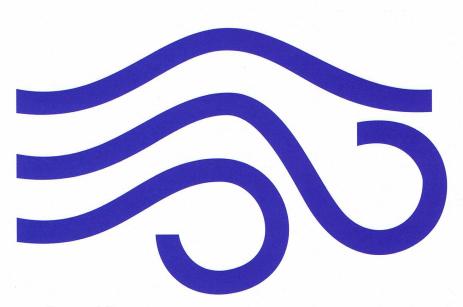
FOURTH QUARTER 2012 GROUNDWATER MONITORING REPORT

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-MCMORAN CORPORATION COPPER QUEEN BRANCH

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Prepared by:

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January 18, 2013

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Approved by:

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted by Freeport-McMoRan Corporation Copper Queen Branch (CQB) in the fourth quarter 2012 in the vicinity of the Concentrator Tailing Storage Area (CTSA). Groundwater monitoring is conducted pursuant to Tasks 1.0 (well inventory of drinking water wells) and 2.2 (groundwater monitoring) of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2008) to characterize sulfate in the vicinity of the CTSA and subsequent modifications. 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 (DWS) wells outside of and within one mile of the sulfate plume 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).

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 specifications of 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 generalized geologic map of the study area and well locations where data reported herein have been collected. Table 2 lists wells scheduled under the groundwater monitoring program, their availability for sampling, and their sampling status in the fourth quarter 2012. 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 presented in Section 2.

One new domestic drinking water supply well, WEISKOPF 897, and one new monitoring well, BMO-2012-1M, were installed and became operational during the fourth quarter. The new wells were added to the groundwater monitoring schedule as they became operational. WEISKOPF 897 was installed as a mitigation action (Clear Creek, 2012). The well name for the pre-existing well on the property has been changed to WEISKOPF 802 on tables and figures to differentiate between the new well and the old well. BMO-2012-1M was installed to replace GGOOSE 547 and delineate the southeast edge of the sulfate plume. Survey data for the new wells can be found in Appendix A.

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring

Analytical results and groundwater elevation data for the fourth quarter 2012 are tabulated in Tables 3 and 4, respectively, along with information previously collected under the Mitigation Order. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the fourth quarter 2012. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 3 shows groundwater elevations in the fourth quarter 2012. Groundwater elevations were calculated using depth to water measurements made under static (nonpumping) conditions for all wells shown on Figure 3. At wells where multiple samples or water levels were collected during the fourth quarter 2012, 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 fourth quarter 2012 are included in Appendices B, C, and D, respectively. As determined by the data verification review, the analytical results for samples collected in the fourth quarter 2012 by Clear Creek and CQB are of acceptable quality for use in the groundwater monitoring being conducted pursuant to the Mitigation Order.

3. FINDINGS

This report provides the results of groundwater monitoring conducted within the vicinity of the CTSA for the fourth quarter 2012. Groundwater samples were collected from 57 wells and depth to water measurements were collected in 43 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 fourth quarter 2012 groundwater monitoring are described below.

- Water quality samples have been collected from wells completed in three principal water bearing units in the area: basin fill, undifferentiated Bisbee Group, and Glance Conglomerate. The undifferentiated Bisbee Group consists, from youngest to oldest, of the Cintura Formation, Upper Mural Limestone, Lower Mural Limestone and Morita Formation. Figures 2 and 3 provide the screened lithology of the wells sampled.
- Sulfate concentration data indicate that the plume extends to the southwest from the vicinity of the former evaporation pond (Figure 1) to the vicinity of Naco and to the south to the vicinity of Bisbee Junction (Figure 2). 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 2 are based on both historic and current sulfate concentration data. Historic data are available in this report and in the Aquifer Characterization Report (Clear Creek, 2010).
- Comparison of the fourth quarter 2012 sulfate concentrations with previous quarters indicates no large scale change in the plume geometry since the Mitigation Order sampling began in 2008, although concentration contours within the plume have been modified to reflect current concentrations.
- Figure 4 shows sulfate concentrations through time at public drinking water supply wells that are not receiving mitigation actions. Sulfate concentrations have remained relatively stable over time, although NWC-04 displays the greatest variability in concentration.
- Groundwater elevations decrease from east to west across the study area, indicating westerly groundwater flow (Figure 3).
- Figures 5 and 6 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 1.68 feet per year in

BMO-2010-3B, which has declined 3.75 feet between July 2010 and October 2012. 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 sampled is 7.46 feet per year in BMO-2008-10GU, which has declined 29.42 feet between August 2008 and July 2012. Water level declines of up to 9 feet have been measured in BMO-2008-1G, 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 from the time the wells were put into service through the fourth quarter 2012. The groundwater elevations in bedrock wells BMO-2008-10GL and BMO-2008-11G display increasing trends. The groundwater elevation in bedrock well BMO-2010-1M is relatively steady over time.

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.
- Clear Creek. 2012. Feasibility Study and Mitigation Plan for Drinking Water Supplies Affected by Sulfate, Mitigation Order on Consent Docket No. P-121-07. March 28, 2012.
- 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. (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 No.	Semiannual Sampling First Quarter	Quarterly Sampling Second Quarter	Annual Sampling Third Quarter	Quarterly Sampling Fourth Quarter
ANDERSON 396	613396	✓	✓	✓	✓
ANDERSON 458	221458	✓	✓	✓	✓
AWC-02	616586	✓	✓	✓	✓
AWC-03	616585	✓	✓	✓	✓
AWC-04	616584	✓	✓	✓	✓
AWC-05	590620	✓	✓	✓	✓
BANKS 986	647986	✓	✓	✓	✓
BANKS 987	647987	WLO		WLO	
BARTON 919	644919	WLO		WLO	
BF-01	539783			✓	
BIMA	577927	✓	✓	✓	✓
BMO-2008-1G	909474	✓		✓	
BMO-2008-3B	909147	✓		✓	
BMO-2008-4B	910096	✓		✓	
BMO-2008-5B	909653	✓	✓	✓	✓
BMO-2008-5M	909552	✓	✓	✓	✓
BMO-2008-6B	909146	✓	✓	✓	✓
BMO-2008-6M	909019	✓	✓	✓	✓
BMO-2008-7M	908794	✓		✓	
BMO-2008-8B	910097			✓	
BMO-2008-8M	909711	✓		✓	
BMO-2008-9M	909255	✓		✓	
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	✓	✓	✓	✓
CHAMBERS	629807	✓	✓	✓	✓
COB MW-1	903992			✓	
COB MW-2	903984	✓		✓	
COB MW-3	906823			✓	
COB WL	593116			✓	
COOPER	623564	✓	✓	✓	✓
COOPER C	637069	✓	✓	✓	✓



TABLE 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name	ADWR 55 Registry No.	Semiannual Sampling	Quarterly Sampling Second Quarter	Annual Sampling Third	Quarterly Sampling Fourth
		i iist Quarter		Quarter	Quarter
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	✓	✓	√	✓
POOL	509518	✓	✓	√	✓
RAMIREZ	216425	✓	✓	√	✓



TABLE 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name	ADWR 55 Registry No.	Semiannual Quarterly Sampling First Quarter Second Quarter		Annual Sampling Third Quarter	Quarterly Sampling Fourth Quarter
RAY	803772	✓	✓	✓	✓
ROGERS 596/803	573596	✓	✓	✓	✓
ROGERS E	216018	✓	✓	✓	✓
RUIZ	531770	✓	✓	✓	✓
SCHWARTZ	210865	✓	✓	✓	✓
STEPHENS	808560	WLO		WLO	
SUNBELT	201531	WLO		WLO	
SWAN	NR	✓		✓	
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:

ADWR = Arizona Department of Water Resources

WLO = Water Level Only

NR = No Record



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status		
ANDERSON 396	613396	Anderson	Well Inventory	236	Y	Y	Water quality sample collected in October 2012		
ANDERSON 458	221458	Anderson	Plume	734	Y	Y	Water quality sample collected in October 2012		
AWC-02	616586	Arizona Water	Plume	330	N	Y	Water quality sample collected in October 2012. Unable to		
AWO-02	010300	Company Arizona Water	1 lullie	330		'	collect water level because well was pumping.		
AWC-03	616585	Company	Plume	269	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because well was pumping.		
AWC-04	616584	Arizona Water Company	Plume	250	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because well was pumping.		
AWC-05	590620	Arizona Water Company	Plume	1183	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because well was pumping.		
BANKS 986	647986	Banks	Well Inventory	435	N	Y	Water quality sample collected in October 2012. Unable to collect water level because wellhead is not accessible.		
BANKS 987	647987	Banks	Well Inventory	339	Y	N	Water level collected in October 2012.		
BARTON 919	644919	Barton	Plume	130	N	N	Well is not scheduled for fourth quarter sampling.		
BF-01	539783	Copper Queen Branch	Plume	400	N	N	Well is not scheduled for fourth quarter sampling.		
ВІМА	577927	Bisbee Municipal Airport	Plume	465	N	Υ	Water quality sample collected in November 2012. Unable to collect water level due to obstruction in well.		
BMO-2008-1G	909474	Copper Queen Branch	Plume	310	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-3B	909147	Copper Queen Branch	Plume	260	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-4B	910096	Copper Queen Branch	Plume	610	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-5B	909653	Copper Queen Branch	Plume	285	Y	Y	Water quality sample collected in October 2012		
BMO-2008-5M	909552	Copper Queen Branch	Plume	450	Υ	Υ	Water quality sample collected in October 2012		
BMO-2008-6B	909146	Copper Queen Branch	Plume	265	Υ	Y	Water quality sample collected in October 2012		
BMO-2008-6M	909019	Copper Queen Branch	Plume	450	Υ	Υ	Water quality sample collected in October 2012		
BMO-2008-7M	908794	Copper Queen Branch	Plume	670	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-8B	910097	Copper Queen Branch	Plume	480	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-8M	909711	Copper Queen Branch	Plume	1210	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-9M	909255	Copper Queen Branch	Plume	775	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-10GL	909435	Copper Queen Branch	Plume	810	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-10GU	909272	Copper Queen Branch	Plume	449	N	N	Well is not scheduled for fourth quarter sampling.		
BMO-2008-11G	909434	Copper Queen Branch	Plume	760	N	N	Well is not scheduled for fourth quarter sampling.		



