ID: TM-6 Syll Sample ID: W4G0594-06 (Ground Water) Sample Report Page 1 of 1 Sample By: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 33.0 mg/L 0.30 0.06 W431236 DT 08/05/14 15:03

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: BMO-2012-1M

SVL Sample ID: W4G0594-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled By: CLS

	*	`			. r . r .			Sample	aby. CLS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissalved Anion	a by Ion Chuomatagua	l	_		_				_	

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 210
 mg/L
 3.00
 0.55
 10
 W431236
 DT
 08/05/14 15:14
 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

 Client Sample ID:
 BMO-2008-1G
 Sampled:
 22-Jul-14 11:15

 SVL Sample ID:
 W4G0594-08 (Ground Water)
 Sample Report Page 1 of 1
 Sampled By:
 CLS

	*	•	,					Sampi	cu by. CLS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	117	mg/L	3.00	0.55	10	W431236	DT	08/05/14 15:26	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: TM-15 Sample Age 1 of 1 Sample By: CLS

SVL Sample ID: W4G0594-09 (Ground Water) Sample Report Page 1 of 1 Sample By: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 14.6 mg/L 0.30 0.06 W431236 DT 08/05/14 15:37

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: BMO-2008-7M

SVL Sample ID: W4G0594-10 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled BV: CLS

SVL Sample ID: W4G0594-10 (Ground Water)

Sample Report Page 1 of 1

Sampled By: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Method Aharyte Result Ohlis KL MDL Dhutton Batch Aharyst Aharyzed Not

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 27.3
 mg/L
 0.30
 0.06
 W431236
 DT
 08/05/14 15:48
 M1

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: BMO-2008-8M

SVL Sample ID: W4G0594-11 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 12 Sample 13. W 10000 1 11 (Oround Water)				ampic recport	1 450 1 01 1	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	66.8	mg/L	1.50	0.28	5	W431236	DT	08/05/14 16:11	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: BMO-2008-8B

SVL Sample ID: W4G0594-12 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID: W4G0594-12 (Ground Water)					Page 1 of 1	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	one by Ion Chromotograp	aha								

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 1380
 mg/L
 15.0
 2.75
 50
 W431236
 DT
 08/05/14 16:23

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director D2



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0594
Reported: 11-Aug-14 08:57

Client Sample ID: BMO-2008-9M

SVL Sample ID: W4G0594-13 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled BV: CLS

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 74.2 mg/L 1.50 0.28 5 W431236 DT 08/05/14 16:34 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0594**Reported: 11-Aug-14 08:57

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W431236	04-Aug-14	

Quality Control - LABORATORY CONTROL SAMPLE Data												
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes			
Dissolved Anion EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	aphy mg/L	10.2	10.0	102	90 - 110	W431236	04-Aug-14				

Quality Cont	trol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogi	aphy								
EPA 300.0	Sulfate as SO4	mg/L	677	671	10.0	R > 4S	90 - 110	W431236	04-Aug-14	D2,M3
EPA 300.0	Sulfate as SO4	mg/L	38.6	27.3	10.0	113	90 - 110	W431236	05-Aug-14	M1

Quality Control - MATRIX SPIKE DUPLICATE Data											
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	684	677	10.0	R > 4S	1.0	20	W431236	04-Aug-14	D2,M3

Notes and Definitions

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t

M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was

acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

< RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PANAGAKOS	W4G0486-01	Ground Water	17-Jul-14 16:07	23-Jul-2014
SCHWARTZ	W4G0486-02	Ground Water	18-Jul-14 09:47	23-Jul-2014
ROGERS 803	W4G0486-03	Ground Water	18-Jul-14 11:08	23-Jul-2014
BMO-2008-4B	W4G0486-04	Ground Water	18-Jul-14 12:49	23-Jul-2014
WEISKOPF 802	W4G0486-05	Ground Water	18-Jul-14 15:31	23-Jul-2014
WEISKOPF 897	W4G0486-06	Ground Water	18-Jul-14 16:43	23-Jul-2014
WEED	W4G0486-07	Ground Water	18-Jul-14 17:20	23-Jul-2014
BURKE	W4G0486-08	Ground Water	21-Jul-14 09:45	23-Jul-2014
THOMPSON 341	W4G0486-09	Ground Water	21-Jul-14 10:55	23-Jul-2014
PARRA	W4G0486-10	Ground Water	21-Jul-14 12:35	23-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: PANAGAKOS

Sampled: 17-Jul-14 16:07
Received: 23-Jul-14

SVL Sample ID: W4G0486-01 (Ground Water) Sample Report Page 1 of 1 Sampled Rv.

	*	,	, Sampled I							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	467	mg/L	3.00	0.55	10	W431081	DT	07/29/14 19:24	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: SCHWARTZ

Sampled: 18-Jul-14 09:47
Received: 23-Jul-14

SVL Sample ID: W4G0486-02 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

		`	, , ,					Sampi	Sampled By.		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	s by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	216	mg/L	1.50	0.28	5	W431081	DT	07/29/14 19:35	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: ROGERS 803

Sampled: 18-Jul-14 11:08
Received: 23-Jul-14

SVL Sample ID: W4G0486-03 (Ground Water) Sample Report Page 1 of 1 Sampled Rv.

	1			~	р. с - гор с г с	8	Sampled By.			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogr	aphy								
EPA 300.0	Sulfate as SO4	192	mg/L	1.50	0.28	5	W431081	DT	07/29/14 19:45	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: **BMO-2008-4B**Sampled: 18-Jul-14 12:49

Received: 23-Jul-14

SVL Sample ID: W4G0486-04 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

Method RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 11.6 W431081 DT 07/29/14 19:56 mg/L 0.30 0.06 M1

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: WEISKOPF 802

Sampled: 18-Jul-14 15:31
Received: 23-Jul-14

SVL Sample ID: W4G0486-05 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

		•	<u> </u>					Sumpr	ou By.	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	608	mg/L	15.0	2.75	50	W431081	DT	07/29/14 20:17	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: WEISKOPF 897

Sampled: 18-Jul-14 16:43
Received: 23-Jul-14

SVL Sample ID: W4G0486-06 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

Method Result Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 18.4 W431081 DT 07/29/14 20:28 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0486 Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Sampled: 18-Jul-14 17:20 Client Sample ID: WEED Received: 23-Jul-14

SVL Sample ID: W4G0486-07 (Ground Water) Sample Report Page 1 of 1 Sampled By:

Method Result Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 14.1 W431081 DT 07/29/14 20:38 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: BURKE
Sampled: 21-Jul-14 09:45
Received: 23-Jul-14

SVL Sample ID: W4G0486-08 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

Method Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 29.6 W431081 DT 07/29/14 20:49 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: **THOMPSON 341**Sampled: 21-Jul-14 10:55
Received: 23-Jul-14

SVL Sample ID: W4G0486-09 (Ground Water)

Sample Report Page 1 of 1

Sampled By:

Method Analyte Result RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 8.02 W431081 DT 07/29/14 21:20 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0486**Bisbee, AZ 85603 Reported: 04-Aug-14 09:22

Client Sample ID: PARRA

Sampled: 21-Jul-14 12:35
Received: 23-Jul-14

SVL Sample ID: W4G0486-10 (Ground Water) Sample Report Page 1 of 1 Sampled Rv.

		-	Sampled By.							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	432	mg/L	7.50	1.38	25	W431081	DT	07/29/14 21:31	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W4G0486** Reported: 04-Aug-14 09:22

Quality Con	trol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Ani EPA 300.0	ions by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W431081	29-Jul-14	

Quality Control - LABORATORY CONTROL SAMPLE Data									
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anion EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	aphy mg/L	10.7	10.0	107	90 - 110	W431081	29-Jul-14	

Quality Cont	Quality Control - MATRIX SPIKE Data									
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogr	aphy								
EPA 300.0	Sulfate as SO4	mg/L	35.7	24.1	10.0	116	90 - 110	W431081	29-Jul-14	M1
EPA 300.0	Sulfate as SO4	mg/L	23.8	11.6	10.0	122	90 - 110	W431081	29-Jul-14	M1

Quality Control - MATRIX SPIKE DUPLICATE Data											
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
	ions by Ion Chromatog	raphy									
EPA 300.0	Sulfate as SO4	mg/L	36.0	35.7	10.0	119	0.8	20	W431081	29-Jul-14	M1

Notes and Definitions

D2	Sample required	dilution due to high concentration	of target analyte.

M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

< RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: **W4G0402**Reported: 01-Aug-14 11:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
AWC-04	W4G0402-01	Ground Water	16-Jul-14 11:32	VH	18-Jul-2014
AWC-02	W4G0402-02	Ground Water	16-Jul-14 13:28	VH	18-Jul-2014
TVI 875	W4G0402-03	Ground Water	16-Jul-14 15:21	VH	18-Jul-2014
TVI 236	W4G0402-04	Ground Water	16-Jul-14 16:22	VH	18-Jul-2014
FB20140716	W4G0402-05	Ground Water	16-Jul-14 16:31	VH	18-Jul-2014
EQB20140716	W4G0402-06	Ground Water	16-Jul-14 16:33	VH	18-Jul-2014
ECHAVE	W4G0402-07	Ground Water	17-Jul-14 10:10	VH	18-Jul-2014
ZANDER	W4G0402-08	Ground Water	17-Jul-14 11:52	VH	18-Jul-2014
POWER 639	W4G0402-09	Ground Water	17-Jul-14 13:40	VH	18-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0402 Bisbee, AZ 85603 Reported: 01-Aug-14 11:25

Sampled: 16-Jul-14 11:32 Client Sample ID: AWC-04 Received: 18-Jul-14 SVL Sample ID: W4G0402-01 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Units RLDilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 24.1 W431081 DT 07/29/14 17:29 mg/L 0.30 0.06 M1

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

Client Sample ID: AWC-02

SVL Sample ID: W4G0402-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled Bv: VH

Sampled Bv: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 19.2 mg/L 0.30 0.06 W431081 DT 07/29/14 18:00

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

Client Sample ID: TVI 875

SVI_Sample ID: W4G0402-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sample 1D. 11400402-00 (Glound Hatel)					Sampled By: VH				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	Dissolved Anions by Ion Chromatography									
EPA 300.0	Sulfate as SO4	328	mg/L	3.00	0.55	10	W431081	DT	07/29/14 18:11	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0402 Bisbee, AZ 85603 Reported: 01-Aug-14 11:25

Sampled: 16-Jul-14 16:22 Client Sample ID: TVI 236 Received: 18-Jul-14 SVL Sample ID: W4G0402-04 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Units RLMDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 43.9 W431081 DT 07/29/14 18:21 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Laboratory Director

John Ken John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

 Client Sample ID:
 FB20140716
 Sampled:
 16-Jul-14 16:31

 SVL Sample ID:
 W4G0402-05 (Ground Water)
 Sample Report Page 1 of 1
 Sampled Bv: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 0.59 mg/L 0.30 0.06 W430247 DT 07/28/14 23:29

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

 Client Sample ID:
 EQB20140716
 Sample ID:
 VH
 VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.06 W430247 DT 07/28/14 23:41

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0402 Bisbee, AZ 85603 Reported: 01-Aug-14 11:25

Sampled: 17-Jul-14 10:10 Client Sample ID: ECHAVE Received: 18-Jul-14 SVL Sample ID: W4G0402-07 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Units RLMDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4 26.7 W431081 DT 07/29/14 18:32 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken

Laboratory Director

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

Client Sample ID: ZANDER
SVL Sample ID: W4G0402-08 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: VH

	SVL Sample ID: W4G0402-08 (Ground Water)					Sample Report Page 1 of 1 Sampled By: VH					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	Disable of Assistant by Lor Character and by										

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 6.99
 mg/L
 0.30
 0.06
 W431081
 DT
 07/29/14 18:42

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

SVL holds the following certifications:



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W4G0402
Reported: 01-Aug-14 11:25

Client Sample ID: POWER 639

SVL Sample ID: W4G0402-09 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	2 · = 2 · · · · · · · · · · · · · · · ·				Sample Report Lage 1 of 1 Sampled By: VH					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ıs by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	168	mg/L	1.50	0.28	5	W431081	DT	07/29/14 19:14	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929

Kellogg ID 83837-0929

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation					
36 West Hwy 92	Work Order: W4G0402				
Bisbee, AZ 85603	Reported: 01-Aug-14 11:25				
Quality Control - RLANK Data					

Quality Control - BLANK Data											
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes			
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	<0.30	0.06	0.30	W430247	28-Jul-14				
Dissolved Anio EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W431081	29-Jul-14				

Quality Control - LABORATORY CONTROL SAMPLE Data											
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes		
Anions by Ion	Chromatography										
EPA 300.0	Sulfate as SO4	mg/L	10.4	10.0	104	90 - 110	W430247	28-Jul-14			
Dissolved Anio EPA 300.0	ons by Ion Chromatography Sulfate as SO4	mg/L	10.7	10.0	107	90 - 110	W431081	29-Jul-14			

Quality Con	trol - MATRIX SPIKE	Data	<u> </u>							
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography									
EPA 300.0	Sulfate as SO4	mg/L	158	147	10.0	105	90 - 110	W430247	28-Jul-14	D2,M3
EPA 300.0	Sulfate as SO4	mg/L	10.8	0.54	10.0	103	90 - 110	W430247	28-Jul-14	
Dissolved Ani	ons by Ion Chromatogr	aphy								
EPA 300.0	Sulfate as SO4	mg/L	35.7	24.1	10.0	116	90 - 110	W431081	29-Jul-14	M1
EPA 300.0	Sulfate as SO4	mg/L	23.8	11.6	10.0	122	90 - 110	W431081	29-Jul-14	M1

Quality Control - MATRIX SPIKE DUPLICATE Data											
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Anions by Ior	1 Chromatography										
EPA 300.0	Sulfate as SO4	mg/L	10.9	10.8	10.0	104	1.0	20	W430247	28-Jul-14	
Dissolved Ani	ions by Ion Chromatog	raphy									
EPA 300.0	Sulfate as SO4	mg/L	36.0	35.7	10.0	119	0.8	20	W431081	29-Jul-14	M1



Freeport McMoRan - BisbeeProject Name: Copper Queen Branch Sulfate Mitigation Order36 West Hwy 92Work Order:W4G0402Bisbee, AZ 85603Reported:01-Aug-14 11:25

Notes and Definitions

D2 Sample required dilution due to high concentration of target analyte.

M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was

acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



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Project Name: Copper Queen Branch Sulfate Mitigation Order

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Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W4G0401**Reported: 01-Aug-14 11:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
RAMIREZ	W4G0401-01	Ground Water	10-Jul-14 15:50	VH	18-Jul-2014
CHAMBERS	W4G0401-02	Ground Water	10-Jul-14 16:24	VH	18-Jul-2014
COOPER	W4G0401-03	Ground Water	10-Jul-14 16:57	VH	18-Jul-2014
ANDERSON 396	W4G0401-04	Ground Water	11-Jul-14 09:16	VH	18-Jul-2014
ANDERSON 458	W4G0401-05	Ground Water	11-Jul-14 10:20	VH	18-Jul-2014
PIONKE 517	W4G0401-06	Ground Water	11-Jul-14 14:05	VH	18-Jul-2014
HOWARD NR	W4G0401-07	Ground Water	14-Jul-14 09:49	VH	18-Jul-2014
FB20140714	W4G0401-08	DI Water	14-Jul-14 10:47	VH	18-Jul-2014
EQB20140714	W4G0401-09	DI Water	14-Jul-14 10:49	VH	18-Jul-2014
HOWARD 312	W4G0401-10	Ground Water	14-Jul-14 11:40	VH	18-Jul-2014
DUP20140714	W4G0401-11	Ground Water	14-Jul-14 18:00	VH	18-Jul-2014
MCCONNELL 265	W4G0401-12	Ground Water	14-Jul-14 13:06	VH	18-Jul-2014
FRANCO 383	W4G0401-13	Ground Water	14-Jul-14 15:13	VH	18-Jul-2014
DODSON	W4G0401-14	Ground Water	14-Jul-14 16:37	VH	18-Jul-2014
BMO-2010-3B	W4G0401-15	Ground Water	15-Jul-14 11:23	VH	18-Jul-2014
BMO-2010-3M	W4G0401-16	Ground Water	15-Jul-14 14:48	VH	18-Jul-2014
TM-10	W4G0401-17	Ground Water	15-Jul-14 15:57	VH	18-Jul-2014
DUP20140716	W4G0401-18	Ground Water	16-Jul-14 18:00	VH	18-Jul-2014
AWC-05	W4G0401-19	Ground Water	16-Jul-14 10:34	VH	18-Jul-2014
AWC-03	W4G0401-20	Ground Water	16-Jul-14 10:58	VH	18-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: RAMIREZ
SVL Sample ID: W4G0401-01 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sampled BV: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 8.92 mg/L 0.30 0.06 W431080 DT 07/29/14 22:02

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: CHAMBERS
SVL Sample ID: W4G0401-02 (Ground Water)
Supplementary
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sampled BV: UH-14 16:24
Sampled BV: VH-14 16:24
Sampled BV: VH-14 16:24
Sampled BV: VH-14 16:24
Supplementary
Supplement

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 11.0 mg/L 0.30 0.06 W431080 DT 07/29/14 22:34

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Laboratory Director

John Kern



Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: COOPER Sample ID: W4G0401-03 (Ground Water) Sample Report Page 1 of 1 Sample By: VH

DT

07/29/14 22:45

	,			Sumple Report Luge 1 01 1			Sampled by. VII			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										

 Dissolved Anions by Ion Chromatography

 EPA 300.0
 Sulfate as SO4
 32.2
 mg/L
 0.30
 0.06
 W431080

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: ANDERSON 396
SVL Sample ID: W4G0401-04 (Ground Water)
Sample Report Page 1 of 1

	5 12 Sumpro 12. W 100 for CT (Oround trator)				Sample Report 1 age 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved An	Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	272	mg/L	3.00	0.55	10	W431080	DT	07/30/14 10:45	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0401 Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Sampled: 11-Jul-14 10:20 Client Sample ID: ANDERSON 458 Received: 18-Jul-14 SVL Sample ID: W4G0401-05 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Result Units RLMDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4 25.3 W431080 DT 07/29/14 23:27 mg/L 0.30 0.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern

John Ken Laboratory Director



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: PIONKE 517
SVL Sample ID: W4G0401-06 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: VH
Sample By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Kern Laboratory Director

EPA 300.0 **Sulfate as SO4** 14.6 mg/L 0.30 0.06 W431080 DT 07/29/14 23:37

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0401 Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Sampled: 14-Jul-14 09:49 Client Sample ID: HOWARD NR Received: 18-Jul-14 SVL Sample ID: W4G0401-07 (Ground Water) Sample Report Page 1 of 1 Sampled By: VH

	1			~ .				Sampled By. VII			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	s by Ion Chromatogra	phy									
EPA 300.0	Sulfate as SO4	496	mg/L	7.50	1.38	25	W431080	DT	07/30/14 10:58	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Ken John Kern Laboratory Director



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

 Client Sample ID:
 FB20140714
 Sample Report Page 1 of 1
 Sampled:
 14-Jul-14 10:47

 SVL Sample ID:
 W4G0401-08 (DI Water)
 Sample Report Page 1 of 1
 Sampled Bv.
 VH

	SVL Sample ID: W4G0401-08 (DI Water)					Sample Report Page 1 of 1 Sampled By: VH						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		

Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 0.54 mg/L 0.30 0.06 W430247 DT 07/28/14 22:15

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

 Client Sample ID:
 EQB20140714
 Sample Report Page 1 of 1
 Sample Received: 18-Jul-14 North
 14-Jul-14 10:49 Received: 18-Jul-14 North

 SVL Sample ID:
 W4G0401-09 (DI Water)
 Sample Report Page 1 of 1
 Sample By: VH
 VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.06 W430247 DT 07/28/14 23:17

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: HOWARD 312

SVL Sample ID: W4G0401-10 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled BV: VH

	a resumption of the contract o			sumple Report Luge 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	69.1	mg/L	1.50	0.28	5	W431080	DT	07/30/14 11:10	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

 Client Sample ID:
 DUP20140714
 Sample ID:
 VH

	The production of the producti			Sample Report Luge 1 of 1			заприси Бу. Уп			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	495	mg/L	7.50	1.38	25	W431080	DT	07/30/14 11:22	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: MCCONNELL 265

SVL Sample ID: W4G0401-12 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled: 14-Jul-14 13:06
Received: 18-Jul-14

VH

	s + 2 sumpre is: Wilderer i2 (Ground Water)			Sample Report 1 age 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	975	mg/L	30.0	5.50	100	W431080	DT	07/29/14 22:44	D2

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John Kern



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: FRANCO 383

SVL Sample ID: W4G0401-13 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample By: VH

Sample By: VH

					Sumple Report Fuge For F			Sampled By: VH		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved An	ions by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	349	mg/L	3.00	0.55	10	W431080	DT	07/29/14 22:56	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: DODSON
SVL Sample ID: W4G0401-14 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: VH

	STE Sample 15: Wiles in Ti (Ground Water)				ampic report	1 450 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	54.4	mg/L	1.50	0.28	5	W431080	DT	07/30/14 11:35	D2,M1

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EPA 300.0

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0401 Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Sampled: 15-Jul-14 11:23 Client Sample ID: BMO-2010-3B Received: 18-Jul-14 SVL Sample ID: W4G0401-15 (Ground Water) Sample Report Page 1 of 1 Sampled By: VH

W431080

DT

07/29/14 23:58

	•	•				0		Sample	aby. VII	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions	s by Ion Chromatogra	nphy								

0.30

0.06

mg/L

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

19.0

John Ken John Kern

Sulfate as SO4



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: BMO-2010-3M Sample Report Page 1 of 1 Sampled: 15-Jul-14 14:48
SVL Sample ID: W4G0401-16 (Ground Water) Sample Report Page 1 of 1 Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 10.2 mg/L 0.30 0.06 W431080 DT 07/30/14 00:11

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: TM-10 Sample Agent Page 1 of 1 Sample Sample Syll Sample ID: W4G0401-17 (Ground Water) Sample Report Page 1 of 1 Sample By VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 5.46 mg/L 0.30 0.06 W431080 DT 07/30/14 00:23

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: W4G0401 Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Sampled: 16-Jul-14 18:00 Client Sample ID: DUP20140716 Received: 18-Jul-14 SVL Sample ID: W4G0401-18 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Result Units RLMDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 22.9 W431080 DT 07/30/14 00:35 mg/L 0.30 0.06

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: AWC-05
SVL Sample ID: W4G0401-19 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: VH
Sample By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4 20.3 mg/L 0.30 0.06 W431080 DT 07/30/14 00:48

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern Laboratory Director

John Ken



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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92 Work Order: **W4G0401**Bisbee, AZ 85603 Reported: 01-Aug-14 11:21

Client Sample ID: AWC-03

SVI_Sample ID: W4G0401-20 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 V L Sample 1D. VV+G0+01-20 (Ground vvater)					rage 1 of 1		Sampled By: VH		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	69.1	mg/L	1.50	0.28	5	W431080	DT	07/30/14 12:00	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



Kellogg ID 83837-0929

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Freeport McMoRan - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order 36 West Hwy 92 Work Order: W4G0401

Bisbee, AZ 856										ed: 01-Aug-	
Quality Cont	trol - BLANK Data										
Method	Analyte	Units	Re	sult	MDL		М	RL	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	<0	.30	0.06		0.2	30	W430247	28-Jul-14	
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	<0	.30	0.06		0.3	30	W431080	29-Jul-14	
Quality Cont	rol - LABORATORY C	ONTROL SA	MPLE Date	a							
Method	Analyte	Units	LCS Resu		LCS True		% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	10.4		10.0		104	90 - 110	W430247	28-Jul-14	
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	mg/L	10.5		10.0		105	90 - 110	W431080	29-Jul-14	
Quality Cont	trol - MATRIX SPIKE I	Data									
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
	Chromatography	П	150	147	10.0		105	90 - 110	W420247	20 1 1 14	D2.142
EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	mg/L mg/L	158 10.8	147 0.54	10.0 10.0		105 103	90 - 110	W430247 W430247	28-Jul-14 28-Jul-14	D2,M3
Dissolved Anio EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	mg/L mg/L	20.3 63.2	8.92 54.4	10.0 10.0		114 R > 4S	90 - 110 90 - 110	W431080 W431080	29-Jul-14 30-Jul-14	M1 D2
Quality Contr	ol - MATRIX SPIKE D	UPLICATE D									
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	n Chromatography Sulfate as SO4	mg/L	10.9	10.8	10.0	104	1.0	20	W430247	28-Jul-14	
Dissolved Ani EPA 300.0	ions by Ion Chromatogr Sulfate as SO4	raphy mg/L	20.6	20.3	10.0	116	1.2	20	W431080	29-Jul-14	M1



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Freeport McMoRan - BisbeeProject Name: Copper Queen Branch Sulfate Mitigation Order36 West Hwy 92Work Order:W4G0401Bisbee, AZ 85603Reported:01-Aug-14 11:21

Notes and Definitions

D2 Sample required dilution due to high concentration of target analyte.

M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was

acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0249**Reported: 25-Jul-14 09:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
DUP20140709	W4G0249-01	Ground Water	09-Jul-14 18:00	VH	11-Jul-2014
DUP20140710	W4G0249-02	Ground Water	10-Jul-14 18:00	VH	11-Jul-2014
FB20140708	W4G0249-03	DI Water	08-Jul-14 15:15	VH	11-Jul-2014
EQB20140708	W4G0249-04	DI Water	08-Jul-14 15:16	VH	11-Jul-2014
FB20140709	W4G0249-05	DI Water	09-Jul-14 14:50	VH	11-Jul-2014
EQB20140709	W4G0249-06	DI Water	09-Jul-14 14:51	VH	11-Jul-2014
FB20140710	W4G0249-07	DI Water	10-Jul-14 09:52	VH	11-Jul-2014
EQB20140710	W4G0249-08	DI Water	10-Jul-14 09:53	VH	11-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



Kellogg ID 83837-0929

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

EPA 300.0

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

D2

Client Sample ID: DUP20140709

SVL Sample ID: W4G0249-01 (Ground Water)

1.38

RL

7.50

mg/L

Sampled: 09-Jul-14 18:00 Received: 11-Jul-14

ampie Keport	rage rorr	Sampled By: VH							
MDL	Dilution	Batch	Analyst	Analyzed	Notes				

Dissolved Anions	s by	Ion	Chromatography
Dissolved Amitons	, ,,	1011	Chiomatography

John Ken

Sulfate as SO4

W429041 07/14/14 21:46 25 AEW

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

1020

John Kern



Kellogg ID 83837-0929

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: DUP20140710

SVL Sample ID: W4G0249-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 18:00 Received: 11-Jul-14

Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 8.99 mg/L 0.30 0.06 W429041 AEW 07/14/14 21:57

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



John Ken

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: FB20140708

SVL Sample ID: W4G0249-03 (DI Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 15:15 Received: 11-Jul-14

Sampled By: VH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion	Chromatography									
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.06	-	W430023	AEW	07/21/14 16:51	

mg/L

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



John Ken

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: EQB20140708

SVL Sample ID: W4G0249-04 (DI Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 15:16 Received: 11-Jul-14

Sampled By:	VH	

	*	•	,		. r - r -			Sample	aby. VII	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion (Chromatography									
EPA 300 0	Sulfate as SO4	< 0.30	mø/L	0.30	0.06		W430023	ΔEW	07/21/14 17:02	

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John Kern



John Ken

Kellogg ID 83837-0929

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 **Project Name: Copper Queen Branch Sulfate Mitigation Order**

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: FB20140709

SVL Sample ID: W4G0249-05 (DI Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 14:50 Received: 11-Jul-14

Sampled By: VH

	1	, , , , , , , , , , , , , , , , , , , ,		~ .	р.тр			Sampled By. VII			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Anions by Ion C	Chromatography										
EPA 300 0	Sulfate as SO4	< 0.30	mo/L	0.30	0.06		W430023	AFW	07/21/14 17:14		

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: EQB20140709

SVL Sample ID: W4G0249-06 (DI Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 14:51 Received: 11-Jul-14

	SVL Sample ID: W4G	0249-06 (DI Water)		Sa	ample Report	Page 1 of 1		Sampleo	d By: VH	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 W430023 07/21/14 17:25 mg/L 0.30 0.06 AEW

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John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: **FB20140710**

SVL Sample ID: W4G0249-07 (DI Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 09:52 Received: 11-Jul-14

р.т тс			D	ampie recport	ruge rorr		Sample	аву: vн		
Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	

Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.06 W430023 AEW 07/21/14 17:37

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 **Project Name: Copper Queen Branch Sulfate Mitigation Order**

Work Order: W4G0249

Reported: 25-Jul-14 09:23

Client Sample ID: **EQB20140710**

SVL Sample ID: W4G0249-08 (DI Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 09:53 Received: 11-Jul-14

	1	, , , , , , , , , , , , , , , , , , , ,		~				Samplec	iby. VII	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion C	hromatogranhy									

Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.06 W430023 AEW 07/21/14 17:48

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92 Bisbee, AZ 85603 Work Order: W4G0249

Reported: 25-Jul-14 09:23

Quality Cont	trol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	<0.30	0.06	0.30	W430023	21-Jul-14	
Dissolved Anio EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	raphy mg/L	<0.30	0.06	0.30	W429041	14-Jul-14	

Quality Cont	Quality Control - LABORATORY CONTROL SAMPLE Data											
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes			
Anions by Ion	Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	10.0	10.0	100	90 - 110	W430023	21-Jul-14				
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	10.8	10.0	108	90 - 110	W429041	14-Jul-14				

Quality Cont	trol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography									
EPA 300.0	Sulfate as SO4	mg/L	38.2	27.2	10.0	110	90 - 110	W430023	21-Jul-14	
EPA 300.0	Sulfate as SO4	mg/L	12.1	1.49	10.0	106	90 - 110	W430023	21-Jul-14	
Dissolved Anie	ons by Ion Chromatogi	raphy								
EPA 300.0	Sulfate as SO4	mg/L	71.0	60.8	10.0	102	90 - 110	W429041	14-Jul-14	D2
EPA 300.0	Sulfate as SO4	mg/L	32.0	20.5	10.0	116	90 - 110	W429041	14-Jul-14	M1

Quality Contro	uality Control - MATRIX SPIKE DUPLICATE Data													
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes			
Anions by Ior	n Chromatography													
EPA 300.0	Sulfate as SO4	mg/L	12.2	12.1	10.0	107	0.7	20	W430023	21-Jul-14				
Dissolved Ani	ions by Ion Chromatog	raphy												
EPA 300.0	Sulfate as SO4	mg/L	71.1	71.0	10.0	103	0.2	20	W429041	14-Jul-14	D2			



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Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92 Work Order: **W4G0249**Bisbee, AZ 85603 Reported: 25-Jul-14 09:23

Notes and Definitions

D2 Sample required dilution due to high concentration of target analyte.
 M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable



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Bisbee, AZ 85603

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Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
PALMER	W4G0248-01	Ground Water	07-Jul-14 10:05	VH	11-Jul-2014
NESS	W4G0248-02	Ground Water	07-Jul-14 13:49	VH	11-Jul-2014
SWAN	W4G0248-03	Ground Water	07-Jul-14 14:51	VH	11-Jul-2014
OSBORN	W4G0248-04	Ground Water	07-Jul-14 15:30	VH	11-Jul-2014
NOTEMAN	W4G0248-05	Ground Water	07-Jul-14 16:23	VH	11-Jul-2014
BIMA	W4G0248-06	Ground Water	08-Jul-14 08:53	VH	11-Jul-2014
EPPELE 641	W4G0248-07	Ground Water	08-Jul-14 10:55	VH	11-Jul-2014
RAY	W4G0248-08	Ground Water	08-Jul-14 12:27	VH	11-Jul-2014
BANKS 986	W4G0248-09	Ground Water	08-Jul-14 15:28	VH	11-Jul-2014
EAST	W4G0248-10	Ground Water	08-Jul-14 16:30	VH	11-Jul-2014
COB MW-3	W4G0248-11	Ground Water	09-Jul-14 09:25	VH	11-Jul-2014
COB MW-2	W4G0248-12	Ground Water	09-Jul-14 10:15	VH	11-Jul-2014
COB MW-1	W4G0248-13	Ground Water	09-Jul-14 13:20	VH	11-Jul-2014
COB WL	W4G0248-14	Ground Water	09-Jul-14 15:19	VH	11-Jul-2014
NWC-04	W4G0248-15	Ground Water	10-Jul-14 08:55	VH	11-Jul-2014
NWC-06	W4G0248-16	Ground Water	10-Jul-14 10:00	VH	11-Jul-2014
NWC-02	W4G0248-17	Ground Water	10-Jul-14 10:37	VH	11-Jul-2014
ROGERS, E	W4G0248-18	Ground Water	10-Jul-14 11:55	VH	11-Jul-2014
KEEFER	W4G0248-19	Ground Water	10-Jul-14 13:02	VH	11-Jul-2014
DUP20140708	W4G0248-20	Ground Water	08-Jul-14 18:00	VH	11-Jul-2014

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL. Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

EPA 300.0

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: PALMER

Sulfate as SO4

SVL Sample ID: W4G0248-01 (Ground Water)

MDL

Sampled: 07-Jul-14 10:05 Received: 11-Jul-14

Analyzed

er)	Sample Report Page 1 of 1	Sampled By: VH

Batch

Dilution

Dissolved Anions by Ion Chromatography

John Ken

W429184 0.06

Analyst

07/17/14 13:54 AEW M1

Notes

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

18.3

Units

mg/L

RL

0.30

John Kern



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Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92 Work Order: **W4G0248**Bisbee, AZ 85603 Reported: 22-Jul-14 11:23

Client Sample ID: NESS

SVI, Sample ID: W4G0248-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

5 V L Sample 1D. VV+G0240-02 (Glound Vvaler)			Sample Report Fage 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	48.3	mg/L	1.50	0.28	5	W429184	AEW	07/17/14 14:26	D1,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: SWAN

SVL Sample ID: W4G0248-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 07-Jul-14 14:51 Received: 11-Jul-14

Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes
--

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 19.4 mg/L 0.30 0.06 W429184 AEW 07/17/14 14:47

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 **Project Name: Copper Queen Branch Sulfate Mitigation Order**

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: OSBORN

SVL Sample ID: W4G0248-04 (Ground Water)

Sample Report Page 1 of 1

Sampled: 07-Jul-14 15:30 Received: 11-Jul-14

Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 18.0 mg/L 0.30 0.06 W429184 AEW 07/17/14 14:57

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

Client Sample ID: NOTEMAN

SVL Sample ID: W4G0248-05 (Ground Water)

Sample Report Page 1 of 1

Sampled: 07-Jul-14 16:23 Received: 11-Jul-14

	Sample Report I	rage 1 of 1		Sampled By: VH			
RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	

W429184

25

Discolved.	Anione	hy In	n Chromato	aranhv
Dissuiveu	THIUHS	Dy IUI	i Cili diliato	zrapny

EPA 300.0 Sulfate as SO4

John Ken

7.50 1.38

AEW 07/17/14 15:08 D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

mg/L

289

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: WAC0248

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

Client Sample ID: BIMA

SVL Sample ID: W4G0248-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 08:53 Received: 11-Jul-14

5 V L Sample 1D. VV+G0240-00 (Ground vvater)				Sample Report Fage 1 of 1				Sampled By: VH		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300 0	Sulfate as SO4	297	mø/L	7.50	1.38	25	W429184	AFW	07/17/14 15:41	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

Client Sample ID: EPPELE 641

SVL Sample ID: W4G0248-07 (Ground Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 10:55 Received: 11-Jul-14

Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 21.6 mg/L 0.30 0.06 W429184 AEW 07/17/14 15:51

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: RAY

SVL Sample ID: W4G0248-08 (Ground Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 12:27 Received: 11-Jul-14

07/17/14 16:02

D2

	Sample Report 1	.gc 1 01 1	Sampled By: VH						
,	MDL	Dilution	Batch	Analyst	Analyzed	Notes			

Dissolved Anio	ons by Ion Chromatograp	hy						
EPA 300.0	Sulfate as SO4	147	mg/L	1.50	0.28	5	W429184	AEW

Units

RL

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

John Kern



John Ken

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: BANKS 986

SVL Sample ID: W4G0248-09 (Ground Water)

Sample Report Page 1 of 1

Sampled: 08-Jul-14 15:28 Received: 11-Jul-14

Sampled By:	VH	

	3 v L Sample 1D. vv4G0246-03 (Ground vvater)				Sample Report Page 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	s by Ion Chromatograp										
EPA 300.0	Sulfate as SO4	107	mg/L	1.50	0.28	5	W429184	AEW	07/17/14 16:12	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 **Project Name: Copper Queen Branch Sulfate Mitigation Order**

AEW

W429184

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: EAST

SVL Sample ID: W4G0248-10 (Ground Water)

13.1

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Sample Report Page 1 of 1

0.06

Sampled: 08-Jul-14 16:30 Received: 11-Jul-14

07/17/14 16:23

	Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography											

0.30

mg/L

Dissolved Anions by Ion Chromatography
EPA 300.0 Sulfate as SO4

John Kern Jo

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: COB MW-3

SVL Sample ID: W4G0248-11 (Ground Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 09:25 Received: 11-Jul-14

	Sample	d By: VH	
Batch	Analyst	Analyzed	Notes

John Ken

Dilution

Dissolved Anions by	Ion Chromatography									
EPA 300.0	Sulfate as SO4	90.9	mg/L	1.50	0.28	5	W429184	AEW	07/18/14 11:25	D2

RL

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248 Reported: 22-Jul-14 11:23

Client Sample ID: COB MW-2

SVL Sample ID: W4G0248-12 (Ground Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 10:15 Received: 11-Jul-14

Sampled By: VH

John Ken

Dilution

Batch Analyst

Analyzed

Notes

Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 43.7 W429184 07/17/14 16:44 mg/L 0.30 0.06 AEW

RL

Units

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: COB MW-1

SVL Sample ID: W4G0248-13 (Ground Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 13:20 Received: 11-Jul-14

	SVL Sample ID: W4G0248-13 (Ground Water)				ample Report	Page 1 of 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
	-	•			_				_	

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 1000 W429184 07/17/14 16:54 mg/L 15.0 2.75 AEW D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: COB WL

SVL Sample ID: W4G0248-14 (Ground Water)

Sample Report Page 1 of 1

Sampled: 09-Jul-14 15:19 Received: 11-Jul-14

recourred.	
Sampled By:	VH

5 v L Sample 1D. VV4G0240-14 (Glound Vvater)					Sample Report Fage 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anions	s by Ion Chromatograp										
EPA 300.0	Sulfate as SO4	81.5	mg/L	1.50	0.28	5	W429184	AEW	07/17/14 17:05	D2	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

Client Sample ID: NWC-04

SVL Sample ID: W4G0248-15 (Ground Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 08:55 Received: 11-Jul-14

Sampled By:	VH	

	SVE Sample 1B. 1146	rater,		1 age 1 of 1	Sampled By: VH					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	194	mg/L	3.00	0.55	10	W429184	AEW	07/17/14 17:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W4G0248**Reported: 22-Jul-14 11:23

Freeport McMoRan - Copper Queen Branch 36 West Highway 92

Bisbee, AZ 85603

Client Sample ID: NWC-06 Sampled: 10-Jul-14 10:00

SVL Sample ID: W4G0248-16 (Ground Water)

Sample Report Page 1 of 1

Received: 11-Jul-14
Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 8.97 mg/L 0.30 0.06 W429184 AEW 07/17/14 17:47

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: NWC-02

SVL Sample ID: W4G0248-17 (Ground Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 10:37 Received: 11-Jul-14

Sampled By: VH

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 7.65 mg/L 0.30 0.06 W429184 AEW 07/17/14 17:58

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Method

Project Name: Copper Queen Branch Sulfate Mitigation Order

Analyst

Work Order: W4G0248 Reported: 22-Jul-14 11:23

Client Sample ID: ROGERS, E

SVL Sample ID: W4G0248-18 (Ground Water)

Sample Report Page 1 of 1

Dilution

Sampled: 10-Jul-14 11:55 Received: 11-Jul-14

Sampled By: VH Batch

Dissolved Anions by Ion Chromatography

EPA 300.0 Sulfate as SO4

John Ken

0.30 0.06

RL

Units

mg/L

W429184

Analyzed

Notes

07/17/14 18:08 AEW

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Result

6.41

John Kern



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Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 **Project Name: Copper Queen Branch Sulfate Mitigation Order**

Work Order: W4G0248

Reported: 22-Jul-14 11:23

Client Sample ID: **KEEFER**

SVL Sample ID: W4G0248-19 (Ground Water)

Sample Report Page 1 of 1

Sampled: 10-Jul-14 13:02 Received: 11-Jul-14

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								~p		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissalved Anione	hv. Ion Chuomotoguo	k								

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 6.66 mg/L 0.30 0.06 W429184 AEW 07/17/14 18:19

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

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Reported: 22-Jul-14 11:23

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W4G0248

Client Sample ID: **DUP20140708**

Sampled: 08-Jul-14 18:00 Received: 11-Jul-14

	SVL Sample ID: W4G	Water)	S	ample Report	Page 1 of 1	Sampled By: VH				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	110	mg/L	3.00	0.55	10	W429184	AEW	07/17/14 18:29	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern



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Freeport McMoRan - Copper Queen Branch
36 West Highway 92
Bisbee, AZ 85603
Project Name: Copper Queen Branch Sulfate Mitigation Order
W4G0248
Reported: 22-Jul-14 11:23

Quality Conti	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	aphy mg/L	<0.30	0.06	0.30	W429184	17-Jul-14	

Quality Cont	Quality Control - LABORATORY CONTROL SAMPLE Data												
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes				
Dissolved Anio EPA 300.0	ns by Ion Chromatogr Sulfate as SO4	raphy mg/L	10.6	10.0	106	90 - 110	W429184	17-Jul-14					

Quality Cont	trol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
	-									
Dissolved Anie	ons by Ion Chromatogi	raphy								
Dissolved Anic	ons by Ion Chromatogi Sulfate as SO4	raphy mg/L	29.8	18.3	10.0	115	90 - 110	W429184	17-Jul-14	M1

Quality Control - MATRIX SPIKE DUPLICATE Data												
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes	
Dissolved Ani	ons by Ion Chromatog	raphy										
EPA 300.0	Sulfate as SO4	mg/L	30.0	29.8	10.0	117	0.8	20	W429184	17-Jul-14	M1	

Notes and Definitions

D2 Sample required dilution due to high concentration of target analyte.

M1 Matrix spike recovery was high, but the LCS recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was

acceptable.

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

R > 4S % recovery not applicable, sample concentration more than four times greater than spike level

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable

APPENDIX C GROUNDWATER SAMPLING FORMS

			Groundw	ater Sa	ampling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branch	า
Task No:	1				Date:	Jul 11, 2014		
Well ID:	Anderson 396	6			Weather:	Sunny, 80s		
ADWR No:	613396				Sampler:	VNH		
	•			WELL D	ATA			
Well De	pth (ft bls):		285		Nomina	Casii al Size (inches)	ng Capacity Gallons per	Linear Foot
Casing D	iameter (in):		8			2	0.16 0.65	
						5	1.	02
Static Water	Level (ft bmp):		152.02			8	1. 2.	47 61
Casing V	olume (gal):	347	x3 =	1042		10		08
Total Volum	e Purged (gal):		No purge		Ca	asing Volume = gallo	ons/foot * water colu	mn (feet)
	T	ı	FII	ELD SAMPLI	ING DATA	Ī	T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comr	ments
	Pump On							
9:04:05 AM				7.35	21.4	1033		
							D 0"	
	EIELD DADAM	ETED STADII	IZATION: Three	conscoutive re	adings within	0.3 su pH, 2 degree	Pump Off	<u>, , , , , , , , , , , , , , , , , , , </u>
	TILLD I AIVAIV	ILTER OTABL		AMPLE INFO		0.0 3u pri, 2 degree	3 O, and 100 5/cm	
Sample Colle	ction Point:	Spigot on st			Table 11014			
-	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Anderson 39	96	9:16:17	Poly	500mL	1	300.0	NA	Υ
			WATER LEVE	L MEASURE	EMENT COL	LECTION		
No waterNo water	vel measurement level measureme level measureme level measureme	nt collected. N nt collected. C	bstruction in well	•	wellhead			
			WEL	L PURGING IN	NFORMATION	l		
O Purged 3	3 well volumes and 3 well volumes bas vell until field para Collect from stor	ed on previous meters stabiliz	s water level and ed.	field paremete	ers stabilized.			
Additional C	comments:							
ſ								

		G	Froundwa	ater Sa	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 11, 2014			
Well ID:	Anderson 458	3			Weather:	Sunny, 80s			
ADWR No:	221458				Sampler:	VNH			
ADVICTO.	221400			WELL DA		VIVII			
W 11 D			734				Capacity		
vveii De	epth (ft bls):				Nomina	l Size (inches)	Gallons per Linear Foot 0.16		
Casing D	Diameter (in):		5			4 5	0.6 1.0		
Static Water	r Level (ft bmp):	156.66				6	1.4	7	
Casing V	/olume (gal):	589	x3 =	1767		8 10	2.6 4.0		
Total Volum	ne Purged (gal):		640		Casi	ing Volume = gallons	s/foot * water colun	nn (feet)	
				D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
8:55 AM	Pump On								
9:15 AM	20m	8	160	8.16	23.1	400.6			
9:35 AM	40m	8	320	8.14	24.3	399.2			
9:55 AM	60m	8	480	8.15	24.3	398.4			
10:15 AM	80m	8	640	8.13	24.5	396.7			
	E.E. B. B. B. B. A. B. A. B.				" "		Pump Off		
	FIELD PARAME	TER STABILIZ				3 su pH, 2 degrees	C, and 100 S/cm)		
		0 : .		IPLE INFOR	MATION				
Sample Colle	nple ID	Spigot near Time	pressure tanks Container Type	Volume	No. of	Analysis Method	Preservative	Filtered	
				volume	Containers	Arialysis Metriou	rieservative	(y/n)	
Anderson 4	58	10:20:13	Poly	500mL	1	300.0	NA	Y	
			NATER LEVEL	MEASUREN	LENT COLLE	ECTION			
X Water lev	vel measurement c								
	level measuremen		access to wellhe	ead/No port in	wellhead				
No water	level measuremer	t collected. Ob	ostruction in well.						
	level measuremen	t collected. W	ell is pumping.						
Other:			WELL F	PURGING INF	ORMATION				
O Purged 3	well volumes and	field paramete	rs stabilized.						
_	well volumes base			eld paremeter	s stabilized.				
	ell until field param								
X Other:		1 well volume,	and stable param	neters					
Additional C	Comments:								

				.	mpling	. •			
Project No:	287030				Client:	Freeport Coppe	r Queen Branc	h	
Task No:	1				Date:	Jul 16, 2014			
Well ID:	AWC-02				Weather:	Overcast, 80s			
	616586				Sampler:	VNH			
/ DVVI III.	0.0000			WELL DAT					
Well Don	th (ft blo):		333		Nomino		Capacity	incor Foot	
Well Dep	otn (it bis):				Nomina	l Size (inches)	Gallons per Linear Foot 0.16		
Casing Dia	ameter (in):		20			5	0.65 1.02		
Static Water L	Level (ft bmp):		124.49			6	1.4	7	
Casing Vo	olume (gal):	3403	x3 =	10209		8	2.6 4.0		
Total Volume	Purged (gal):		10000		Casi	ng Volume = gallons	s/foot * water colum	ın (feet)	
			FIEL	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
11:40 AM	Pump On								
12:00 PM	20m	100	2000	7.53	21.6	505.5			
12:20 PM	40m	100	4000	7.53	21.5	507.6			
12:40 PM	60m	100	6000	7.64	21.9	496.7			
1:00 PM	80m	100	8000	7.56	22.1	495.3			
1:20 PM	100m	100	10000	7.54	21.8	499.5			
							Pump Off		
	FIELD PARAME	TER STABILIZ	ATION: Three co	nsecutive read	dings within 0.	3 su pH, 2 degrees (C, and 100 (S/cm)		
			SAM	IPLE INFOR	MATION				
Sample Collect	tion Point:	Spigot near	pressure tanks	in shed					
Samp	ple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
AWC-02		13:28:31	Poly	250mL	1	300.0	NA	Υ	
			VATER LEVEL	MEASUREN	IENT COLLE	CTION			
	I measurement co		200000 to Wallha	ad/No sort is	wollboad				
	evel measuremen evel measuremen		access to wellhe estruction in well.	au/INO PORT IN '	weilileau				
	evel measuremen								
Other:									
· ·				PURGING INF	ORMATION				
_	vell volumes and f			old pares: -+	o otobili=l				
_	vell volumes base Il until field param		water level and fi d.	eia paremeter	s stabilized.				
O Other:	aniin noid param	Julio Glabilize	~-						
Additional Co	omments:								
, taditional ou	minorito.								

		G	roundwa	ater Sai	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 16, 2014		
Well ID:	AWC-03				Weather:	Sunn, humid, 8	0s	
ADWR No:	616585				Sampler:	VNH		
	<u>'</u>			WELL DAT		1		
Well De	pth (ft bls):		270		Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot
						2	0.1	6
Casing D	iameter (in):		16			5	0.6	
Static Water	Level (ft bmp):		123.50			6 8	1.4 2.6	
Casing V	olume (gal):	1530	x3 =	4590		10	4.0	
Total Volum	e Purged (gal):		6120		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
			FIEI	_D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
10:46 AM	Pump On							
10:49 AM	3m	680	2040	7.90	21.5	567.4		
10:52 AM	6m	680	4080	7.71	21.3	519.8		
10:55 AM	9m	680	6120	7.68	21.4	506.9		
							D 0"	
	EIELD DADAME	TED STADILL	ZATIONI: Three or		dia ara suithia O	3 su pH, 2 degrees	Pump Off	
	FIELD PARAME	TER STABILIZ		PLE INFOR		3 su pn, 2 degrees	C, and 100 5/cm)	
Ozzaka Ozila	ation Daint	Cnigot noor			IVIATION			
Sample Colle	ction Point:	Spigot near	pressure tanks	in snea	No. of			Filtered
Sam	nple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
AWC-03		10:58:50	Poly	250mL	1	300.0	NA	Υ
.,			NATER LEVEL	MEASUREN	MENT COLLE	ECTION		
	el measurement c			and/Nonentin	الم م طال مين			
	evel measuremer level measuremer			ead/No port in	weiirieau			
O No water	evel measuremen	t collected. W	ell is pumping.					
o Other:			=					
V D 10		C 11		PURGING INF	ORMATION			
_	well volumes and well volumes base			ield naremeter	rs stahilized			
_	ell until field param			iola paromotor	o otabilizoa.			
O Other:								
Additional C	omments:							
		-						

		(-	Groundwa	ater Sai	mpling	Form		
	007000		or our law.	ator oar			O D	L.
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	<u>n</u>
Task No:	1				Date:	Jul 16, 2014		
Well ID:	AWC-04				Weather:	Partly cloudy, 8	0s	
ADWR No:	616584				Sampler:	VNH		
				WELL DAT	ΓA I	Casing	Capacity	
Well De	epth (ft bls):		337		Nomina	l Size (inches)	Gallons per L	
Casing D	iameter (in):		16			4	0.1 0.6	
	. ,					5	1.0	2
Static Water	Level (ft bmp):		118.44			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):	2283	x3 =	6849		10	4.0	
Total Volum	e Purged (gal):		11700		Casi	ing Volume = gallons	s/foot * water colum	in (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
11:12 AM	Pump On							
11:15 AM	3m	780	2340	7.22	21.4	623.5		
11:18 AM	6m	780	4680	7.70	20.8	802.9		
11:21 AM	9m	780	7020	7.36	20.8	678.5		
11:24 AM	12m	780	9360	7.37	20.8	643.5		
11:27 AM	15m	780	11700	7.32	20.7	632.2		
							Pump Off	
	FIELD PARAME	TER STABILIZ	ATION: Three co	nsecutive read	dings within 0.	3 su pH, 2 degrees	C, and 100 ∫ S/cm)	
			SAM	IPLE INFOR	MATION			
Sample Colle	ction Point:	Spigot near	pressure tanks	in shed				
San	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
AWC-04		11:32:36	Poly	250mL	1	300.0	NA	Y
DUP201407	716	1800	Poly	250mL	1	300.0	NA	Y
		\	WATER LEVEL	MEASUREN	MENT COLLE	ECTION		
	el measurement c			1/51				
	level measuremer level measuremer			ead/ino port in	weiinead			
	level measuremer							
O Other:								
			WELL F	PURGING INF	ORMATION			
_	well volumes and							
_	well volumes base			ield paremeter	s stabilized.			
O Purged wO Other:	ell until field param	ieters stabilize	u.					
	\							
Additional C	omments:							
<u> </u>								·

		G	Proundwa	ater Sar	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 16, 2014		
Well ID:	AWC-05				Weather:	Sunny, humid,	80s	
ADWR No:	590620				Sampler:	VNH		
				WELL DAT	Ā			
Well Dei	oth (ft bls):		1183		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot
	,					2	0.1	6
Casing Di	ameter (in):		16			5	0.6 1.0	
Static Water	Level (ft bmp):		346.34			6	1.4	
Casing Vo	olume (gal):	8739	x3 =	26217		10	2.6 4.0	
Total Volume	e Purged (gal):		26100		Casi	ing Volume = gallons	s/foot * water colum	n (feet)
	3 (3 /		FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
9:40 AM	Pump On							
9:55 AM	15m	580	8700	7.66	22.1	445.1		
10:10 AM	30m	580	17400	7.80	22.5	442.4		
10:25 AM	45m	580	26100	7.60	22.6	470.9		
							Pump Off	
	FIELD PARAME	TER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
				IPLE INFOR	MATION			
Sample Collec	ction Point:	Spigot near	pressure tanks	in shed	1	ı		
Sam	ple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
AWC-05		10:34:51	Poly	250mL	1	300.0	NA	Y
			WATER LEVEL	MEASUREN	IENT COLLE	ECTION .		
No water INo water I	el measurement c evel measuremer evel measuremer evel measuremer	nt collected. No nt collected. Ob	ostruction in well.	ead/No port in v	wellhead			
			WELL F	PURGING INF	ORMATION			
O Purged 3 v	well volumes and well volumes base ell until field paran	ed on previous	water level and fi	eld paremeter	s stabilized.			
Additional C	omments:							
	23.							

-								
		G	Groundwa	ater Sai	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Banks 986				Weather:	Sunny, 80s		
ADWR No:	647986				Sampler:	VNH		
7.5 **********	10.1.000			WELL DA				
Wall D	anth (ft bla):		435		Namina	Casing I Size (inches)	Capacity Gallons per L	incar Foot
Well Do	epth (ft bls):				Nomina	2	0.1	
Casing [Diameter (in):		6			4 5	0.6 1.0	-
Static Wate	er Level (ft bmp):	Use 22	8.85 from Ban	ks 987		6	1.4	
Casing \	Volume (gal):	303	x3 =	909		8	2.6 4.0	
Total Volun	ne Purged (gal):		920		Casi	ng Volume = gallons	s/foot * water colum	in (feet)
	0 10 /	ı	FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
1:30 PM	Pump On							
1:45 PM	15m	8	120	7.54	22.5	1190		
2:05 PM	35m	8	280	7.56	23.1	1183		
2:25 PM	55m	8	440	7.53	23.1	1179		
2:45 PM	75m	8	600	7.54	23.0	1176		
3:05 PM	95m	8	760	7.52	23.0	1177		
3:25 PM	115m	8	920	7.58	22.3	1175		
							Pump Off	
	FIELD PARAME	TER STABILIZ	ATION: Three co	nsecutive rea	dings within 0.	3 su pH, 2 degrees (C, and 100 [S/cm)	
			SAM	IPLE INFOR	MATION			
Sample Coll	ection Point:	Wellhead spi	got					
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Banks 986		15:28:01	Poly	250mL	1	300.0	NA	Υ
DUP20140	708	18:00	Poly	250mL	1	300.0	NA	Υ
		V	VATER LEVEL	MEASUREN	IENT COLLE	ECTION		
	evel measurement							
	r level measureme r level measureme			ead/No port in	wellhead			
	r level measureme							
Other:			1 - 1 - 3					
			WELL F	PURGING INF	ORMATION			
_	3 well volumes and							
_	3 well volumes bas			eld paremeter	s stabilized.			
O Purged vO Other:	well until field paraı	meters stabilize	a.					
Additional (Comments:							
		<u></u>		<u></u>	<u></u>			

						_		
			Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Banks 987				Weather:	Sunny, 80s		
ADWR No:	647987				Sampler:	VNH		
ABWITTO.	011001			WELL DA		11111		
			000				Capacity	
Well De	epth (ft bls):		339		Nomina	al Size (inches)	Gallons per I 0.1	
Casing D	Diameter (in):		6			4	0.6	
Static Wate	r Level (ft bmp):		228.85			5 6	1.0	
Otatic Wate	r Lever (it bilip).					8	2.6	
Casing \	/olume (gal):		x3 =	0		10	4.0	8
Total Volum	ne Purged (gal):				Cas	ing Volume = gallon	s/foot * water colum	ın (feet)
			FIE	LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ients
	Pump On	•		•	•	•		
							Pump Off	
	FIELD PARAME	TER STABILIZ				.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAN	MPLE INFOR	MATION			
Sample Colle	ection Point:	Wellhead sp	pigot					
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
			L WATER LEVEL	MEASURE	MENT COLL	ECTION		
Y Motor lo	vel measurement		VVAILI LL VLL	INLAGUNLI	VILIVI COLL	LOTION		
	r level measureme		o access to wellh	nead/No port in	wellhead			
	level measureme							
No water	level measureme	nt collected. W	/ell is pumping.					
O Other:								
			WELL	PURGING INF	FORMATION			
_	well volumes and							
_	3 well volumes bas			field paremete	ers stabilized.			
Purged vOther:	vell until field para	meters stabiliz	ed.					
Additional (Comments:				WLG	0		
 								

		C	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 17, 2014		
Well ID:	Barton 919				Weather:	Partly cloudy, 7	'0s	
ADWR No:	644919				Sampler:	VNH		
				WELL DA				
Well De	epth (ft bls):		130		Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot
						2	0.1	6
Casing L	Diameter (in):		6			5	0.6 1.0	
Static Wate	r Level (ft bmp):		113.42			6 8	1.4 2.6	
Casing \	/olume (gal):		x3 =			10	4.0	
Total Volun	ne Purged (gal):				Casi	ing Volume = gallons	s/foot * water colum	ın (feet)
	3 (0 /		FIEI	LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
							Pump Off	
	FIELD PARAME	TER STABILI				.3 su pH, 2 degrees	C, and 100 S/cm	
			SAN	IPLE INFOR	MATION			
Sample Colle	ection Point:	ı	1		T			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		L ,	A/ATED LEVEL	MEAGURE	AFNT COLL	ECTION		
V W			WATER LEVEL	MEASURE	WENT COLL	ECTION		
	vel measurement or level measureme		o access to wellh	ead/No port in	wellhead			
	r level measureme							
 No water 	r level measureme	nt collected. V	/ell is pumping.					
O Other:								
O. Diversed C	II l	£:-1-1		PURGING INF	-ORMATION			
_	B well volumes and B well volumes bas	·		field paremete	ers stabilized.			
_	well until field parar			,				
O Other:								
Additional (Comments:				WL	0		
 								

		Gı	roundwa	ter San	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Bima				Weather:	Sunny, 60s		
ADWR No:	577927				Sampler:	VNH		
	101110			WELL DATA	· ·			
Wall Do	nth (ft bla):		460		Nomina		Capacity Gallons per L	incar Foot
vveii De	pth (ft bls):		400		INOMINA	l Size (inches)	0.1	
Casing Di	iameter (in):		4			4	0.6	
Static Water	Level (ft bmp):					5 6	1.0 1.4	
Cooing \/	olumo (gal):		x3 =			8	2.6 4.0	
	olume (gal):				Casi	ng Volume = gallon:		
Total Volume	e Purged (gal):		No purge	O SAMPLING				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)		Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On	L						
8:49:07 AM				6.56	21.6	1653		
								,
							Pump Off	
	FIELD PARAM	ETER STABILIZA			-	su pH, 2 degrees C	, and 100 S/cm)	
				PLE INFORM	1ATION			
Sample Collec	ction Point:	Spigot near p-t	anks in shed	1	T	1	<u> </u>	
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Bima		8:53:26 AM	Poly	250mL	1	300.0	NA	Υ
			ATER LEVEL N	MEASUREMI	ENT COLLE	CTION		
	el measurement o level measuremer		accas to wallboard	I/No port in wo	llbood			
	level measuremer			/No port in we	iiileau			
	level measuremer							
Other:								
			WELL P	URGING INFO	RMATION			
_	well volumes and	•						
_	well volumes base ell until field paran		iter level and field	d paremeters s	stabilized.			
X Other:		ner request, 1 fiel	d reading					
Additional C	omments:							
, taditional C	ommonio.	1						

ject No:	287030				Client: <u>F</u>	reeport Copper	Queen Branci	1
sk No:	20,100			!	Date:	7-22-	-)4	
sk 190. all ID:	Rima.	2008-1	L		Weather:	Partly Clo	udr/	
•					Sampler:	Christophur	L. Shirma	
WR No:		<u>.</u>		WELL DAT	Ά	0	annoitu	
		20			Nominal	Casing C Size (inches)	Gallons per Li	
Well De	pth (ft bis):	<u> 311.7</u>	<u> </u>			2	0.16 0.65	
Casing D	iameter (in):	5 "				4 5	1.02	
Static Water	r Level (ft bmp): _	74	. 14			6	1.47 2.61	
	_	240	$7 \times 3 = 7$	22		8 10	4.08	
Casing V	/olume (gal):		, / /		Casing	y Volume = gallons/	foot * water colum	n (feet)
Total Volum	ne Purged (gai):	74	/ FIFI	D SAMPLIN	G DATA			
		Discharge	· Total			Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
2945	Pump On						<u> </u>	<u> </u>
1011	30	8.3	249	6.85	72.1	1004		
035	50	83	415	1.81	120	1008		<u> </u>
1-56	130	8.3	581	181	21.9	1009		
1013	90	8.3	747	1-87	220	1010		
1(1)		- 4	1 6	- 		L	<u></u>	
	 							
	 							
	 						Pump Off	
		ER STABILIZ	ATION: Three co	onsecutive re	adings within	0.3 su pH, 2 degree	s C, and 100 μS/c	m)
	FIELD PARAMET			IPLE INFOR	RMATION			
	FIELD PARAMET		SAN					
			SAN					
Sample Co	ollection Point:	Time	Container	Volume	No. of	Analysis Method	Preservative	Filtered (y/n)
Sample Co	ollection Point:		Container Type	Volume		Analysis Method	Preservative L	t .
Sample Co	ollection Point:		Container	1	No. of		Preservative	E .
Sample Co	ollection Point:	Time	Container Type	Volume 250	No. of Containers	300	Preservative	E .
Sample Co Sa BMO - 2	ollection Point: ample ID 2008206	Time	Container Type	Volume 250	No. of Containers	300	Preservative Lec	E .
Sample Co	ample ID 2008) C	Time	Container Type	Volume 250 MEASURE	No. of Containers	300 LECTION	Preservative	E .
Sample Co	Dilection Point: ample ID 2007 () () level measurementer level measurer	Time V nt collected. ment collected. ment collected.	Container Type // // // // // // // // // // // // /	Volume 259 MEASURE	No. of Containers	300 LECTION	Preservative Lec	B .
Sample Co	evel measurementer level measurer	Time V nt collected. ment collected. ment collected.	Container Type // // // // // // // // // // // // /	Volume 259 MEASURE	No. of Containers	300 LECTION	Preservative	E .
Sample Co	level measurementer level measurer atter level measurer atter level measurer	Time V nt collected. ment collected. ment collected.	Container Type // // VATER LEVEL No access to w Obstruction in v Well is pumping	Volume 250 MEASURE	No. of Containers / MENT COL	300 LECTION	Preservative Lec	t .
Sample Co	election Point: ample ID 2007) C level measurementer level measurer ater level measurer ater level measurer	Time V nt collected. ment collected. ment collected. ment collected.	Container Type // // VATER LEVEL No access to w Obstruction in w Well is pumping	Volume 259 MEASURE rellhead/No powell. g.	No. of Containers	300 LECTION	Preservative	t .
Sample Co	ample ID 2007) C level measurementer level measurer level measu	Time V nt collected. ment collected ment collected ment collected	Container Type // // // // // // // // //	Volume 250 MEASURE rellhead/No powell. g.	No. of Containers / MENT COL	300 LECTION	Preservative	t .
Sample Co	level measurementer level	Time Vent collected. ment collected. ment collected. ment collected. ment collected. ment collected. ment collected.	Container Type // VATER LEVEL No access to w Obstruction in w Well is pumping WELL neters stabilized ous water level a	Volume 250 MEASURE rellhead/No powell. g.	No. of Containers / MENT COL	300 LECTION	Preservative	E .
Sample Co	level measurementer level	Time Vent collected. ment collected. ment collected. ment collected. ment collected. ment collected. ment collected.	Container Type // VATER LEVEL No access to w Obstruction in w Well is pumping WELL neters stabilized ous water level a	Volume 250 MEASURE rellhead/No powell. g.	No. of Containers / MENT COL	300 LECTION	Preservative	E .
Sample Co	ed 3 well volumes a well until field parts	Time Vent collected. ment collected. ment collected. ment collected. ment collected. ment collected. ment collected.	Container Type // VATER LEVEL No access to w Obstruction in w Well is pumping WELL neters stabilized ous water level a	Volume 259 MEASURE rellhead/No powell. g. PURGING In	No. of Containers / MENT COL	300 LECTION	Preservative	t .
Sample Co	level measurementer level	Time Vent collected. ment collected. ment collected. ment collected. ment collected. ment collected. ment collected.	Container Type // // // // // // // // //	Volume 259 MEASURE rellhead/No powell. g. PURGING In	No. of Containers / MENT COL	300 LECTION	Preservative	t .