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
BMO-2008-13B	909551	Copper Queen Branch	Plume	474	N	N	Well is not scheduled for fourth quarter sampling.	
BMO-2008-13M	909760	Copper Queen Branch	Plume	1030	N	N	Well is not scheduled for fourth quarter sampling.	
BMO-2010-1M	219957	Copper Queen Branch	Plume	540	Y	Y	Water quality sample collected in October 2012	
BMO-2010-2M	219958	Copper Queen Branch	Plume	370	Υ	Υ	Water quality sample collected in October 2012	
BMO-2010-3B	219970	Copper Queen Branch	Plume	330	Υ	Υ	Water quality sample collected in October 2012	
BMO-2010-3M	219969	Copper Queen Branch	Plume	532	Y	Y	Water quality sample collected in October 2012	
BMO-2012-1M	221388	Copper Queen Branch	Plume	396	Y	Υ	Water quality sample collected in November 2012	
CHAMBERS	629807	Chambers	Well Inventory	245	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead is not accessible.	
COB MW-1	903992	City of Bisbee	Plume	420	N	N	Well is not scheduled for fourth quarter sampling.	
COB MW-2	903984	City of Bisbee	Plume	170	N	N	Well is not scheduled for fourth quarter sampling.	
COB MW-3	906823	City of Bisbee	Plume	269	N	N	Well is not scheduled for fourth quarter sampling.	
COB WL	593116	City of Bisbee	Plume	150	N	N	Well is not scheduled for fourth quarter sampling.	
COOPER	623564	Cooper	Plume	325	N	Y	Water quality sample collected in October 2012. Unable to collect water because wellhead was not accessible.	
COOPER C	637069	Hutson	Plume	220	Y	Y	Water quality sample collected in October 2012	
DODSON	644927	Dodson	Plume	200	Y	Y	Water quality sample collected in October 2012	
DOUGLASS 791	592791	Douglass	Well Inventory	200	N	N	Well identified for water level measurement only. Well is not scheduled for fourth quarter sampling.	
DOUGLASS 792	592792	Douglass	Well Inventory	200	N	N	Well identified for water level measurement only. Well is not scheduled for fourth quarter sampling.	
DURAZO	NR	Durazo	Well Inventory	ND	N	N	Unable to collect water level or water quality sample because well is not operational.	
EAST	599796	East	Well Inventory	125	Y	Y	Water quality sample collected in October 2012	
ECHAVE	219449	Echave	Well Inventory	345	N	Y	Water quality sample collected in October 2012	
EPPELE 641	805641	Eppele	Well Inventory	265	Y	Y	Water quality sample collected in October 2012	
FLEMING	218386	Fleming	Well Inventory	400	N	N	Well is not scheduled for fourth quarter sampling.	
FRANCO 101	500101	Franco	Well Inventory	200	N	N	Well is not currently operational.	
FRANCO 383	221383	Franco	Plume	711	Y	Y	Water quality sample collected in October, November, and December 2012	
FULTZ	212447	Fultz	Well Inventory	300	N	N	Water quality sample not collected per owner request. Unable to collect water level due to obstruction in well.	



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
GARNER 557	558557	Garner	Plume	300	Υ	N	Well identified for water level measurements only. Water level measurement taken in October 2012.	
GARNER 635	587635	Garner	Plume	680	Υ	Υ	Water quality sample collected in October 2012.	
GGOOSE 547	628547	Copper Queen Branch	Plume	800	N	N	Well abandoned October 2012.	
GOAR RANCH	610695	Goar	Well Inventory	250	N	N	Well is not scheduled for fourth quarter sampling.	
HOBAN	805290	Copper Queen Branch	Well Inventory	316	Y	Υ	Water quality sample collected in October 2012.	
HOWARD NR	NR	Howard	Well Inventory	200	Υ	Υ	Water quality sample collected in October 2012.	
HOWARD 312	221312	Howard	Plume	980	Υ	Υ	Water quality sample collected in October 2012.	
KEEFER	209744	Keefer	Well Inventory	245	Y	Υ	Water quality sample collected in October 2012.	
MARCELL	NR	Marcell	Well Inventory	220	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead was not accessible.	
MCCONNELL 265	539265	McConnell	Well Inventory	216	Y	Υ	Water quality sample collected in October 2012.	
MCCONNELL 459	221459	McConnell	Plume	863	Υ	Υ	Water quality sample collected in October 2012.	
METZLER	35-71891	Metzler	Well Inventory	351	Υ	N	Water level measurement collected October 2012. Unable to collect water quality sample because well is not operational.	
MOORE	538847	Moore	Well Inventory	220	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead is not accessible.	
NESS	509127	Ness	Well Inventory	812	N	N	Well is not scheduled for fourth quarter sampling.	
NOTEMAN	212483	Bailey	Well Inventory	400	N	Υ	Water quality sample collected in October 2012. Unable to collect water level due to obstruction in well.	
NWC-02	562944	Naco Water Company	Plume	312	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because the well was pumping.	
NWC-03	203321	Naco Water Company	Plume	312	N	Y	Water quality sample collected in October 2012. Unable to collect water level because the well was pumping.	
NWC-03 CAP	627684	Naco Water Company	Plume	179	Y	N	Well identified for water level measurements only. Water level measurement taken in October 2012.	
NWC-04	551849	Naco Water Company	Well Inventory Sulfate Trend	795	N	Y	Water quality sample collected in December 2012. Unable to collect water level because the well was pumping.	
NWC-06	575700	Naco Water Company	Well Inventory	410	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because the well was pumping.	
OSBORN	643436	Osborn	Plume	258	N	N	Well is not scheduled for fourth quarter sampling.	
PALMER	578819	Palmer	Well Inventory	220	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead is inaccessible.	



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
PANAGAKOS	35-76413	Panagakos	Well Inventory	200	Υ	Υ	Water quality sample collected in November 2012.	
PARRA	576415	Parra	Plume	355	N	Y	Water quality sample collected in October 2012. Unable to collect water level because wellhead was not accessible.	
PIONKE 395	613395	Pionke	Well Inventory	300	Υ	Υ	Water quality sample collected in October 2012.	
PIONKE 517	221517	Pionke	Plume	604	Υ	Υ	Water quality sample collected in October 2012.	
POOL	509518	Pool	Well Inventory	313	N	N	Unable to access well. Unable to contact well owner.	
RAMIREZ	216425	Ramirez	Well Inventory	300	Υ	Υ	Water quality sample collected in October 2012.	
RAY	803772	Ray	Well Inventory	100	Υ	Υ	Water quality sample collected in October 2012.	
ROGERS 596	573596	Rogers, David	Plume	290	Y	N	Well is turned off. Rogers residence uses ROGERS 803. Water level measurement collected in October 2012.	
ROGERS 803	641803	Rogers, Ernest M	Plume	140	N	Y	Water quality sample collected in October 2012. Unable to collect water level due to obstruction in well.	
ROGERS E	216018	Rogers, Ernest M	Well Inventory	290	N	Υ	Water quality sample collected in October 2012.	
RUIZ	531770	Ruiz	Well Inventory	312	N	Υ	Water quality sample collected in October 2012. Unable to collect water level due to obstruction in well.	
SCHWARTZ	210865	Schwartz	Well Inventory	305	Y	Y	Water quality sample collected in October 2012.	
STEPHENS	808560	Stephens	Well Inventory	NR	N	N	Well identified for water level measurements only. Well is not scheduled for fourth quarter sampling.	
SUNBELT	201531	Sunbelt Marketing, Inc.	Well Inventory	380	N	N	Well identified for water level measurements only. Well is not scheduled for fourth quarter sampling.	
SWAN	NR	Swan	Well Inventory	NR	N	N	Well is not scheduled for fourth quarter sampling.	
TM-02A	522574	Copper Queen Branch	Plume	925	N	N	Well is not scheduled for fourth quarter sampling.	
TM-06 MILLER	522695	Miller	Plume	200	N	N	Well is not scheduled for fourth quarter sampling.	
TM-07	522576	Copper Queen Branch	Plume	350	N	N	Well is not scheduled for fourth quarter sampling.	
TM-10 USBP	522696	U.S. Border Patrol	Well Inventory	290	Y	Y	Water quality sample collected in October 2012.	
TM-15 MILLER	522699	Miller	Well Inventory	325	N	N	Well is not scheduled for fourth quarter sampling.	
TM-16	522578	Copper Queen Branch	Plume	115	N	N	Well is not scheduled for fourth quarter sampling.	
TM-19A	522580	Copper Queen Branch	Plume	700	N	N	Well is not scheduled for fourth quarter sampling.	
TM-42	562554	Copper Queen Branch	Plume	250	N	N	Well is not scheduled for fourth quarter sampling.	
TVI 236	802236	Turquoise Valley, Inc.	Well Inventory	222	Y	Y	Water quality sample collected in October 2012.	