No No No No No No No No	Service Servic	n Branch
NR No: Sample: Locate	Well Depth (ft bis): Casing Diameter (in): Casing Volume (gal): Total Volume Purged (gal): Time Elapsed Time (min) Pump On 1400 14	
WELL DATA Veli Depth (ft bis): Casing Diameter (in): Latic Water Level (ft bmp): Casing Volume (gal): Visit Volume (gal): Visit Volume (gal): Visit Volume (gal): Visit Volume Purged (gal): Visit Visit Purged Pu	WRILDATA Casing Capacity Well Depth (ft bis): Casing Diameter (in): Static Water Level (ft bmp): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): Total Volume Purged (gal): Time Elapsed Time Rate (gpm) Rate (gpm) Plend Discharge (gal): Rate (gpm) Plend Discharge (gul) FIELD SAMPLING DATA Temp (conductance (us/rom) FIELD SAMPLING DATA Temp (conductance (us/rom) FIELD SAMPLING DATA Temp (conductance (us/rom) FIELD SAMPLE INFORMATION FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers Analysis Method Prese Type WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION WATER Level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Cither: WELL PURGING INFORMATION S. Purged 3 well volumes and field parameters stabilized.	
Well Data Well Depth (It bis): Zero Nominal Size (Inches): Gallons per Linear Foot 1	Well Depth (ft bis): Casing Diarmeter (in): Static Water Level (ft bmp): Casing Volume (gal): Total Volume Purged (gal): FIELD SAMPLING DATA Casing Volume = gallons/foot * water level (ft bmp): Total Volume Purged (gal): FIELD SAMPLING DATA FIELD SAMPLING DATA FIELD SAMPLING DATA Time Elapsed Time (gpm) Gallons FIELD SAMPLING DATA FIELD SAMPLE INFORMATION FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample ID Time Container Volume Containers Analysis Method Prese FIELD SAMPLE INFORMATION FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample ID Time Container Volume Containers Analysis Method Prese FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample ID Time Container Volume Containers Analysis Method Prese FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample ID Time Container Volume Rater Stabilized Container Rater Stabilized Container Rater Stabilized Container Rater Stabilized Container Rater Stabili	idno
Well Depth (ft ble): Casing Diameter (in): 5	Nominal Size (Inches) Gallor	
Well Depth (ft ble): Casing Diameter (in): Latic Water Level (ft bmp): 145.3L	Casing Diameter (In): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): Total Volume Purged (gal): Total Volume Purged (gal): Time Elapsed Time Rate (gpm) Blackarge (gallons) Rate (gpm) Rate (gallons) FIELD SAMPLING DATA Total Physical	ons per Linear Foot
Casing Diameter (in): Latic Water Level (it bmp): Latic Water Level (it	Casing Diameter (in): 145.31	0.16
Casing Volume (gal): 177 x3 = 357 Casing Volume (gal): 177 x3 = 357 Casing Volume = gallons/foot * water column (feet) FIELD SAMPLING DATA Time Elapsed Time Oischarge Total Discharge (gallons) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume = gallons/foot * water column (feet) Time Casing Volume Gallons	Casing Volume (gsl):	-
Casing Volume (gal): 17	Casing Volume (gsl):	
Casing Volume (gal): SHOUND Purged (gal): Time Elapsed Time (gm) Discharge Rate (gm) Discharge (gallons) FIELD SAMPLING DATA FIELD SAMPLING DATA Specific Conductance Conductance (us/om) Specific Conductance (us/om) FIELD Purp On 1400 10 22 13 19 21 70 70 70 70 70 70 70 70 70 70 70 70 70	Casing Volume (gal): Sylo	
FIELD SAMPLING DATA FIELD SAM	Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) (SU) Temp (PC) Conductance (us/s/cm) 1350 Pump On	ater column (feet)
Time Elapsed Time (min) Discharge Rate Discharge (gallons) PH Temp (CC) Conductance (LIS/orm) Comments 350 Pump On	Time Elapsed Time Rate (gpm) (gallons) (SU) Temp (CC) Conductance (µS/m) 350 Pump On	
Time Elapsed Time (min) Discharge (gallons) Pitter (gu) Conductance (µS/m) Comments 350 Pump On	Time Elapsed Time (min) Rate (gpm) Rate (gpm) Discharge (gallons) (SU) CC Conductance (µS/cm) 350 Pump On	
Pump On 135	Pump On 1400	Comments
190 19 27 13 19 19 19 19 19 19 19	1400 15 27 13 19 19 19 19 19 19 19	
YOS 15 27 40 198 70 70 70 70 70 70 70 7	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume No. of Containers Analysis Method Prese BMD-2003-3B 1/10 PL 250 WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION	
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□ Other: WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	Other: WELL PURGING INFORMATION Solution of the parameters stabilized.	
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☐ Purged well until field parameters stabilized. ☐ Other:		
☐ Other:	☐ Purged well until field parameters stabilized.	
Additional Comments: 114.7		
	Additional Comments: 1)4.7	

			oundwat				_	
Project No:	287030				Client:	Freeport Coppe	er Queen Brand	h
Task No:	1				Date:	Jul 18, 2014		
Well ID:	BMO-2008-4	3			Weather:	Sunny, 80s		
ADWR No:	910096				Sampler:	VNH		
				WELL DAT	A T	Casing	Capacity	
Well De	epth (ft bls):		610		Nomina	al Size (inches)	Gallons per L	inear Foot
Casina F	Diameter (in):		5			2	0.1	
						5	1.0	2
Static Water	r Level (ft bmp):		137.49			8	1.4 2.6	
Casing V	olume (gal):	482	x3 =	1446		10	4.0	
Total Volum	ne Purged (gal):		1500		Casi	ing Volume = gallons	s/foot * water colum	nn (feet)
Total Total	io i aigea (gai).			SAMPLING	3 DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
11:44 AM	Pump On				<u>'</u>			
12:04 PM	20m	25	500	7.88	23.6	364.2		
12:24 PM	40m	25	1000	7.81	23.2	374.0		
12:44 PM	60m	25	1500	7.78	23.3	379.1		
							Pump Off	
	FIELD PARAM	ETER STABILIZA	TION: Three cons	secutive read	Ings within 0.3	su pH, 2 degrees C		
			SAMP	LE INFORM	MATION			
Sample Colle	ection Point:	Spigot in well sh	ned					
-	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
BMO-2008-	-4B	12:49:51	Poly	250mL	1	300.0	NA	Υ
		W	ATER LEVEL M	1EASUREM	ENT COLLE	CTION		
	vel measurement							
	level measureme			I/No port in w	ellhead			
	· level measureme · level measureme							
Other:	icver measureme	ni concolca. Wen	o pumping.					
			WELL PL	JRGING INFO	ORMATION			
O Purged 3	well volumes and	field parameters	stabilized.					
_	well volumes bas		ater level and field	d paremeters	stabilized.			
-	vell until field para	meters stabilized.						
O Other:								
Additional (Comments:	Open valves, off when done		y switching	both break	ers on at electri	cal box nearby.	Return to

	287030				Client: F	reeport Copper	Queen Branch	
oject No: sk No:					Date: _	219-14		
	BM0-2	20 D- I	B		Weather:	Cloud		
II (D:	111111111111111111111111111111111111111	יים מינו			Sampler:	hristodor	1 Shown	
WR No:	·			WELL DAT				
	····	105			Maminal	Casing C Size (inches)	apacity Gallons per Lin	ear Foot
Well De	epth (ft bls):				Norminan	2	0.16	<u> </u>
Casing [Diameter (in):	·	5"			5	0.65 1.02	
_	_	161	12			6	1.47	
itatic vvate	r Level (ft bmp):		· · · · · · · · · · · · · · · · · · ·			8 10	2.61 4.08	
Casing \	/olume (gal):	137	x3 = 4		Caping	Volume = gallons/		(feet)
Total Volun	ne Purged (gal):	1.7	5			Volume - gallons		. (,
				D SAMPLIN	IG DATA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts
1200	Pump On							
1215	10	27	138	6.98	21.7	794		
1325	15	27	405	7.01	21.7	793	<u> </u>	
1225	120	27	125	1.99	71.6	795		
1235	123							
					<u> </u>	}		
							Pump Off	
		<u> </u>		<u> </u>	ii dibin (n)
	FIELD PARAMET	ER STABILIZA	ATION: Three or	onsecutive re	adings within t).3 su pH, 2 degree	3 O, and 100 percen	
			SAN	MPLE INFO	KINATION			
Sample Co	ollection Point:		<u></u>					Filtered
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
		1235	P2_	250	1)	300	Fre	γ_2
// Mag 0	~2 <i>00</i> %~5 <i>V</i> 5	<u> </u>			1			
BMO		1		•				/
<u>Kmo</u>	· .	<u> </u>	VATER LEVEL	MEASURE	MENT COL	LECTION		
			VATER LEVEL	MEASURE	MENT COL	LECTION	<u> </u>	
K Water	level measuremen	it coilected.					<u> </u>	
Water □ No water	level measuremen	nt coilected. ment collected.	No access to w	elihead/No po				
Water No water No water	level measuremen	nt collected. ment collected. ment collected.	No access to w	elihead/No po vell.				
Water No water No water	level measuremen ter level measuren ter level measuren ter level measuren	nt collected. ment collected. ment collected.	No access to w Obstruction in w	elinead/No po vell. g.	ort in wellhead			
Water No wat No wat No wat	level measuremen ter level measuren ter level measuren ter level measuren	nt collected. nent collected. nent collected. nent collected.	No access to w Obstruction in v Well is pumping	elihead/No po well. g. PURGING I!				
Water No wat No wat No wat	level measuremen ter level measuren ter level measuren ter level measuren	nt collected. nent collected. nent collected. nent collected.	No access to w Obstruction in v Well is pumping WELL eters stabilized	elihead/No po well. g. PURGING I!	ort in wellhead	l		
Water No wat No wat No wat Other:	level measurementer level measurenter level measurenter level measurend 3 well volumes a	nt collected. nent collected. nent collected. nent collected. nent dield param ased on previo	No access to w Obstruction in v Well is pumping WELL eters stabilized ous water level a	elihead/No po well. g. PURGING I!	ort in wellhead	l		
Water No wat No wat No wat Other: Purget Purget	level measurementer level measurenter level measurenter level measurend 3 well volumes at 3 well volumes b	nt collected. nent collected. nent collected. nent collected. nent dield param ased on previo	No access to w Obstruction in v Well is pumping WELL eters stabilized ous water level a	elihead/No po well. g. PURGING I!	ort in wellhead	l		
Water No wat No wat Other: Purger Purger Purger Other:	level measurementer level measurenter level measurenter level measurend 3 well volumes ad 3 well volumes b	nt collected. nent collected. nent collected. nent collected. nent collected. and field param based on previous	No access to w Obstruction in v Well is pumping WELL eters stabilized ous water level a	elihead/No po well. g. PURGING I!	ort in wellhead	l		
Water No wat No wat Other: Purget Purget Purget Purget	level measurementer level measurenter level measurenter level measurend 3 well volumes at 3 well volumes b	nt collected. nent collected. nent collected. nent collected. nent dield param ased on previo	No access to w Obstruction in v Well is pumping WELL eters stabilized ous water level a	elihead/No po well. g. PURGING I!	ort in wellhead	l		
Water No wat No wat Other: Purger Purger Purger Other:	level measurementer level measurenter level measurenter level measurend 3 well volumes ad 3 well volumes b	nt collected. nent collected. nent collected. nent collected. nent collected. and field param based on previous	No access to w Obstruction in v Well is pumping WELL eters stabilized ous water level a	elihead/No po well. g. PURGING I!	ort in wellhead	l		



oject No:	287030			'	Client: <u>F</u>	reeport Copper	Queen Branch	
sk No:	201000				Date:	9-19-14		
	A m	0.2008	-5M		Weather:	Cloudy		
ell ID:	1)111	1-2017			Sampler:	ristoler L	Shering	
WR No:	 ————————————————————————————————			WELL DAT				
		2. /.			Nominal S	Casing C	apacity Gallons per Line	ear Foot
Well De	epth (ft bis):	<u> 450</u>			MOLITICAL	2	0.16	
Casing D)iameter (in):		·			5	0.65 1.02	
Tinila Maia	r Level (ft bmp):	1527	18			6	1.47	
Static vvate	L react (it much).	7.02.2		909.6		8	2.61 4.08	
Casing \	/olume (gai):	303.2		101.C		Volume = gallons/f	oot * water column	(feet)
Total Volun	ne Purged (gal):	9	191)	D SAMPLIN		.0		
				D SAWIPLIN	I DAIA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts
1000	Pump On							
1000	1	18	90	6.90	22.2	445	· .	
1005	25	19	450	7.01	22.1	642		
1025	115	. 2	710	1.98	212	1.46		
1043	175	1/2	990	197	22./	645		
1055	55		-7./ // -	\ \ \ / / -		:		<u>.</u>
		 -						
	 -	 			†			
		 	 -	 	 			
		 			 		Pump Off	
	FIELD DADAMET	TER STARILIZ	ATION: Three c	onsecutive re	adings within 0).3 su pH, 2 degrees	s C, and 100 μS/cr	n)
	FIELD PARAME	ENOTABLE	SAI	WPLE INFO	RMATION		_	
	<u> </u>							
Samnle Cr	ollection Point:		Container		No. of	Analysis Method	Preservative	Filtered
			Collegine	\/okime		Analysis Method	1 (035) 40040	
	ample ID	Time	Туре	Volume	Containers			(y/n)
s		 	1	250	Containers	300	Ico	(y/n)
s	200 8-5 W	1053	Type	250	1-1-	300	Too	(y/n)
s		1053	1	250	1-1-	300	Ios	(y/n)
S (3 Motor	200 8-5 M	1053	Type L NATER LEVEL	250 L MEASURE	EMENT COLL	300 ECTION	Too	(y/n)
S (B MO -	200 3-5 W	nt collected.	WATER LEVEL	250 L MEASURE	EMENT COLL	300 ECTION	Ios	(y/n)
S Water	200 8-5 M level measurementer level measuremen	nt collected. ment collected. ment collected.	NATER LEVEL No access to w. Obstruction in v.	250 L MEASURE	EMENT COLL	300 ECTION	Too	(y/n)
S Water	200 3-5 W	nt collected. ment collected. ment collected.	NATER LEVEL No access to w. Obstruction in v.	250 L MEASURE	EMENT COLL	300 ECTION	Ios	(y/n)
S Water	200 8-5 M level measurementer level measuremen	nt collected. ment collected. ment collected.	No access to w. Obstruction in w. Well is pumpin	250 L MEASURE wellhead/No privell.	EMENT COLL	300 ECTION	Toe	(y/n)
Water No wa No wa	level measurement revel measurementer level me	nt collected. ment collected. ment collected. ment collected	NATER LEVEL No access to ward of the control of th	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL	300 ECTION	Too	(y/n)
Water No wa No wa	level measurement revel measurementer level me	nt collected. ment collected. ment collected ment collected	NATER LEVEL No access to w Obstruction in w WELL meters stabilized	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	Toe	(y/n)
U Water U No wa U No wa U Other	level measurement revel measurementer level measurementer level measurementer level measurementer level measurementer level measurementer level volumes and 3 well vo	nt collected. ment collected ment collected ment collected and field param based on previ	NATER LEVEL No access to ward of the control of th	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	Too	(y/n)
□ Water □ No wa □ No wa □ Other	level measurement ater level measurementer level well volumes level well until field particular designations and second s	nt collected. ment collected ment collected ment collected and field param based on previ	NATER LEVEL No access to ward of the control of th	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	Too	(y/n)
Water No wa No wa Dother Purge Purge Durge Other	level measurement revel measurementer level me	nt collected. ment collected ment collected ment collected and field paran based on previ	NATER LEVEL No access to water level in the control of the contro	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	Too	(y/n)
Water No wa No wa No wa Purge Purge Purge	level measurement ater level measurementer level well volumes level well until field particular designations and second s	nt collected. ment collected ment collected ment collected and field param based on previ	NATER LEVEL No access to water level in the control of the contro	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	Toe	(y/n)
Water No wa No wa Other Purge Purge Other	level measurement revel measurementer level me	nt collected. ment collected ment collected ment collected and field paran based on previ	NATER LEVEL No access to water level in the control of the contro	2.50 L MEASURE wellhead/No privell. ig.	EMENT COLL ort in wellhead	300 ECTION	10c	(y/n)



Project No:	287030				Client: <u>F</u>	reeport Coppe	Queen Branch	<u> </u>
ask No:					Date: _	8-19-14		
Vell ID:	Bmar	2008-61	3		Weather:			
ADWR No:		-1141 B (A.1.)			Sampler: /	Mr. stoller	1-Str Vina	
IDVVK 140:	· · · · · · · · · · · · · · · · · · ·			WELL DAT	Ά		Sanasih.	
		9.	<u> </u>		Nominal :	Casing (Size (inches)	Gallons per Lir	ear Foot
Well De	epth (ft bls):		5		101	2	0.16	
Casing Diameter (in):			<u> </u>				0.65 1.02 1.47	
Statio Mate	Static Water Level (ft bmp):		.36	•				
					8 10		2.61 4.08 s/foot * water column (feet)	
Casing Volume (gal):			<u> x3 = }</u>					
Total Volum	ne Purged (gal):		<u> </u>	D SAMPLIN				
				D SAMPLIN	ט אואלי פ	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (US)	Temp (°C)	Conductance (µS/cm)	Comme	nts
0859	Pump On	<u>. </u>						
0855	+	5.1	15	6.89	21.7	300		
0600	15	6.1	75	4. 7.05	71:6	297		
0000	1 20	34	100	509	21.5	296		
0920	30		725	208	21.6	298		
Q 733	45	5.4	-44) - -	 /.// / \	211	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	<u> </u>							
	<u> </u>	 -			 -	,		
					 			
	<u> </u>	<u> </u>			 		Pump Off	
		OTABILIT	ATION: Three C	oneacutive rea	dings within ().3 su pH, 2 degree		n)
	FIELD PARAME	ER STABILIZA	SAM	APLE INFOF	RMATION			
Sample Co	ellection Point:							
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method		Filtered (y/n)
Beno	2008-6B	0935	PL	250	<u> </u>	300	Ido	
- 1/1·10	74-0,00]				
		٧	VATER LEVE	_ MEASURE	MENT COL	ECTION		· · ·
□ Water	level measureme	nt collected.			_			
No wat	ter level measurer	ment collected.	No access to w	relihead/No po	et in wellhead			
	ter level measurer							
1	ter level measurer	ment collected.	. Well is pumpin	g.			<u> </u>	
□ Other:			WELL	PURGING IN	IFORMATION			
☐r Purge	d 3 well volumes a	and field param						
D Purge	d 3 well volumes t	pased on previ	ous water level	and field parer	neters stabiliz	ed.		
□ Purge	d well until field pa	arameters stab	ilized.					
☐ Other:								
Additiona	al Comments:	68.7						
					<u></u>			
								

oject No:	287030			(Client: <u>F</u>	reeport Copper	Queen Branch	<u> </u>	
	207030	<u> </u>			Date:	8-19-14			
sk No:	BMO-2008-6M				Weather: Cloudy				
ell ID:	1)111/- 10	01 61	4		Sampler:	Christodar	1 Sharm	1	
OWR No:		<u> </u>		WELL DAT		 			
		1150			Nominal	Casing C Size (inches)	apacity Gallons per Lir	ear Foot	
Well De	epth (ft bls):	450			Nominal	2	0.16		
Casing Diameter (in): _		5	1		4 5		0.65 1.02		
		197.40			6		1.47		
						8	2.61 4.08		
Casing \	Volume (gal):	<u> </u>	$\frac{7.6 \times 3}{2}$	/-	Caeinr	Volume = gallons/	foot * water colum	n (feet)	
Total Volur	ne Purged (gal):	840				y diame - gamene			
				D SAMPLIN	GDAIA	Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts	
2800	Pump On								
0 710	10	21	210	6.90	22.0	774			
9820 -	20	2.1	420	1.89	22.2	772		·	
0830	30	21	439	7.82	22.0	573			
	40	1	840	6.90	21.9	774			
0840	+ 70	<i> </i>	1 0 tir	18218					
									
	<u> </u>								
							Pump Off		
	SICI D BARAMET	ER STABILIZ	ATION: Three o	onsecutive rea	dings within	0.3 su pH, 2 degree	s C, and 100 μS/c	m)	
	FIELD PAIGHNE.		SAI	MPLE INFOR	RMATION				
	in it - Delete								
	ollection Point:		Container	Volume	No. of	Analysis Method	Preservative	Filtered	
S	Sample ID	Time	Туре	J	Containers		Jeu	(y/n)	
BMO	-2008-6 M	0840	PL_	259	 	300	300		
		·				FOTION			
		\\	NATER LEVE	L MEASURE	MENT COL	LECTION			
₩ Water	r level measuremer	nt collected.							
/	ater level measuren	nent collected.	. No access to v	velihead/No po	ort in wellnead	l	•		
[′] □ No wa		أعمام مالم علي م	. Obstruction in	well.					
□ No wa	ater level measurer	nent collected	_						
□ No wa	ater level measurer ater level measurer	nent collected nent collected	. Well is pumpin	ıg.					
□ No wa	ater level measurer	nent collected	. Well is pumpin		IFORMATION	1			
☐ No wa	ater level measurer :	nent collected	. Well is pumpin WELI	PURGING IN	IFORMATION	ı			
□ No wa □ No wa □ Other	ater level measurer	nent collected	. Well is pumpin WELI neters stabilized	PURGING IN		-			
No wa	ater level measurer : ed 3 weil volumes a ed 3 weil volumes b	ment collected and field paran pased on previ	WELL WELL neters stabilized jous water level	PURGING IN		-			
No wa No wa Other	ater level measurer : ed 3 weil volumes a ed 3 well volumes b ed well until field pa	ment collected and field paran pased on previ	WELL WELL neters stabilized jous water level	PURGING IN		-			
No wa Cother Purge Purge Purge Other	ater level measurer: ed 3 well volumes a ed 3 well volumes b ed well until field pa r:	and field paran pased on previ	WELL WELL neters stabilized jous water level	PURGING IN		-			
No wa Cother Purge Purge Purge Other	ater level measurer : ed 3 weil volumes a ed 3 well volumes b ed well until field pa	ment collected and field paran pased on previ	WELL WELL neters stabilized jous water level	PURGING IN		-			
No wa Cother Purge Purge Purge Other	ater level measurer: ed 3 well volumes a ed 3 well volumes b ed well until field pa r:	and field paran pased on previ	WELL WELL neters stabilized jous water level	PURGING IN		-			

ject No:	287030				Client: _	reeport Copper	Queen Branci	<u> </u>	
sk No:	20,000				Date: _	7-22-14			
•	amo.	2008-7M			Weather:	Partly	Partly Claudy		
ell 1 D :	- Driw-	£V40	//		Sampler:	Christool	~ L Shi	un	
WR No:	· · · · · · · · · · · · · · · · · · ·			WELL DAT			11		
<u> </u>		10	7()		Nominal	Casing C Size (inches)	apacity Gallons per Lit	near Foot	
Well De	pth (ft bis):	0	rll		1401111100	2	0.16 0.65		
Casing Diameter (in): Static Water Level (ft bmp): Casing Volume (gal):						4 5	1.02		
		24'	4.66			6	1.47 2.61		
		110 (1 42 - 1	302	8 10		4.08		
		$\frac{434 \times 3}{1302}$			Casing Volume = gallons/foot * water column (feet)				
Total Volum	ne Purged (gal):			D SAMPLIN					
	<u> </u>	- Discharge	Total			Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents 	
1400	Pump On								
Tunz	10	21	525	7.10	2307	488			
1445	4	21	945	-7.1/	234'	487		<u> </u>	
1505	+ /2	21	13/5	7/13	23-2	428			
1305	1-4->					, , ,			
-	 							,	
	 								
		 -			. ,				
		 _							
		 					Pump Off		
	FIELD PARAMET	ER STABILIZ	ATION: Three co	onsecutive rea	adings within	0.3 su pH, 2 degrees	s C, and 100 μS/c	m)	
	TILLD (THE UNIT		SAN	IPLE INFOF	RMATION			<u></u>	
la Oa	U-stien Beint:								
	ollection Point: ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
		1	PL	250		300	Sec	X	
1	200857M	1 1405	1 1/1_	1 6/0	·				
BMO-	200857M	1505	PL	1 200	 			/	
<u> Bmo-</u>	2008-7M	T	1	†		LECTION			
□ Water	level measureme	V	VATER LEVEL	. MEASURE	MENT COL				
□ Water □ No wat	level measurementer level measurer	V nt collected. ment collected.	NATER LEVEL	. MEASURE	MENT COL				
□ Water □ No wat	level measurementer level measurer	V nt collected. ment collected. ment collected.	VATER LEVEL No access to we Obstruction in v	MEASURE	MENT COL				
☐ Water ☐ No wat	level measurement ter level measurer ter level measurer ter level measurer	V nt collected. ment collected. ment collected.	VATER LEVEL No access to we Obstruction in v	MEASURE	MENT COL				
□ Water □ No wat	level measurement ter level measurer ter level measurer ter level measurer	V nt collected. ment collected. ment collected.	NATER LEVEL No access to we Obstruction in v Well is pumping	MEASURE ellhead/No po well.	MENT COL	l			
□ Water □ No wat □ No wat □ No wat □ Other:	level measurementer level measurer ter level measurer ter level measurer	V nt collected. ment collected ment collected. ment collected.	NATER LEVEL No access to we Obstruction in v Well is pumping	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l			
□ Water □ No wat □ No wat □ No wat □ Other:	level measurementer level measurer ter level measurer ter level measurer	V nt collected. ment collected. ment collected. ment collected. ment dilected.	NATER LEVEL No access to we Obstruction in v Well is pumping WELL	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l .			
□ Water □ No wat □ No wat □ No wat □ Other: □ Purget	level measurementer level measurer level measurer level measurer level measurer level measurer level measurer level well volumes and 3 well volumes is	V nt collected. ment collected. ment collected. ment collected. and field paramoased on previous	NATER LEVEL No access to we Obstruction in v Well is pumping WELL neters stabilized. ous water level a	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l .			
□ Water □ No wat □ No wat □ No wat □ Other: □ Purget	level measurementer level measurer level measurer level measurer de 3 well volumes and 3 well volumes and 3 well until field particulars and well until field particulars and section with the section of	V nt collected. ment collected. ment collected. ment collected. and field paramoased on previous	NATER LEVEL No access to we Obstruction in v Well is pumping WELL neters stabilized. ous water level a	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l .			
□ Water □ No wat □ No wat □ No wat □ Other: □ Purge □ Purge □ Purge	level measurementer level measurer ster level measurer ster level measurer ad 3 well volumes a ad 3 well volumes i ad well until field pa	v nt collected. ment collected. ment collected. ment collected. and field param based on previous arameters stab	NATER LEVEL No access to we Obstruction in v Well is pumping WELL neters stabilized. ous water level a	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l .			
□ Water □ No wat □ No wat □ No wat □ Other: □ Purge □ Purge □ Purge	level measurementer level measurer level measurer level measurer de 3 well volumes and 3 well volumes and 3 well until field particulars and well until field particulars and section with the section of	v nt collected. ment collected. ment collected. ment collected. and field param based on previous arameters stab	NATER LEVEL No access to we Obstruction in v Well is pumping WELL neters stabilized. ous water level a	MEASURE ellhead/No powell. g. PURGING IN	MENT COL	l .			

aretal MID /	287030				Client:	-reeport Coppe	r Queen Branch	<u> </u>	
oject No: <u>2</u> sk No:	267000				Date: 7-24-/4				
-	// 100	2008-8	B		Weather:	5 ynar	/		
ell ID:	<u> </u>	711.00-1	<u> </u>		Sampler:	Christ Olar	L Shem	ar	
WR No:				WELL DAT					
· 		WAA			Naminal	Casing (Size (inches)	Capacity Gallons per Lin	ear Foot	
Well Dep	oth (ft bls):	480			Nominai	2	0.16	<u></u>	
Casing Diameter (in):			-1/		. 4		0.65 1.02		
_	•	201	86			6	1.47		
tatic vvater	Level (ft bmp):			545		8 10	2.61 4.08		
Casing Vo	olume (gal):	181.6		9-13	Casin	g Volume = gallons		ı (feet)	
Total Volume	e Purged (gal):	ما	39			g volume – gameno			
				D SAMPLIN	IG DATA	Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts	
1055	Pump On					<u> </u>			
1110	16	14,2	2/3	627	213	2510		<u></u>	
, , , , , , , , , , , , , , , , , , , 	1-12-	14,2	205	4.26	214	2520	·		
1/20	77	142	1197	12.72	37.5	1520			
1(30)	135	4.1	139	126	2/2	9520			
1140	175-	- 17' L	<u> </u>	626				·	
	<u> </u>	-		6.5					
		<u> </u>			1	1			
		<u> </u>			 				
		 -			-		Pump Off		
	EIELD PARAMET	TER STABILIZA	ATION: Three c	onsecutive re	adings within (0.3 su pH, 2 degree	s C, and 100 μS/cn	n)	
			SAN	MPLE INFO	RMATION				
Sample Col	llection Point:		Container)/aluma	No. of	Analysis Method	Preservative	Filtered	
Sample Col		Time	Container Type	Volume	No. of Containers	Analysis Method		(y/n)	
ample Col	llection Point:	Time 1340		Volume 250		Analysis Method	Preservative ### Time		
iample Col	llection Point:	1340	Туре	250	,Containers	300		(y/n)	
iample Col	llection Point:	1340		250	,Containers	300		(y/n)	
Sample Col	llection Point: mple ID 2008- 3 //	1940 V	Type	250 L MEASURE	Containers / / / MENT COLI	300 LECTION		(y/n)	
Sample Col Sai	llection Point: mple ID 2008- 2 85 evel measurement	V nt collected. ment collected.	VATER LEVEL	250 L MEASURE	Containers / / / MENT COLI	300 LECTION		(y/n)	
Sample Col Sai	llection Point: mple ID 2008- 3 13 evel measurement level measurement level measurer level measurer	Vent collected. The collected collected. The collected collected collected.	VATER LEVEL No access to w Obstruction in	250 L MEASURE	Containers / / / MENT COLI	300 LECTION		(y/n)	
Sample Col Sai SMO Water le No wate	llection Point: mple ID 2008- 2 85 evel measurement	Vent collected. The collected collected. The collected collected collected.	VATER LEVEL No access to w Obstruction in w Well is pumpin	250 L MEASURE rellhead/No powell.	Containers MENT COLI	300 LECTION		(y/n)	
Sample Col Sai	llection Point: mple ID 2008- 3 13 evel measurement level measurement level measurer level measurer	Vent collected. The collected collected. The collected collected collected.	VATER LEVEL No access to w Obstruction in w Well is pumpin	250 L MEASURE rellhead/No powell.	Containers / / / MENT COLI	300 LECTION		(y/n)	
Sample Col Sai SMO Water le No wate No wate	llection Point: mple ID 2008- 3 evel measurement er level me	V nt collected. ment collected. ment collected. ment collected.	VATER LEVEL No access to w Obstruction in well is pumpin WELL eters stabilized	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	
Sample Col Sam SMO Water le No wate No wate No wate Purged Purged	llection Point: mple ID 2008- 2 85 evel measurement level measure	V nt collected. ment collected. ment collected. ment collected. and field param pased on previo	VATER LEVEL No access to w Obstruction in w Well is pumpin WELL etters stabilized ous water level	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	
Sample Col Sai MO Water k No wate No wate No wate Purged Purged	llection Point: mple ID 2008- 3 evel measurement er level me	V nt collected. ment collected. ment collected. ment collected. and field param pased on previo	VATER LEVEL No access to w Obstruction in w Well is pumpin WELL etters stabilized ous water level	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	
Sample Col San San MO Water le No wate No wate Other: Purged Purged Purged Other:	llection Point: mple ID 2008- 3 8 evel measurement in the serving measure	vont collected. ment collected. ment collected. ment collected. ment collected. and field param passed on previous parameters stab	VATER LEVEL No access to w Obstruction in w Well is pumpin WELL etters stabilized ous water level	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	
Sample Col Sample Col Sample Col No wate No wate No wate Purged Purged Purged Other:	llection Point: mple ID 2008- 2 85 evel measurement level measure	V nt collected. ment collected. ment collected. ment collected. and field param pased on previo	VATER LEVEL No access to w Obstruction in w Well is pumpin WELL etters stabilized ous water level	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	
Sample Col Sam SMO Water k No wate No wate No wate Purged Purged Purged Other:	llection Point: mple ID 2008- 3 8 evel measurement in the serving measure	vont collected. ment collected. ment collected. ment collected. ment collected. and field param passed on previous parameters stab	VATER LEVEL No access to w Obstruction in w Well is pumpin WELL etters stabilized ous water level	250 MEASURE Velihead/No powell. g. PURGING IN	Containers MENT COLI ort in wellhead	300 LECTION	Jeo .	(y/n)	

and the second the second temporary Internet Filest Content. Outlook SECO2FW/Groundwater Sampling Sheet 2013-07-9

roject No:	287030				Client:	Freeport Coppe	r Queen Branc	<u>n</u>
ask No:	201000		· · ·		Date:	7-24-14		
	amo-2	200- 2	M	,	Weather:	Sunnel		
ell iD:	pmo-re	008-81			Sampler: /	Mostoph	L Shirm	
WR No:				WELL DAT				
		<u> </u>	12.0			Casing (Capacity Gallons per Li	near Foot
Well De	pth (ft bls):		LLU.		Nominal	Size (inches) 2	0.16	
Casing Diameter (in):		5"			4		0.65 1:02	
•	_	20	2 48			5	1.47	
Static Water	r Level (ft bmp):		2110	~?!!		8	2.61	
Casing Volume (gal):		924.6 x3 = 1714			10 4.08 Casing Volume = gallons/foot * water column (feet			
Total Volum	ne Purged (gal):		2816			ig Volume = gallons	root water colum	iii (ieet)
Total Volum	10 (4.304 (3.4)		FIEL	D SAMPLIN	G DATA	, 		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
2800	Pump On							
0400	60	17%	1056	713	24.6	568		
7706		12/	9117	7.09	747	520		· ·
] () () ()	120	1-1/1-	2/41	30%	24./.	(69		
<u>1730</u>	150	7/1/2	2011	7.07	243	5/9		
040	1/60-	1.6	1814	1.0/	 (- (Je 		
				 -	<u> </u>			
		ļ		 		 		
			<u></u>	<u> </u>	 		Pump Off	
				<u> </u>		0.2 au pH 2 dograd		m)
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	adings Within	0.3 su pH, 2 degree	15 O, and 100 pore	····/
_			SAN	MPLE INFOR	RMATION			
Sample Co	ellection Point:					<u> </u>		Filtrand
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
- /1"		1040	0)	250	1 7	300	Tres	4
13 Ma-	2008- 210	1040	1 b-	1	 	7997	7	
	· · · · · ·	<u> </u>	L VATER LEVEI	MEASURE	MENT COL	LECTION		
			VALENCE VE		<u> </u>			
Water	level measuremer ter level measurer	nent collected.	No access to w	ellhead/No po	rt in wellhead	d d		
☑ No wat	ter level measurer ter level measurer	nent collected.	Obstruction in	well.			٠	
	ter level measurer							
□ Other:								
				. PURGING IN	FORMATIO	· · · · · · · · · · · · · · · · · · ·		
Purge	d 3 well volumes a	and field param	eters stabilized		taan atabili	zed		
	d 3 well volumes b			and field parer	HAKRIP STADIO	Lyu.		
	d well until field pa	arameters stab	ınzea.					
Other:		and						-
Additiona	al Comments:	101.2						
 								
								

Project No:	287030				Client: <u></u>	Freeport Coppe	r Queen Branc	<u>h</u>
Task No:					Date: _			
Well ID:	Bine	1-2008	-9M		Weather:	7-24-1		
ADWR No:					Sampler:	Christoplar	2-Slama	<u>.</u>
				WELL DAT	Α	Casing (Canacity	
\\\ell De	epth (ft bls):	775			Nominal	Size (inches)	Gallons per Li	
	_		`y			2	0.16 0.65	
Casing E	Diameter (in):	<u> </u>	01 0			5	1.02	
Static Wate	r Level (ft bmp):		93.53	14.5.0		6 8	1.47 2.61	
Casing \	/olume (gal):	490.4	x3 = /	472		10	4.08	
Total Value	ne Purged (gal):	1			Casing	g Volume = gallons	/foot * water colum	ın (feet)
TOTAL VOIGH	ie Pulged (gai).		FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (ºC)	Specific Conductance (µS/cm)	Comme	ents
1240	Pump On						<u> </u>	
1300	20	18.8	376	7.31	24.3	561		
1320	VO	128	757	7.37	202	571		<u> </u>
1240	170	10.2	1728	7.36	24.4	<u> </u>		
1400	00	12.7	1504	336	1 0.4	57(····
1111	0	100	75 75					
								<u> </u>
· - -				<u> </u>			Pump Off	
	FIELD PARAMET	ER STABILIZ).3 su pH, 2 degree	s C, and 100 µS/C	m)
			SAN	MPLE INFOR	RMATION			<u> </u>
Sample Co	llection Point:					,		Filtered
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
BMO	2008 9 M	1400	01	250	17	300	Tec	\mathscr{L}
עוייע	1000 100	700	16	1 1	1-1-			-
		V	VATER LEVE	MEASURE	MENT COLI	ECTION		
Ƴ Water	level measuremen	t collected.						
(□ No wat	er level measuren	ent collected.	No access to w	rellhead/No po	rt in wellhead			
	ter level measuren							
□ No wat	ter level measuren	ient collected.	wen is pumpin	g.				
Li Ottlei.			WELL	PURGING IN	FORMATION			
- Purgeo	d 3 well volumes a	nd field param	eters stabilized.					
☐ Purged	d 3 well volumes b	ased on previo	ous water level a	and field parer	neters stabiliz	ed.		
1	d well until field pa	rameters stabi	lized.					
Other:		// B :						
Additiona	I Comments:	-781-						
							·········	



Project No:	287030				Client: <u>F</u>	reeport Copper	Queen Branci	<u> </u>
ask No:	207000				Date: _	8-7-14		
Vell ID:	amo- 2	008-10	61		Weather:	Cloudy		<u></u>
	<u> </u>	<u>/V/0 W</u>	<u> </u>		Sampler: /	Christopher L	Shunn	
DWR No:				WELL DAT		_	1	
		010			Morninal	Casing C Size (inches)	apacity Gallons per Lit	near Foot
Well De	epth (ft bis):	<u> </u>	<u> </u>		140(1	2	0.16 0.65	
Casing [Diameter (in):		<u></u>			4 5	1.02	
Static Wate	r Level (ft bmp):	50	7.21			6	1.47 2.61	
	•	308	8 x3 = 9	26.4		8 10	4.08	
Casing \	/olume (gal):	240	<u> </u>	<u> </u>	Casing	g Volume = gallons/	foot * water colum	n (feet)
Total Volun	ne Purged (gal):		774	D SAMPLIN			-	
		Discharge	Total			Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
0.045	Pump On							
On CO		45	2210	104)	25.2	1420		<u> </u>
1 15V/	1.0	1//	270	4.50_	25.6	1917		
101115	120	7.7	47/	154	25.7	1918		
1075	100	7.4	738	10:57	25.8	1419		
1245	240	3.4	947	1.56	25.8	7917		
1273	12765	 	-	0				
	- 							
	 	 -						
	-	 					Pump Off	
- -	FIELD PARAMET	TER STABILIZ	ATION: Three c	onsecutive re	adings within	0.3 su pH, 2 degree	s C, and 100 μS/c	m)
			SAI	IPLE INFO	RMATION			
Sample Co	ollection Point:							
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
1/1000	2008-106L	1245	PL	250	1_/_	300	Ico	5/_
15110-	2000 3 7000	Ţ			ι	<u> </u>		1
		\ \ \	VATER LEVE	MEASURE	MENT COL	LECTION		
☑ Water	level measuremen	nt collected.						
U No wa	ter level measurer	ment collected.	No access to w	iellhead/No p	ort in wellhead	I	-	
	ter level measurer							
	ter level measurer	ment collected	. Well is pumpin	g.				
Other			WELL	PURGING I	VFORMATION	1		
Durge	d 3 well volumes a	and field param						
□ Purge	d 3 well volumes t	pased on previ	ous water level	and field pare	meters stabiliz	zed.		
☐ Purge	ed well until field pa	arameters stab	ilized.					
☐ Other								
Addition	al Comments:	3021						
							·	
					<u> </u>			
			· · · · · · · · · · · · · · · · · · ·					

2-tall assiltations and the information of the state of t

Date:	ject No: 2	287030				Client:	Freeport Copper	r Queen Branci	<u> </u>
March Sampler Clouds Sampler Clouds Sampler Christophar Sampler Christophar Sampler Christophar Sampler Christophar Sampler Christophar Sampler Casing Capacity WELL DATA Casing Capacity WELL DATA Casing Capacity Casing Volume = gallons/foot * water column (feet) Time Casing Capacity Casing Capacity Casing Capacity Casing Capacity Casing Capacity Casing Volume = gallons/foot * water column (feet) Casing Volume Candidation Capacity Ca	· -	.01000				Date:	2-14-14	<u> </u>	
WELL DATA Casing Capacity Well Depth (ft bis): Casing Diarmeter (in): Static Water Level (ft bmp): Total Volume Purged (gai): FIELD SAMPLING DATA Casing Volume = gallons/foct * water column (feet) Time Elapsed Time (gain): FIELD SAMPLING DATA Time (min) Discharge (gailons) FIELD SAMPLING DATA Time (gpm) Total Discharge (gailons) FIELD SAMPLING DATA The ph Conductance (usin) The containers (gpm) Total Discharge (gailons) The ph Conductance (usin) The ph Conductan	_	0 w 0	- 2008-	116		Weather:	Cloudy		
Well Depth (ft bis): Casing Diameter (in): Casing Diameter (in): Static Water Level (ft bmp): Casing Volume (gal): FIELD SAMPLING DATA Time Elapsed Time (gpm) Discharge (gal): FIELD SAMPLING DATA Temp Conductance (gpm) Discharge (gal): FIELD SAMPLING DATA Temp Conductance (gpm) Casing Volume = gallons/foot * water column (feet) FIELD SAMPLING DATA Temp Conductance (gpm) Casing Volume = gallons/foot * water column (feet) FIELD SAMPLING DATA Temp Conductance (gpm) Container (gpm) SAMPLING DATA Temp Conductance (gpm) Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) Conductance (gpm) SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) Temp Conductance (gpm) SAMPLING DATA Temp Conductance (gpm) Temp Con	-		1000	μο		Sampler:	Christoplar	Shum-	
Norminal Size (inchas) Gallons per Linear Foot Gallons Gallons per Linear Foot Gallons per Linear Foot Gallons Gallons per Linear Foot Gallons Gallons per Linear Foot Gallons per Linear Gallons Gallons per Linear Gallons Gallons per Linear Gallons Gallons per Linear Gallons per Linear Gallons Gallons per Linear Gallons Gallons per Linear Gallons per Line	WR No:				WELL DAT	Ά			
Casing Diameter (in): Casing Diameter (in): Casing Volume (gal): Casing Volume (gal): Casing Volume (gal): FIELD SAMPLING DATA Time Elapsed Time Retain (gard): FIELD SAMPLING DATA Time Pump On (gard): SAMPLE SAMPLING DATA Temp Conductance (gard): Conductance (gard): Conductance (gard): Conductance (gard): SAMPLE SAMPLING DATA Temp Conductance (gard): Conductance (gard): FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION SAMPLE INFORMATION SAMPLE INFORMATION SAMPLE INFORMATION WATER LEVEL MEASUREMENT COLLECTION WATER			7//)		Nominal		Gallons per Lir	near Foot
Casing Diameter (in): 199.7 x3 = 599./ 10	Well Dep	th (ft bis):	164			Normal	2	0.16	
Static Water Level (ft bmp): 199.7 x3 = 599.7 10 2.61	Casing Dia	ameter (in):		7					
Casing Volume (gal): 199.7 x3 = 599.7 10 4.06	-	_	7/0	4 24			6		
Total Volume Purged (gal): Total Volume Purged (gal): FIELD SAMPLING DATA Time Elapsad Time (min) Elapsad Time (min) Discharge Rate Discharge (gallons) Discharge (gallons) Discharge (gallons) Discharge Rate Discharge (gallons) Discharge	static vvater i	reasi (ur purih):			-991		_		
Total Volume Purged (gal): FIELD SAMPLING DATA Time Elapsed Time (min) Discharge Rate (gallons) FIELD SAMPLING DATA Specific Conductance (u.S/cm) FIELD SAMPLING DATA Primp Conductance (u.S/cm) FIELD SAMPLING DATA Specific Conductance (u.S/cm) FIELD SAMPLING DATA Purp On 12.55 Purmp On 13.30 Purmp Off FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers Analysis Method Presarvative Filter (y/n) ### WATER LEVEL MEASUREMENT COLLECTION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Other:	Casing Vo	ilume (gal):		, / x3 =) 1.1	Casin		foot * water colum	n (feet)
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gum) Total Discharge (gum) Temp (%C) Conductance (uS/cm) Conductance (uS/cm) Temp (%C) Temp Off (uS/cm) Temp (%C) Temp Off (uS/cm) Temp (gum) Temp	Total Volume	Purged (gai):		اجرح	D CAMPI IN				
Time Elapsed Time (min) Discharge Rate (gpm) Discharge (SU) Property Conductance (μS/cm) Conductance (μS/cm) Property Conductance (-				D SAMPLIN	G DAIA	Specific		
12 5 Pump On 12 10 8 80 7 7 24 36 36 36 36 36 36 36 3	Time		Rate	Discharge			Conductance	Comme	ents
1725 10 8 80 7.5 24.8 36.2 1737 30 8 240 7.5 24.8 36.2 1737 24.9 32.2 1737 30 8 4.00 7.5 8 24.7 3.00 1738 24.7	1215	Pump On							
30 3 480 757 248 362 360 1330 75 360	1410		8	RO	751	24.8	361		
1330 360	1725	- 	Ý	740	75%	241	362		
1330 25 8 600 1.5 k 24.7 360 36	1293	10	8		757	240			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Other:	1315	60	\		7.58	74.7	360		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:	1330	-25	- 0	611.7	<u> </u>	1 2 1	7		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:		 			 				
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:		<u> </u>			 	 			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:		 			 	 			
Sample Collection Point: Sample ID Time Container Type Volume Containers Type Volume Containers Type Volume Containers Analysis Method Preservative Filtere (y/n) WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:			<u> </u>		 	 	<u> </u>	Pump Off	
Sample Collection Point: Sample ID Time Container Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:			CO STABILIZ	ATION: Three o	onsecutive re	adings within	0.3 su pH, 2 degree	es C, and 100 μS/o	m)
Sample ID Time Type Volume Type Volume Container Contai		FIELD PARAME	EK STABILIE	SAI	MPLE INFO	RMATION			
Sample ID Time Container Type Volume Type Volume Type Volume Type Analysis Method Preservative (yn)	Sample Col	llection Point:					- ₁		Filtered
WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:			Time		Volume		Analysis Method	Preservative	(y/n)
WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	_^		1770	101	250	1	300	Ta-	<u> </u>
Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	1311111-	100 1-116	1730	 		1-1-			6
Water level measurement collected. □ No water level measurement collected. No access to wellhead/No port in wellhead □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:		<u>·</u>		VATER LEVE	L MEASURE	MENT COL	LECTION	, M.	
No water level measurement collected. No access to wellnead/No port in wellnead/No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:									
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	No water t	er level measurer er level measurer	ment collected	No access to v	vellhead/No p	ort in wellhea	d		
No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	່⊓ Nowat	er level measurei	ment collected	. Obstruction in	well.				
Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	☐ No wat	er level measure	ment collected	. Well is pumpir	ng.		N.		
Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. Other:	☐ Other:			10/51	DURGING I	MEORMATIO	N		
Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. Other:	<u> </u>		1 pr 1 1						
☐ Purged well until field parameters stabilized. ☐ Other:	Purgeo	3 well volumes	and field paran	neters stabilized Oue water level	ı. and field oare	meters stabil	ized.		
□ Other:	Purged	d 3 well volumes i	paseu on previ arameters stat	ilized.	and note pass				
· N Cb	1								
Additional Continents. 1170			10	15.7					
	Additions	i Commenta.						<u>.</u>	
						<u></u>			
									CHEAR



Project No:	287030				Client:	Freeport Coppe	er Queen Branc	<u></u>
Task No:					Date:	8-19-14		
Well ID:	BM0-200	2-13/	3		Weather:	Moudy		
ADWR No:	Dirio Zuo	0			· Sampler: <i>(</i>	Christopy L	-Slowers	
ADVIK NO.				WELL DA		211 344701- 12		
		1/2	-				Capacity Gallons per L	noor Foot
Well De	epth (ft bis):	47.	<u> </u>		Nominal	Size (inches) 2	0.16	
Casing E	Diameter (in):	5	· V			4	0.65 1.02	
Static Wate	r Level (ft bmp):) <i>I '</i>	2.7.8			6	1.47	
	•	9/25	x3 = 80	22.	1	8 10	2.61 4.08	
Casing V	/olume (gal):	<u> </u>		<u>/2·)</u>	Casin	g Volume = gallons	· · · · · · · · · · · · · · · · · · ·	
Total Volun	ne Purged (gal):	90	00	D SAMPLIN				
<u> </u>	1			D SAMELIN	I DAIA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
1255	Pump On							
1301		20	200	6.62	21.4	1890		
1220	135	20	500	6.60	21.4	1870		·
12.20	125	20	700	///	263	1880		
1330	77	7 1	900	4.73	7. 3	1890		
13-11	1.75	20	700	4.4	41,2	7000		· -
	 							
-	 			<u></u>				
	 	<u> </u>	!			-		
	 			-			Pump Off	
 	FIELD PARAMET	ER STABILIZ	NATION: Three c	onsecutive rea	adings within ().3 su pH, 2 degree	s C, and 100 μS/ci	m)
<u> </u>				IPLE INFOR		<u> </u>		
Sample Co	llection Point:							
		 	Container	Ι	No. of	Analysis Method	Preservative	Filtered
Sa	mple ID	Time	Туре	Volume	Containers		Preservative	(y/n)
BMO	2008-13B	1240	PL	250	<u> </u>	300	Ia_	
				<u> </u>				<i>l</i>
		M	VATER LEVEL	MEASURE	MENT COLL	ECTION		
	evel measuremen			 				
	er level measurem				rt in wellhead			
	er level measurem							
	er level measurem	ient collected.	well is pumping] .				
☐ Other:			WELL	PURGING IN	FORMATION		<u> </u>	· · · · · · · · · · · · · · · · · · ·
Purged	3 well volumes a	nd field parame	eters stabilized.					
	3 well volumes be			nd field parem	neters stabilize	ed.		
	well until field par							
☐ Other:								
Additional	Comments:	262.3						
		, , , , , , , , , , , , , , , , , , ,		<u>,</u>	<u> </u>			
	<u> </u>			<u></u>	· · · · · · · · · · · · · · · · · · ·			
		<u></u>	· <u></u>					

roject No:	287030				Client: <u>F</u>	reeport Coppe	r Queen Branci	<u> </u>
ask No:	201000		. ————————————————————————————————————		Date: _	8-20-1	4	
ell ID:	Bran	2008- /:	3 M	1	Weather: _	Partly (1	audy_	
	()1-70-				Sampler:	Christopher	L Surun	
OWR No:				WELL DAT	Ά	0	2	
344-U.D.		193	0		Nominal	Casing (Size (inches)	Gailons per Lir	near Foot
Well De	epth (ft bis):	<u> </u>	5-11			2	0.16 0.65	
Casing (Diameter (in):		<u> </u>			5	1.02	
Static Wate	er Level (ft bmp):	<u> </u>	14			6 8	1.47 2.61	
Casino ¹	Volume (gal):	837.	3 x3 = 2	500		10	4.08	
	•	7/	24		Casing	y Volume = gallons	foot * water colum	n (feet)
Total Volur	ne Purged (gal):		FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
06.15	Pump On							
2835	140	57	798	8.46	23-2	1358		
0935	200	4.6	1140	8.5/	13.4	1338		·
1035	260	3.8	14//	758	23/1	355		
1235	380	3.8	1872	2.52	23.8	/356		
1235	440	2.8	2101	1.50	23,7	1360		
1635	720	2.8	7604	8 48	73.6	1362		
[<u>-</u>	<u></u>
							- O#	
			<u> </u>			Down II 2 dogge	Pump Off	m)
		CO OTABILIZA	ATION: Three o	onsecutive rea	idings within u).3 su pH, 2 degree	S C, and 100 perc	
	FIELD PARAMET	ER STABILIZA			A A A TECHNI			
	FIELD PARAMET	ER STABILIZA	SAI	MPLE INFOR	MATION			
Sample Co	FIELD PARAMET	ER STABILIZ	SAI	MPLE INFOR				Filtered
<u>:</u>		Time	SAI	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
S	ollection Point:	Time	SAI	Volume	No. of	Analysis Method	Preservative Lot	
S	ollection Point:	Time 1635	Container Type	Volume 250	No. of Containers	300		
S	ollection Point:	Time 1635	SAI	Volume 250	No. of Containers	300		
Sing - 20	ample ID	Time 14.35	Container Type VATER LEVE	Volume 250 MEASURE	No. of Containers	300 ECTION		
Sing Your Your Water	pollection Point: ample ID OR 13M level measurementer level meas	Time // 35 Vint collected.nent collected.	Container Type VATER LEVE	Volume 250 MEASURE	No. of Containers	300 ECTION		
Signo 20	ample ID OR 13 M level measurementer level m	Time /// 35 V It collected. ment collected. ment collected.	Container Type VATER LEVE	Volume 250 L MEASURE relihead/No powell.	No. of Containers	300 ECTION		
Sing Yater No wa No wa	pollection Point: ample ID OR 13M level measurementer level mea	Time /// 35 V It collected. ment collected. ment collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin	Volume 250 L MEASURE relihead/No powell. g.	No. of Containers MENT COLI	300 ECTION		
Signo 20	pollection Point: ample ID OR 13M level measurementer level mea	Time /// 35 V It collected. ment collected. ment collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin	Volume 250 L MEASURE relihead/No powell.	No. of Containers MENT COLI	300 ECTION		
Water No wa No wa Other:	level measurementer level	Time /// 3 vit collected. ment collected. ment collected. ment collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL teters stabilized	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		
Water No wa No wa Dither:	level measurementer level	Time 1/3 V Int collected. Inent collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL seters stabilized ous water level	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		
Water No wa No wa Dother: Purge Purge	level measurementer level	Time 1/3 V Int collected. Inent collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL seters stabilized ous water level	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		
Water No wa No wa Other: Purge Purge Purge Other	level measurementer level	Time 1/3 V Int collected. Inent collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL seters stabilized ous water level	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		
Water No wa No wa Other: Purge Purge Purge Other	level measurementer level	Time 1/3 V Int collected. Inent collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL seters stabilized ous water level	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		
Water No wa No wa Dother: Purge Purge Purge Other	level measurementer level	Time 1/3 V Int collected. Inent collected.	Container Type VATER LEVE No access to w Obstruction in Well is pumpin WELL seters stabilized ous water level	Volume 250 L MEASURE relihead/No powell. g PURGING IN	No. of Containers MENT COLL It in wellhead	300 ECTION		

enetit/findowe\Temonrary internet Files\Content.Outlook\SSECO2FW\Groundwater Sampling Sheet 2013-07-9

Date: Sy-1/Y Sampler: Chr.+fegh_ L Skun_ Well Data Well Dath ft bis): 550 Nominal Size (finches) Gallons per Linear Foot 0.68 1.02 Static Water Level (ft bmp): 223./// 8 1.02 Static Water Level (ft bmp): 3335 Total Volume Purged (gal): 73335 Total Volume Purged (gal): 705 Time Elapsed Time (min) Discharge (gal) (gallons) (ga	oject No:	287030			c	lient: <u>F</u>	reeport Copper	Queen Branch	<u> </u>
Well Depth (ft bip): Well Depth (ft bip): Casing Diameter (in): Static Water Level (ft brip): Casing Volume (gal): 733.5 x3 = 10.0 Total Volume Purged (gal): Time Elapsed Time (gpm) Secharge (gpm) Discharge (ggm) Gallons) FIELD SAMPLING DATA Fireth Conduction or (u.slicim) Comments (gallons) Field SAMPLING DATA Fireth Conduction or (u.slicim) Comments (gallons) Field SAMPLING DATA Fireth Conduction or (u.slicim) Comments (gallons) Field SAMPLING DATA Fireth Conduction or (u.slicim) Comments (gallons) Field SAMPLING DATA Fireth Conduction or (u.slicim) Comments (gallons) Field SAMPLING DATA Fireth Conduction or (u.slicim) Comments (u.slicim) Comments (u.slicim) Field Parameter Sampling Data Volume (u.slicim) Sample Collection Point: Sample ID Time Container Type Volume (u.slicim) Field Parameter Sampling Data Volume (u.slicim) Field Parameter Sampling Information Field Parameter Sampling Information Field Parameters stabilized. Deutged 3 well volumes and field parameters stabilized. Deutged 3 well volumes based on previous water level and field parameters stabilized. Deutged 3 well volumes based on previous water level and field parameters stabilized. Deutged 3 well volumes based on previous water level and field parameters stabilized. Deutged 3 well volumes based on previous water level and field parameters stabilized. Deutged 3 well volumes and field parameters stabilized.	•	201000				ate: _	8-4-14		
WELL DATA Well Data Well Data Casing Capacity Well Data Casing Diameter (in): Casing Diameter (in): Casing Diameter (in): Casing Diameter (in): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): Total Volume Purged (gal): Total Volume Purged (gal): Time Elapsed Time (gam) Casing Data Casing Volume = gallone/foct * water column (feet) FIELD SAMPLING DATA Time Casing Volume = gallone/foct * water column (feet) FIELD SAMPLING DATA Time (gam) Casing Volume = gallone/foct * water column (feet) FIELD SAMPLING DATA Time (gam) Casing Volume = gallone/foct * water column (feet) FIELD SAMPLING DATA Time (gam) Casing Volume = gallone/foct * water column (feet) FIELD SAMPLING DATA Tamp Conductance (u.Sicm) Confliction Confliction Confliction Confliction Confliction Confliction Confliction FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 surph, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Water level measurement collected. No access to wellhead(No port in wellhead) No water level measurement collected. No access to wellhead(No port in wellhead) No water level measurement collected. No access to wellhead(No port in wellhead) No water level measurement collected. Near case to wellhead(No port in wellhead) No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other: WELL PURGING INFORMATION	•	A har	2010	1 M		Veather:	Synn-/		
Well DaTA Well Depth (it bis): Casing Capacity Well Depth (it bis): Casing Diameter (in): \$\frac{1}{2} \frac{1}{4} 0.35 \\ \$1.02 \\ \$5 1.02 \\ \$5 1.02 \\ \$5 1.02 \\ \$6 1.47 \\ \$8 2.261 \\ \$1.02 \\ \$8 2.261 \\ \$1.02 \\ \$8 2.261 \\ \$1.02 \\ \$8 2.261 \\ \$1.02 \\ \$8 2.261 \\ \$1.02 \\ \$1.03 \\ \$1.02 \\ \$1.03 \\ \$1.03 \\ \$1.03 \\ \$1.03 \\ \$1.03 \\ \$1.03 \\ \$1.00 \\	•	13110°	2011/2	 - 	s	- Sampler: /	Christophy	L Sherma	
Well Depth (it bis): S	WR No:								
Well Depth (ft blas): Casing Diameter (in): Za J H Gasing Volume (gal): Casing Volume (gal): Casing Volume (gal): Casing Volume (gal): Discharge Rate (min) Rate (min) Purpp On O9730 Purpp On O9730 Purp On O97				50		Nominal		Gallons per Lin	ear Foot
Casing Diameter (in): 22	Well De	pth (ft bls):	<u> </u>	<u>, , , </u>		140,11114	2		
Casing Volume (gal): 733.5 / X3 = 100	Casing Di	iameter (in):		5'			' - '	1.02	
Casing Volume (gal): Total Volume Purged (gal): Total Volume Purged (gal): Time Elapsed Time (min) Discharge Rate (gpm) R	Static Water	l evel (ft bmp):	22	3./4					
Total Volume Purged (gal): Casing Volume = gallons/foot * water column (feet) FIELD SAMPLING DATA		•	333.3	x3 = 1/	10				
Time Elapsed Time Rate (gpm) Discharge Rate (gpm) Discharge (gallons) Pump On Off State (gpm) State (g	Casing V	olume (gai):				Casing	Volume = gallons	foot * water columi	n (feet)
Time Elapsed Time (min) Discharge Rate Discharge (gallons) PH Temp (COnductance (gpm)) Pump On (Pt) IS IO IO ISO 7.3/ 3.8 7.0 0.9.9.5 IS IO ISO 7.3/ 3.8 7.0 1.3.0 ISO 7.3/ 3.8 7.2 1.3.0 ISO 7.3/	Total Volum	e Purged (gal):	100	7 FIEL	D SAMPLING	G DATA			
Time Elapsed Time (gpm) (gallons) (SU) (PC) Collidations (µS/cm) 0930 Pump On 0945 15 10 150 7.21 3.8 7.20 1/30 120 3 565 734 3.5 7.2 1/30 120 3 565 734 3.5 7.2 1/30 120 3 565 734 3.5 7.2 1/30 120 3 7.5 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3			Discharge					Comme	nte
Pump On Of 15	Time		Rate						
10 15 10 15 10 15 10 15 10 15 10 10	400		(gpm)	(ganons)		<u>, , , , , , , , , , , , , , , , , , , </u>			
1030 10	0930	Pump On		1000	5721	128	720		
130 120 3 234 234 23.8 773 130 240 3 7/5 7.37 23.9 7.72 7.38 7.38 7.39	0975	15	_10	200	-/· 3/ ->/-	521.	777		
130 30 3 73 73 73 73 73 7	1030	60	-5-	3/3	734	93,	371		
330 340 3 715 737 23.9 772 1400 370 3 7005 7.38 738 732 1400 370 3 7005 7.38 738 732 1400 370 3 7005 7.38 738 732 1400 370 3 7005 7.38 738 732 1400 370 3 7005 7.38 738 732 1400 370 3 7005 7.38 738 732 1400 370 370 370 370 370 370 370 370 370 3	1/30		3	565	57-	7692 X	723		
1400 270 3 1605 7,38 238 722	1230	<u> </u>		735	535		D 72		
Pump Off		1290		7/5	7 20	- J. (-	532		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Type Volume Containers No. of Containers Analysis Method Preservative (yin) 3 99 WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	<u> </u>	170		1009	/1 <i>/0</i>	/ 24	1 7.		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Type Volume Containers No. of Containers Analysis Method Preservative (y/n) WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. Other:	<u> </u>	ļ <i>"</i> — — —		 				· · · · · · · · · · · · · · · · · · ·	,
Sample Collection Point: Sample ID Time Container Type Volume No. of Containers Containers No. of Co		 							
Sample Collection Point: Sample ID Time Container Type Volume Preservative Type WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:		SIELD PARAMET	FR STABILIZ	ATION: Three co	onsecutive rea	dings within	0.3 su pH, 2 degree	s C, and 100 μS/c	m)
Sample ID Time Type Volume Containers Containers Containers Containers Analysis Method Preservative (ym) 3 00 WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. Other:		LIEED! WASHE		SAN	IPLE INFOR	MATION			
Sample ID Time Container Type Volume Containers Analysis Method Preservative (y/n) Mo - 20(0 - M	2	Harrian Doint:							
WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:			Time	l l	Volume		Analysis Method	Preservative	
Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	Rmn-	2010-IM	1400	PL	250		300	10	<u> </u>
Water level measurement collected. □ No water level measurement collected. No access to wellhead/No port in wellhead □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	15.10	1010 111	 			<u> </u>	<u> </u>		<u> </u>
□ No water level measurement collected. No access to wellhead/No port in wellnead □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:			١	NATER LEVE	MEASURE	MENT COL	LECTION		
WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	☐ No wat☐ No wat☐ No wat☐	ter level measurer ter level measurer ter level measurer	nent collected nent collected	. Obstruction in to the complete in the comple	well. g				
☐ Purged 3 well volumes based on previous water level and field paremeters stabilized. ☐ Purged well until field parameters stabilized. ☐ Other:	Other.			WELL	PURGING IN	FORMATION	· · · · · · · · · · · · · · · · · · ·		
0.0 1	Purge	d 3 well volumes t	pased on prev	ious water level	and field parer	meters stabiliz	zed.		
Additional Comments: 3] (0	☐ Purge	d well until field pa							
	☐ Purge ☐ Purge ☐ Other:								=
	☐ Purge ☐ Purge ☐ Other:								

Project No:	287030				Client: <u>İ</u>	Freeport Coppe	r Queen Branc	h
Task No:					Date: _	<u> </u>	14	
Well ID:	Bma	2010-	2 M		Weather: _	Blondy	<u>'</u>	
ADWR No:	<u> </u>	20110			Sampler:	1 hrstoplan	L Shurm	n .
ADVIA NO.	· · · · · · · · · · · · · · · · · · ·			WELL DAT				
		38	20		Nominal	Casing (Size (inches)	Capacity Gallons per Li	near Foot
Well De	epth (ft bis):		Tu		Teorimo	2	0.16	
Casing [Diameter (in):		5			4	0.65 1.02	
Static Wate	r Level (ft bmp):	22	0.78	:		6	1.47 2.61	
	•	111.4		342		8	4.08	
_	/olume (gal):		31/2	1.	Casing	g Volume = gallons	foot * water colum	ın (feet)
Total Volun	ne Purged (gai):		/162	D SAMPLIN	G DATA			
<u></u>		Discharge	· Total			Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents ——————
0845	Pump On							
0855	10	25	270	6.47	21.0	1940		
0900	20	27	SYD	6.49	21.0	1930		
DAIS	1 30	22	210	6.48	21.0	1940		
(2-1.5	1 - /1/			1 7 0				
			<u> </u>					
<u></u>						1		
	 							
			<u> </u>				Pump Off	
	FIELD PARAMET	ER STABILIZ	ATION: Three o	onsecutive rea	idings within ().3 su pH, 2 degree	s C, and 100 μS/c	m)
				MPLE INFOR				·
Sample Co	llection Point:							
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
BMD	-2010-2M	0915	PL	250	<u> </u>	300	Tu	
Duc	081414	09/1	14	250	<u> </u>	300	7 Car.	5_
- ************************************	SI 11 -/	٧	VATER LEVE	L MEAŠURE	MENT COLL	ECTION		
- Water	level measuremen	t collected.						
∐ No wat	er level measuren	nent collected.			rt in wellhead		•	
	er level measuren							
1	ter level measuren	nent collected.	Well is pumpin	g.				
☐ Other:			WELL	PURGING IN	FORMATION			
₩ Purgeo	i 3 well volumes a	nd field param						
Purged	d 3 well volumes b	ased on previo	us water level	and field paren	neters stabiliz	ed.		
	d well until field pa							
□ Other:					<u></u>			
Additiona	Comments:	109,3	<u></u>					
			; _1 L					
		PM	pheate					

		G	roundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 15, 2014		
Well ID:	BMO-2010-3	 В			Weather:	Overcast, 70s		
ADWR No:	219970				Sampler:	VNH		
				WELL DA		,		
Well De	oth (ft bls):		330		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					Nomina	2	0.1	6
Casing Di	ameter (in):		5			5	0.6 1.0	
Static Water	Level (ft bmp):		120.06			6	1.4	7
Casing Vo	olume (gal):	214	x3 =	642		10	2.6 4.0	
Total Volume	e Purged (gal):		630		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
	ı	ı	FIEL	D SAMPLIN	IG DATA	T		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
9:35 AM	Pump On							
9:50 AM	15m	6	90	7.76	21.6	422.1		
10:05 AM	30m	6	180	7.65	21.6	420.8		
10:20 AM	45m	6	270	7.72	21.7	419.5		
10:35 AM	60m	6	360	7.65	21.8	419.4		
10:50 AM	:50 AM 75m 6 450 7.66					418.9		
11:05 AM	90m	6	540	7.64	21.9	418.6		
11:20 AM	105m	6	630	7.63	21.8	419.1		
							D O. (
	FIELD DARAME	TED STABILIZ	ATION: Three or	nacoutivo roo	dingo within O	3 su pH, 2 degrees	Pump Off	
	FIELD FARAIVIE	TER STABILIZ		IPLE INFOR	-	3 su pri, 2 degrees i	c, and 100 5/cm)	
Comple Called	ntion Doints	Cnigot noor			WATION			
Sample Collection	pple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
BMO-2010-3	 BB	11:23:30	Poly	500mL	1	300.0	NA	Y
			- /					
		V	WATER LEVEL	MEASURE	MENT COLLE	CTION		
X Water leve	el measurement c	ollected.						
	evel measuremer			ead/No port in	wellhead			
	evel measuremer evel measuremer							
O Other:	5.51 mododiemen		o io pairipiliy.					
			WELL F	PURGING INF	ORMATION			
_	well volumes and	•						
_	well volumes base	•		eld paremeter	s stabilized.			
O Purged we	ell until field paran	icicis stadilize	u.					
Additional C	omments:							
, taditional O	ommonto.							

		G	Froundwa	ater Sa	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 15, 2014	·		
Well ID:	BMO-2010-3	<u></u>			Weather:	Sunny, windy, 60s			
ADWR No:	219969				Sampler:	VNH			
ADVICTO.	213303			WELL DA		VIVII			
\M-II D-	41- //4 1-1-\		F22		Nicociona		Capacity		
Well De	epth (ft bls):		532		Nomina	l Size (inches)	Gallons per l 0.1		
Casing D	Diameter (in):		5			4 5	0.6 1.0		
Static Water	Level (ft bmp):		121.92			6	1.4		
Casing V	olume (gal):	418	x3 =	1255		8 10	2.6 4.0		
Total Volum	ne Purged (gal):		1260		Casi	ng Volume = gallon	s/foot * water colum	in (feet)	
	3 1 3 1 1 (3 1)	I.		_D SAMPLIN	G DATA				
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gallons) PH (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
11:45 AM	Pump On								
12:05 PM	20m	7	140	7.95	22.2	360.6	Clear, sulphur	odor	
12:25 PM	40m	7	280	7.77	22.5	383.1	Yellow, sulphu	r odor	
12:45 PM	60m	7	420	7.78	22.8	389.7	Clear, sulphur	odor	
1:05 PM	80m	7	560	7.77	23.1	388.0	Clear, sulphur	odor	
1:25 PM	100m	7	700	7.78	23.5	386.2	Clear, odorless		
1:45 PM	120m	7	840	7.76	23.2	386.5	Clear, odorless	3	
2:05 PM	140m	7	980	7.81	23.3	386.7	Clear, odorless	3	
2:25 PM	160m	7	1120	7.75	23.3	387.4	Clear, faint sul	phur odor	
2:45 PM	180m	7	1260	7.74	23.1	386.9	Clear, faint sul	phur odor	
	FIELD PARAME	TER STABILIZ	ATION: Three co	onsecutive rea	dings within 0.	3 su pH, 2 degrees	C, and 100 (S/cm)		
			SAM	IPLE INFOR	MATION				
Sample Colle	ction Point:	Spigot near	pressure tanks	in shed					
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMO-2010-	3M	14:48:58	Poly	500mL	1	300.0	NA	Y	
		١	VATER LEVEL	MEASUREN	MENT COLLE	ECTION			
	el measurement c level measuremer		access to wellhe	ead/No port in	wellhead				
	level measuremer								
No waterOther:	level measuremer	nt collected. W	eii is pumping.						
J.1.01.			WELL I	PURGING INF	ORMATION				
X Purged 3	well volumes and	field paramete	rs stabilized.						
_	well volumes base	•		ield paremeter	s stabilized.				
_	ell until field paran	neters stabilize	d.						
Other:									
Additional C	comments:								

ingt No.	287030			(Client: <u>F</u>	reeport Copper	Queen Branch	
-	201030				Date:	7-22-14	<u>/</u>	
sk No: 	B.MO.	2012 -	100		//eather:	Partly /low	de	
II ID: _	10140	1012	-/ /·/		Sampler:	,		
WR No:	····			WELL DAT				
		210		1	Manager C	Casing C	Capacity Gallons per Lin	ear Foot
Well Der	ptin (ft bls):	40:			Nominal 3	Size (inches) 2	0.16	
Casing Di	iameter (in):		511			4	0.65 1.02	
_		<u> </u>	994			5	1.47	
tatic Water	Level (ft bmp):		\	-		8	2.61 4.08	
Casing Vo	olume (gal):	178.5	x3 = 53	35.5	0	Volume = gallons/		(feet)
Fotal Volum	e Purged (gal):					Volunte - gandre	1000 110001 0010111	. (1004)
				D SAMPLIN	G DATA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge / (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts
2800	Pump On						<u></u>	
	10	1,	60	1,.95	22.9	857		
0 \$ 30	30		120	697	72.8	856		
	10	1	360	1.99	32.7	858		
0900		1	540	699	22 i	857		
<u>0930</u>	90			<u></u>	2			
	<u> </u>							·
	<u> </u>	<u> </u>						
	 		 					
	 		 				Pump Off	
<u></u>	FIELD BARAMET	FR STABILIZ	ATION: Three C	onsecutive re	adings within 0).3 su pH, 2 degree	s C, and 100 μS/cr	n)
	FIELD PARAMIC		SAN	IPLE INFOR	RMATION			
Sample Co	llection Point:							Filtered
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
Bma 3	1-11-1-100	0930	PZ	250		300	Ju	
1)11100 1	2012-1M	T						
	<u></u>	\ \	NATER LEVE	MEASURE	MENT COL	ECTION		
Water	level measureme ter level measurer	nt collected.	No second to vi	nlihaad/Ma Dr	nt in wellhead			
□ No wat	ter level measurer	ment collected	. Obstruction in	vell.			•	
140 Wal		116116 00110010-	. Well is pumpin	g.				
□ No wat	ter level measurel ter level measurel	ment collected						
□ No wat	ter level measure	ment collected						
□ No wat □ No wat □ Other:	ter level measure		WELL	PURGING IN	FORMATION			
□ No wat □ No wat □ Other:	ter level measure	and field paran	WELL	PURGING IN				 -
No wat No wat Other: Purget Purget	d 3 well volumes	and field paran	WELL neters stabilized	PURGING IN				
No wat No wat Other: Purget Purget Purget	d 3 well volumes d 3 well volumes d 3 well volumes d well until field p	and field paran	WELL neters stabilized	PURGING IN				
No wat No wat Other: Purget Purget Purget Other:	d 3 well volumes and 3 well volumes and 3 well volumes and well until field page	and field paran pased on previ arameters stat	WELL neters stabilized	PURGING IN				
No wat Cher: Purget Purget Purget Other: Other:	d 3 well volumes d 3 well volumes d 3 well volumes d well until field p	and field paran	WELL neters stabilized	PURGING IN				

		Gi	coundwa	ter Sar	npling F	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Гask No:	1				Date:	Jul 21, 2014		
Well ID:	Burke				Weather:	Overcast, 70s		
ADWR No:	212268				Sampler:	VNH		
	•			WELL DAT	A			
Well De	epth (ft bls):		781		Nomina	Casing al Size (inches)	Capacity Gallons per I	inear Foot
Casing D	Diameter (in):		6			2	0.1 0.6	
						5	1.0	2
Static Water	r Level (ft bmp):		592.35			8	1.4 2.6	
Casing V	/olume (gal):	277	x3 =	831		10	4.0	
Total Volum	ne Purged (gal):					ing Volume = gallons	s/foot * water colum	nn (feet)
	1		FIELD	SAMPLING	G DATA	l		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
9:36 AM				8.19	27.8	448.8		
							Pump Off	
	FIELD PARAM	IETER STABILIZA				su pH, 2 degrees C	, and 100 S/cm)	
				PLE INFORM				
Sample Colle	ection Point:	Pressure tank s	pigot next to 20	,000gal stor	1	T		
	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Burke		9:45:40 AM	Poly	250mL	1	300.0	NA	Υ
		,	ATED LEVEL	AEACUET:	ENT COLLE	OTION		
V 184 / 1			ATER LEVEL N	/IEASUREM	ENT COLLE	CTION		
	vel measurement of level measureme	collected. nt collected. No ac	cess to wellhead	/No port in we	llhead			
		nt collected. Obstr		,, , , , , , , , , , , , , , , , , , ,				
No water	level measureme	nt collected. Well i	s pumping.					
O Other:			MELLS	IDOING INTE	DAATION.			_
O Burged 2	well volumes and	field parameters		JRGING INFO	KIVIATION			
_		field parameters s ed on previous wa		paremeters	stabilized.			
_	vell until field parar		2. 2	,				
X Other:	One grab from ta	ink due to spigot is	sues					
Additional C	Comments:				_	et water to flow f milar to Osborn.		
		parameter and	ı sanıpı c mom	Top of lank	, memou si	milai iu Usbuin.	i iaiiu-iiitei Sal	npie.