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
TVI 713	567713	Turquoise Valley, Inc.	Well Inventory	200	Y	N	Well identified for water level measurements only. Water level measurement taken in October 2012.	
TVI 875	568875	Turquoise Valley, Inc.	Plume	330	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead was not accessible.	
WEED	544535	Weed	Plume	320	N	Υ	Water quality sample collected in October 2012. Unable to collect water level because wellhead was not accessible.	
WEISKOPF 802	641802	Weiskopf	Well Inventory	200	Y	Y	Water quality sample collected in October 2012.	
WEISKOPF 897	221897	Weiskopf	Plume	947	Υ	Υ	Water quality sample collected in December 2012.	
ZANDER	205126	Zander	Well Inventory	280	Υ	Υ	Water quality sample collected in October 2012.	

ADWR = Arizona Department of Water Resources

bls = below land surface

NR = No Record

35-71891 = ADWR 35 Database

Y = Yes

N = No



Well Name	ADWR 55 Registry No.	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 4/14/09	7.27 7.12	21.0	965	488
	<u> </u>	7/14/09	7.12	21.8 22.2	1229 1372	534 550
		10/12/09	6.98	21.5	1375	510
		1/27/10	7.93	20.1	1449	523
ANDERSON 396	613396	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	6.92	15.1	1485	609
		7/14/11	7.23	24.4	1451	678
		10/11/11	6.65	21.2	1230	543
	<u> </u>	2/1/12	7.28	11.8	1360	551
	<u> </u>	4/25/12	7.10	23.9	1380	657
		7/12/12	6.89	24.9 24.0	1520 1414	667
		10/10/12 9/9/12	7.40 8.34	25.9	406.3	574 31
ANDERSON 458	221458	10/10/12	8.13	23.8	412.3	30.3
		1/7/08	ND	ND	ND	14
		3/3/08	ND	ND	ND	16
		5/5/08	ND	ND	ND	13.3
		8/12/08	7.01	22.3	630	14.3
		10/23/08	7.31	23.1	464	15.9
		3/11/09	7.19	21.8	420	15.5
		4/22/09	7.17	22.6	430	14.7
		7/22/09	7.24	22.7	444	14.2
		10/21/09	7.19	21.3	468	16.8
		2/3/10	7.44	19.7	449	18.6
AWC-02	616586	4/23/10	7.56	19.7	526	18.3
	<u> </u>	7/20/10	7.27	23.9	450	18.2
		11/4/10	7.72	21.3	465.9 500	18.8
	<u> </u>	1/19/11 4/7/11	7.84 7.27	19.0 20.3	488.5	18.4 17.3
	-	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	448.9	13.0
		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	22.4	469	38.8
		10/23/08	7.48	21.0	462	41.8
		3/11/09 4/22/09	7.25 7.30	21.2 21.4	445 452	64.2 42.4
		7/22/09	7.30	21.4	452 456	42.4
		10/21/09	7.48	21.3	540	50.5
		2/3/10	7.44	19.7	449	42.0
A1A/O 00	040505	4/23/10	7.57	19.7	468	44.4
AWC-03	616585	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	49.0
		4/7/11	7.28	19.9	469.8	46.8
		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



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/4/08	ND	ND	ND	18
		4/7/08	ND	ND	ND	18
		6/2/08	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
	<u> </u>	4/22/09	6.93	22.1	560	26.1
	_	7/22/09 10/21/09	7.13 7.00	22.5	587 607	26.2 25.7
	_	2/3/10	7.35	21.2 19.3	438	16.3
	<u> </u>	4/23/10	7.14	19.2	625	27.4
AWC-04	616584	7/20/10	7.02	24.1	600	26.6
		11/4/10	7.41	20.3	593.2	24.0
		1/19/11	8.15	20.5	690	26.2
		4/7/11	7.00	20.4	637.2	25.8
		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
		2/4/08	ND	ND	ND	13
	<u> </u>	4/7/08	ND	ND	ND	14
	_	6/2/08 8/12/08	ND 6.74	ND 23.3	ND 425	14.3 14.9
	<u> </u>	10/23/08	7.45	21.0	423	15.4
		3/11/09	7.43	22.1	398	16.5
	<u> </u>	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
AWC-05	590620	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	17.0
		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 10/18/12	7.24 7.66	22.6 22.6	432.1 436.1	19.1 20.1
		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
BANKS 986	647986	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 7/11/11	7.66	21.5	965.0	64.5
		7/11/11 10/12/11	7.72 7.88	25.4 21.2	890.0 1551	68.8 172
		1/31/12	7.69	20.2	1017	64.3
		1/31/2012 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
	1	10/4/12	7.73	22.0	845.4	62.6



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/4/08	6.46	21.9	2745	1320
		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
DF-UI	539763	11/4/09	6.24	23.0	2846	1280
		3/1/10	6.34	21.1	2945	1260
		4/7/10	5.83	20.4	1853	1450
		7/6/10	5.93	22.6	1403	1310
		7/13/11	6.26	21.3	2960	1350
		2/1/12	6.18	19.8	2910	1480
		8/14/12	6.00	21.5	3000	1500
		2/6/08	6.69	22.2	1335	210
		4/25/2008 ¹	6.37	23.1	1521	190
		5/13/2008 ¹	6.58	22.7	1489	195
		6/23/2008 ¹	6.30	23.3	1572	225
		6/23/08 DUP	6.30	23.3	1572	196
		7/29/2008 ¹	6.44	23.0	1647	204
		8/28/2008 ¹	M	23.0	1776	256
		9/23/2008 ¹	6.29	23.0	1741	296
		10/22/08	6.41	22.3	1801	285
		1/20/09	6.40	21.7	1233	190
		1/20/09 DUP	6.40	21.7	1233	200
		4/7/09	6.45	23.4	1436	212
BIMA	577927	7/8/09	6.31	23.4	1483	189
5	0.102.	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
		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
		2/5/08	7.43	20.2	714	206
		4/21/2008 ¹	7.06	21.9	753	201
		5/15/2008 ¹	7.16	22.2	845	211
BLOMMER	633472	6/23/2008 ¹	6.93	21.5	903	193
		7/29/20081	7.21	22.2	921	203
		8/27/20081	7.12	22.1	864	189
		9/23/20081	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	198 104
		8/4/09	7.23	22.8	950 922	
	 	10/27/09	7.11	21.9		103
BMO-2008-1G	909474	2/17/10	7.36	20.5	899.3	98.4
		4/15/10	7.04	22.2	711	95.2
	 	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	26.6	1015	121
		2/8/12	7.02	20.2	869	116
		8/14/12	6.97	21.9	959	120



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
BMO-2008-3B	909147	10/26/09	7.32	21.8	684	153
		3/3/10	7.38	21.4	695	164
		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	6.95	173
		7/10/12	7.02	21.5	651	150
		12/11/08	7.34	22.8	374	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
BMO-2008-4B	910096	2/24/10	7.48	21.8	362	9.7
		4/16/10	7.70	23.4	330	9.73
		7/2/10	7.25	23.6	323	10.10
		2/15/11	7.65	22.2	362	8.90
		7/22/11	7.33	23.7	371	10.2
	<u> </u>	2/23/12	7.21	22.3	354	10.5
		8/15/12	6.96 7.08	23.6	380	9.50
	-	9/30/08 2/18/09	7.08	22.0 21.5	688 691	193 192
		4/27/09	7.03	22.1	605	177
	-	8/4/09	7.35	22.3	724	174
		10/29/09	7.29	21.8	731	181
		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
D140 0000 ED		7/7/10	6.94	22.2	551	183
BMO-2008-5B	909653	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
		7/13/11	6.99	22.0	712	200
		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
		7/10/12	6.87	21.5	726	218
		10/16/12	6.69	21.4	712	207
		10/2/08	7.13	23.6	551	107
		2/18/09	7.06	22.5	562	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
BMO-2008-5M	909552	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
		5/12/11	7.16	23.0	558	119
		7/12/11	7.22	22.7	590	126
		12/7/11	7.1	21.2	601	129
		2/3/12 4/18/12	6.99 6.71	21.5	589	130
			n / 1	22.4	587	120
		7/10/12	6.82	22.4	592	135



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		7/16/08	7.36	24.1	475	53.3
		11/4/08	7.41	21.5	398	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
BMO-2008-6B	909146	7/1/10	7.24	22.2	361	40.1
BMO 2000 0B	303140	10/5/10	7.05	21.0	407	37.2
		2/14/11	7.27	21.8	397	40.2
		5/12/11	7.32	21.5	380	35.0
		7/12/11	7.27	21.1	390	37.8
	_	12/7/11	7.28	20.8	330	21.8
		2/3/12	7.28	20.1	346	23.0
	_	4/18/12 7/10/12	7.25 6.86	21.4 21.2	336	19.7 21.9
	-	10/16/12	6.79	21.5	328 342	19.9
		7/10/08	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
DMO 0000 CM	000010	7/1/10	7.15	22.0	571	198
BMO-2008-6M	909019	10/5/10	6.87	21.3	720	202
		2/14/11	6.80	21.3	731	202
		5/12/11	7.12	21.9	709	189
		7/12/11	7.06	21.8	709	194
		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
		7/14/08	7.63	25.2	500	31.4 34.5
	-	11/6/08 2/18/09	7.53 7.31	22.6 23.3	380 452	27.6
		5/11/09	7.43	24.4	426	26.0
		8/6/09	7.43	24.1	486	25.1
		10/27/09	7.53	23.0	470	26.1
		2/17/10	7.57	23.4	452	25.4
BMO-2008-7M	908794	2/17/10 DUP	7.57	23.4	452	25.0
		4/15/10	7.52	23.2	415	26.0
		7/6/10	7.28	23.5	391	22.8
		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
		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
DMO 2000 0D	010007	11/9/09 DUP	6.33	21.8	2889	1520
BMO-2008-8B	910097	3/3/10	6.51	20.4	3016	1320
		4/16/10 7/1/10	6.06	21.4	1682	1470 1440
			6.10	21.4	1594	
		7/15/11 1/30/12	6.21 6.22	21.2 21.2	2940 2880	1380 1480
		1/30/12 DUP	6.22	21.2	2880	1480



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
BMO-2008-8M	909711	3/3/10 4/16/10	7.70	24.1	641 541	99.5
		7/1/10	7.29 6.99	24.5 25.0	502	97.0 94.7
		1/24/11	7.05	23.4	595	98.2
		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
		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	51.7
		8/17/09	7.76	25.6	534	53.4
BMO-2008-9M	909255	11/3/09	7.82	24.9	552	56.9
DIVIO-2000-3IVI	909233	3/4/10 4/6/10	8.07 6.74	22.4 23.8	520 484	58.6 60.1
		7/1/10	7.40	23.8	484	61.0
		2/10/11	6.79	24.0	520	64.2
		7/15/11	7.56	24.3	516	67
		2/1/12	7.54	22.4	516	67.4
		7/12/12	7.68	24.2	513	68.9
		8/20/08	6.22	29.5	2924	1320
		11/5/08	6.47	25.3	2573	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
BMO-2008-10GL	909435	11/2/09	6.52	26.7	2565	1100
		3/4/10	6.76	24.1	2937	1080
		4/8/10	6.03	25.6	1575	1260
		7/2/10	6.16	26.3	1338	1020
		7/13/11 2/2/12	6.32 6.45	24.8	1726 1600	644 624
	-	7/13/12	6.71	24.8 25.7	1571	545
		8/4/08	6.41	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
BMO-2008-10GU	909272	11/2/09	6.27	21.8	3157	1730
		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
	H	8/22/08 11/12/08	7.96	28.2 24.2	359 257	14.2 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
PMO 2009 440	000424	3/1/10	8.37	23.2	338	13.0
BMO-2008-11G	909434	4/9/10	6.88	24.5	301	13.0
		7/1/10	6.97	25.4	298	12.3
		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
		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 1010
BMO-2008-13B	909551	10/28/09 2/16/10	6.81 6.87	19.7 20.8	2259 2093	997
PINIO-5000-10D	303331	4/14/10	6.38	21.2	1346	974
		7/6/10	6.37	21.8	1208	974
		7/0/10	6.44	20.8	2160	1010
		2/9/12	6.68	20.3	2180	1060
		7/11/12	6.55	21.2	2190	1080



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		12/3/08	7.73	24.1	1463	494
		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
BMO-2008-13M	909760	2/16/10	8.07	24.9	1297	375
		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
		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
DMO 2010 1M	240057	8/31/11	7.74	23.2	562	154
BMO-2010-1M	219957	12/13/11	7.63	21.3	713	149
		2/8/12	7.69	22.0	605	158
		4/24/12	7.08	23.4	701	150
		7/9/12	6.37	24.3	715	161
		10/17/12	7.40	23.9	699	154
		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
5110 0010 011		7/14/11	6.62	21.5	2160	917
BMO-2010-2M	219958	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
		7/9/12	6.41	21.8	2190	1030
		10/17/12	6.60	21.3	2200	998
		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
BMO-2010-3B	219970	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
		7/5/12	7.51	22.4	419.1	15.7
		10/18/12	7.58	21.6	411.9	17.0
		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
BMO-2010-3M	219969	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
		7/5/12	7.66	23.7	381.8	10.3
		10/18/12	7.71	23.3	379.9	10.4
BMO-2012-1M	221388	11/13/12	7.55	21.3	933.7	231
DIVIO ZUIZ-IIVI	221000	2/7/08	7.17	23.0	411	29.5
		4/22/08	7.17	27.0	423	26
		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
BURKE	212268	4/28/09	7.16	26.1	369	24.2
DOLVE	212200	8/19/09				
			7.36	26.7	486	22.5
		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



Well Name	ADWR 55 Registry No.	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 1/27/09	7.41 7.57	22.5 21.5	420 312	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	22.6	410	6.5
		1/26/10	7.31	21.3	416	5.7
CHAMBERS	629807	4/23/10	7.47	20.9	427.5	8.34
01.0.11.02.110	-	7/21/10	7.49	23.1	430	7.75
		10/19/10	8.00	23.0	440	7.04
		1/18/11 4/11/11	7.47 7.18	22.4 22.0	390 427.3	7.30 7.74
		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	22.4	410	8.41
		10/8/12	7.44	22.4	430.0	10.1
		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
COB MW-1	903992	7/22/09	6.94	21.6	1570	680
COB IVIVV-1	903992	7/22/09 DUP	6.94	21.6	1570	730
		10/22/09	6.81	22.3	1582	820
		2/4/10	7.04	21.1	1653	680
		4/20/10	6.92	21.8	1836	783
		7/13/10 7/14/11	7.02 6.78	22.3 21.4	2004 1924	919 927
		7/12/12	6.74	23.4	1760	805
		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	7.33	21.8	431	34
		7/22/09	7.36	21.3	483	33.5
COB MW-2	903984	10/22/09 3/3/10	7.24 7.55	21.0 19.7	454 450	32.2 33.5
COB WWV-2	303304	4/26/10	7.28	21.3	479.6	34.8
		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
		2/28/08	7.39	21.0	416	57.8
		3/27/08 4/30/08	ND ND	ND ND	ND ND	57.7 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
COB MW-3	906823	2/12/09	7.35	21.1	432	112
		4/23/09	7.35	22.6	407	43.7
		7/22/09	7.38	21.5	460	52.3
		10/22/09 10/22/09 DUP	7.40 7.40	21.3 21.3	466 466	74.2 73.9
		3/3/10	7.40	21.1	480	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



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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 7.00	ND	ND 4075	107
		10/23/08 2/12/09	7.23 6.98	21.4 20.6	1075 814	104 94
COB WL	593116	4/23/09	7.29	20.6	923	98
		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
		2/12/08	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 2/11/09	6.68	24.7 21.4	1510 1147	518 567
COLLINS	565260	4/21/09	6.92	22.5	1150	499
OOLLING	000200	7/22/09	7.00	22.4	1413	460
		10/20/09	6.60	21.9	1432	513
		2/2/10	6.98	21.2	1439	471
		4/23/10	6.99	20.6	1472	561
		7/20/10	6.69	25.0	1420	569
		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 7/20/09	8.19 8.45	24.9	346 430	33.4 32.3
		10/14/09	7.85	29.8 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
COOPER	623564	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
		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 10/9/12	7.45 7.70	22.9 22.1	430 432.8	33.4 34.3
		3/20/08	6.93	22.1	432.8 2081	34.3 880
		5/5/08	6.78	22.4	2139	990
		7/15/08	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
COOPER C	637069	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 1/17/11	7.16 6.95	20.9 20.5	1980 1880	829 756
		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



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
DODSON	644927	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
		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 45.4
		4/12/12	7.06 7.10	20.6	1492 1790	45.4 54.0
		7/11/12 10/4/12	7.10	21.5 20.6	1626	48.7
		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
		7/20/10	7.28	23.0	1070	405
DURAZO	NR	10/19/10	7.28	21.9	1112	398
		1/19/11	7.94	21.6	1050	360
		4/4/11	7.20	21.9	1119	383
		7/14/11	7.01	23.6	1101	409
		10/12/11	7.23	24.9	1000	396
		2/7/12	7.26	25.3	1152	404
		4/12/12	7.41	21.8	1101	407
		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 4/21/10 DUP	7.42 7.42	20.5 20.5	616	14.4 13.9
EAST	599796	7/14/10 7/14/10	7.42	20.5	616 577.1	13.9
		10/20/10	7.64	21.2	650	12.1
		1/18/11	7.44	21.0	615.9	13.1
		4/5/11	7.19	20.8	612.5	13.8
		7/12/11	7.19	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
		2/1/12	7.39	20.7	390.0	26.7
		4/23/12	7.50	22.5	440.0	26.4
ECHAVE	219449	7/17/12	7.44	22.2	430	26.1
		10/9/12	7.69	21.9	404.7	26.1
		10/9/12 DUP	7.69	21.9	404.7	26.0
ECHAVE	219449	4/23/12 7/17/12 10/9/12	7.44 7.69	22.2 21.9	440.0 430 404.7	26. 26. 26.