		G	roundwa	ter Sar	npling F	-orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 10, 2014			
Well ID:	Chambers				Weather:	Partly cloudy, 8	80s		
ADWR No:	629807				Sampler:	VNH			
	•			WELL DAT	Ā				
Well De	epth (ft bls):		245		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot	
			6			2	0.1	6	
Casing L	Diameter (in):		U			5	0.6 1.0		
Static Wate	r Level (ft bmp):		1			6 8	1.4 2.6		
Casing \	/olume (gal):		x3 =			10	4.0		
Total Volum	ne Purged (gal):		108		Casi	ing Volume = gallon	s/foot * water colum	n (feet)	
			FIEL	D SAMPLING	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
4:12 PM	Pump On								
4:15 PM	3m	12	36	7.44	23.3	436.5			
4:18 PM	6m	12	72	7.59	22.7	436.8			
4:21 PM	9m	12	108	7.50	22.9	436.4			
							Pump Off		
	FIELD PARAM	ETER STABILIZ	ATION: Three cor	nsecutive read	lings within 0.3	su pH, 2 degrees C	c, and 100 \(S/cm)		
			SAMI	PLE INFORM	MATION				
Sample Colle	ection Point:	Spigot near we	ellhead		_				
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Chambers		16:24:04	Poly	250mL	1	300.0	NA	Y	
			/ATER LEVEL I	MEASUREM	ENT COLLE	CTION			
	vel measurement of level measureme		access to wellhes	d/No port in w	allhaad				
	level measureme			anto portin w	Cili iCaa				
No water	level measureme	nt collected. Wel	I is pumping.						
O Other:									
				URGING INFO	ORMATION				
_	B well volumes and B well volumes bas			d naremeters	stahilized				
_	vell until field parar			a paremeters	otabilizea.				
O Other:									
Additional (Comments:								

		G	Groundwa	ater Sai	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 9, 2014		
Well ID:	COB MW-1				Weather:	Partly cloudy, 8	0s	
ADWR No:	903992				Sampler:	VNH		
	100000			WELL DA				
Well De	epth (ft bls):		420		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing L	Diameter (in):		8			5	0.6 1.0	-
Static Water	r Level (ft bmp):		240.03			6 8	1.4 2.6	
Casing V	/olume (gal):	470	x3 =	1410		10	4.0	
Total Volum	ne Purged (gal):		1400		Casi	ng Volume = gallons	s/foot * water colum	ın (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gallons) PH (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
10:55 AM	Pump On							
11:15 AM	20m	10	200	6.95	21.9	1728		
11:35 AM	40m	10	400	7.05	21.7	1784		
11:55 AM	60m	10	600	7.00	21.6	1836		
12:15 PM	80m	10	800	6.96	21.5	1882		
12:35 PM	100m	10	1000	6.97	21.6	1924		
12:55 PM	120m	10	1200	6.93	21.6	1952		
1:15 PM	140m	10	1400	6.95	21.5	2000		
	FIELD DADAM	TED 074 DU 1	ZATIONI TI		J		Pump Off	
	FIELD PARAME	ETER STABILIZ			-	3 su pH, 2 degrees (C, and 100 S/cm)	
				IPLE INFOR	WIATION			
Sample Colle	ection Point:	Wellhead spi	igot I		No of			Cite and
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
COB MW-1		13:20:11	Poly	250mL	1	300.0	NA	Υ
DUP20140	709	18:00	Poly	250mL	1	300.0	NA	Υ
			WATER LEVEL	MEASUREN	MENT COLLE	ECTION		
	vel measurement of level measureme		access to wellbo	ad/No port in	wollboad			
	· level measureme			au/No port iii	weimeau			
No water	level measureme	nt collected. W	ell is pumping.					
O Other:			=					
X Purged 3)ellelee e e e	field negation		PURGING INF	ORMATION			
X Purged 3 well volumes and field parameters stabilized.O Purged 3 well volumes based on previous water level and field paremeters stabilized.								
_	vell until field para			·				
O Other:								
Additional C	Comments:							

		G	Groundwa	ater Sai	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	 h	
Task No:	1				Date:	Jul 9, 2014	a quodii Biano		
Well ID:	COB MW-2				Weather:	Partly cloudy, 7	0s		
ADWR No:	903984				Sampler:	VNH			
ABWITTE.	000001			WELL DA		71417			
Well De	epth (ft bls):		162		Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot	
						2	0.1	6	
Casing L	Diameter (in):		4			5	0.6 1.0		
Static Water Level (ft bmp):			131.32			8	1.4 2.6		
Casing \	/olume (gal):	20	x3 =	60		10	4.0		
Total Volum	ne Purged (gal):		105		Casi	ng Volume = gallons	s/foot * water colum	ın (feet)	
	FIELD SAMPLING DATA								
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
9:53 AM	Pump On								
9:58 AM	5m	7	35	7.53	21.1	548.1			
10:03 AM	10m	7	70	7.54	20.6	502.4			
10:08 AM	15m	7	105	7.52	20.5	503.5			
	FIELD DADAM	TED OTABULE	ZATIONI, Thurs are		dia ara salah ia Os	2 1	Pump Off		
	FIELD PARAME	TER STABILIZ		IPLE INFOR	-	3 su pH, 2 degrees (J, and 100 S/cm)		
Sample Colle	nation Daint	Wallboad ani		IFEE IN OR	WATION				
	mple ID	Wellhead spi	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
COB MW-2	<u> </u>	10:15:09	Poly	250mL	1	300.0	NA	Y	
							_		
		\	WATER LEVEL	MEASUREN	MENT COLLE	CTION			
	vel measurement								
	level measureme			ad/No port in	wellhead				
	· level measureme								
Other:									
WELL PURGING INFORMATION									
X Purged 3 well volumes and field parameters stabilized.O Purged 3 well volumes based on previous water level and field paremeters stabilized.									
 Purged well until field parameters stabilized. 									
Other:									
Additional (Comments:	Hand-filter							

		G	Groundwa	ater Sai	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 9, 2014		
Well ID:	COB MW-3				Weather:	Partly cloudy, 7	' 0s	
ADWR No:	903823				Sampler:	VNH		
	•			WELL DAT	Α			
Well De	epth (ft bls):		300		Nomina	Casing	Capacity Gallons per L	inear Foot
Casing	Namotor (in):		4			2	0.1 0.6	
	Diameter (in):					5 1.02		
Static Water	Static Water Level (ft bmp): 124.19					8	1.4 2.6	
Casing Volume (gal): 115 x3 = 344						10	4.0	
Total Volum	ne Purged (gal):		342		Casi	ing Volume = gallon	s/foot * water colum	in (feet)
			FIEL	D SAMPLIN	G DATA			
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (SU)					Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
9:00 AM	Pump On							
9:06 AM	M 6m 19 114 7.74				21.3	510.6	Faint yellow, o	dorless
9:12 AM	12m	19	228	7.60	21.3	521.8	Clear, odorless	3
9:18 AM	18m	19	342	7.61	21.4	525.3	Clear, odorless	3
							- 0"	
		TED CTABILIZ	ATION, Three or		din an within O	2 0 1 1 2 40 770 00	Pump Off	
	FIELD PARAIVI	TER STABILIZ		IPLE INFOR	-	3 su pH, 2 degrees	C, and 100 5/cm)	
Sample Colle	action Doint:	Wellhead spi		II LL IIII OK	WINTION			
· ·		1			No. of			Filtered
Sar	nple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
COB MW-3		9:25:08 AM	Poly	250mL	1	300.0	NA	Υ
V			VATER LEVEL	MEASUREN	MENT COLLE	ECTION		
	vel measurement of level measureme		access to wellhe	ead/No port in	wellhead			
	level measureme			ad/140 port iii				
No water	level measureme	nt collected. We	ell is pumping.					
O Other:			\\(\frac{1}{2} \)		ODMATION			
WELL PURGING INFORMATION X Purged 3 well volumes and field parameters stabilized.								
	s well volumes and s well volumes bas			eld paremeter	s stabilized.			
	vell until field para			•				
O Other:								
Additional C	Comments:							
 								

		G	roundwa	ater Sai	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 9, 2014			
Well ID:	COB WL				Weather:	Partly cloudy, 9	0s		
ADWR No:	593116				Sampler:	VNH			
	1000000			WELL DA					
Well De	epth (ft bls):		150		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
	. ,					2	0.1	6	
Casing L	Diameter (in):		4			5	0.6 1.0		
Static Wate	er Level (ft bmp):		78.12			6 8	1.4 ⁻ 2.6		
Casing \	Volume (gal):	47	x3 =	141		10	4.0		
Total Volum	ne Purged (gal):		123		Casi	ng Volume = gallons	foot * water column (feet)		
		_	FIEL	D SAMPLIN	G DATA	1			
Time			pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
2:43 PM	Pump On								
2:49 PM	6m	8	48	7.27	21.8	926			
2:55 PM	12m	8	96	7.17	21.4	1134			
3:01 PM	18m	1.5	105	7.50	22.1	1097			
3:07 PM	24m	1.5	114	7.52	21.8	1124			
3:13 PM	30m	1.5	123	7.42	21.8	1132			
	1						Pump Off		
	FIELD PARAME	ETER STABILIZ				3 su pH, 2 degrees (C, and 100 S/cm)		
				IPLE INFOR	MATION				
Sample Colle	ection Point:	Wellhead spi	got		No. of	<u> </u>		Filt and al	
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
COB WL		3:19:34 PM	Poly	250mL	1	300.0	NA	Υ	
			WATER LEVE	MEAGUE	AENT OO: : =	OTION:			
V 14/ 1	values =		VATER LEVEL	MEASUREN	IENI COLLE	CHON			
	vel measurement or level measureme		access to wellhe	ead/No port in	wellhead				
	r level measureme			- 1					
	r level measureme	nt collected. We	ell is pumping.						
O Other:			\\/E r	PURGING INF	ORMATION				
X Purged 3	3 well volumes and	field parameter		SINGING INF	ORIVIA HON				
X Purged 3 well volumes and field parameters stabilized.O Purged 3 well volumes based on previous water level and field paremeters stabilized.									
Purged v	well until field para	neters stabilized	d.						
O Other:									
Additional (Comments:								

		G	roundwa	ter Sar	npling F	orm		
Project No:	287030				Client:		er Queen Branc	h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	Cooper				Weather:	Partly cloudy, 8	30s	
ADWR No:	623564				Sampler:	VNH		
	14-44-4			WELL DAT	<u> </u>			
Well De	epth (ft bls):		325		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					Nomina	2	0.10	6
Casing D	Diameter (in):		6			5	0.69	
Static Wate	r Level (ft bmp):		,			6	1.4	
Casing \	/olume (gal):		x3 =	0		8 10	2.6 4.0	
Total Volum	ne Purged (gal):		120		Casi	ng Volume = gallon	s/foot * water colum	n (feet)
	1		FIEL	D SAMPLING	G DATA			
Time	(min) (gpm) (gallons) (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
4:40 PM	Pump On							
4:45 PM	5m	8	40	7.56	23.1	427.8		
4:50 PM	10m	8	80	7.66	22.5	428.5		
4:55 PM	15m	8	120	7.68	22.4	428.8		
							Pump Off	
	FIELD PARAM	IETER STABILIZA			-	su pH, 2 degrees 0	C, and 100 S/cm)	
				PLE INFORM	MATION			
Sample Colle	ection Point:	Spigot on Nort	h side of house		l N	T	1	F-14 1
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Cooper		16:57:16	Poly	250mL	1	300.0	NA	Υ
			/ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement · level measureme		access to wellhes	d/No port in w	allhead			
	level measureme			a/No port iii w	Siliteau			
No water	level measureme	ent collected. Well	is pumping.					
O Other:								
- 5 10		16.11		URGING INFO	DRMATION			
	B well volumes and B well volumes bas			ld paremeters	stabilized.			
_	vell until field para			a paromotoro	otabilizoa.			
O Other:								
Additional (Comments:							

Project No:	287030				Client: <u>F</u>	reeport Copper	Queen Branch	<u> </u>
ask No:	201.000				Date:	7-21-14		
vell ID:	(200	er C			Neather:	Cloudy		
•	CORP	¥			Sampler:/	Christopher }	Shuman	
ADWR No:				WELL DAT	A	2-2-1	e e e e e e e e e e e e e e e e e e e	
		22	<u> </u>	-	Nominal	Casing C Size (inches)	Gallons per Lir	ear Foot
Well De	pth (ft bis):		<u>/</u>			2	0.16 0.65	
Casing Di	iameter (in):	<i></i>				5	1.02	
Static Water	Level (ft bmp):	162	.67			6	1.47 2.61	
	olume (gal):	87.2	x3 = 2	53	<u>-</u>	10	4.08	
			297		Casing	g Volume = gallons/	foot * water colum	n (feet)
Total Volum	e Purged (gal):			D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
0030	Pump On							
0930	10	8.5	25	Toda 4	23.0	1555		
	20	8.5	120	1.15	2).[1597		
0950	30	8.5	297	6.63	23.1	1548		
1000	1-76/	-6"-1					<u></u>	
	 							
	 							
<u> </u>								
							Pump Off	
	FIELD PARAME	ER STABILIZ	ATION: Three c	onsecutive rea	adings within	0.3 su pH, 2 degree	s C, and 100 µa/c	
	<u> </u>		SAI	VIPLE INFOR	MATION			
Sample Co	llection Point:					,		Filtered
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
		1000	PL	250		F02300	2cc	
Coope		1			· ·			
<u> </u>	<u> </u>	V	VATER LEVE	L MEASURE	MENT COL	LECTION		
☐ No wat	level measureme ter level measurer ter level measurer ter level measurer	nent collected. nent collected	. Obstruction in	well.	ort in wellhead	l 		
□ Other:			WELL	PURGING IN	(FORMATION	V		
/□ Purge	d 3 well volumes a d 3 well volumes a d well until field pa	oased on previ	ous water level	and field parer	meters stabili	zed.		
	al Comments:							
<u>57.3</u>								
					<u> </u>			

		Gı	oundwa	ter San	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Brancl	h
Task No:	1				Date:	Jul 14, 2014		
Well ID:	Dodson				Weather:	Partly cloudy, 8	0s	
ADWR No:	644927				Sampler:	VNH		
				WELL DATA				
Well De	epth (ft bls):		200		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					2 0.16			6
Casing L	Diameter (in):		6			5	0.65 1.02	
Static Water	Static Water Level (ft bmp):		95.43			6 8	1.47 2.6	
Casing \	/olume (gal):	154	x3 =	461		10	4.08	
Total Volum	ne Purged (gal):		650		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
	0 (0)		FIELD	SAMPLING	B DATA			
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gallons) PH (SU) Temp (°C) Specific Conductance (µS/cm) Co				Comm	ents			
3:40 PM	Pump On				•			
3:50 PM	10m	13	130	7.42	21.8	1788		
4:00 PM	20m	13	260	7.25	21.2	1786		
4:10 PM	30m	13	390	7.24	21.3	1716		
4:20 PM	40m	13	520	7.33	21.7	1680		
4:30 PM	50m	13	650	7.27	21.9	1651		
							Pump Off	
	FIELD PARAM	1ETER STABILIZA	TION: Three con	secutive readi	ngs within 0.3	su pH, 2 degrees C	, and 100 「S/cm)	
			SAMF	PLE INFORM	IATION			
Sample Colle	ection Point:	Wellhead spigot						
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Dodson		4:37:57 PM	Poly	250mL	1	300.0	NA	Υ
			ATER LEVEL N	MEASUREM	ENT COLLEC	CTION		
	vel measurement o	collected. nt collected. No ac	cass to wallhaad	/No port in we	llhead			
		nt collected. No ac		No port in we	iiricau			
No water	level measureme	nt collected. Well is	s pumping.					
O Other:			\					
Y D	ا المبدر	I field parameter		JRGING INFO	RMATION			
_		I field parameters s ed on previous wat		paremeters s	tabilized.			
_	vell until field parar							
O Other:								
Additional (Comments:							
								

		C	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 7, 2014		
Well ID:	Douglass 791]			Weather:	Rainy, 70s		
ADWR No:	592791				Sampler:	VNH		
	'			WELL DA				
Well De	epth (ft bls):		200		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing D	iameter (in):		5			5	0.6	
Static Water	Level (ft bmp):		28.22		6 8		1.4 ⁻ 2.6	
Casing V	Casing Volume (gal): x3 =					10	4.0	
Total Volum	e Purged (gal):				Casi	ing Volume = gallons	s/foot * water colum	in (feet)
			FIE	LD SAMPLIN	IG DATA			
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge pH (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
							Pump Off	
	FIELD PARAME	TER STABILIZ				.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAN	IPLE INFOR	MATION			
Sample Colle	ection Point:	T	1		T	1		
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		,	WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	el measurement							
	level measureme				wellhead			
	level measureme			•				
O Other:								
			WELL	PURGING INF	FORMATION			
O Purged 3 well volumes and field parameters stabilized.								
_	 Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. 							
O Other:	Pumped dry, stal							
Additional C					WLO)		
, wallional C	ZOTTITICITIO.	<u> </u>			VVLC	<u>, </u>		

		C	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 7, 2014		
Well ID:	Douglass 792	2			Weather:	Rainy, 70s		
ADWR No:	592792				Sampler:	VNH		
				WELL DA	ΤΑ	Onella	One a site.	
Well De	epth (ft bls):		200		Nomina	l Size (inches)	Capacity Gallons per L	inear Foot
Casing D	Diameter (in):		5			2	0.1	
						5	1.0	2
Static Water	r Level (ft bmp):		82.43			8	1.4 ² 2.6	
Casing V	olume (gal):		x3 =			10	4.0	8
Total Volum	ne Purged (gal):				Casi	ng Volume = gallons	s/foot * water colum	n (feet)
			FIE	LD SAMPLIN	IG DATA	T		
Time	Time Elapsed Time (min) Discharge Rate (gallons) (SU)		Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
	Pump On							
	EIELD DADAME	TED OTABILI	7471011 71			0 11 0 1	Pump Off	
	FIELD PARAME	TER STABILIZ		MPLE INFOR	-	.3 su pH, 2 degrees	C, and 100 S/cm)	
Cample Calle	ation Daint		- OAII	AFEE IN OR	IVIATION			
Sample Colle			<u> </u>		No. of	<u> </u>		Filtered
Sar	mple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
V			WATER LEVEL	. MEASUREN	MENT COLL	ECTION		
	vel measurement of level measureme		o access to wellh	ead/No port in	wellhead			
	level measureme				Weilifedd			
O No water	level measureme	nt collected. W	/ell is pumping.					
O Other:			\A/F11	DUDOING INF	CODMATION			
Purged 3	well volumes and	field parameter		PURGING INF	ORMATION			
 Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. 								
_	vell until field parar			·				
O Other:	Pumped dry, stal	ble parameters	3					
Additional C	Comments:				WLC)		

		G	roundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1				Date:	Jul 21, 2014		
Well ID:	Durazo				Weather:	Sunny, 80s		
ADWR No:	NR				Sampler:	VNH		
				WELL DA	<u> </u>			
Well De	epth (ft bls):				Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing L	Diameter (in):					5	0.65 1.02	
Static Water	r Level (ft bmp):					6 8	1.4 ⁻ 2.6	
Casing V	/olume (gal):		x3 =	0		10 4.08		
Total Volume Purged (gal):					Casi	ng Volume = gallons	s/foot * water colum	nn (feet)
			FIEL	_D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
							Pump Off	
	FIELD PARAME	TER STABILIZ			-	0.3 su pH, 2 degrees	C, and 100 S/cm)
			SAN	IPLE INFOR	MATION			
Sample Colle	ection Point:	<u> </u>			N (I		F74 1
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		V	VATER LEVEL	MEASURE	MENT COLL	ECTION		
	vel measurement							
	level measureme				n wellhead			
	level measureme			!•				
O Other:								
				PURGING INF	ORMATION			
 Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. 								
_	s well volumes bas vell until field para			neiu paremet	eis siadiii200.			
O Other:	Other: Pumped dry, stable parameters							
Additional (Comments:	Unabl	e to collect SWI	or sample a	s well is disc	connected, and sou	ınding port is rust	ed shut.
							J	

		G	roundwa	ater Sar	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	East				Weather:	Partly cloudy, 9	0s	
ADWR No:	599769				Sampler:	VNH		
	<u>'</u>			WELL DAT	A	•		
Well De	pth (ft bls):		125		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing D	iameter (in):		6			5	0.6 1.0	
Static Water	Level (ft bmp):		72.03			6 8	1.4 2.6	
Casing V	olume (gal):	78	x3 =	233		10	4.0	
Total Volume Purged (gal): Casing Volume = gallons/foot * water column (feet)							n (feet)	
			FIEL	D SAMPLIN	G DATA			
Time	(min) (gpm) (gallons) (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
4:00 PM	Pump On							
4:08 PM	8m	10	80	7.24	21.3	612.3		
4:16 PM	16m 10 160 7.46				20.8	616.4		
4:24 PM	24m	10	240	7.43	20.7	618.8		
							Pump Off	
	FIELD PARAME	TER STABILIZ			-	3 su pH, 2 degrees (C, and 100 S/cm)	
		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		IPLE INFORI	WATION			
Sample Colle	ection Point:	Wellhead spi	got		No. of			Ciltoro d
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
East		4:30:13 PM	Poly	250mL	1	300.0	NA	Υ
		V	VATER LEVEL	MEASUREM	IENT COLLE	ECTION		
	vel measurement		annon to wallbo	ad/Na sastia i	اده و طال و د			
	level measureme level measureme			ad/No port in v	weiinead			
	level measureme							
O Other:								
WELL PURGING INFORMATION								
 V Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. 								
_	well volumes bas ell until field parar			ola paremeter	o otabilizeu.			
Other:								
Additional C	Comments:							

		G	roundwa	ter Sar	nplina f	orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc		
Task No:	1				Date:	Jul 17, 2014	or Queen Brane	11	
Well ID:	Echave				Weather:	Sunny, 70s			
ADWR No:	219449				Sampler:	VNH			
ADWIN No.	213443			WELL DAT		VIVII			
\\ \ D	4 (6.11.)		245		<u> </u>		Capacity		
Well De	epth (ft bls):		345		Nomina	l Size (inches)	Gallons per L 0.1		
Casing D	Diameter (in):		6			4	0.6		
Static Water	Static Water Level (ft bmp): Use 218.41 fro			8/13		5 6	1.0 1.4		
Casing \	/olume (gal):	186	x3 =	558		8	2.6 4.0		
		100		000	Casi	Casing Volume = gallons/foot * water column (feet)			
Total Volum	ne Purged (gal):		560 FIEL	D SAMPLING					
Time	Time Elapsed Time Discharge Rate (min) Discharge Rate (gallons) PH (SU)			pН	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
8:37 AM	Pump On								
8:57 AM	20m	7	140	7.55	21.9	405.6			
9:17 AM	40m	7	280	7.68	21.8	405.0			
9:37 AM	60m	7	420	7.67	21.9	404.8			
9:57 AM	80m	7	560	7.68	21.6	405.0			
							Pump Off		
	FIELD PARAM	ETER STABILIZA	ATION: Three cor	nsecutive read	lings within 0.3	su pH, 2 degrees C	c, and 100 (S/cm)		
			SAM	PLE INFORM	MATION				
Sample Colle	ection Point:	Well head spig	ot, hand-filter						
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Echave		10:10:44	Poly	250mL	1	300.0	NA	Y	
			ATER LEVEL I	MEASUREM	ENT COLLE	CTION			
	vel measurement of level measureme		ccess to wellhes	d/No port in w	allhaad				
	r level measureme			a, No poit III W	omieau				
	r level measureme								
O Other:									
	<u> </u>			URGING INFO	ORMATION				
	B well volumes and B well volumes bas			d paremeters	stabilized				
_	well until field para		10 VOI AIIA 1161	- parometers	J.Gomzou.				
O Other:	•								
Additional (Comments:	Switch to turn	well on is top	o right.					
			- 1	<u> </u>					

		G	roundwa	ter Sar	npling F	-orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Eppele 641				Weather:	Sunny, 70s		
ADWR No:	805641				Sampler:	VNH		
				WELL DAT	A			
Well De	epth (ft bls):		265		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
			8			2 4	0.1	6
	iameter (in):					5	1.0	
Static Water	Level (ft bmp):		66.62			8	1.4	
Casing V	olume (gal):	518	x3 =	1554		10	4.0	
Total Volum	e Purged (gal):		550		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
	T		FIEL	O SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
9:45 AM	Pump On					•		
10:00 AM	14m	10	150	7.63	21.0	584.2		
10:15 AM	29m	10	300	7.66	20.9	589.9		
10:30 AM	44m	10	450	7.65	21.0	596.9		
10:40 AM	54m	10	550				Pumpe	d dry
							Pump Off	
	FIELD PARAM	ETER STABILIZA			-	su pH, 2 degrees C	, and 100 S/cm)	
				PLE INFORM	MATION			
Sample Colle	ction Point:	Wellhead spig	ot			T	_	
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Eppele 641		10:55:05	Poly	250mL	1	300.0	NA	Y
		101	ATER LEVEL N	MEAGUDEA	ENT COLLE	CTION		
X Water lev	el measurement o		AIER LEVEL I	VIEASUREIVI	ENT COLLE	CTION		
	level measuremen		ccess to wellhead	d/No port in we	ellhead			
O No water	level measuremer	nt collected. Obst	ruction in well.					
No water	level measuremer	nt collected. Well	is pumping.					
Other:			WELL D	URGING INFO	ORMATION.			
Purged 3	well volumes and	field parameters		CAGINO INFO	Z. CIVII/ CT I OIN			
_	well volumes base	•		d paremeters	stabilized.			
_	ell until field parar							
X Other:	Pumped dry, sta	ble parameters						
Additional C	comments:	Pumped dry at 5	55min, or 550gal.	Wait 15min fo	or recharge, the	en sample because	parameters are sta	ble.

Project No:	287030				Client:	Freeport Coppe	r Queen Brand	<u>ch</u>
rask No:					Date:	8-21-14		
Nell ID:	Famo	must Bla	au K		Weather:	Partly C	loudy	
ADWR No:	- 4 4 4 4	101			Sampler: (Chastonler	L'Sheyman	
ADVVIX NO.				WELL DA		3431.71 97.6.2		
					Mominal	Casing Size (inches)	Capacity Gallons per L	inear Foot
Well De	epth (ft bis):				NOMINA	2	0.10	3
Casing [Diameter (in):					4 5	0.68 1.03	
Static Wate	er Level (ft bmp):	_				6	1.4	7
	•		x3 =			8 10	2.6° 4.00	
Casing	/olume (gal):		<u> </u>		Casin	g Volume = gallons	/foot * water colur	nn (feet)
Total Volun	ne Purged (gai):			D SAMPLIN		3		
	 	Discharge	· Total			Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents
	Pump On							
·			,					
		٠.						
	<u> </u>							
.								
								
		<u> </u>						
			<u> </u>				Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within ().3 su pH, 2 degree	s C, and 100 μS/c	m)
				IPLE INFOR				
Sample Co	llection Point:						<u> </u>	
	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
FQB-	2821/1	1430	PL	250	1	300	Icc	<u> </u>
		` `					·′	
		W	ATER LEVEL	MEASURE	MENT COLL	ECTION		
	evel measuremen							
	er level measurem				t in wellnead		•	
	er level measurem er level measurem							
☐ Other:	ei leach (lisaadio	0112 0011001	11011 10 paniping			. 		
			WELL	PURGING IN	FORMATION		<u> </u>	<u>.,.</u>
	3 well volumes ar					_		
_	3 well volumes ba			nd field parem	neters stabilizo	9 d .		
i -	i well until field par	ameters stabil	izea.					
	l Camananta:				<u> </u>	· · · · · · · · · · · · · · · · · · ·		
Additiona	Comments:							
						<u>. </u>		

and increase the index of the control of the contro

CREEK SO

Date: Field Clon X Westher: Sampler: Christ-tylu Stateman Well Dath Well Dath (ft bis): Casing Diameter (in): Casing Diameter (in): Static Water Level (ft bmp): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): FIELD SAMPLING DATA Time Elapsed Time Rate (gal) Discharge (gal) Blackarge (gal) (gal) Discharge (ga	<u> </u>
WRN No: WELL DATA Casing Capacity Well Depth (ft bis): Casing Diameter (in): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): Time Elapsed Time Rate (gam) Pump On Pump On Pump On Pump On Pield PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm SAMPLE INFORMATION Sample Collection Point: Sample Collection Point: Water level measurement collected. No access to wellhead/No port in wellnead No water level measurement collected. Obstruction in well. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: Well DATA Casing Capacity A	Tandy
Well Depth (ft bis): Casing Capacity Well Depth (ft bis): Casing Diameter (in): Casing Diameter (in): Casing Diameter (in): Casing Diameter (in): Casing Volume (gal): Casing Volume (gal): Total Volume Purged (gal): FIELD SAMPLING DATA Time Elapsed Time (min) Pump On FIELD SAMPLING DATA Temp Conductance (ggm) FIELD SAMPLING DATA Temp Conductance (ggm) FIELD SAMPLING DATA Temp Conductance (ggm) FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cn SAMPLE INFORMATION Sample Collection Point: Sample Collection Point: Sample D Time Type Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Direct Well purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes based on previous water level and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 3 well volumes and fleid parameters stabilized. Purged 9 well until field parameters stabilized.	
Nominal Size (inches) Gallons per Line O.16 O.5 O.16 O.5 O	
Well Depth (ft ble): Casing Diameter (in): Static Water Level (ft bmp): Casing Volume (gal): X3 = 10	near Foot
Casing Diameter (in): Sample Collection Point: Sample ID Time Container Type Volume Containers Type Type Volume Type	
Casing Volume (gal): Z3 = 10 4.08 Casing Volume (gal): Time Elapsad Time (min) Diacharge (gal)ms (gum) Diacharge (gal)ms (gum) Diacharge (gal)ms (gum) Diacharge (gal)ms) Pump On Pump On FIELD SAMPLING DATA Temp Conductance (µS/rm) Specific Conductance (µS/rm) Pump On FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/rm SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume No. of Containers (Containers) Analysis Method Preservative Type WATER LEVEL MEASUREMENT COLLECTION WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellnead/No port in wellhead No water level measurement collected. Well is pumping. Other: Well purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. Purged well until field parameters stabilized. Other:	
Casing Volume (gal): Casing Volume Purged (gal): Casing Volume = gallons/foot * water column	
Total Volume Purged (gal): FIELD SAMPLING DATA Time Elapsed Time (min) Pump On Pump On FIELD SAMPLING DATA FIELD SAMPLING DATA Specific Conductance (us/rm) Pump On FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cn SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Container Sample ID FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cn SAMPLE INFORMATION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Well is pumping. Other: Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Other:	
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gallons) PH Temp (SU) Temp Conductance (µS/cm) Conductance (µS/cm) Pump On Pump On Pitch Pump On Pump On Pitch Pump On Pump On Pitch Pump On Pump On Pitch Pump On Pump	in (feet)
Time Elapsed Time (min) Discharge Rate (gpm) Pilocharge (gullons) Pump On Pump On Pump On Piecharge (gallons) Pump On Piecharge (gallons) Pump On Piecharge (gallons) Pump On Piecharge (gallons) Pump On Piecharge (gallons) Pump On Piecharge (gallons) Pump On Piecharge Volume Rate (gallons) Pump Off Sample ID Time Container Type Volume Container Container Type Pump Off Piecharge Volume Container Analysis Method Preservative Parallel Pump On Pump On Pump On Preservative Container No. of Container Type Volume Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of Container No. of No. of Container No. of No. of Container No. of No. of Container No. of No. of Container No. of No. of Container No. of No. of Container No. of No. of Container No. of No. of No. of Container No. of N	
Pump On FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cm SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume Oontainers Analysis Method Preservative PB - 0 82 19 WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	ents
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FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cn SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume No. of Containers Containers Analysis Method Preservative 300 Loc WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Other:	
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.3 su pH, 2 degrees C, and 100 µS/cn SAMPLE INFORMATION Sample Collection Point: Sample ID Time Container Type Volume No. of Containers Containers WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected. No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Other:	
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Sample Collection Point: Sample ID Time Type Container Type Volume Containers Containers Containers Containers Containers Containers Analysis Method Preservative ### ### ### ### ### ### ### ### ### #	
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WATER LEVEL MEASUREMENT COLLECTION Water level measurement collected: No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	Filtered (y/n)
Water level measurement collected: No water level measurement collected. No access to wellhead/No port in wellhead No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: WELL PURGING INFORMATION Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized. Other:	- <i>//</i> -
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□ No water level measurement collected. Well is pumping. □ Other: WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	
Unit	
□ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	<u> </u>
□ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Other:	
☐ Purged well until field parameters stabilized. ☐ Other:	
Other:	
Additional Comments:	
Auditional Commonts.	