## EPPELE 641 ## 805641 ## 10/20/10 ## 7/11/11/11 ## 17/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/11 ## 17/11/	Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
S1/208 7.21 21,7 667 24,			2/11/09	7.00	21.4	646	21.7
1721/08		 					
101408							
1/21/09							
## AB09							
Page							
FLEMING 218386 7715/10 6.98 24.2 13.0 572.1 17. FRANCO 101 50010101 500101 50010101 500101 500101 500101 500101 500101 500101 5							
EPPELE 641 805641 1020/10 7.66 21.0 572.1 17. 17. 17.43 21.0 576.4 17. 17.1711 7.43 21.5 559.2 16. 17.17111 7.27 23.5 558.3 18. 18. 17.17111 10.00 7.27 23.5 558.3 18. 18. 17.17111 10.00 7.27 23.5 558.3 18. 18. 17.1712 7.68 19.9 500.0 19. 17.1712 7.68 19.9 500.0 19. 17.1712 7.74 20.6 563.8 19. 17.1712 7.74 20.6 563.8 19. 17.1712 7.74 20.6 563.8 19. 17.1712 7.60 21.7 560 18. 17.0712 7.60 21.7 560 18. 17.0712 7.60 21.7 560 18. 17.0712 7.60 21.7 560 18. 17.0712 7.60 21.7 560 18. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 558.8 19. 17.0712 7.84 20.7 17.0712 17		<u> </u>					21.1
EPPELE 641 805841 1/17/111 7.43 21.0 576.4 17.45/11 7.43 21.5 569.2 16. 7/11/11 7.27 23.5 563.1 18. 10/12/11 7.38 20.9 500.0 19. 1/31/12 7.68 19.9 500.8 18. 4/11/2012 7.74 20.6 563.8 19. 4/11/2012 7.74 20.6 563.8 19. 4/11/2012 7.74 20.6 563.8 19. 7/6/12 7.60 21.7 560 18. 10/3/12 7.84 20.7 558.8 19. 10/3/12 7.84 20.7 558.8 19. 10/3/12 7.84 20.7 558.8 19. 10/3/12 7.84 20.7 558.8 19. 560 10/3/12 7.84 20.7 558.8 19. 57/5/08 6.93 22.1 1301 67/5/08 6.93 22.1 1357 68 10/15/08 7/14/08 7.00 22.7 1586 68 10/15/08 7/14/09 7.00 22.7 1586 68 10/15/08 7/14/09 7.00 22.7 1586 68 10/15/08 10/15/08 7/13/10 7.49 10/12/10 7.16 24.2 1493 655 1/22/10 7.43 15.8 15.59 69 7/13/10 7.48 28.6 901.6 18.5 FRANCO 383 221383		l l					17.2
## 4/5/11	EPPELE 641	805641					17.3
T/11/11 T.27 23.5 563.1 18.							16.7
### FRANCO 101 50010101 50010101 500101 500101 500101 500101 500101							18.6
10/12/11							18.3
1/31/12							19.6
### ### ##############################							18.2
### ### ##############################							19.5
FLEMING 218386 7/15/10 6.98 24.2 1390 57 10/3/12 7.84 20.7 558.8 19.9 28/08			4/11/2012 DUP	7.74	20.6		19.6
FLEMING 218386 7/15/10 6.98 24.2 1390 57 2/6/08 7.47 19.6 1301 67 5/5/08 6.93 23.1 1557 68 7/14/08 7.00 22.7 1586 68 10/15/08 7.20 20.5 1560 68 1/22/09 7.19 20.1 1178 74 4/14/09 7.24 23.1 1416 69 7/13/09 7.30 27.3 1532 67 10/12/09 7.16 24.2 1493 65 1/22/01 7.43 15.8 1559 69 7/13/10 7.48 28.8 901.6 18 9/13/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.66 25.0 1005 31 11/3/12 7.67 19.8 988.2 34 12/3/12 7.54 19.4 1001 33 2/27/08 6.76 21.1 1827 15 4/21/2008 6.76 21.1 1827 15 4/21/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1788 11 7/29/2008 6.74 22.0 1788 11 7/29/2008 6.74 22.0 1788 11 7/29/2008 6.74 22.2 1989 15 8/28/2008 M 21.6 1889 13 9/23/2008 6.74 22.2 1989 15 10/22/08 6.80 21.4 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/08 6.80 21.1 1940 144 10/21/11 7.22 21.1 1082 11/21/21 1940 144 11/21/11 7.22 21.1 1082			7/6/12	7.60	21.7	560	18.8
2/6/08			10/3/12	7.84	20.7	558.8	19.5
FRANCO 101 50101 50010101 50010101 500101 500101 500101 500101 5001	FLEMING	218386	7/15/10	6.98	24.2	1390	573
FRANCO 101			2/6/08	7.47	19.6	1301	670
FRANCO 101 FRANCO			5/5/08	6.93	23.1	1557	680
FRANCO 101 500101 4/12/09 7.19 20.1 1178 74 4/14/09 7.24 23.1 1416 69 7/13/09 7.30 27.3 1532 67 10/12/09 7.16 24.2 1493 65 11/26/10 6.91 18.5 1529 64 4/23/10 7.43 15.8 1559 69 7/13/10 7.48 28.6 901.6 18 9/13/12 7.66 25.0 1005 31 FRANCO 383 221383 10/5/12 7.63 24.4 1002 32 11/13/12 7.67 19.8 988.2 34 12/3/12 7.54 19.4 1001 33 2/27/108 6.76 21.1 1827 15 4/21/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1739 13 6/23/2008 6.74 22.0 1788 11 7/29/2008 6.74 22.2 1989 15 8/28/2008 M 21.6 1889 13 9/23/2008 6.80 21.4 1940 14 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 10/22/08 6.80 21.4 1940 14 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 10/20/08 6.80 21.4 1940 14 1/21/09 6.74 21.2 1481 82 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 10/20/08 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 71 10/25/10 7.32 21.2 1202 68 1/25/10 7.32 20.4 1136 56 10/20/10 7.27 20.5 1091 54 1/18/11 7.23 20.4 1136 56 1/5/11 7.08 22.1 1082 49 1/5/11 7.08 22.1 1082 49 1/5/11 7.08 22.1 1082 51. 1/25/11 7.08 22.1 1082 51.			7/14/08	7.00	22.7	1586	680
FRANCO 101 101209			10/15/08	7.20	20.5	1560	680
FRANCO 383 221383 FRANCO 383 221383 221383 221383 221383 221383 FRANCO 383 22180 221804 2217788 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 221778 221804 22			1/22/09	7.19		1178	740
FRANCO 383 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 2213838 22	FRANCO 101	500101	4/14/09		23.1	1416	690
FULTZ 1/26/10 6.91 18.5 1529 64 4/23/10 7.43 15.8 1559 69 7/13/10 7.48 28.6 901.6 18 9/13/12 7.66 25.0 1005 31 10/5/12 7.63 24.4 1002 32 11/13/12 7.67 19.8 988.2 34 12/3/12 7.54 19.4 1001 33 2/27/08 6.76 21.1 1827 15 4/21/2008 6.76 21.1 1827 15 4/21/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1739 13 5/14/2008 6.74 22.0 1788 11 7/29/2008 6.74 22.2 1989 15 8/28/2008 M 21.6 1889 13 9/23/2008 6.82 21.9 1821 13 10/220/8 6.80 21.4 1940 14 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 10/20/08 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 71 10/8/09 DUP 7.00 21.6 1262 71 10/8/09 DUP 7.00 21.6 1262 71 10/8/09 7.32 21.2 1202 68 7/14/10 7.75 22.2 1132 57 10/20/10 7.27 20.5 1091 54 4/5/11 DUP 7.08 22.1 1082 49 4/5/11 DUP 7.08 22.1 1082 49 4/5/11 0.74 20.2 21.7 870 48 2/14/10 7.42 20.2 60 8/25/11 6.45 23.3 940 50.2 2/14/10 7.42 20.2 60.2 60.2 3/14/10 7.65 20.2 20.2 60.4 4/5/11 7.08 22.1 7.08 20.2 60.4 4/5/11 7.08 22.1 1082 51 10/12/11 7.22 21.7 870 48							670
FRANCO 383 2213833 2213833 2213833 2213833 2213833 2213833 2213833 2213833 2213833 2213833 2213833 2213833 22138333 2213833 2213833 2213833 2213833 2213833 2213833 22138333 2213833 2213833 2213833 2213833 2213833 2213833 22138333 2213833 2213833 2213833 2213833 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 2213833 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 22138333 2							650
FRANCO 383 2214838 2214838 2214838 2214838 22178 2214838 22178 2214838 2218644 22177 221483 2214838 22177 221483 2214838 22177 221483 2214838 22177 221483 2214838 22177 2214838 2214838 22177 2214838 2218644 2218644 2218644 2218644 2218644 2218644 2218644 2218644 2218644 2218644 2218644 221883 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218838 2218848 2218							640
FRANCO 383 22111 2212708 2213989 2213989 221388 2213 221388 2213 2213889 2213 221388 2213 221388 2213 221388 2213 22144 2214 22144 2217 2214 2217 2217 2217 2217 2217 2217 2221 2221 2221 2222 2217 2221 2222 2217 2221 2222 2217 2221 2222 2217 2221 2221 2222 2221 2222 2221 2222 2221 2222 2221 2222 2221 2222 2222 2222 2222 2222 2222 2222							699
FRANCO 383 221383 10/5/12 7.63 24.4 1002 32 11/13/12 7.67 19.8 988.2 34 12/3/12 7.54 19.4 1001 33 2/27/08 6.76 21.1 1827 15 4/21/2008¹ 6.74 22.0 1739 13 5/14/2008¹ 6.88 22.3 1532 13 6/23/2008¹ 6.74 22.0 1788 11 7/29/2008¹ 6.74 22.0 1788 11 7/29/2008¹ 6.74 22.0 1889 15 8/28/2008¹ M 21.6 1889 13 9/23/2008¹ 6.82 21.9 1821 13 10/22/08 6.80 21.4 1940 144 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 133 10/22/08 6.80 21.4 1940 144 1/21/09 6.78 21.5 1695 133 10/22/08 6.80 21.4 1940 144 1/21/09 6.78 21.5 1695 133 10/8/09 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 75 10/8/09 DUP 7.00 21.6 1262 75 10/8/09 T.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50.							188
FRANCO 383 11/13/12		<u> </u>					318
FULTZ 11/13/12 11/13/12 12/3/12 7.54 19.4 1001 33 2/27/08 6.76 21.1 1827 15 4/21/2008 ¹ 6.74 22.0 1739 13 5/14/2008 ¹ 6.88 22.3 1532 13 6/23/2008 ¹ 6.74 22.0 1788 11 7/29/2008 ¹ 6.74 22.0 1788 11 7/29/2008 ¹ 6.74 22.2 1989 15 8/28/2008 ¹ M 21.6 1889 13 9/23/2008 ¹ 6.82 21.9 1821 13 10/22/08 6.80 21.4 1940 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 10/8/09 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 1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 4/20/10 7.32 21.2 1102 68. 4/5/11 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 49. 50. 8/25/11 6.45 23.3 940 50. 4/1/1/1/17 7.22 21.7 870 48.	FRANCO 383	221383					324
FULTZ 212447	1100000	22.000					349
FULTZ 13447 14/21/2008 ¹ 15/14/2008 ¹ 16.88 12.3 1532 13 6/23/2008 ¹ 16.74 17/29/2008 ¹ 17/29/2008 ¹ 1889 13 19/23/2008 ¹ 10/22/08 16.82 11.9 1821 13 10/22/08 1889 13 10/22/08 18.80 11.4 1940 14.4 11/21/09 17.44 11/21/09 17.04 17.13/09 17.04 17.13/09 17.04 17.05 17.06 17.06 17.06 17.07 17.08 17.08 17.08 17.09 17.09 17.09 17.00							332
FULTZ 212447 5/14/2008¹ 6.88 22.3 1532 13 6/23/2008¹ 6.74 22.0 1788 11 7/29/2008¹ 6.74 22.2 1989 15. 8/28/2008¹ M 21.6 1889 13 9/23/2008¹ 6.82 21.9 1821 13 10/22/08 6.80 21.4 1940 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 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 10/8/09 DUP 7.00 21.6 1262 71 1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 10/91 1/8/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 49. 4/5/11 DUP 7.08 22.1 1082 49. 49. 49. 49. 49. 49. 41. 41.		_					152
FULTZ 212447 FULTZ 212447 FULTZ 6/23/2008 ¹ 6/23/2008 ¹ 6.74 22.2 1989 15 8/28/2008 ¹ M 21.6 1889 13 9/23/2008 ¹ 6.82 21.9 1821 13 10/22/08 6.80 21.4 1940 144 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 133 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 1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 10/81 1/8/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50.		_					
FULTZ 158/28/2008 ¹ 158/28/2008 ¹ 158/28/2008 ¹ 1682 21.9 1821 133 9/23/2008 ¹ 6.82 21.9 1821 133 10/22/08 6.80 21.4 1940 144 11/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 133 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. 1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 10/91 54. 1/8/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50.		_					
FULTZ 8/28/2008 M 21.6 1889 13 9/23/2008 6.82 21.9 1821 13 10/22/08 6.80 21.4 1940 144 1/21/09 6.74 21.2 1481 82 4/9/09 6.78 21.5 1695 13 4/9/09 7.04 23.4 1452 81 10/8/09 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 72 10/8/09 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48. 2/14/09 7.46 20.2 604 17. 2/14/09 7.46 20.2 604 17. 2/14/09 7.46 20.2 604 17. 2/14/09 7.46 20.2 604 17. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.08 22.1 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 604 47. 2/14/09 7.46 20.2 20.2 604 47. 2/14/09 7.46 20.2 20.2 604 47. 2/14/09 7.08 20.2 604 47. 2/14/09 7.08 20.2 604 47. 2/14/09 7.08 20							
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FULTZ 212447 2126 2126 2126 2127 2120 2126 2127 2120 2127 2120 2							
FULTZ 212447 7/13/09 7.04 23.4 10/8/09 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 71 11/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
10/8/09 7.00 21.6 1262 72 10/8/09 DUP 7.00 21.6 1262 71. 11/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
10/8/09 DUP 7.00 21.6 1262 71. 1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 49. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.	FULTZ	212447					
1/25/10 7.11 21.8 1282 66. 4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48. 214/08 7.46 20.2 604 17.							
4/20/10 7.32 21.2 1202 68. 7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48. 20/4 1/98 7.46 20.2 604 17.		 					
7/14/10 7.75 22.2 1132 57. 10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
10/20/10 7.27 20.5 1091 54. 1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
1/18/11 7.23 20.4 1136 56. 4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
4/5/11 7.08 22.1 1082 49. 4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48. 2/44/02 7.46 20.2 604 17.							
4/5/11 DUP 7.08 22.1 1082 51. 8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48. 20/4/19 7.46 20.2 604 17.		 					
8/25/11 6.45 23.3 940 50. 10/12/11 7.22 21.7 870 48.							
10/12/11 7.22 21.7 870 48.							
2/11/08 7.46 20.2 604 17		 					
CALLANT 502527 2/11/00 7.40 20.2 604 17.							
	GALLANT	502527					20.9