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 17, 2014		
Well ID:	Fleming				Weather:	Partly cloudy, 7	'0s	
ADWR No:	218386				Sampler:	VNH		
	•			WELL DA	TA			
Well De	epth (ft bls):		445		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		7			2	0.1 0.6	
						5	1.0	2
Static Water	Level (ft bmp):		372.97			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =			10	4.0	
Total Volum	e Purged (gal):				Casi	ing Volume = gallon	s/foot * water colum	n (feet)
		ī	FIE	LD SAMPLIN	IG DATA		T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
	<u> </u>					<u> </u>	Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAN	IPLE INFOR	IMATION			
Sample Colle	ection Point:	1	<u> </u>		I	1		
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		'	WATER LEVEL	MEASURE	MENT COLL	ECTION		
	el measurement			101				
	level measureme level measureme			·	wellnead			
	level measureme			•				
O Other:								
				PURGING INF	FORMATION			
_	well volumes and well volumes bas			field paramete	re etabilizad			
	well volumes bas ell until field parar			neiu paremete	is stabilized.			
O Other:	<u> </u>							
Additional C	Comments:				WL	0		

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 14, 2014		
Well ID:	Franco 101				Weather:	Partly cloudy, 8	0s	
ADWR No:	500101				Sampler:	VNH		
				WELL DA	TA			
Well De	pth (ft bls):		200		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		6			2	0.1 0.6	
						5	1.0	2
Static Water	Level (ft bmp):		197.08			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =			10	4.0	
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	in (feet)
			FIE	LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On	•						
	<u></u>					<u> </u>	Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAIN	IPLE INFOR	IMATION			
Sample Colle	ection Point:	I	<u> </u>		I	T		
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		,	WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	vel measurement o							
	level measureme level measureme				wellnead			
	level measureme			•				
O Other:								
				PURGING INF	FORMATION			
_	well volumes and			field movements				
_	well volumes bas ell until field parar			neid paremete	irs stabilized.			
O Other:	Pumped dry, sta							
Additional C	Comments:				WLO	<u> </u>		
						- 		

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 14, 2014		
Well ID:	Franco 383				Weather:	Partly cloudy, 8	30s	
ADWR No:	221383				Sampler:	VNH		
				WELL DA	ТА			
Well De	pth (ft bls):		711		Nomina	Casing	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		5			2	0.10	
Casing D	iameter (iii).				5	1.0		
Static Water	Level (ft bmp):		196.87			8	1.4 ⁻ 2.6	
Casing V	olume (gal):	524	x3 =	1573		10	4.0	
Total Volum	e Purged (gal):		640		Casi	ing Volume = gallon	s/foot * water colum	n (feet)
	1	ı	FIEI	LD SAMPLIN	IG DATA	Ī	T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
1:50 PM Pump On								
2:10 PM 20m 8 160 7.44 26.5 1026 2:30 PM 40m 8 320 7.68 26.4 1029								
2:30 PM	40m	1029						
2:50 PM	60m	8	480	7.62	26.2	1029		
3:10 PM	80m	8	640	7.63	26.5	1030		
							Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
			-	IPLE INFOR	MATION			
Sample Colle	ection Point:	Spigot near	pressure tanks	in shed	l N	ı	<u> </u>	F24 1
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Franco 383		15:13:56	Poly	500mL	1	300.0	NA	Υ
			WATER LEVEL	MEASURE	MENT COLL	ECTION		
	el measurement			!/N				
	level measureme			·	weiinead			
Other:								
				PURGING INF	ORMATION			
_	well volumes and well volumes bas			field parameta	re etabilizad			
_	ell until field para			neiu paremete	is stabilized.			
X Other:			and stable paran	neters				
Additional C	Comments:							
	,							

		C	Groundwa	ater Sa	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 21, 2014			
Well ID:	Goar Ranch				Weather:	Sunny, 80s			
ADWR No:	610695				Sampler:	VNH			
				WELL DA	TA				
Well De	epth (ft bls):		250		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot	
Casing D	liameter (in):		2	0.1					
			7			5	1.0	2	
Static Water	Level (ft bmp):		191.73			8	1.4 2.6		
Casing V	olume (gal):		x3 =	0		10	4.0		
Total Volum	e Purged (gal):				Casi	ing Volume = gallons	s/foot * water colum	n (feet)	
			FIE	LD SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On	<u> </u>			L				
							Pump Off		
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)		
			SAIN	MPLE INFOR	MATION				
Sample Colle	ection Point:	<u> </u>	<u> </u>		No. of	1		Elle and	
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
		'	WATER LEVEL	MEASURE	MENT COLL	ECTION			
	el measurement			101					
	level measureme				wellnead				
 No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. 									
Other:									
				PURGING INF	ORMATION				
_	well volumes and well volumes bas			field paremete	re etahilizad				
_	ell until field parar			neiu paremete	is stabilized.				
O Other:	Pumped dry, sta								
Additional C	Comments:				WLO)			

Project No:	287030				Client: <u>F</u>	Freeport Coppe	r Queen Branci	<u> </u>	
Task No:					Date:	7	<u>-21-14</u>		
Well ID:	170	ban			Weather:	Partly	aoudy		
ADWR No:					Sampler:	Christophy 1	- Streamon		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				WELL DAT	Α	Casing (Canacity		
144- II D	- At- (ft blo)	7/	20		Nominal	Size (inches)	Gallons per Lir	near Foot	
MAGII DE	epth (ft bls):				· · · · · · · · · · · · · · · · · · ·	2	0.16 0.65	1	
Casing E	Diameter (in):	5	11			5	1.02		
Static Wate	r Level (ft bmp):		170.90		1	6	1.47 2.61		
	/olume (gal):	13.	2 x3 = 3	96		10	4.08		
_	ne Purged (gal):		5200		Casing Volume = gallons/foot * water column (feet)				
TOLAS VOIGI	ne r diged (gai).		FIEL	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	 Total Discharge (gallons) 	pH (SU)	Temp (℃)	Specific Conductance (µS/cm)	Comme	nts	
1025	Pump On					- 1a a -	<u> </u>		
1035		17.6	17%	6.65	21.9	1929		<u> </u>	
1045	20	17/	352	4-68	917	1901			
1068	30	17.1,	£2 X	4.69	71.1	1903			
1423	1/9		- 7-0 -						
ļ									
ļ									
	<u> </u>	 						<u> </u>	
 		 	<u></u>						
							Pump Off		
ļ	FIELD PARAME	I STABILIZ	ATION: Three o	onsecutive rea	adings within (0.3 su pH, 2 degree	s C, and 100 μS/c	m)	
	1122		SAI	VIPLE INFOR	RMATION		_		
Comple Co	ollection Point:								
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
 		1055	PL	150	17	300	Fea	<i>Y</i>	
1700	θρ/1	11075	<u> </u>		1			<i>(</i>	
 	<u>·</u>	V	VATER LEVE	L MEASURE	MENT COL	LECTION			
☐ No wa	level measurementer level measurer liter level measurer liter level measurer	ment collected. ment collected.	Obstruction in	well.	ort in wellhead				
- Julie	·		WELL	PURGING IN	FORMATION	l			
Purge Durge	ed 3 well volumes a ed 3 well volumes b ed well until field pa : al Comments:	oased on previ	ous water level	and field parer	neters stabiliz	red.			
129 1	ai Commonio.	1							
				. = =	<u> </u>				

		Gı	roundwa	ter San	npling F	orm			
Project No:	287030				Client:		er Queen Brancl	h	
Task No:	1				Date:	Jul 14, 2014			
Well ID:	Howard 312				Weather:	Sunny, 70s			
ADWR No:	221312				Sampler:	VNH			
	•			WELL DATA	Ą				
Well De	epth (ft bls):		980		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
Casing D	iameter (in):		5			2	0.16 0.65		
						5	1.02	2	
Static Water	Level (ft bmp):		206.97			8	1.47 2.6		
Casing V	olume (gal):	788	x3 =	2365		10	4.08		
Total Volum	e Purged (gal):		800			ng Volume = gallon	s/foot * water colum	n (feet)	
	I		FIELD	SAMPLING	DATA		I		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commo	ents	
9:55 AM	Pump On								
10:15 AM	20m	8	160	8.17	23.0	616.0	Clear, odorless	i	
10:35 AM	40m	8	320	8.18	24.2	617.5			
10:55 AM 60m 8 480 8.15 25.5 618.9									
11:15 AM 80m 8 640 8.16 25.9 619.1									
11:35 AM 100m 8 800 8.16 26.6 618.3									
	FIELD DADA	45TED OT A DIL 17A	TION TI				Pump Off		
	FIELD PARAM	TETER STABILIZA		PLE INFORM	_	su pH, 2 degrees C	, and 100 S/cm)		
0	- die - Deiet	Co-in-st	_	_	IATION				
Sample Colle	ection Point:	Spigot near pres	ssure tank in sn	lea	No. of		<u> </u>	Filtered	
San	nple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)	
Howard 312	2	11:45:43	Poly	500mL	1	300.0	NA	Υ	
			ATER LEVEL N	MEASUREM	ENT COLLEC	CTION			
	el measurement o	collected. nt collected. No ac	cass to wallhaad	/No port in we	llhaad				
		nt collected. No ac		no port in we	iiileau				
No water level measurement collected. Well is pumping.									
Other: WELL PURGING INFORMATION									
O Durand O	woll volumes are	field perometers		JRGING INFO	KMATION				
_		I field parameters s ed on previous wa		paremeters s	tabilized.				
	ell until field parar								
X Other:	Purge minimum	1 well volume, and	stable paramete	rs					
Additional C	Comments:								
-									

		G	roundwa	ter Sar	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Brancl	h
Task No:	1				Date:	Jul 14, 2014		
Well ID:	Howard NR				Weather:	Sunny, 80s		
ADWR No:	NR				Sampler:	VNH		
7.5 **********	,			WELL DAT				
Well De	epth (ft bls):		220		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					110111111	2	0.10	3
Casing D	Diameter (in):		6			5	0.69	
Static Water	r Level (ft bmp):		157.92			6 8	1.4 ⁻ 2.6 ⁻	
Casing \	/olume (gal):	91	x3 =	274		10	4.08	
Total Volum	ne Purged (gal):		440		Casi	ng Volume = gallon	s/foot * water colum	n (feet)
	T		FIEL	D SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
9:05 AM	Pump On							
9:15 AM 9m 11 110 7.46 21.3 1152 Faint yellow, odorles								
9:25 AM	19m	11	220	7.32	21.6	1225	Clear, odorless	i
9:35 AM	29m	11	330	7.25	21.2	1273		
9:45 AM	39m	11	440	7.18	21.1	1300		
							Pump Off	
	FIELD PARAM	ETER STABILIZ			-	su pH, 2 degrees (C, and 100 S/cm)	
				PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spig	ot		T		1	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Howard NR	?	9:49:31	Poly	500mL	1	300.0	NA	Υ
DUP20140	714	1800	Poly	500mL	1	300.0	NA	Y
			/ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement		acces to wellbook	d/No port in w	allbood			
	r level measureme r level measureme			u/No port iii w	eiirieau			
No water level measurement collected. Well is pumping.								
O Other:								
V D 15) well we been	Halder		URGING INFO	DRMATION			
•	B well volumes and B well volumes bas	•		d paremeters	stabilized			
_	well until field para			,				
O Other:								
Additional C	Comments:							
	·							

		G	roundwa	ter Sar	npling F	orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Brancl	h	
Task No:	1				Date:	Jul 10, 2014			
Well ID:	Keefer				Weather:	Partly cloudy, 8	30s		
ADWR No:	209744				Sampler:	VNH			
				WELL DAT	<u> </u>				
Well De	epth (ft bls):		245		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
	,				Nomina	2	0.16		
Casing D	Diameter (in):		6			5	0.65 1.02		
Static Wate	r Level (ft bmp):		141.97			6	1.47		
Casing V	olume (gal):	151	x3 =	454		8 10	2.6° 4.08		
Total Volum	ne Purged (gal):		450		Casi	ng Volume = gallon	s/foot * water colum	n (feet)	
			FIEL	D SAMPLING	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
12:15 PM	Pump On								
12:30 PM	15m	10	150	7.45	22.6	448.5			
12:45 PM	30m	10	300	7.52	21.6	452.7			
1:00 PM	45m	10	450	7.49	21.6	460.5			
							Pump Off		
	FIELD PARAM	IETER STABILIZ				su pH, 2 degrees C	C, and 100 S/cm)		
				PLE INFORM	MATION				
Sample Colle	ection Point:	Wellhead spig	ot I		l N		<u> </u>	F-14 1	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Keefer		13:02:41	Poly	250mL	1	300.0	NA	Υ	
		V	VATER LEVEL I	MEASUREM	ENT COLLE	CTION			
	vel measurement		anne ta wallban	d/No postis	م م ما الم				
	level measureme			d/No port in we	eimeau				
O Other:									
V				URGING INFO	DRMATION				
	well volumes and well volumes bas			ld naremeters	stahilized				
_	vell until field para			a paremeters	Stabilizea.				
O Other:									
Additional (Comments:								

		G	roundwa	ter San	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 14, 2014		
Well ID:	McConnell 26	65			Weather:	Partly cloudy, 8	30s	
ADWR No:	539265				Sampler:	VNH		
				WELL DAT				
Well De	pth (ft bls):		216		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
	, , ,					2	0.1	6
Casing Di	iameter (in):		6			5	0.6 1.0	
Static Water	Level (ft bmp):		164.03			6 8	1.4 ⁻ 2.6	
Casing V	olume (gal):	76	x3 =	229		10	4.0	
Total Volume	e Purged (gal):		270		Casi	ng Volume = gallon	s/foot * water colum	n (feet)
			FIEL	D SAMPLING	DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
12:32 PM	Pump On							
12:42 PM	10m	9	90	6.89	22.2	1962	Clear, sulphur	odor
12:52 PM	20m	9	180	6.96	21.9	1977	Clear, sulphur	odor
1:02 PM	30m	9	270	6.95	21.8	1941	Clear, sulphur	odor
							Pump Off	
	FIELD PARAM	ETER STABILIZ			-	su pH, 2 degrees 0	C, and 100 S/cm)	
			-	PLE INFORM	MATION			
Sample Colle	ction Point:	Wellhead spig	ot T				<u> </u>	
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
McConnell 2	265	13:06:14	Poly	500mL	1	300.0	NA	Υ
			VATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	el measurement o		access to wellhead	d/No port in w	allboad			
	level measureme			a/140 port iii we	simeau			
O No water level measurement collected. Well is pumping.								
Other: WELL PURGING INFORMATION								
V D 10				URGING INFO	DRMATION			
_	well volumes has		s stabilized. vater level and fiel	d naremeters	stahilized			
_	ell until field parar			a paromotoro	otabilizoa.			
O Other:								
Additional C	comments:							

		G	roundwa	ter San	npling F	orm			
Project No:	287030				Client:		er Queen Branch	า	
Task No:	1				Date:	Sep 9, 2014			
Well ID:	McConnell 45	59			Weather:	Sunny, 70s			
ADWR No:	221459				Sampler:	VNH			
				WELL DATA	A				
Well De	epth (ft bls):		863		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
			5			2	0.16	3	
Casing D	iameter (in):					5	0.65 1.02		
Static Water	Level (ft bmp):		167.37			8	1.47 2.61		
Casing V	olume (gal):	710	x3 =	2129		10	4.08		
Total Volum	e Purged (gal):		825		Casing Volume = gallons/foot * water column (feet)				
			FIELD	SAMPLING	DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents	
9:30 AM	Pump On				-				
9:45 AM	15m	11	165	7.97	23.4	455.6			
10:00 AM	30m	11	330	8.12	24.1	461.1			
10:15 AM	45m	11	495	8.12	24.8	460.6			
10:30 AM	60m	11	660	8.13	25.0	466.3			
10:45 AM	75m	11	825	8.12	25.1	465.7			
							Pump Off		
	FIELD PARAM	IETER STABILIZA	TION: Three con	secutive readi	ngs within 0.3	su pH, 2 degrees C	, and 100 「S/cm)		
			SAMF	PLE INFORM	MATION				
Sample Colle	ection Point:	Spigot near pre	ssure-tanks in s	hed					
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
McConnell 4	459	10:50:44	Poly	250mL	1	300.0	NA	Υ	
		W	ATER LEVEL N	MEASUREM	ENT COLLEC	CTION			
	vel measurement o			6.					
	level measureme			'No port in we	llhead				
	level measureme								
Other:			-1-1-3						
			WELL PL	JRGING INFO	RMATION				
_	well volumes and								
_	well volumes bas vell until field parar		ter level and field	paremeters s	tabilized.				
X Other:		neters stabilized. Ime, stable param	eters						
Additional C									
Auditional C	JOHIHEHIS.								

		C	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 21, 2014		
Well ID:	Metzler				Weather:	Sunny, 80s		
ADWR No:	35-71891				Sampler:	VNH		
				WELL DA				
Well De	epth (ft bls):		351		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
						2	0.16	
Casing L	Diameter (in):		6			5	0.6 1.0	
Static Water	r Level (ft bmp):		293.45			6 8	1.4 ⁻ 2.6	
Casing V	Casing Volume (gal): x3 = 0				10	4.0		
Total Volum	ne Purged (gal):				Casi	ng Volume = gallons	s/foot * water colum	in (feet)
			FIE	LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
							Pump Off	
	FIELD PARAME	TER STABILIZ				.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAIN	IPLE INFOR	MATION			
Sample Colle	ection Point:	<u> </u>	<u> </u>		No. of	Ι		Elle and
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		,	WATER LEVEL	MEASURE	MENT COLL	ECTION		
	vel measurement			1/51				
	level measureme				weiinead			
	level measureme			•				
O Other:								
				PURGING INF	ORMATION			
_	B well volumes and B well volumes bas			field naremeto	re etahilizad			
_	vell until field parar			neiu paremete	is stabilized.			
O Other:	Pumped dry, sta							
Additional (Comments:				WLO)		

Project No:	287030									
	201030				Client:	Freeport Coppe	er Queen Branch	1		
Гask No:	1				Date:	Jul 7, 2014				
Vell ID:	Ness				Weather:	Overcast, 70s				
ADWR No:	509127				Sampler:	VNH				
				WELL D	ATA	Cook	0			
Well Der	pth (ft bls):		812		Nomina	Casin al Size (inches)	ng Capacity Gallons per	Linear Foot		
			6			2	0.1	16		
	iameter (in):					5	1.0	02		
Static Water	Level (ft bmp):		594.42			6 8				
Casing Vo	olume (gal):	320	x3 =	959		10				
Total Volume	e Purged (gal):		960		Ca	asing Volume = gallo	ns/foot * water colur	nn (feet)		
	-		FIE	ELD SAMPLI	ING DATA	_				
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (SU) (°C)		Specific Conductance (µS/cm)	Comr	nents						
11:45 AM	Pump On									
12:05 PM	20m	8	160	7.46	24.9	535.3				
12:25 PM	40m	8	320	7.58	25.2	534.2				
12:45 PM	60m	8	480	7.62	25.2	534.9				
1:05 PM	80m	8	640	7.62	25.3	536.3				
1:25 PM	100m	8	800	7.63	25.3	536.4				
1:45 PM	120m	8	960	7.60	25.3	536.6				
							Pump Off			
	FIELD PARAM	ETER STABIL				0.3 su pH, 2 degrees	s C, and 100 S/cm)		
			SA	MPLE INFO	RMATION					
Sample Collec	ction Point:	Spigot on sto	orage tank.							
	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Vess		13:49:28	Poly	250mL	1	300.0	NA	Y		
		<u> </u>	\^\^ TED E\ /E	T ME ACLIDE	TATELY COL	LECTION				
X Water lev	vel measurement o	- alleated	WATER LEVE	L MEASURE	-MENT COL	LECTION				
	level measurement		o access to wellh	ead/No port ir	ı wellhead					
	level measuremen			·						
	level measuremen	nt collected. W	/ell is pumping.							
O Other:			WELL		NFORMATION	1				
X Purged 3	well volumes and	I field paramet		. FUNGING II	IFORWIA HOLL					
_	well volumes bas			field paremete	ers stabilized.					
_	ell until field parar									
Other:										
Additional Co	omments:									

		G	roundwa	ter San	npling F	orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Brancl	n	
Task No:	1				Date:	Jul 7, 2014			
Well ID:	Noteman				Weather:	Overcast, rainy	, 70s		
ADWR No:	212483				Sampler:	VNH			
	<u>'</u>			WELL DAT					
Well D	epth (ft bls):		470		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot	
						2	0.16	3	
Casing I	Diameter (in):		5			5	0.65		
Static Wate	er Level (ft bmp):	Use 32	7.54 from 2/2	5/09		6	1.47		
Casing \	Volume (gal):	145	x3 =	435		10	2.6° 4.08		
Total Volun	ne Purged (gal):		440		Cas	ing Volume = gallons	s/foot * water colum	n (feet)	
Total Volum	no r urgou (gui).			SAMPLING	DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)				ents	
4:00 PM	PM Pump On								
4:10 PM	10m	11	110	6.83	23.2	1428			
4:20 PM	20m	11	220	6.84	23.3	1421			
4:30 PM	30m	11	330	6.86	23.4	1420			
4:40 PM	40m	11	440	6.80	23.2	1423			
							Pump Off		
	FIELD PARAN	METER STABILIZA	TION: Three con	secutive read	ings within 0.3	su pH, 2 degrees C,	, and 100 「S/cm)		
			SAMF	PLE INFORM	MATION				
Sample Coll	ection Point:	Yard spigot und	er fake rock						
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Noteman		16:43:56	Poly	250mL	1	300.0	NA	Y	
			ATER LEVEL N	MEASUREM	ENT COLLEC	CTION			
	evel measurement or r level measureme		ecase to wallhand	/No port in wa	llhaad				
	r level measureme r level measureme			TAO POIT III WE	ııı ıcau				
	r level measureme								
Other:									
0 5	2	- Ld - ·		JRGING INFO	RMATION				
_	3 well volumes and 3 well volumes bas			paremeters s	tabilized				
_	well until field parar			F 0. 51110101010					
O Other:	·								
Additional (Comments:								

Project No:	287030				_Client:	Freeport Copp	er Queen Bran	ich
Task No:	1.0				Date:	9-23-14		
Well ID:	NSO	-07			— Weather:	4-23-4	4	
ADWR No:					Sampler:	RTM		
				WELL DA		000		
147 11 15							Capacity	
Well De	epth (ft bls):				Nomina	al Size (inches)	Gallons per I	
Casing D	Diameter (in):					4	0.6	-
Static Wate	r Level (ft bmp):	104	17			5 6	1.0 1.4	
			/ 42 =		1	8	2.6	1
Casing \	/olume (gal):	/	x3 =		0	10	4.0	
Total Volum	ne Purged (gal):	/				ng Volume = gallon	s/foot * water colui	mn (feet)
		T		LD SAMPLI	NG DATA	r		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents
	Pump On							
		,				1		
		1/0		110	SIA	MY	6	
		1		100	1	1111		
	V V							
							Pump Off	
F	IELD PARAMET	ER STABILIZA	TION: Three c	onsecutive rea	dings within (0.3 su pH, 2 degree		m)
			SAN	MPLE INFOR	RMATION			
Sample Coll	ection Point:							
			Container		No. of			Filtered
San	nple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)
						-		
		W	ATER LEVEL	. MEASURE	MENT COLL	ECTION		
	vel measurement							
_	level measureme				t in wellhead			
	level measureme level measureme							
☐ Other:	icver measureme	ent conected.	ven is pumping	.6				
	1		WELL I	PURGING INF	ORMATION			
□ Purged 3	well volumes and	d field paramet	ers stabilized.					
	well yolumes bas			nd field parem	eters stabilize	ed.		
	ell until field para	meters stabiliz	ed.					
□ Other:			<u> </u>	0	1 2	10111	1	1 -
Additional C		Keviu	Quint	, Kic	K Lup	EZ (AWC)	, Nic	k up Tes
Amer	iva, al	025	k				6.4	

Project No:	287030				_Client:	Freeport Copp	er Queen Bran	ch
Task No:	0.1				Date:	9-23-14		
Well ID:	1.808	15D-0	3		Weather:	SUNNE	70's	
ADWR No:					Sampler:	B50		
				WELL DA				
Well De	epth (ft bls):				Namina		Capacity	incar Foot
					Nomina	al Size (inches)	Gallons per I 0.1	
Casing D	Piameter (in):					4 5	0.6	
Static Water	Level (ft bmp):	89.1				6	1.0 1.4	7
Casing V	olume (gal):	12 10	x3 =			8 10	2.6 4.0	
Total Volum	e Purged (gal):				Casir	ng Volume = gallons	s/foot * water colur	nn (feet)
	3 (3 /		FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
						10	1000	
	1	2/8			1	7 7	A VVIA (()
							V	
				/	1			
		V						
							Pump Off	
F	II IELD PARAMETE	L ER STABILIZA	TION: Three co	nsecutive rea	dinas within ().3 su pH, 2 degree		m)
				IPLE INFOR			o o, and roo poro.	,
Sample Colle	action Doint							
Sample Colle	ection Point:		Container		No of			F:11.
Sam	iple ID	Time	Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
. 1		W	ATER LEVEL	MEASURE	MENT COLL	ECTION		
Water lev	el measurement							
☐ No water	level measureme	nt collected. N	lo access to we	llhead/No por	t in wellhead			
	level measureme			ell.				
	level measureme	nt collected. W	Vell is pumping.					
Other:			WELLB	URGING INF	ORMATION			
☐ Purged 3	well volumes and	field naramet		OKONIO IIII	ORIVIATION			
	well volumes bas			d field pareme	eters stabilize	d.		
	ell until field parar							
□ Other:								
Additional C	omments:	Kevin	QUIN	t, 1	sick	From To	st Ane-,	ce ave

		G	roundwa	iter Sar	npling l	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	NWC-02				Weather:	Sunny, 80s		
ADWR No:	562944				Sampler:	VNH		
				WELL DAT	A			
Well De	epth (ft bls):		312		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
						2	0.16	
Casing L	Diameter (in):		6			5	0.6 1.0	
Static Wate	r Level (ft bmp):					6	1.4	
Casing \	/olume (gal):		x3 =			10	2.6 4.0	
Total Volum	ne Purged (gal):				Cas	ing Volume = gallon	s/foot * water colum	ın (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gallons) PH (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On					•		
10:20 AM				7.60	22.4	429.7		
10:25 AM				7.59	22.1	430.9		
10:30 AM				7.57	22.0	431.6		
								,
							Pump Off	
	FIELD PARAM	ETER STABILIZ	ATION: Three co	nsecutive read	dings within 0.3	3 su pH, 2 degrees (C, and 100 S/cm)	
			SAM	PLE INFORI	MATION			
Sample Colle	ection Point:	Hand-filter fro	m wellhead spig	got				
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC-02		10:37:54	Poly	250mL	1	300.0	NA	Y
		,	1/ATED 5/5/	NATAOUDEN	TENT COLLE	OTION		
- 10/ /			VATER LEVEL	MEASUREN	IENT COLLE	CTION		
	vel measurement or level measureme		access to wellhea	ad/No port in w	<i>e</i> llhead			
	r level measureme			.a, . to po. t t				
No water	r level measureme	nt collected. We	II is pumping.					
O Other:								
O. Dumand C	II I	l field =		PURGING INF	ORMATION			
_	B well volumes and B well volumes bas			ld paremeters	stabilized			
_	vell until field para							
O Other:								
Additional (Comments:	Hand-filter						
		•						

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	NWC-03 CAF	•			Weather:	Sunny, 60s		
ADWR No:	627684				Sampler:	VNH		
	•			WELL DA	TA			
Well De	epth (ft bls):		179		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		8			2	0.1 0.6	
					5		1.0	2
Static Water	Level (ft bmp):		137.30			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =			10	4.0	
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	n (feet)
		ī	FIE	LD SAMPLIN	IG DATA		T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
	<u> </u>					<u> </u>	Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAN	IPLE INFOR	MATION			
Sample Colle	ection Point:	I	<u> </u>		I	T		
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		,	WATER LEVEL	MEASURE	MENT COLL	ECTION		
	el measurement			1/51				
	level measureme level measureme			·	wellnead			
	level measureme			•				
O Other:								
				PURGING INF	ORMATION			
_	well volumes and			field movements				
	-9							
O Other:								
Additional C	Comments:	_ 			WL	0		

		G	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	NWC-04				Weather:	Sunny, 70s		
ADWR No:	551849				Sampler:	VNH		
		1		WELL DA	TA		0 "	
Well De	epth (ft bls):		462		Nomina	Casing al Size (inches)	Capacity Gallons per I	inear Foot
Casina	Diameter (in):		10			2	0.16 0.65	
Casing L	Diameter (iii).		10			5	1.0	
Static Wate	er Level (ft bmp):					8	1.4 2.6	
Casing \	Volume (gal):		x3 =			10	4.0	
Total Volun	ne Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	ın (feet)
	0 (0 /		FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ients
	Pump On							
8:35 AM				7.49	23.9	823.8		
8:40 AM				7.49	23.8	827.3		
8:45 AM				7.57	23.8	826.2		
								,
								,
							Pump Off	
	FIELD PARAMI	ETER STABILIZ	ZATION: Three co	onsecutive rea	dings within 0.	3 su pH, 2 degrees	C, and 100 S/cm)	
			SAM	IPLE INFOR	MATION			
Sample Coll	ection Point:	Hand-filter fr	om wellhead sp	igot				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC-04		8:55:10	Poly	250mL	1	300.0	NA	Y
- 14/ /			NATER LEVEL	MEASURE	MENT COLLI	ECTION		
	vel measurement r level measureme		access to wellhe	ead/No port in	wellhead			
	r level measureme			, aa, . to poit				
No water	r level measureme	nt collected. W	ell is pumping.					
O Other:)A/ELL 1		CORMATION			
O Durgod (2 wall valumas and	I field personate		PURGING INF	ORMATION			
_	3 well volumes and 3 well volumes bas	•		ield paremete	rs stabilized.			
_	well until field para			·				
O Other:								
Additional (Comments:	Hand-filter						
1								

		G	roundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Aug 11, 2014		
Well ID:	NWC-04				Weather:	Sunny, 70s		
ADWR No:	551849				Sampler:	VNH		
				WELL DA	TA			
Well De	epth (ft bls):		462		Nomina	Casing al Size (inches)	Capacity Gallons per I	inear Foot
Cooing	Diameter (in):		10			2	0.16 0.65	
Casing L	Diameter (in):		10			5	1.0	
Static Wate	r Level (ft bmp):					8	1.4 2.6	
Casing \	/olume (gal):		x3 =			10	4.0	
Total Volum	ne Purged (gal):				Cas	ing Volume = gallon	s/foot * water colum	nn (feet)
			FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
10:10 AM				7.53	24.5	818.1		
10:15 AM				7.60	23.7	819.2		
10:20 AM				7.59	23.5	824.0		
							Pump Off	
	FIELD PARAMI	ETER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
				IPLE INFOR	MATION			
Sample Colle	ection Point:	Hand-filter fr	om wellhead sp	igot	1	T	T	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC-04		10:28:32	Poly	250mL	1	300.0	NA	Y
			//ATED EVEL	MEACUDEN	AENT COLL	CTION		
O Water le	vel measurement		NATER LEVEL	MEASURE	WENT COLLI	ECTION		
	r level measureme		access to wellhe	ead/No port in	wellhead			
	r level measureme			·				
No water	r level measureme	nt collected. W	ell is pumping.					
O Other:			\/\EII [PURGING INF	ODMATION			
Purged 3	B well volumes and	l field naramete		OKONYO NYI	ORWATION			
•	well volumes and well volumes bas	•		ield paremeter	rs stabilized.			
X Purged v	vell until field para	meters stabilize	ed.					
O Other:								
Additional (Comments:	Hand-filter						
 								

		G	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Sep 9, 2014		
Well ID:	NWC-04				Weather:	Sunny, 70s		
ADWR No:	551849				Sampler:	VNH		
				WELL DA	TA			
Well Do	epth (ft bls):		462		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
			10			2	0.16	
Casing L	Diameter (in):		10			5	0.6 1.0	
Static Wate	er Level (ft bmp):					6 8	1.4 2.6	
Casing \	Volume (gal):		x3 =			10	4.0	
Total Volun	ne Purged (gal):				Cas	ing Volume = gallon	s/foot * water colum	n (feet)
	3 3 3 (3 - 7)	I.	FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
8:38 AM				7.56	23.5	809.1		
8:43 AM				7.48	23.9	796.6		
8:48 AM				7.50	24.0	789.5		
							Pump Off	
	FIELD PARAMI	ETER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
			SAM	IPLE INFOR	MATION			
Sample Coll	ection Point:	Hand-filter fr	om wellhead sp	igot				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC-04		8:55:04	Poly	250mL	1	300.0	NA	Y
			AVATED LEVEL	MEAGUIDEN	45NT COLL			
0 \\/			NATER LEVEL	MEASURE	MENT COLLI	ECTION		
	vel measurement r level measureme		access to wellhe	ead/No port in	wellhead			
	r level measureme			·				
 No water 	r level measureme	nt collected. W	ell is pumping.					
O Other:			\^/ = 1.1.1	DUDCING INF	ODMATION			
Purged 3	3 well volumes and	I field paramete		PURGING INF	ORIVIATION			
_	3 well volumes and 3 well volumes bas	•		ield paremete	rs stabilized.			
_	well until field para			·				
O Other:								
Additional (Comments:	Hand-filter						
1								-

		G	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	NWC-06				Weather:	Sunny, 80s		
ADWR No:	575700				Sampler:	VNH		
				WELL DA	TA			
Well De	epth (ft bls):		340		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casina	Diamotor (in):		8			2	0.1	6
Casing L	Diameter (in):		0			5	1.0	
Static Wate	r Level (ft bmp):					8	1.4 2.6	
Casing \	/olume (gal):		x3 =			10	4.0	
Total Volun	ne Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	in (feet)
			FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
9:40 AM				7.53	22.9	400.6		
9:45 AM				7.66	22.3	406.1		
9:50 AM				7.68	22.4	405.9		
							Pump Off	
	FIELD PARAME	ETER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
				IPLE INFOR	MATION			
Sample Colle	ection Point:	Hand-filter from	om wellhead sp	igot	Т	ı		
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC-06		10:00:40	Poly	250mL	1	300.0	NA	Y
DUP20140	710	18:00	Poly	250mL	1	300.0	NA	Y
0 Materia	vol magaurament		WATER LEVEL	WEASURE	VIENT COLLI	ECTION		
	vel measurement of level measureme		access to wellhe	ead/No port in	wellhead			
	r level measureme			·				
 No water 	r level measureme	nt collected. W	ell is pumping.					
O Other:			WELL	PURGING INF	ODMATION			
Purged 3	3 well volumes and	I field paramete		PURGING INF	ORIVIATION			
_	s well volumes and s well volumes bas			ield paremete	rs stabilized.			
_	well until field para			·				
Other:								
Additional (Comments:	Hand-filter						

		G	roundwa	iter Sar	npling f	-orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 7, 2014		
Well ID:	Osborn				Weather:	Overcast, 70s		
ADWR No:	643436				Sampler:	VNH		
				WELL DAT	·A			
Well De	epth (ft bls):		258		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot
Casing	Diameter (in):		8			2	0.1	
						5	0.65 1.02	
Static Wate	r Level (ft bmp):		1			8	1.4 2.6	
Casing \	/olume (gal):		x3 =			10	4.0	
Total Volun	ne Purged (gal):		90		Casi	ing Volume = gallon	s/foot * water colum	nn (feet)
			FIEL	D SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments	
	Pump On	•			•			
3:24 PM				7.84	29.2	496.3		
	<u> </u>						Pump Off	
	FIELD PARAM	IETER STABILIZA			-	3 su pH, 2 degrees C	C, and 100 S/cm)	
		0 :		PLE INFORM	WATION			
Sample Colle	ection Point:	Spigot on east	side of house	<u> </u>	No. of	I	1	Filtrand
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Osborn		15:30:47	Poly	250mL	1	300.0	NA	Υ
			/ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement r level measureme		access to wellhea	d/No port in w	ellhead			
	r level measureme			ω, το ρ οιτ τ	ooaa			
No water	r level measureme	ent collected. Well	is pumping.					
O Other:			WELL 5		2014471011			
O. Diversed C		16-1-1		URGING INFO	JRMATION			
_	3 well volumes and 3 well volumes bas			ld paremeters	stabilized.			
_	well until field para							
X Other:	Sample from tan	k, hand filter						
Additional (Comments:							