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		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	35.7
		10/14/09	7.58	25.2	446	36.1
		2/2/10	7.79	22.8	465	35.1
		4/22/10	7.84	23.7	464.1	36.9
GARNER 635	587635	7/20/10	7.57	25.3	458.2	38.8
O/11/17/21/ 000	007000	10/19/10	8.23	25.4	510	37.9
		1/19/11	7.82	24.1	463.4	35.7
		1/19/11 DUP	7.82	24.1	463.4	35.7
		4/6/11	7.76	23.4	467.4	35.8
		7/15/11	7.19	25.0	457.40	37.7
		10/11/11	7.57	24.2	400.0	38
		2/2/12 4/13/12	7.38 7.62	22.7 24.0	469.5 460.0	39.2 33.5
		7/11/12	7.52	24.0	520	33.5
		7/11/12 7/11/12 DUP	7.52	24.9	520	37.2
		10/5/12	8.09	23.1	472.9	39.1
		5/21/08	7.08	22.7	856	199
		8/15/08	7.02	24.8	915	178
		10/29/08	7.27	22.6	897	216
GGOOSE 547	628547	2/24/09	7.06	23.8	851	186
		5/14/09	7.15	23.9	743	174
		8/19/09	7.20	23.8	887	175
		11/11/09	7.15	23.1	897	188
		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
		3/2/2010 DUP	7.36	24.9	693	45.1
		4/9/10	6.17	25.6	556	48.1
		7/7/10 2/1/12	6.48	26.3	546	44.4 42.0
		2/1/12	6.57 6.93	24.1 22.1	559	42.0 510
		5/7/08	6.88	22.1	1359 1532	670
		7/14/08	6.88	22.3	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
HOBAN	805290	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
		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



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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	7.35	20.0	1714	440
		1/27/10 DUP	7.35	20.0	1714	520
HOWARD NR	NR	4/21/10	7.16	20.8	1490	710
		7/19/10	6.94	24.6	1350	548
		10/18/10	6.47	21.4	1420	568
		1/17/11	7.12	19.8	1370	520
		4/11/11	7.20	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
HOWARD 340	224242	8/14/12	8.35	26.3	629.3	69.2
HOWARD 312	221312	10/16/12	8.18	26.6	648.3	68.1
		2/6/08	7.70	19.0	378	6.8
		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
		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
KEEFER	209744	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
		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
MADOFIL	ND	2/1/12	7.42	20.8	1557	705
MARCELL	NR -	4/13/12	7.15	21.8	1560	668
		7/13/12	6.86	22.3	1730	650
		10/17/12	7.18	21.3	1546	660
		10/17/12 DUP	7.18	21.3	1546	657
		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
		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
		4/22/10	6.95	20.1	1691	811
MCCONNELL 265	539265	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
					1702	
		7/12/11	6.60	23.7		790
		10/11/11	7.18	21.8	1590	845
		2/7/12	7.14	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
MCCONNELL 459	221459	7/27/12 10/8/12	8.25 8.12	26.5 25.3	510.0 517.3	41 43.4
MOOOTHIVE LE 400						



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		0/5/00	, ,	, ,	" ,	, , ,
		3/5/08 5/15/08	7.27 7.12	21.6 22.8	1055 1051	317 329
		7/31/08	7.12	22.5	1078	317
		10/20/08	7.16	22.5	1078	305
		10/20/08 DUP	7.24	22.2	1080	326
		2/11/09	7.12	21.3	818	321
		4/20/09	7.12	23.2	845	313
		7/15/09	7.41	22.9	1031	293
		7/15/09 DUP	7.41	22.9	1031	309
		10/14/09	7.1	22.7	989	315
METZLER	35-71891	2/1/10	7.22	21.7	1021	286
	<u> </u>	5/18/10	7.56	21.0	1053	330
	<u> </u>	7/16/10	7.20	24.1	1007	330
	T T	10/19/10	7.15	22.6	1006	319
		1/19/11	7.55	21.1	930	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	7.47	20.6	433	7.40
		7/15/10	7.44	24.1	431.3	7.54
MOORE	538847	7/15/10 DUP	7.44	24.1	431.3	7.11
		10/19/10	6.79	22.1	430	7.14
		1/18/11	7.48	21.1	390	6.42
		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
	<u> </u>	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
		7/24/08	7.35	26.5	563	50.2
		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
NESS	509127	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	7.20	26.8	380	39.2



NOTEMAN NOTEMAN HOUSE NSD-02 NSD-03	212483	2/5/08 5/13/08 7/24/08 10/23/08 1/19/09 4/7/09 7/8/09 10/5/09 1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.70 6.67 6.68 6.57 6.38 6.56 6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	19.9 23.0 24.2 23.2 22.9 23.8 24.6 24.1 20.3 22.4 24.6 24.6 24.6 22.3 22.9	1317 1445 1539 1643 1098 1375 1405 1442 1450 1446 1438 1430	310 272 274 356 322 303 260 281 289 307 309 280 286
NOTEMAN HOUSE NSD-02	212483	7/24/08 10/23/08 1/19/09 4/7/09 7/8/09 10/5/09 1/20/10 4/19/10 7/19/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.68 6.57 6.38 6.56 6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	24.2 23.2 22.9 23.8 24.6 24.1 20.3 22.4 24.6 24.6 24.6 22.3	1539 1643 1098 1375 1405 1442 1450 1446 1438 1430	274 356 322 303 260 281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	10/23/08 1/19/09 4/7/09 7/8/09 10/5/09 1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.57 6.38 6.56 6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	23.2 22.9 23.8 24.6 24.1 20.3 22.4 24.6 24.6 22.3	1643 1098 1375 1405 1442 1450 1446 1438 1430	356 322 303 260 281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	1/19/09 4/7/09 7/8/09 1/8/09 1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.38 6.56 6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	22.9 23.8 24.6 24.1 20.3 22.4 24.6 24.6 24.6 22.3	1098 1375 1405 1442 1450 1446 1438 1430 1446	322 303 260 281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	4/7/09 7/8/09 10/5/09 11/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.56 6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	23.8 24.6 24.1 20.3 22.4 24.6 24.6 22.3	1375 1405 1442 1450 1446 1438 1430 1446	303 260 281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	7/8/09 10/5/09 1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.55 6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	24.6 24.1 20.3 22.4 24.6 24.6 22.3	1405 1442 1450 1446 1438 1430 1446	260 281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	10/5/09 1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.48 6.79 6.81 6.77 6.08 6.84 6.72 6.72	24.1 20.3 22.4 24.6 24.6 22.3	1442 1450 1446 1438 1430 1446	281 289 307 309 280
NOTEMAN HOUSE NSD-02	212483	1/20/10 4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.79 6.81 6.77 6.08 6.84 6.72 6.72	20.3 22.4 24.6 24.6 22.3	1450 1446 1438 1430 1446	289 307 309 280
NOTEMAN HOUSE NSD-02	212483	4/19/10 7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.81 6.77 6.08 6.84 6.72 6.72	22.4 24.6 24.6 22.3	1446 1438 1430 1446	307 309 280
NOTEMAN HOUSE NSD-02	212483	7/19/10 10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.77 6.08 6.84 6.72 6.72	24.6 24.6 22.3	1438 1430 1446	309 280
NOTEMAN HOUSE NSD-02	212483	10/18/10 1/19/11 4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.08 6.84 6.72 6.72	24.6 22.3	1430 1446	280
NSD-02		4/4/11 4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.72 6.72			266
NSD-02		4/4/11 DUP 7/11/11 10/11/11 2/3/12	6.72	22.9	4	200
NSD-02		7/11/11 10/11/11 2/3/12			1446	276
NSD-02		10/11/11 2/3/12	6.78	22.9	1446	279
NSD-02		2/3/12		23.9	1406	272
NSD-02			6.96	23.4	1250	286
NSD-02			6.68	21.3	1370	301
NSD-02		4/23/12	6.68	24.0	1580	291
NSD-02	-	7/9/12	6.57	24.7	1360	265
NSD-02		7/9/12 DUP 10/4/12	6.57 6.80	24.7 23.6	1360 1412	265 287
NSD-02	212483	2/3/12	7.06	13.5	1520	324
		2/5/08	ND	ND	ND	43
NSD-03	527587	7/7/08	8.02	21.0	609	44
NSD-03		2/5/08	ND	ND	ND	70.7
	527586	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
NWC-02	562944	7/20/10	7.36	23.7	412.5 416.2	6.87
1400-02	302344	10/19/10 1/18/11	7.42 7.47	22.5 23.2	390	7.39 6.43
		4/6/11	7.27	22.9	413.5	6.4
		7/15/11	7.03	22.5	416.3	7.24
		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
		3/4/08	ND	ND	ND	560
		6/9/08	ND 7.07	ND 24.0	ND 1071	524
		10/27/08	7.07	21.9	1374	489
		2/12/09	7.06	20.2	1023	412
		4/23/09 4/23/09 DUP	6.98	21.9	1129	466
	-	7/21/09	6.98 7.21	21.9 22.9	1129 1194	460 458
	<u> </u>	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
NIMO CO	202224	7/20/10	7.04	22.8	1229	477
NWC-03	203321	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	354 354
	<u> </u>	10/10/12	7.31	21.1	1029	



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/4/08	ND	ND	ND	240
		6/9/08	ND	ND	ND	231
		10/27/08	7.32	25.0	856	162
		1/22/09	7.23	22.9	688	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	846 797	197
	-	4/23/09 5/28/09	7.21 7.01	24.1 24.1	933	188 210
		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 6/15/10	7.68 7.31	25.8 24.5	901.3 917.5	210 212
		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
NWC-04	551849	11/4/10	7.53	23.9	853.2	197
NVVC-04	551649	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	175 204
		6/17/11 7/15/11	7.28 7.06	23.7 23.5	856.3 875.1	202
		8/25/11	7.32	25.1	780	195
		9/26/11	6.56	26.2	875.4	198
		9/26/11 DUP	6.56	26.2	875.4	199
		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 5/22/12	7.16 7.25	23.4 23.9	870 970	204 178
	-	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
		3/4/08	ND	ND	ND	7.9
	575700	6/9/08	ND 7.05	ND	ND 44.4	7.2
		10/27/08	7.35	23.3	414	6.4
		2/12/09 4/23/09	7.54 7.30	21.8 24.5	306 354	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
NWC-06		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
		4/6/11 DUP	7.42	23.1	388.3	7.73
		7/15/11 10/13/11	7.09	22.9	394.3	8.36
		10/13/11	7.51 7.47	22.3 22.1	340 402.7	8.48 8.44
		4/25/12	7.47	22.5	402.7	7.11
		7/18/12	7.39	22.8	380	8.60
	L	10/10/12	7.62	21.9	393.6	9.33



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
OSBORN	643436	4/7/09	7.25	24.0	542	17
		8/18/09	7.16	24.6	643	17.4
		10/5/09	7.14	22.9	599	17.9
		1/21/10	7.47	19.5	591	15.6
		4/19/10	7.60	21.5	601.9	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
		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	7.72	11.9	510	13.8
DALMED		4/22/10	7.97	13.6	520	16.7
PALMER	578819	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
		4/5/11 7/12/11	8.04	19.0	499.2	15.8
		10/11/11	7.65 7.85	26.6 22.0	517.6 510.4	16.4 17
	-	2/3/12	7.94	10.0	521.4	17.1
	-	4/11/12	7.52	18.7	519.8	17.1
		7/10/12	7.30	27.9	390	16.6
		10/3/12	8.09	25.7	526.7	17.6
		10/3/12 DUP	8.09	25.7	526.7	17.5
		4/21/08	6.80	20.5	1228	410
	35-76413	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
PANAGAKOS		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
		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
		4/12/2012 DUP	6.90	20.9	1265	352
		7/9/12	6.82	22.2	1140	292
		11/27/2012	7.51	20.1	1164	274