		G	roundwa	ter Sar	nplina F	orm			
Project No:	287030				Client:		er Queen Branc	 h	
Task No:	1				Date:	Jul 7, 2014			
Well ID:	Palmer				Weather:	Overcast, 70s			
ADWR No:	578819				Sampler:	VNH			
ADWIT NO.	070010			WELL DAT	· ·	VIVII			
Wall Da	anth (ft hin).		220		Namina		Capacity	inner Foot	
vveii De	epth (ft bls):		220		INOMINA	l Size (inches)		Gallons per Linear Foot 0.16	
Casing D	Diameter (in):		6			5	0.69 1.00		
Static Water	r Level (ft bmp):					6	1.4		
Casing V	Casing Volume (gal): x3 =				8 10	2.6° 4.08			
	Total Volume Purged (gal): 90				Casing Volume = gallons/foot * water column (feet)				
	311 (31)	<u> </u>		D SAMPLING	G DATA				
Time	ime Elapsed Time Discharge Rate (gpm) Total Discharge pH (gullons) (SU)		Temp (°C)	Specific Conductance (µS/cm)	Comm	ents			
9:45 AM	Pump On	•			•				
9:50 AM	5	6	30	7.79	23.2	534.6			
9:55 AM	10	6	60	8.08	23.8	534.1			
10:00 AM	15	6	90	8.07	23.9	534.4			
							Pump Off		
	FIELD PARAM	METER STABILIZA	ATION: Three cor	nsecutive read	ings within 0.3	su pH, 2 degrees C	c, and 100 S/cm)		
			SAM	PLE INFORM	MATION				
Sample Colle	ection Point:	Spigot on east	side of house						
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Palmer		10:05:07	Poly	250mL	1	300.0	NA	Υ	
			/ATER LEVEL I	MEASUREM	ENT COLLE	CTION			
	vel measurement			1/51					
	level measureme			a/No port in we	elinead				
	level measureme								
O Other:									
				URGING INFO	DRMATION				
	B well volumes and B well volumes bas			d parameters	etahilizad				
_	vell until field para			u paremeters	Stabilizeu.				
O Other:	F								
Additional C	Comments:								
1									

		G	roundwa	ter Sar	npling F	-orm		
Project No:	287030				Client:	Freeport Coppe	er Oueen Branci	h
Task No:	1				Date:	Jul 17, 2014	or occorr brance	
Well ID:	Panagakos				Weather:	Overcast, 70s		
ADWR No:	35-76413				Sampler:	VNH		
				WELL DAT	<u> </u>	V 1 11 1		
Well De	epth (ft bls):		200		Nomina	Casing	Capacity Gallons per L	inear Foot
					TVOITIITO	2	0.16	6
Casing D	iameter (in):		8			5	0.69	
Static Water	Level (ft bmp):		159.69			6	1.4 ⁷ 2.6 ⁷	
Casing V	Casing Volume (gal): 105 x3 = 316			316		10	4.08	
Total Volume Purged (gal): 315					Casi	ng Volume = gallons	s/foot * water colum	n (feet)
	0 (0)			D SAMPLING	DATA			
Time	TIME I . I S I S I S I S I S I S I S I S I S			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
3:20 PM	Pump On				•			
3:35 PM	15m	7	105	7.11	22.1	1311.0		
3:50 PM	30m	7	210	7.09	21.5	1348.0		
4:05 PM	45m	7	315	7.13	21.4	1357.0		
							Pump Off	
	FIELD PARAM	ETER STABILIZA		PLE INFORM	-	su pH, 2 degrees C	s, and 100 S/cm)	
0 1 0 1		0.1			MATION			
Sample Colle	ection Point:	Spigot ~50ft so	utheast from w	ell head	No. of			Filtered
San	nple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
Panagakos		16:07:26	Poly	250mL	1	300.0	NA	Υ
			ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	el measurement level measureme		ccess to wellhea	d/No port in w	allhead			
	level measureme			anto por in w	Jinicaa			
No water	level measureme	nt collected. Well	is pumping.					
Other:			WELL	LIDOINO INIC	DIA TION			
X Purged 3	well volumes and	field parameters		URGING INFO	OKIVIA I IUN			
_	well volumes bas			d paremeters	stabilized.			
_	ell until field para							
Other:								
Additional C	Comments:	Dig out valve	to allow wate	r to flow fro	m well. Wh	en finished, retu	rn to original clo	sed position

	Groundwater Sampling Form									
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h		
Task No:	1				Date:	Jul 21, 2014				
Well ID:	Parra				Weather:	Sunny, 80s				
ADWR No:	576415				Sampler:	VNH				
				WELL DAT						
Well De	pth (ft bls):		355		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
	, ,					2	0.1	6		
Casing D	iameter (in):		6			5	0.6			
Static Water	Static Water Level (ft bmp): Use 280.99 from 7/20/09			20/09		6 8	1.4 ⁻ 2.6			
Casing V	olume (gal):	109	x3 =	327		10	4.0			
Total Volum	e Purged (gal):		336		Casi	ng Volume = gallons	s/foot * water colum	n (feet)		
			FIEL	D SAMPLING	G DATA					
Time	Elapsed Time (min) Discharge Rate (gpm) Total Discharge (pH (gallons) (SU)		Temp (°C)	Specific Conductance (µS/cm)	Comm	ents				
12:08 PM	Pump On									
12:16 PM	8m	14	112	7.11	22.8	1192				
12:24 PM	16m	14	224	7.34	22.5	1189				
12:32 PM	24m	14	336	7.30	22.4	1193				
							Pump Off			
	FIELD PARAM	IETER STABILIZA			-	su pH, 2 degrees C	c, and 100 (S/cm)			
			SAM	PLE INFORM	MATION					
Sample Colle	ection Point:	Wellhead spige	ot	T	T	1				
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Parra		12:35:14	Poly	250mL	1	300.0	NA	Υ		
			ATER LEVEL I	MEASUREM	ENT COLLE	CTION				
	el measurement		acces to wellboo	d/No port in w	allbood					
	level measureme level measureme			d/No port in we	eimeau					
	level measureme									
O Other:										
				URGING INFO	DRMATION					
_	well volumes has			ld naremeters	stahilizad					
_										
O Other:	O Other:									
Additional C	Comments:									
		•								
Ī										

		C	Proundwa	ater Sa	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 11, 2014			
Well ID:	Pionke 395				Weather:	Sunny, 80s			
ADWR No:	613395				Sampler:	VNH			
				WELL DA	TA				
Well De	pth (ft bls):		330		Nomina	Casing Il Size (inches)	Capacity Gallons per I	inear Foot	
						2	0.1	6	
Casing D	iameter (in):		8			5	0.65 1.02		
Static Water	Level (ft bmp):		156.66			6 8	1.47 2.61		
Casing V	olume (gal):		x3 =			10	4.0		
Total Volum	e Purged (gal):				Casi	ing Volume = gallons	s/foot * water colum	nn (feet)	
	FIELD SAMPLING DATA								
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On								
			Pump n	ot working	no sampl	е			
							Pump Off		
	FIELD PARAME	TER STABILIZ	ZATION: Three co	onsecutive rea	dings within 0	.3 su pH, 2 degrees	C, and 100 S/cm		
			SAN	MPLE INFOR	MATION				
Sample Colle	ection Point:								
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
		,	L WATER LEVEL	MEASUREN	L MENT COLL	LECTION			
X Water lev	rel measurement o								
	level measuremen		o access to wellh	ead/No port in	wellhead				
O No water	level measureme	nt collected. O	bstruction in well						
	level measuremen	nt collected. W	/ell is pumping.						
O Other:			WELL	PURGING INF	ORMATION				
Purged 3	well volumes and	field paramete							
_	well volumes bas			field paremete	rs stabilized.				
O Purged well until field parameters stabilized.									
Other:									
Additional C	Comments:			Pump	not workir	ng, no sample			

		G	roundwa	iter Sar	npling f	-orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 11, 2014		
Well ID:	Pionke 517				Weather:	Sunny, 80s		
ADWR No:	221517				Sampler:	VNH		
				WELL DAT				
Well De	epth (ft bls):		604		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing D	iameter (in):		5			5	0.6 1.0	
Static Water	Level (ft bmp):		153.56			6 8	1.4 2.6	
Casing V	olume (gal):	459	x3 =	1378		10	4.08	
Total Volum	e Purged (gal):		1440		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Time Elapsed Time (min) Discharge Rate (gallons) Total Discharge pH (gullons) (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
12:00 PM	Pump On				•			
12:20 PM	20m	12	240	7.72	22.8	390.2		
12:40 PM	40m	12	480	7.69	23.4	390.3		
1:00 PM	60m	12	720	7.75	23.4	389.2		
1:20 PM	80m	12	960	7.77	23.3	389.4		
1:40 PM	100m	12	1200	7.72	23.5	388.7		
2:00 PM	120m	12	1440	7.76	23.7	388.9		
							Pump Off	
	FIELD PARAM	ETER STABILIZA			-	su pH, 2 degrees C	c, and 100 (S/cm)	
			SAM	PLE INFORM	MATION			
Sample Colle	ection Point:	Spigot near pr	essure tanks in	shed	ı			
	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Pionke 517		14:05:45	Poly	250mL	1	300.0	NA	Y
		10	/ATER LEVEL	MEAGLIDEN	ENT COLLE	CTION		
X Water lev	vel measurement		TOTAL LEVEL	IVILAGUREIV	LIVI COLLE	OTION		
	level measureme		access to wellhea	ıd/No port in w	ellhead			
O No water	level measureme	nt collected. Obs	truction in well.					
	level measureme	nt collected. Wel	I is pumping.					
O Other:			WELLP	URGING INFO	ORMATION			
Purged 3	well volumes and	I field parameters						
 Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized. 								
Purged well until field parameters stabilized								
X Other:	Purge minimum	1 well volume, ar	nd stable parame	ters				
Additional C	Comments:							

		G	roundwa	ter Sar	nplina F	orm					
Project No:	287030				Client:		er Queen Brancl	 h			
Task No:	1				Date:	Jul 17, 2014					
Well ID:	Power 639				Weather:	Overcast, 80s		Queen Branch Apacity Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 Poot * water column (feet) Comments			
	222639					VNH					
ADWR No:	222039			WELL DAT	Sampler:	VINI					
			400				Capacity				
Well De	epth (ft bls):		480		Nomina	l Size (inches)	•				
Casing D	Diameter (in):		6			4					
Static Water	r Level (ft bmp):		294.32			5 6					
Casing V	Casing Volume (gal): 273 x3 = 818										
Total Volume Purged (gal): 825					Casi	ng Volume = gallon	s/foot * water colum	n (feet)			
			FIEL	D SAMPLING	G DATA						
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge pH (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents			
12:22 PM	Pump On				•						
12:37 PM	15m	11	165	7.61	22.1	646.3					
12:52 PM	30m	11	330	7.54	22.2	715.7					
1:07 PM	45m	11	495	7.48	21.9	810.2					
1:22 PM	60m	11	660	7.42	22.1	845.6					
1:37 PM	75m	11	825	7.40	22.1	861.3					
							Pump Off				
	FIELD PARAM	IETER STABILIZA	ATION: Three cor	nsecutive read	ings within 0.3	su pH, 2 degrees C	c, and 100 (S/cm)				
			SAMI	PLE INFORM	MATION						
Sample Colle	ection Point:	Wellhead spigo	ot								
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
Power 639		13:40:57	Poly	250mL	1	300.0	NA	Υ			
		W	ATER LEVEL I	MEASUREM	ENT COLLE	CTION					
	vel measurement										
	level measureme			d/No port in we	ellhead						
	level measureme										
O Other:											
			WELL P	URGING INFO	ORMATION						
	well volumes and										
_	well volumes bas			ld paremeters	stabilized.						
Purged wOther:	vell until field para	meters stabilized.									
Additional C	Commente:										
Additional	ZOTIITICITIS.	l.									

		G	roundwa	ter Sar	nplina F	orm		
Project No:	287030				Client:		er Queen Branc	 h
Task No:	1				Date:	Aug 11, 2014		
Well ID:	Power 639				Weather:	Sunny, 70s		
ADWR No:	222639			WELL DAT	Sampler:	VNH		
							Capacity	
Well De	epth (ft bls):		480		Nomina	l Size (inches)	Gallons per L 0.10	
Casing D	Diameter (in):		6			4	0.6	5
Static Water	r Level (ft bmp):		294.44			5 6	1.02 1.4	
			x3 =	818		8	2.6 4.0	
Total Volume Purged (gal): 800					Casi	ng Volume = gallon	s/foot * water colum	n (feet)
	3 (3 /	I.		D SAMPLING	G DATA			
Time	Fime Elapsed Time (min) Discharge Rate (gpm) Total Discharge pH (gullons) (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
8:25 AM	Pump On							
8:45 AM	20m	10	200	7.83	21.8	631.2		
9:05 AM	40m	10	400	7.56	21.8	780.9		
9:25 AM	60m	10	600	7.51	21.7	841.1		
9:45 AM	80m	10	800	7.50	21.8	864.9		
							Pump Off	
	FIELD PARAM	ETER STABILIZA	ATION: Three cor	nsecutive read	ings within 0.3	su pH, 2 degrees 0	c, and 100 (S/cm)	
			SAMI	PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spigo	ot					
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Power 639		9:49:27	Poly	250mL	1	300.0	NA	Υ
		W	ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement							
	level measureme			d/No port in w	ellhead			
	level measureme							
O Other:			Fb					
			WELL P	URGING INFO	ORMATION			
	well volumes and							
_	well volumes bas			ld paremeters	stabilized.			
Purged wOther:	vell until field para	meters stabilized.						
	Commonts:							
Additional C	Johnnerits:							
<u> </u>								

		G	roundwa	ter Sar	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Sep 9, 2014		
Well ID:	Power 639				Weather:	Sunny, 80s		
ADWR No:	222639				Sampler:	VNH		
				WELL DAT				
Well De	epth (ft bls):		480		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					T TOTALING	2	0.1	6
Casing D	iameter (in):		6			5	0.6 1.0	
Static Water	Level (ft bmp):		294.47			6	1.4	
Casing V	olume (gal):	273	x3 =	818		10	2.6	
Total Volum	ie Purged (gal):		900		Casi	ng Volume = gallons	s/foot * water colum	in (feet)
FIELD SAMPLING DATA								
Time			pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
11:15 AM	:15 AM Pump On							
11:30 AM	15m	12	180	7.56	22.2	516.0		
11:45 AM	30m	12	360	7.57	21.9	702.4		
12:00 PM	45m	12	540	7.51	21.8	793.3		
12:15 PM	60m	12	720	7.51	21.7	830.7		
12:30 PM	75m	12	900	7.49	21.7	850.4		
							Pump Off	
	FIELD PARAM	IETER STABILIZA			-	su pH, 2 degrees C	c, and 100 (S/cm)	
			SAM	PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spigo	ot			T		
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Power 639		12:34:11	Poly	250mL	1	300.0	NA	Y
			ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement level measureme		ccess to wellhoo	d/No port in w	allhead			
	level measureme			a, No poit III W	Siriedu			
	level measureme							
Other:								
V 5	and a d	LE-La :		URGING INFO	ORMATION			
 X Purged 3 well volumes and field parameters stabilized. O Purged 3 well volumes based on previous water level and field paremeters stabilized. 								
Purged well until field parameters stabilized.								
Other:	,							
Additional C	Comments:							
		1						

		Gr	oundwa	ter Sar	npling l	orm -				
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	:h		
Task No:	1				Date:	Jul 10, 2014				
Well ID:	Ramirez				Weather:	Partly cloudy, 8	30s			
ADWR No:	216425				Sampler:	VNH				
				WELL DAT	A					
Well De	pth (ft bls):		300		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
			6			2 4	0.10	6		
Casing D	iameter (in):					5	0.69 1.03			
Static Water	Level (ft bmp):	Use 16	4.85 from 4/1	4/14		8	1.4 ⁻ 2.6			
Casing V	olume (gal):	199	x3 =	597		10	4.0			
Total Volum	e Purged (gal):		600		Casi	ng Volume = gallons	s/foot * water column (feet)			
			FIEL	D SAMPLING	G DATA					
Time	(min) (gpm) (gallons) (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents			
2:45 PM	Pump On									
3:00 PM	15m	10	150	7.59	23.6	411.3				
3:15 PM	30m	10	300	7.54	23.1	413.5				
3:30 PM	45m	10	450	7.56	23.6	412.8				
3:45 PM	60m	10	600	7.58	23.2	413.5				
							Pump Off			
	FIELD PARAM	ETER STABILIZA			-	3 su pH, 2 degrees (C, and 100 S/cm)			
				PLE INFORM	MATION					
Sample Colle	ection Point:	Wellhead spigo	ot		T	Т				
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Ramirez		15:50:11	Poly	250mL	1	300.0	NA	Υ		
			ATER LEVEL I	MEASUREM	IENT COLLE	CTION				
	el measurement level measureme		uccess to wellbes	nd/No port in w	vellbead					
	level measureme			ad/No port iii w	veiirieau					
No water	level measureme	ent collected. Well	is pumping.							
O Other:										
V D 10		16.11		URGING INFO	ORMATION					
_	well volumes and			ıld naremeters	stahilized					
_	 Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. 									
O Other:										
Additional C	Comments:									

		G	roundwa	iter Sar	npling l	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Ray				Weather:	Sunny, 80s		
ADWR No:	803772				Sampler:	VNH		
	'			WELL DAT				
Well De	epth (ft bls):		100		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casina	Diamotor (in):		8			2	0.16 0.65	
	Diameter (in):					5	1.0	2
Static Water	r Level (ft bmp):		43.38			8	1.4 2.6	
Casing V	Casing Volume (gal): 148 x3 = 444			444		10	4.0	
Total Volum	ne Purged (gal):		455		Casi	ing Volume = gallons	s/foot * water colum	n (feet)
			FIEL	D SAMPLIN	G DATA	,		
Time	Time Elapsed Time Discharge Rate (min) (gpm) Total Discharge pH (gallons) (SU)				Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
11:17 AM	Pump On	ump On						
11:30 AM	13m	7	91	7.11	21.3	1398		
11:43 AM	26m	7	182	7.14	21.1	1391		
11:56 AM	39m	7	273	7.13	21.0	1402		
12:09 PM	52m	7	364	7.13	21.1	1407		
12:22 PM	65m	7	455	7.14	21.4	1409		
							Pump Off	
	FIELD PARAM	ETER STABILIZA				3 su pH, 2 degrees (C, and 100 S/cm)	
				PLE INFORI	MATION			
Sample Colle	ection Point:	Wellhead spig	ot I	1		1	<u> </u>	
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Ray		12:27:40	Poly	250mL	1	300.0	NA	Υ
		W	/ATER LEVEL	MEASUREM	IENT COLLE	CTION		
	vel measurement							
	level measureme			ad/No port in w	elinead			
	level measureme							
O Other:								
V				PURGING INFO	ORMATION			
	well volumes and well volumes bas			old naremeters	stahilized			
_	vell until field para			na paremeters	Stabilizea.			
O Other:								
Additional C	Comments:							

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 18, 2014		
Well ID:	Rogers 596				Weather:	Sunny, 80s		
ADWR No:	573596				Sampler:	VNH		
				WELL DA	TA			
Well De	pth (ft bls):		290		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		6			2	0.1 0.6	
						5	1.02	
Static Water	Level (ft bmp):		140.64		6 8		1.4 2.6	
Casing V	olume (gal):		x3 =	0		10 4.08		
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	ın (feet)
	FIELD SAMPLING DATA							
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
			7471011 71				Pump Off	
	FIELD PARAME	TER STABILIZ		IPLE INFOR		.3 su pH, 2 degrees	C, and 100 S/cm)	
0 1 0 11			SAIN	APLE INFOR	IVIATION			
Sample Colle	ection Point:				No. of	1		Filtered
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
			WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	el measurement		toellle	and/No now in	اده و طال مید			
	level measureme level measureme				weiinead			
	level measureme			•				
O Other:								
				PURGING INF	FORMATION			
_	well volumes has			field naremete	re etahilizad			
 Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. 								
O Other:								
Additional C	Comments:				WLO	<u> </u>		
		-						

		G	roundwat	ter San	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 18, 2014		
Vell ID:	Rogers 803				Weather:	Sunny, 80s		
ADWR No:	641803				Sampler:	VNH		
				WELL DAT	A		_	
Well De	epth (ft bls):		140		Nomina	Casing	Capacity Gallons per L	inear Foot
			6			2 4	0.10	6
Casing L	Diameter (in):		0			5	1.02	
Static Water	r Level (ft bmp):					6 8	1.4 ⁻ 2.6 ⁻	
Casing V	/olume (gal):		x3 =			10	4.08	
Total Volum	ne Purged (gal):		~45		Cas	ing Volume = gallons	s/foot * water colum	n (feet)
			FIELD	SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
10:50 AM	Pump On				•			
10:55 AM	5m	3	15	7.46	25.2	710.9		
11:00 AM	10m	3	30	7.50	24.7	711.7		
11:05 AM	15m	3	45	7.48	24.9	709.2		
							Pump Off	
	FIELD PARAM	IETER STABILIZA				su pH, 2 degrees C,	, and 100 S/cm)	
				PLE INFORM	MATION			
Sample Colle	ection Point:	Spigot in well s	hed		1	1		
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Rogers 803	}	11:08:23	Poly	250mL	1	300.0	NA	Y
		W	ATER LEVEL N	MEASUREM	ENT COLLE	CTION		
	vel measurement o							
	level measureme			No port in we	linead			
	level measureme							
O Other:								
_				JRGING INFO	DRMATION			
_	well volumes and well volumes bas			naremeters	stahilized			
-	vell until field parar		aoi ievei ailu ilelu	Paremeters 8	nabin264.			
-								
Other:								
	Comments:	SWL from Ro	gers 596 is be	low Total D	Depth of Roo	gers 803.		

		G	roundwa	ter Sar	npling F	-orm		
Project No:	287030				Client:		er Queen Branc	h
Task No:	1				Date:	Jul 10, 2014		
Well ID:	Rogers, E				Weather:	Sunny, 80s		
ADWR No:	216018		285 6 Use 155.97 from April 14, 201 190			VNH		
ADWIT NO.	210010			WELL DAT	Sampler:	VIVII		
Well De	anth (ft hin).		205		Namina		Capacity	inner Foot
vveii De	epth (ft bls):		200		INOMINA	l Size (inches)	Gallons per L 0.10	
Casing D	Diameter (in):		6			5	0.69 1.00	
Static Water	r Level (ft bmp):	Use 155.9	7 from April 1	14, 2014		6	1.4	
Casing V	/olume (gal):	190	x3 =	570		8	2.6° 4.08	
Total Volum	ne Purged (gal):		600		Casi	ng Volume = gallon	s/foot * water colum	n (feet)
			FIEL	D SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)		pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
10:53 AM	Pump On							
11:08 AM	14m	10	150	7.46	23.0	425.5		
11:23 AM	29m	10	300	7.52	22.4	428.2		
11:38 AM	44m	10	450	7.53	22.3	429.8		
11:53 AM	59m	10	600	7.54	22.4	428.5		
							Pump Off	
	FIELD PARAM	IETER STABILIZ <i>i</i>	ATION: Three cor	nsecutive read	ings within 0.3	su pH, 2 degrees C	c, and 100 \(\text{S/cm} \)	
			SAM	PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spige	ot					
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Rogers, E		11:55:26	Poly	250mL	1	300.0	NA	Υ
		W	ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	vel measurement			1/51				
	level measureme			a/No port in we	elinead			
	level measureme							
O Other:								
			WELL P	URGING INFO	DRMATION			
	well volumes and			ld norses - t	otobili-s -			
_	well volumes bas well until field para			d paremeters	stabilized.			
O Other:	ion antii noid para	motoro otabilizoa.						
Additional C	Comments:							
	- /							

		G	roundwa	ter San	npling F	orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Aug 11, 2014		
Well ID:	Ruiz				Weather:	Sunny, 70s		
ADWR No:	531770				Sampler:	VNH		
				WELL DATA	A			
Well De	pth (ft bls):		312		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
						2	0.1	6
Casing D	iameter (in):	Unable to get wa	6 ater level, use 300	0.31 from April		5	0.6	
Static Water	Level (ft bmp):		15, 2014			6 8	1.4 ⁻ 2.6	
Casing V	olume (gal):	17	x3 =	51		10	4.0	
Total Volum	e Purged (gal):		60		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
			FIEL	D SAMPLING	DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
11:08 AM	Pump On							
11:13 AM	5m	4	20	7.30	21.0	866.2		
11:18 AM	10m	4	40	7.33	21.1	871.3		
11:23 AM	15m	4	60	7.32	21.2	869.2		
							Pump Off	
	FIELD PARAM	IETER STABILIZA			-	su pH, 2 degrees C	c, and 100 (S/cm)	
			SAM	PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spigo	ot		T	1		
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Ruiz		11:25:08	Poly	250mL	1	300.0	NA	Υ
			ATER LEVEL I	MEASUREM	ENT COLLE	CTION		
	el measurement		acces to wellbac	d/No montin wa	ال م م ما ال			
		nt collected. No a nt collected. Obst		u/NO port iii we	siirieau			
		nt collected. Well						
O Other:								
V				URGING INFO	RMATION			
_		I field parameters ed on previous w		d naremeters	stahilized			
_	ell until field para			a paremeters :	otabilizea.			
O Other:								
Additional C	Comments:							

		G	Groundwa	ater Sai	npling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	 h
Task No:	1				Date:	Jul 18, 2014	A GUOON BIAND	··
Well ID:	Schwartz				Weather:	Sunny, 80s		
ADWR No:	210865				Sampler:	VNH		
ABWINIO.	210000			WELL DA				
Well Do	epth (ft bls):		305		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
	. , ,				TYOMING	2	0.1	6
Casing I	Diameter (in):		6			5	0.6 1.0	
Static Water	er Level (ft bmp):		129.81			6 8	1.4 2.6	
Casing \	Volume (gal):	257	x3 =	772		10	4.0	
Total Volun	ne Purged (gal):		800		Casi	ng Volume = gallons	s/foot * water colum	n (feet)
	0 (0 /			D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
8:22 AM	Pump On	•						
8:42 AM	20m	10	200	7.55	21.8	790.6		
9:02 AM	40m	10	400	7.46	21.9	791.3		
9:22 AM	60m	10	600	7.50	21.7	792.1		
9:42 AM	80m	10	800	7.45	21.8	790.5		
							Pump Off	
	FIELD PARAMI	ETER STABILIZ			-	3 su pH, 2 degrees (C, and 100 S/cm)	
				IPLE INFOR	MATION			
Sample Coll	ection Point:	Wellhead spi	igot		1	Г		
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Schwartz		9:47:11	Poly	250mL	1	300.0	NA	Y
		<u> </u>	MATER LEVEL	MEAGURE	MENT COLLS	CTION		
X Water le	evel measurement		WATER LEVEL	IVIEASUKEN	TENT COLLE	TON		
	r level measureme		access to wellhe	ad/No port in	wellhead			
	r level measureme			•				
o No wate	r level measureme	nt collected. W	ell is pumping.					
O Other:			\//FII [PURGING INF	ORMATION			
X Purged 3	3 well volumes and	I field paramete		OKOING INF	CHWATION			
_	3 well volumes and			eld paremeter	s stabilized.			
O Purged v	well until field para	meters stabilize	d.					
Other:								
Additional (Comments:	Sounder sti	ll gets a bit stu	uck at ~26 f	t, keep tryin	ıg,		

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 8, 2014		
Well ID:	Stephens				Weather:	Sunny, 90s		
ADWR No:	808560				Sampler:	VNH		
				WELL DA	TA			
Well De	pth (ft bls):				Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):					2	0.1 0.6	
						5	1.0	2
Static Water	Level (ft bmp):		45.39			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =	0		10	4.0	
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	ın (feet)
	T	1	FIE	LD SAMPLIN	IG DATA		T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
	FIELD DADAME		7471011 71				Pump Off	
	FIELD PARAME	TER STABILIZ		MPLE INFOR		.3 su pH, 2 degrees	C, and 100 S/cm)	
0	office Body	\\/ -		WIFLE INFOR	IVIATION			
Sample Colle	ection Point:	Wellhead sp	lgot		No. of	1		Filtered
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
			WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	vel measurement level measureme		o access to wellb	oad/No port in	wollhood			
	level measureme				weiiileau			
	level measureme							
O Other:								
- 5 10				PURGING INF	ORMATION			
_	well volumes and well volumes bas			field paremete	rs stabilized			
	ell until field para			paremete				
O Other:								
Additional C	Comments:				WLO	 o		

		(Groundwa	ater Sa	mnlina	Form		
Project No:	287030		Jiodilawe	ator oa	Client:		er Queen Branc	
Task No:	1				Date:	Jul 8, 2014	er Queen branc	11
Well ID:	Sunbelt				Weather:	Sunny, 70s		
ADWR No:	201531			WELL DA	Sampler: TA	VNH		
							Capacity	
Well De	epth (ft bls):		380		Nomina	l Size (inches)	Gallons per L 0.1	
Casing D	Diameter (in):		6			4	0.6	
Static Wate	r Level (ft bmp):		DRY			5 6	1.0 1.4	
			x3 =			8	2.6	1
	/olume (gal):		X3 =		Casi	ing Volume = gallon	1	
Total Volum	ne Purged (gal):		FIEI	LD SAMPLIN		3		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On	(96)				(μο, σ)		
		Ī				l		
							Pump Off	
	FIELD PARAME	TER STABILIA			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
0 1 0 11			SAN	IPLE INFOR	IMATION			
Sample Colle	ection Point:	ı	1		No of	1		Filtored
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		,	WATER LEVEL	MEASURE	MENT COLL	ECTION		
	vel measurement							
	· level measureme · level measureme				wellhead			
	level measureme							
O Other:	icver measureme	THE COMPOSED A	reii io pumping.					
			WELL	PURGING INF	FORMATION			
o Purged 3	3 well volumes and	I field paramet	ers stabilized.					
Purged 3	3 well volumes bas	ed on previous	s water level and	field paremete	ers stabilized.			
_	vell until field para							
O Other:	Pumped dry, sta	ble parameters	3					
Additional (Comments:			WLO- U	Inable to get	SWL, well is DRY		

			Groundw		<u> </u>	, , 0,,,,		
Project No:	287030				Client:	Freeport Coppe	r Queen Branch	
ask No:	1				Date:	Jul 7, 2014		
Vell ID:	Swan				Weather:	Overcast, 70s		
ADWR No:	NR				Sampler:	VNH		
				WELL D	ATA T	Casin	g Capacity	
Well De	pth (ft bls):		98		Nomina	al Size (inches)	Gallons per	
Casing D	iameter (in):		4			2	0.1	
						5	1.0)2
Static water	Level (ft bmp):		33.68			6 8	1.4 2.6	
Casing V	olume (gal):	42	x3 =	126		10	4.0	8
Total Volum	e Purged (gal):		135		Ca	asing Volume = gallo	ns/foot * water colun	nn (feet)
			FII	ELD SAMPL	ING DATA	1		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents
2:33 PM	Pump On							
2:38 PM	5m	9	45	7.41	22.7	467.9		
2:43 PM	10m	9	90	7.42	22.1	468.8		
2:48 PM	15m	9	135	7.44	21.8	464.7		
							Pump Off	
	FIELD PARAM	ETER STABIL	IZATION: Three	consecutive re	eadings within	0.3 su pH, 2 degrees	s C, and 100 S/cm)	
			SA	MPLE INFO	RMATION			
Sample Colle	ction Point:	Spigot on st	orage tank.					
Sam	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Swan		14:51:46	Poly	250mL	1	300.0	NA	Y
						. = = = = = =		
V			WATER LEVE	L MEASURE	EMENT COL	LECTION		
	vel measurement of level measurement		o access to wellh	ead/No port in	wellhead			
	level measureme			•				
No water	level measureme	nt collected. W	ell is pumping.					
O Other:			\A/E1.	DUDONO "	UEODMATIC:	1		
X Durand 3	Lynoll volumes and	field personat		L PURGING IN	NFORMATION			
_	well volumes and well volumes bas			field paremete	ers stabilized.			
_	vell until field parar							
O Other:								
Additional C	omments:							

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 21, 2014		
Well ID:	Thompson 15	51			Weather:	Partly cloudy, 8	80s	
ADWR No:	612151				Sampler:	VNH		
				WELL DA	TA			
Well De	epth (ft bls):		210		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		7			2	0.1 0.6	
						5	1.0	2
Static Water	Level (ft bmp):		167.78			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =	0		10	4.0	
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	ın (feet)
			FIE	LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On	•						
						<u> </u>	Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	
			SAIN	IPLE INFOR	IMATION			
Sample Colle	ection Point:	I	<u> </u>		I	T		
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		\	WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	el measurement							
	level measureme				wellhead			
	level measureme			•				
O Other:								
				PURGING INF	FORMATION			
_	well volumes and			£:-1-1	4-b-05			
	well volumes bas well until field parar			field paremete	ers stadilized.			
O Other:	ion artii nola parai	notoro stabiliza	ou.					
Additional C	Comments:				WLO	0		
, taditional C					***	-		

		G	roundwa	iter Sar	npling F	-orm		
Project No:	287030				Client:	Freeport Coppe	er Queen Brancl	h
Task No:	1				Date:	Jul 21, 2014		
Well ID:	Thompson 34	41			Weather:	Partly cloudy, 8	30s	
ADWR No:	218341				Sampler:	VNH		
				WELL DAT	Ä			
Well De	epth (ft bls):		285		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
						2	0.16	6
Casing L	Diameter (in):		7			5	0.65	
Static Wate	r Level (ft bmp):	Use 167.7	8 from Thomp	son 151		6 8	1.47 2.6	
Casing \	/olume (gal):	234	x3 =	702		10	4.08	
Total Volum	ne Purged (gal):				Casi	ng Volume = gallons	s/foot * water colum	n (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pump On	•	•		•			
10:30 AM				7.43	24.6	423.6		
10:35 AM				7.49	22.5	422.5		
10:40 AM				7.47	22.1	423.3		
10:45 AM				7.48	22.3	414.2		
							Pump Off	
	FIELD PARAM	IETER STABILIZA				su pH, 2 degrees C	c, and 100 S/cm)	
				PLE INFORM	MATION			
Sample Colle	ection Point:	Wellhead spig	ot, hand-filter		T	ı	<u> </u>	·
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Thompson	341	10:55:29	Poly	250mL	1	300.0	NA	Υ
			/ATER LEVEL	MEASUREN	ENT COLLE	CTION		
	vel measurement · level measureme		access to wellhes	d/No port in w	allhaad			
	· level measureme			a/No port iii w	eiirieau			
No water	level measureme	ent collected. Well	I is pumping.					
O Other:								
		1.6.11		URGING INFO	ORMATION			
_	B well volumes and B well volumes bas			ld naremeters	stahilized			
_	vell until field para			.а раготногого	01002001			
X Other:	Intermittent purg	e as tank is very	full					
Additional (Comments:	Owner reque	sted we don't	overfill tanl	during pur	ge: intermittent	pumping.	
							·	

287030				Client: <u>F</u>	reeport Copper	r Queen Branch	<u> </u>
				Date: _	8-12-14		···
Tin	2.21	······································		Weather:	Partly Cl	order	
	LAR.			Sampler: /	Licistopler L	Sherny	
<u>,</u>	a25			Nominal 9		Capacity Gallons per Lir	ear Foot
oth (ft bis):	925			Norman	2	0.16	
iameter (in):	4"				4		
_	3	38.50			6	1.47	
revel (it pmp):			19/		8		
olume (gal):	301.4	_ x3 =]]	4).6	Coninc			n (feet)
e Purged (gal):					Volume - ganono		
			D SAMPLIN	GDAIA	Specific		<u>. </u>
Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
Pump On	<u></u>						
	25	35,	7.25	24.9	37/	<u> </u>	
10	77.	450	7.3/	250	376		
100	22		5.11	25.1	328		
110	19/	12.5	720	25.1	377		
200	115	917	5.75	152	377		
, , , , , , , , , , , , , , , , , , ,	1.60	900	771	24.9	379	BS 1300	
}	 / / }	10-7-	7.68	24,8	370	479.66 8-	14-14 -
 			7.45	247	392		
	 		1/27.62	24.7		Pump Off 5-	mpla!
FIELD PARAMET	TER STABILIZ	ATION: Three c	onsecutive re	adings within ().3 su pH, 2 degree	es C, and 100 μS/c	m)
		SAN	IPLE INFOR	RMATION			
lection Point		-					
	Timo	Container	Volume	No. of	Analysis Method	Preservative	Filtered (y/n)
	111110	Type		Containers	200	1	\ <u>\range \range </u>
n-2/	1050	1/1	230	 	100	16-	
			1		<u> </u>	<u> </u>	<u> </u>
······································	J		MEACURE	MENT COL	ECTION		
		VATER LEVE	MEASURE	MENT COL	ECTION		<u> </u>
evel measureme	nt collected.	<u> </u>					<u>. </u>
er level measurer	nt collected. ment collected.	. No access to w	ellhead/No po				
er level measurer er level measurer	nt collected. ment collected. ment collected.	. No access to w	rellhead/No po				
er level measurer	nt collected. ment collected. ment collected.	No access to was construction in was the construction in was the construction in was the construction of t	relihead/No po well. g.	ort in wellhead			
er level measurer er level measurer er level measurer	nt collected. nent collected ment collected. nent collected.	No access to was construction in was well is pumpin	relihead/No po well. g. PURGING IN				
er level measurer er level measurer er level measurer	nt collected. ment collected. ment collected. ment collected.	No access to wood of the contraction in word of the contraction in word of the contraction in the contraction of the contractio	relihead/No po well. g. PURGING IN	ort in wellhead			
er level measurer er level measurer er level measurer 1 3 well volumes a 1 3 well volumes i	nt collected. ment collected. ment collected. ment collected. and field paramoased on previ	No access to way. Obstruction in way. Well is pumpin. WELL neters stabilized ous water level a	relihead/No po well. g. PURGING IN	ort in wellhead			
er level measurer er level measurer er level measurer 1 3 well volumes a 1 3 well volumes b	nt collected. ment collected. ment collected. ment collected. and field paramoased on previ	No access to way. Obstruction in way. Well is pumpin. WELL neters stabilized ous water level a	relihead/No po well. g. PURGING IN	ort in wellhead			
er level measurer er level measurer er level measurer 13 well volumes to 13 well volumes to 1 well until field pa	nt collected. ment collected. ment collected. ment collected. and field paramoased on previous arameters stab	No access to way. Obstruction in way. Well is pumpin. WELL neters stabilized ous water level and ilized.	relihead/No po well. g. PURGING IN	ort in wellhead			
er level measurer er level measurer er level measurer 1 3 well volumes a 1 3 well volumes b	nt collected. ment collected. ment collected. ment collected. and field paramoased on previous arameters stab	No access to way. Obstruction in way. Well is pumpin. WELL neters stabilized ous water level a	relihead/No po well. g. PURGING IN	ort in wellhead			
er level measurer er level measurer er level measurer 13 well volumes to 13 well volumes to 1 well until field pa	nt collected. ment collected. ment collected. ment collected. and field paramoased on previous arameters stab	No access to war Obstruction in war obstruction in war of the war of the war of the war obstructions water level of the water level of the water level of the water level of the war of the	relihead/No po well. g. PURGING IN	ort in wellhead			
	oth (ft bis): ameter (in): Level (ft bmp): blume (gal): e Purged (gal): Pump On 5 // // // // // // // FIELD PARAMET Illection Point: mple ID	oth (ft bis): ameter (in): Level (ft bmp): olume (gal): Purged (gal): Elapsed Time (gpm) Pump On 5 7.5 100 1.25 1.20 1.25 2.0 1.25 2.1 1.21 Elapsed Time (spm) Pump On 5 7.5 100 1.25 1.25	TM-2A oth (ft bis): ameter (in): Level (ft bmp): olume (gal): Purged (gal): Elapsed Time (gpm) Pump On S 7.5 32 (0 3.2 (20) 1.36 2.00 1.35 2.00 1	TM-2	Date: Weather: Sampler: Casing Casing Purple (gall): Piech Discharge ph (SU) Temp (°C) Pump On Sampler: Sample: Sam	Date:	Date: S-12-14 Weather: Sampler: Sa

amilification of the contract of the content of the

Project No:	287030				Client: <u>F</u>	reeport Coppe	r Queen Branc	<u>h</u>
Task No:					Date: _	7-21-14		
vell ID:	Tm-1				Veather:	floudy		
	-/-/-	<u></u>			Sampler:	Westople 1	- Shinns	
ADWR No:				WELL DAT				
					Naminal	Casing (Size (inches)	Capacity Gallons per Lie	near Foot
Well De	epth (ft bis):		<i>Q</i>		Nominai	2	0.16	
Casino I	Diameter (in):	40	· (4	0.65 1.02	
	•	1/2.60				6	1.47	
Static Wate	r Level (ft bmp):			72		8	2.61 4.08	
Casing \	√olume (gal):	24.3	x3 = _/	73	Casin	10 j Volume = gallons/		
Total Volur	ne Purged (gal):		72			J Volunie – galionar	TOOL WELCH CO.C.	(1000)
				D SAMPLIN	G DATA	Sec. if a		
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1500	Pump On							
1500	15	11.5	57	7.15	20.1	.557		
1505	10	11.5	115	7.15	19.8	553		<u> </u>
15/1/	1/	11.5	177	7.17	19.9	557		
15-15-	1-15	11.7	//	1-1-1				
	 	 _						
		 						
		 				,	<u>-</u>	
		 						
		 		 			Pump Off	
	SITE D CARAMET	LED STABILIZ	ATION: Three c	onsecutive rea	dings within ().3 su pH, 2 degree	s C; and 100 μS/c	m)
ļ	FIELD PARAME	EK 3 INDICIO	SAN	VIPLE INFOR	MATION			
					<u></u>		<u> </u>	
Sample C	ollection Point:		Container	<u> </u>	No. of		Preservative	Filtered
s	iample ID	Time	Type	Volume	Containers	Analysis Method		(y/n)
	IM-1	1515	PL	250		300	Ja-	
	11-4				<u></u>		<u>.</u>	
		<u> </u>	VATER LEVE	MEASURE	MENT COLL	ECTION		
☐ No w	r level measurement ater level measurent ater level measurent ater level measuren	ment collected. ment collected.	Obstruction in was well is pumping	well. g.				
			WELL	PURGING IN	FORMATION			
1 Purg	ed 3 well volumes a ed 3 well volumes i ed well until field pa r:	based on previ	ous water level :	and field paren	neters stabiliz	ed.		
Addition	al Comments:							
	974	!						
	- (<u> </u>	
	<u> </u>					is.		

,			Juliave		Client:	Free	port Copper Qu	ieen Branch	
ect No: 28	37030				Date:		8-21-14		
: No:					Weather:		forthy Clous	<u>/</u>	
 ID:	TM-	<u>7</u>				11.	1.5 ropler 1	Sheway	
VR No:				WELL DAT	Sampler:		177		
VIC INO.				WELLDA			Casing Cap	acity Gallons per Linea	r Foot
					Nomin	al Size	(inches)	0.16	
Well Dept	h (ft bis):					4		0.65 1.02	1
Casing Dia	meter (in):					. 5	1	1.47	
. ista Malakan I	_evel (ft bmp): _	_			-	6 8	1	2.61 4.08	
			x3 =			10			(feet)
Casing Vo	lume (gal):		, AU		Cas	sing V	olume = gallons/fo	ot " water column	
· Total Volume	Purged (gai):		CIEL	D SAMPLI	NG DATA			<u> </u>	
					Temp		Specific	Commen	ts
Time	Elapsed Time (min)	Discharge Rate (gpm)	· Total Discharge (gallons)	pH (SU)	(°C)		Conductance (µS/cm)		
	Pump On				10-		0-1		
1330	Pump on	10	20	1/276	20.7	_	65/		
1332	-d	10			<u></u>				
1342	 	10	40	7.25	20.5	}-	354-1		
1344	4	 	+ <i>-/-</i> /			}-			
1354	<u> ~ </u>	 	60	7.30	20.6		346		
1256	4	10	60	1.2					
1406		 	100	735	20.	7	358		
1408	8	10	80	- -/-/- -					
				-{				Pump Off	 _
			Three	consecutive	L readings w	thin 0	.3 su pH, 2 degree	s C, and 100 μS/c	m)
	FIELD PARAM	ETER STABIL	ZATION: Tillee	AMPLE INF	ORMATIO	N	.3 su pH, 2 degree		
	·			MIVIT CIL 1141					
Sample C	ollection Point:				No.	of	Analysis Method	Preservative	Filtered (y/n)
	sample ID	Time	Containe Type	Volum	ne Conta		<u></u>	 	1
		-110	X 7/2	25	0 1		300	16	+-/-
	M-7-	140	/		1 /		<u> </u>	<u> </u>	1/
			WATER LE	/EL MEAS	JREMENT	COLL	LECTION		
				<u> </u>					
☐ Wate	r level measurer ater level measu	nent collected.	ed No access t	to wellhead/N	lo port in we	lihead	l		
1 4		rement collect	Ed. Obsulación						
No w	rater level measi rater level measi	urement collect	ted. Weil is pum	nping.					
Ø Othe				ELL PURGI	IC INFORM	ATION	 N		
	 '				10 114 0141				
☐ Pure	ged 3 well volum	es and field pa	rameters stabili	zed.	naremeters	stabili	ized.		
1	2 wali volum	_{les} based on p	IBAIDES METCH 10	ivei dilu liciu	Man at the same of				
☐ Pur	ged well until fiel	ld parameters	5(8)111460.						
pr Oth				1.1	a Cle	<u>~ (</u>	Creck met	mso/	
Additio	nal Commen	ts: TM·	1Samp	pris f	<u> </u>			<u> </u>	
				- · ·					
				<u> </u>					CLE/ CREI ASS

		G	Froundwa	ater Sa	mpling	Form			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 15, 2014			
Well ID:	TM-10				Weather:	Partly Cloudy, 7	70s		
ADWR No:	522696				Sampler:	VNH			
				WELL DA					
Well De	epth (ft bls):		290		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot	
Cooing	Diameter (in):		4			2 4	0.1	6	
	Diameter (in):					5	1.0		
Static Wate	er Level (ft bmp):		271.03			6 1.47 8 2.61			
Casing \	Volume (gal):	12	x3 =	37		10	4.0		
Total Volun	ne Purged (gal):				Casi	ing Volume = gallons	s/foot * water colum	in (feet)	
	1	T	FIEL	D SAMPLIN	IG DATA	1			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
3:24 PM	Pump On								
3:32 PM				7.82	21.6	422.7			
3:42 PM				7.95	21.4	422.8			
3:52 PM				7.86	21.4	421.9			
	FIELD DADAME						Pump Off		
	FIELD PARAME	TER STABILIZ				3 su pH, 2 degrees (C, and 100 S/cm)		
0 1 0 11		0.:		IPLE INFOR	IVIATION				
Sample Colle	mple ID	Time	Pressure tanks Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
TM-10		15:57:31	Poly	250mL	1	300.0	NA	Y	
		10.07.01	i Oiy	ZOUIIL	<u> </u>	500.0	13/1	'	
		\	NATER LEVEL	MEASURE	MENT COLLE	ECTION			
X Water lev	vel measurement c	ollected.							
	level measuremer			ead/No port in	wellhead				
	· level measuremer · level measuremer								
O Other:	ievei illeasutetilet	n conecieu. W	en is puilipilig.						
			WELL I	PURGING INF	FORMATION				
	3 well volumes and								
_	well volumes base			ield paremete	rs stabilized.				
X Purged well until field parameters stabilized. Other:									
	20mm========	Mo:t 10	- hotuse= ====	dings for	oborgo				
Additional (Jomments:	Hand-Filter	n between rea r	uings for re	echarge				
		2. 12. 7							

ject No:	287030				Client: <u>F</u>	reeport Copper	Queen Branch		
sk No:	-41 444		-		Date:	7-22-	14		
sk 190: ell ID:	TI	n-15		\	/Veather: _	Partly C	loudy		
-	<i></i>	<u> </u>			Sampler:/	Genstoda-	L Stronger		
WR No:				WELL DAT	Α	Casing C	'anacity		
		725			Nominal S	Size (inches)	Gallons per Lin	ear Foot	
Well Dep	oth (ft bis):					2	0.16 0.65		
Casing Dia	ameter (in):	411	111			5	1.02		
tatic Water	Level (ft bmp):		NI			6 8	1.47 2.61		
Caeinn V	olume (gal):	_	x3 =		10 4.08				
·			420		Casing	Volume = gallons/	foot * water column	ı (feet)	
otal Volume	e Purged (gal):		FIEL	D SAMPLIN	G DATA			· · · · · · · · · · · · · · · · · · ·	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts	
(2-0	Pump On	101-	<u> </u>						
1229	20	5	140	7.11	23.6	408			
1/ 0	40	5	180	7.15	23.4	407			
1300	100	ク	420	7 12	13.2	417			
[7 <u>916.7</u>	- G								
				 					
			<u></u>						
			<u> </u>			<u> </u>			
		ļ		·		<u> </u>	Pump Off		
			A TION! Three o	anagoutive res	dings within ().3 su pH, 2 degree		n)	
	FIELD PARAME	TER STABILIZ	ATION: Three C	MPLE INFOF	RMATION				
				VILLE IN O.					
Sample Co	llection Point:		1 Containes		No. of	1 - 1 - 1 - 1 4 - 4 h - ad	Preservative	Filtered	
Sa	mple ID	Time	Container Type	Volume	,Containers	Analysis Method		(y/n)	
~ W	n 15	1300	PL	250	1_/_	300	Dlv	- /-	
		1			<u> </u>	<u></u>			
		\	NATER LEVE	L MEASURE	MENT COL	LECTION		·	
☐ No wat	evel measureme er level measure er level measure	ment collected	. No access to w	velihead/No po well.	ort in wellhead				
No wat ☐ No wat ☐ Other:	er level measure	ment collected	l. Well is pumpin	ig.					
- Other.			WELL	PURGING IN	FORMATION	<u> </u>			
C Durger	d 3 well volumes d 3 well volumes	based on prev	ious water level	and field pare	meters stabiliz	zed.			
Purget	d well until field p								
Purget Purget Other:	d well until field p								
Purget Purget Other:	d well until field p							······································	

oject No: sk No:	287030				Client: Freeport Copper Queen Branch				
SK 110.)ate: _	8-4-1			
-II (ID)	1M-1	7.		v	Veather:	Partly -/h	lede		
ell (D:					Sampler:	Placetapler	L'aux		
OWR No:		_		WELL DATA					
		-سول:			Mominal	Casing (Size (inches)	Capacity Gallons per Lir	ear Foot	
Well De	epth (ft bis):	_ <i>[D</i>			MOLITICAL	2	0.16		
Casing D	Diameter (in):	411				4	0.65 1.02		
Static Mate	r Lavel (ft bmp):	' /	2.55		6 1.47				
	•	74	x3 = /	02		8 10	4.08	·	
Casing V	/olume (gal):		<u> </u>	<i></i>	Casing	Volume = gallons	foot * water colum	n (feet)	
Total Volum	ne Purged (gal):		EICI	D SAMPLING	3 DATA				
 		Discharge	Total			Specific			
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	nts 	
1940	Pump On					·		····	
1445	1	21	105	1-74	20.2	1369			
146	10	21	210	678	20.6	1367			
170	115	21	218	By (179	20.0	1368			
433	 	<i></i>	7{/			. 7			
	 								
							<u> </u>		
·····	 	 							
	- -	 							
	+						Pump Off		
•	FIELD PARAMET	ER STABILIZ	ATION: Three co	onsecutive rea	dings within ().3 su pH, 2 degree	s C, and 100 μS/c	n)	
			SAN	IPLE INFOR	MATION				
Sample Co	ollection Point:						3		
		-	Container	Volume	No. of	Analysis Method	Preservative	Filtered (y/n)	
S	ample ID	Time	Туре	0	Containers	300	Lu	10	
Tr	1-16	1955	<u> </u>	250	 	300	1 LCL		
	<u> </u>	<u> </u>		1	MENT COLL	ECTION	<u> </u>	/ _	
			VATER LEVEL	MEASURE	WENT COL	LLOTION			
Water	level measuremer ter level measurer	nt collected.	No anges to w	allhead/No noi	rt in wellhead				
☐ No wat	ter level measurer ter level measurer	nent collected. nent collected.	Obstruction in v	vell.		•	•		
	ter level measurer								
☐ Other:									
		<u>. </u>		PURGING IN	FURMATION	<u> </u>			
Purge	d 3 well volumes a	ind field param	eters stabilized.	d #ald parem	atere stahiliz	red.			
/	d 3 well volumes b	ased on previous	Dus water level a ilized	and tield palett	IO(DIA 3/00/III	· ···			
☐ Purge	d well until field pa	iiaiiicicis sidu	meeu.						
☐ Purger☐ Purger									
☐ Purger ☐ Purger ☐ Other:		474							
☐ Purger ☐ Purger ☐ Other:	al Comments:	32.4							
☐ Purger ☐ Purger ☐ Other:		52.4							

Project No:	287030			(Client:	reeport Coppe	r Queen Branc	<u>h</u>
Fask No:					Date: _	7-27-14		
	TM-1	g a			Weather:	Suna		
Vell ID:		<i></i>			- Sampler: /	bustopler	L Shon	,
ADWR No:				WELL DAT				
		700	· · · · · · · · · · · · · · · · · · ·		Mominal	Casing (Size (inches)	Capacity Gallons per Li	near Foot
Well De	epth (ft bis):		<u> </u>		NONTINAL	2	0.16	
Casing D)iameter (in):	41				4 5	0.65 1.02	
Static Wiston	r Level (ft bmp):	1710	1.5L	_		6	1.47	
	•			55		8	2.61 4.08	
Casing \	/olume (gal):	318.1	x3 = 7	<u>رر</u>	Casino	g Volume = gallons	foot * water colum	ın (feet)
Total Volum	ne Purged (gal):	100	0	- 0.114DL1M				
		<u> </u>		D SAMPLIN	UNIA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	 Total Discharge (gallons) 	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
1/1/	Pump On							
11.20	1,/	2/	375	7.06	27.2	539	<u> </u>	
1140	1-12	7.5	1.25	7.05	24.3	541	· .	
<u>سرسر د ۵</u>	1/10	77	1000	7.06	24.2	542		
-//55	1-7//	23-	10000	11				
	 							
-								·
	 	<u> </u>				1		
							Pump Off	
	EIELD BARAMET	ER STABILIZ/	ATION: Three c	onsecutive rea	dings within (0.3 su pH, 2 degree	s C, and 100 μS/c	m)
	FIELD FAIVAME		SAN	IPLE INFOR	MATION			
Sample Co	ellection Point:							P*16
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Im-	191	1155	Pla	250	1.2	300	$\mathcal{I}_{\mathcal{C}_{\mathcal{C}}}$	<i>Y</i>
					<u> </u>]	
		ν	VATER LEVEL	MEASURE	MENT COL	LECTION		
No wat	level measuremer ter level measuren ter level measuren ter level measuren	nent collected. nent collected.	Obstruction in v	well.	rt in wellhead		:	
			WELL	PURGING IN	FORMATION	<u> </u>	<u> </u>	
D Purge	d 3 well volumes a d 3 well volumes b d well until field pa	ased on previo	ous water level a	and field parer	neters stabiliz	red.		
Additiona	al Comments:							
1/89			·.,					
1"								
			·					

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Project No:	287030				Client: _	Freeport Coppe	Queen Branch			
ask No:					Date:	7-21-1	4			
Vell ID:	T	m-47			Weather:	Partly (1 swaly			
ADWR No:					Sampler:	/ hastoday	1 Shunn			
IDVVIV IVO.				WELL DAT	Α					
		100			Nominal	Casing (Size (inches)	Gallons per Li	near Foot		
Well De	epth (ft bls):	720			10/11/12	2	0.16			
Casing E	Diameter (in):	<u> </u>	1			5	0.65 1.02			
Static Wate	r Level (ft bmp):	\mathcal{L}	8.33			6	1.47 2.61			
		32	$3 \times 3 = 9$	7	ı	8	4.08			
_	/olume (gal):				Casin	y Volume = gallons	/foot * water colum	n (feet)		
Total Volun	ne Purged (gai):		FIFI	D SAMPLIN	G DATA					
	1	Discharge	Total			Specific				
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents		
1245	Pump On									
1265	10	5	50	4.86	21.8	120				
1305	20	5	100	1.82	21.5	1202		·		
1215	30	5	150	6.85	21.4	£ 1205				
1)13	J									
<u> </u>								<u></u>		
								<u>. </u>		
						·				
								<u> </u>		
							Pump Off			
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	dings within ().3 su pH, 2 degree	s C, and 100 μS/c	m)		
			SAN	APLE INFOR	MATION					
Sample Co	ellection Point:		·							
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Tm.	47	1715	PL	260		300	200	<i>Y</i>		
117	/2	 						/		
ļ — — — — — — — — — — — — — — — — — — —	· · · · · · · · · · · · · · · · · · ·	٧	VATER LEVEL	MEASURE	MENT COL	ECTION				
'BK Water	level measuremer		····							
☐ No wa	ter level measuren	nent collected.	No access to w	ellhead/No po	rt in wellhead					
	ter level measuren									
}	ter level measuren	nent collected.	Well is pumping	g.						
Other:			WEI 1	PURGING IN	FORMATION					
₩ Purge	d 3 well volumes a	nd field param								
Purge	d 3 well volumes a d 3 well volumes b	ased on previo	ous water level a	ınd field paren	neters stabiliz	ed.				
	d well until field pa									
☐ Other:			<u>.</u>							
Additiona	I Comments:	31.7								
			··		·					

anianiadows\Terminiarov Internet Files\Content.Outlook\SSECO2FW\Groundwater Sampling Sheet 2013-07-9

		G	roundwa	ater Sai	mplina	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Brand	
Task No:	1				Date:	Jul 16, 2014	JI QUEEN BIUN) i
Well ID:	TVI 236				Weather:	Partly cloudy, 7	′∩s	
ADWR No:	568875				Sampler:	VNH	03	
ADWIN No.	300073			WELL DA		VIVII		
Well De	epth (ft bls):		222		Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot
					Normina	2	0.1	6
Casing D	Diameter (in):		12		5 1.0			
Static Water	r Level (ft bmp):		129.24			6 8	1.4 2.6	
Casing Volume (gal): 545 x3 = 1635 10				4.0				
Total Volum	ne Purged (gal):		1500		Casi	ng Volume = gallons	s/foot * water colun	nn (feet)
	1		FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)			Comm	ents			
3:55 PM	Pump On							
4:00 PM	5m	100	500	7.37	22.0	519.6		
4:05 PM	10m	100	1000	7.42	21.2	517.0		
4:10 PM	15m	100	1500	7.41	21.1	517.3		
							D Off	
	FIELD PARAME	TER STARII 17	ATION: Three co	nsecutive rea	dings within ()	3 su pH, 2 degrees	Pump Off)
	11225 17410 WIL	TER OT REIE		IPLE INFOR	-	.o ou pri, 2 dogrood	o, and 100 0,011	<i>)</i>
Sample Colle	ection Point	Spigot under						
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
TVI 236		16:22:13	Poly	250mL	1	300.0	NA	Υ
V			VATER LEVEL	MEASUREN	MENT COLLI	ECTION		
	vel measurement r level measureme		n access to wellb	ead/No port in	wellhead			
	r level measureme			-	. Homiload			
No water	r level measureme	nt collected. W	ell is pumping.					
Other:			\//ELL_	PURGING INF	ODMATION			
Purged 3	3 well volumes and	I field paramete		OKOING INF	CINIMITION			
_	3 well volumes bas			field paremete	ers stabilized.			
_	well until field para	meters stabilize	ed.					
Other:								
Additional (Comments:	Hand-filter						
					- <u></u>	· _	· _	

		C	Froundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 16, 2014		
Well ID:	TVI 713				Weather:	Partly cloudy, 7	'0s	
ADWR No:	567713				Sampler:	VNH		
				WELL DA	TA			
Well De	epth (ft bls):		200		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		8			2	0.1 0.6	
						5	1.0	2
Static Water	Level (ft bmp):		132.57			<u>6</u> 8	1.4 2.6	
Casing V	olume (gal):		x3 =			10	4.0	
Total Volum	e Purged (gal):				Cas	ing Volume = gallons	s/foot * water colum	ın (feet)
		ī	FIE	LD SAMPLIN	IG DATA		T	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On				•			
	<u> </u>					<u> </u>	Pump Off	
	FIELD PARAME	TER STABILIZ			-	.3 su pH, 2 degrees	C, and 100 S/cm)	1
			SAIN	MPLE INFOR	IMATION			
Sample Colle	ection Point:	<u> </u>	<u> </u>		No. of	1		Filternad
San	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
			WATER LEVEL	. MEASURE	MENT COLL	ECTION		
	el measurement							
	level measureme level measureme			·	weiinead			
	level measureme			•				
O Other:								
				PURGING INF	FORMATION			
_	well volumes and well volumes bas			field naremete	re etahilizad			
	ell until field parar			neia paremete	is stabilized.			
O Other:								
Additional C	Comments:				WL	0		
		-						

		G	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 16, 2014		
Well ID:	TVI 875				Weather:	Partly cloudy, 7	'0s	
ADWR No:	568875				Sampler:	VNH		
	'			WELL DA	ΤA			
Well De	epth (ft bls):		330		Nomina	Casing al Size (inches)	Capacity Gallons per L	inear Foot
Casing	Namotor (in):		8			2	0.1 0.6	6
	Diameter (in):		0			5	1.0	2
Static Water	r Level (ft bmp):					8	1.4 2.6	
Casing V	olume (gal):		x3 =			10	4.0	
Total Volum	ne Purged (gal):		4500		Cas	ing Volume = gallons	s/foot * water colum	in (feet)
			FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min) Discharge Rate (gpm) Total Discharge (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
3:06 PM	Pump On							
3:09 PM	3m	500	1500	7.33	22.3	955.6		
3:12 PM	6m	500	3000	7.28	21.6	948.3		
3:15 PM	9m	500	4500	7.30	21.6	940.2		
							Pump Off	
	FIELD PARAME	ETER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
		<u> </u>		IPLE INFOR	MATION			
Sample Colle	ection Point:	Spigot under	green box		No of	1		Cite ve d
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
TVI 875		15:21:58	Poly	250mL	1	300.0	NA	Υ
		\	WATER LEVEL	MEASURE	MENT COLL	ECTION		
	vel measurement		. "	1/51				
	level measureme			ead/No port in	welinead			
	level measureme							
O Other:								
				PURGING INF	ORMATION			
_	well volumes and well volumes bas			ield naremeter	re etahilizad			
_	vell until field para			ieia paremetei	3 Stabilized.			
O Other:								
Additional C	Comments:							

		G	Groundwa	ater Sa	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 18, 2014		
Well ID:	Weed				Weather:	Sunny, 80s		
ADWR No:	544535				Sampler:	VNH		
	•			WELL DA	TA			
Well De	epth (ft bls):		320		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
Cooling D	Nometer (in):		6			2	0.16 0.65	
Casing D	Diameter (in):		0			5	1.0	
Static Water	r Level (ft bmp):					8	1.4 2.6	
Casing V	/olume (gal):		x3 =	0		10	4.0	
Total Volum	ne Purged (gal):		225		Casi	ing Volume = gallon	s/foot * water colum	ın (feet)
		1	FIEI	LD SAMPLIN	IG DATA		•	
Time	Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge pH (gallons) (SU)		•	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
5:02 PM	Pump On							
5:07 PM	5m	15	75	7.72	21.7	387.3		
5:12 PM	10m	15	150	7.77	21.3	386.5		
5:17 PM	15m	15	225	7.79	21.4	386.7		
							Pump Off	
	FIELD PARAME	TER STABILIZ				.3 su pH, 2 degrees	C, and 100 S/cm)	ł
				IPLE INFOR	RMATION			
Sample Colle	ection Point:	Yard spigot	under fake rock		T	T	I	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Weed		17:20:07	Poly	250mL	1	300.0	NA	Υ
			WATER LEVEL	MEASURE	MENT COLL	ECTION		
	vel measurement			1/51				
	level measureme			•	i weiinead			
	level measureme							
O Other:								
			WELL	PURGING INF	FORMATION			
_	well volumes and	•						
_	well volumes bas well until field para			field paremete	ers stabilized.			
O Other:	veli uritii ilelu para	meters stabiliz	eu.					
Additional C	Commonts:							
Auditional	JUHHHEHIS.							

		G	roundwa	ter Sar	npling F	-orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 18, 2014			
Well ID:	Weiskopf 802	2			Weather:	Sunny, 80s			
ADWR No:	641802				Sampler:	VNH			
-				WELL DAT					
Well De	epth (ft bls):		200		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
Casina D	Nometer (in)					2	0.1	6	
Casing L	Diameter (in):		6			4 0.65 5 1.02			
Static Water	r Level (ft bmp):		150.85			6 8	1.4 2.6		
Casing V	Casing Volume (gal): 72 x3 = 217			217		10	4.0		
Total Volum	Total Volume Purged (gal): 360					ng Volume = gallons	s/foot * water colum	in (feet)	
			FIEL	D SAMPLING	G DATA				
Time	Elapsed Time (min) Discharge Rate (gpm) Total Discharge pH (gallons) (SU)			Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
2:00 PM	Pump On								
2:15 PM	15m	4	60	7.49	28.8	583.9			
2:30 PM	30m	4	120	7.43	24.9	925.3			
2:45 PM	45m	4	180	7.25	24.0	1216			
3:00 PM	60m	4	240	7.24	23.7	1315			
3:15 PM	75m	4	300	7.20	23.5	1356			
3:30 PM	90m	4	360	7.17	23.3	1375			
							Pump Off		
	FIELD PARAM	IETER STABILIZA			-	su pH, 2 degrees C	c, and 100 S/cm)		
				PLE INFORM	MATION				
Sample Colle	ection Point:	Spigot off gara	ge, near wellhe	ad	·	Γ			
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Weiskopf 8	02	15:31:23	Poly	250mL	1	300.0	NA	Υ	
		W	ATER LEVEL I	MEASUREM	ENT COLLE	CTION			
	vel measurement								
	level measureme			d/No port in w	ellhead				
	· level measureme								
O Other:	io voi inicacaronio		10 papg.						
			WELL P	URGING INFO	ORMATION				
_	8 well volumes and								
_	3 well volumes bas		ater level and fiel	ld paremeters	stabilized.				
Purged wOther:	vell until field para	meters stabilized.							
	Commonto								
Additional C	Johnnents:								

		G	roundwa	ter San	npling F	orm			
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	1				Date:	Jul 18, 2014			
Well ID:	Weiskopf 897	,			Weather:	Sunny, 80s			
ADWR No:	221897				Sampler:	VNH			
				WELL DATA					
Well De	epth (ft bls):		1030		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
						2	0.10	6	
Casing L	Diameter (in):		5			5	0.69 1.02		
Static Wate	r Level (ft bmp):		150.55			8	1.4 ⁻ 2.6 ⁻		
Casing \	Casing Volume (gal): 897 x3 = 2691				10	4.08			
Total Volum	ne Purged (gal):		840		Casi	ng Volume = gallons	s/foot * water colum	n (feet)	
	1		FIELD	SAMPLING	DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	nce Comments		
3:40 PM	Pump On								
3:55 PM	15m	14	210	7.85	23.4	387.9			
4:10 PM	30m	14	420	7.97	24.0	387.5			
4:25 PM	45m	14	630	7.92	23.9	387.2			
4:40 PM	60m	14	840	7.87	23.9	387.4			
							Pump Off		
	FIELD PARAN	METER STABILIZA			-	su pH, 2 degrees C	, and 100 S/cm)		
				PLE INFORM	IATION				
Sample Colle	ection Point:	Spigot near pre	ssure tanks in s	hed		Γ			
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Weiskopf 8	97	16:43:02	Poly	250mL	1	300.0	NA	Υ	
			ATER LEVEL N	MEASUREM	ENT COLLEC	CTION			
	vel measurement or level measureme		ooon to wollboad	/No port in wo	llhood				
	r level measureme			no port in we	ineau				
No water	r level measureme	nt collected. Well i	s pumping.						
O Other:									
0.5	Name II and I	<i>C</i> -14 - :		JRGING INFO	RMATION				
_	B well volumes and B well volumes bas			paremeters s	tabilized.				
_	well until field parar			,					
X Other:	Purge 1 well volu	ıme, stable param	eters						
Additional (Comments:								
I									

		G	Groundwa	ater Sai	mpling	Form		
Project No:	287030				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1				Date:	Jul 17, 2014		
Well ID:	Zander				Weather:	Overcast, 80s		
ADWR No:	205126				Sampler:	VNH		
	•			WELL DAT	ΓA			
Well De	epth (ft bls):		280		Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot
Casing D	liameter (in):		6			2	0.1	
	Piameter (in):					5	1.0	2
Static Water	Level (ft bmp):		152.02			8	1.4 2.6	
Casing V	olume (gal):	188	x3 =	564		10	4.0	
Total Volum	e Purged (gal):		600		Casi	ing Volume = gallons	s/foot * water colum	n (feet)
			FIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
10:45 AM	Pump On)n						
11:00 AM	15m	10	150	7.56	22.1	431.3		
11:15 AM	30m	10	300	7.59	21.6	431.5		
11:30 AM	45m	10	450	7.60	21.6	431.7		
11:45 AM	60m	10	600	7.61	21.5	432.0		
							Pump Off	
	FIELD PARAMI	ETER STABILIZ			-	3 su pH, 2 degrees	C, and 100 S/cm)	
0 1 0 11	. 5	M		IPLE INFOR	WATION			
Sample Colle	ection Point:	Wellhead spi	got		No. of	1		Filtered
San	nple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
Zander		11:52:31	Poly	250mL	1	300.0	NA	Υ
		\	WATER LEVEL	MEASUREN	MENT COLLE	ECTION		
	vel measurement level measureme		a a a a a a a su a llh a	ad/Na nautin	المراالمين			
	level measureme			ead/No port in	weiinead			
O No water	level measureme	nt collected. W	ell is pumping.					
O Other:								
V				PURGING INF	ORMATION			
_	well volumes and well volumes bas			eld naremeter	s stahilized			
	ell until field para			ola paremeter	o otabiliza.			
O Other:								
Additional C	Comments:							
		-						