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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 7/14/10	6.91 7.13	20.3 22.2	1219 1201	417 403
PARRA	576415	7/14/10 DUP	7.13	22.2	1201	391
		10/20/10	7.51	21.4	1270	411
		1/19/11	7.49	20.8	1130	391
		4/4/11	6.90	22.6	1207	382
		7/12/11	6.76	23.7	1156	404
		10/12/11	7.44	22.3	1070	406
		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
		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
DIONIKE 205	C42205	7/15/10	7.32	22.3	1158	474
PIONKE 395	613395	10/18/10	7.33	21.3	1277	473
		10/18/10 DUP	7.33	21.3	1277	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
		2/1/2012 DUP	7.25	17.5	1230	495
		4/12/12 7/11/12	7.17	22.1	1218	508 439
		10/17/12	6.59 7.16	22.9 22.3	1280 1136	439
		9/18/12	7.16	23.4	395.8	14
PIONKE 517	221517	10/11/12	7.75	22.8	394.7	14.9
	509518	2/20/08	7.95	20.9	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
		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	21.7	580.9	117
		10/20/10	7.79	21.3	620	115
		1/20/11	7.71	20.5	530	112
		1/20/11 DUP 4/6/11	7.71	20.5	530 567.4	114 114
		2/12/08	7.37 7.11	21.6 18.9	428	15.5
POWER	624535	7/22/08	7.10	21.7	795	20.2



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/4/08	7.47	21.7	408	7.6
		5/6/08	7.19	22.7	405	8.3
		7/17/08	7.32	24.5	439	8.8
		10/27/08	7.41	22.2	412	7.3
		1/29/09	7.24	22.2	301	8.3
		4/16/09	7.49	22.4	344	7.6
		7/10/09	7.52	23.9	411	6.4
		10/6/09	7.30	23.8	388	8.4
		1/25/10	7.48	22.4	390	7.8
RAMIREZ	216425	4/21/10	7.45	22.6	397	9.04
RAWINEZ	210425	7/21/10 10/19/10	7.38 7.91	25.1 23.7	420 450	8.98 10.8
		1/18/11	7.52	23.1	380	8.18
	-	4/11/11	7.24	23.2	408.5	8.65
	-	7/18/11	7.27	25.4	402.6	8.44
		10/12/11	7.40	23.3	412.7	8.55
		1/30/12	7.38	22.3	412.2	8.80
		4/10/12	7.40	23.2	404.5	8.70
		7/6/12	7.32	24.2	415.7	8.97
		10/8/12	7.61	22.5	412.0	9.14
		10/8/2012 DUP	7.61	22.5	412.0	9.07
		2/15/08	7.30	19.1	1540	159
		4/21/2008 ¹	6.92	21.3	1418	125
		5/13/2008 ¹	7.05	20.9	1418	123
		6/23/2008 ¹	6.87	21.1	1593	130
		7/29/2008 ¹	6.98	21.8	1411	120
		8/28/2008 ¹	М	21.1	1519	129
		9/23/2008 ¹	6.90	22.2	1519	125
		10/22/08	6.96	20.8	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
RAY	803772	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
		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
		10/19/09 11/5/09	6.89	23.3	1360 1418	590 540
ROGERS 596	573596	2/25/10	6.79 6.99	21.9	1418	540
		4/22/10	7.21	19.6 18.2	1641	710
		2/7/08	7.45	18.6	601	138
		4/21/2008 ¹	7.45	21.4	552	128
		5/8/2008 ¹	7.14	21.4	622	141
		6/23/2008 ¹	7.06	22.9	660	129
		7/29/2008 ¹	6.78	23.1	339	134
		8/28/2008 ¹	7.18	21.6	635	128
		9/23/2008 ¹	7.10	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
ROGERS 803	641803	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
		1/20/11	7.44	18.1	610	143
		4/8/11	7.30	20.2	658.2	160
		7/14/11	7.12	23.5	653.5	166
		10/12/11	7.41	21.8	665.3	175
		1/30/12	7.40	20.0	580	171
		4/23/12	7.32	23.9	720	166
		7/13/12	7.26	24.0	820	171
	1		7.26	24.0	820	166
		7/13/12 DUP	7.20	27.0	020	100



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/4/08	7.40	21.0	435	4.6
		5/7/08	7.18	22.2	415	5.9
		7/17/08	7.28	23.0	446	7.1
		10/27/08	7.38	21.4	434	15.7
	-	2/10/09 4/16/09	7.51 7.48	20.7 22.0	322 361	5.4 4.9
		7/13/09	7.46	22.6	420	3.8
		10/6/09	7.31	22.3	407	5.8
		1/25/10	7.52	20.6	414	5.1
ROGERS E	216018	4/21/10	7.44	21.1	421	6.04
ROGEROL	210010	7/21/10	7.37	23.8	430	6.47
		10/19/10	7.80	22.8	460	5.92
		1/18/11	7.39	21.5	390	5.50
	_	4/11/11	7.19	22.7	427.2	6.13
		7/18/11	7.12 7.52	24.3 22.2	418.5 370	6.00 5.99
		10/13/11 1/30/12	7.38	20.8	427.2	6.22
		4/10/12	7.37	22.1	421.8	6.31
		7/17/12	7.32	22.7	420	5.85
		10/17/12	7.55	21.7	429.0	6.04
		2/5/08	7.73	18.2	445	263
		5/15/08	7.23	25.9	965	265
		7/30/08	6.99	22.1	999	243
		10/20/08	7.04	22.0	995	238
		2/12/09	6.94	20.9	748	254
		4/21/09	7.18	22.3	759	227
	-	8/3/09 10/28/09	7.05 7.09	22.9 20.6	1029 920	221 227
		2/1/10	7.08	20.9	934	236
		4/26/10	7.01	22.5	920.1	240
RUIZ	531770	7/20/10	7.08	22.5	880	240
		10/20/10	7.52	20.7	970	231
		1/18/11	7.19	20.2	860	213
		4/8/11	7.09	19.8	923.3	236
		8/26/11	6.85	22.6	800	220
		10/13/11	7.19	21.5	810	230
		2/7/12	7.28	20.7	915.6	230
		2/7/12 DUP 4/13/12	7.28 7.04	20.7	915.6 896.5	228
	-	7/18/12	6.87	21.1 21.6	900	203 214
		10/9/12	7.18	21.4	890.6	229
		2/8/08	7.52	21.5	506	158
	<u> </u>	4/21/2008 ¹	7.23	21.7	563	122
		5/19/2008 ¹	7.38	22.4	629	130
		6/23/2008 ¹	7.02	22.1	674	129
		7/29/2008 ¹	7.25	22.4	955	245
		8/28/2008 ¹	M	22.3	669	131
		9/23/20081	7.27	22.2	607	124
		10/22/2008 ¹	7.31	22.0	653	135
		11/19/2008 ¹	7.38	21.1	612	140
		12/17/2008 ¹ 1/29/2009 ¹	6.78 7.08	21.6 22.0	472 475	144 124
	-	2/23/2009 ¹	7.06	22.1	610	123
		4/17/09	7.46	22.1	520	120
		7/10/09	7.52	22.8	651	116
SCHWARTZ	210865	7/10/09 DUP	7.52	22.8	651	117
		10/6/09	7.27	22.5	613	120
		1/22/10	7.79	19.5	664	133
		4/21/10	7.50	20.9	638	129
		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 7/18/11	7.20 7.36	21.5	656.9 612.4	128 116
		10/12/11	7.36	23.7 22.4	635.8	116
		2/6/12	7.32	21.3	629.7	116
		2/6/2012 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	645.0	121
			7.57	25.8	380	19
SRC	211345	4/23/08 8/5/08	7.40	27.2	452	15.4



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
SWAN	NR	10/5/09	7.18	21.4	496	19.7
OWAIT	I III	1/21/10	7.49	19.5	501	18.4
		4/21/10	7.42	20.3	512.1	20.9
		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
		2/3/2012 DUP	7.40	20.5	484.5	19.5
		7/10/12	7.00	22.7	370	19.4
		3/4/08	8.67	22.6	302	12.3
		5/23/08	7.75	22.9	321	14.7
		8/15/08	7.84	26.4	369	14.4
		10/30/08	8.07	23.9	375	21.9
		2/24/09 5/6/09	8.10 8.06	24.8 26.7	340 320	20.3 18.7
		8/12/09	8.34	26.9	398	20
		11/4/09	8.16	26.3	381	21.8
TM-02A	522574	3/10/10	8.13	25.2	351	21.4
		3/10/10 DUP	8.13	25.2	351	21.3
		4/6/10	6.96	24.6	363	25.6
		7/6/10	7.38	24.6	343	22.1
		2/10/11	6.93	20.2	359	22.9
		7/13/11	7.92	24.8	349	22.5
		2/2/12	7.89	22.2	360	23.0
		8/14/12	7.65	24.6	366	23.4
		5/20/08	7.51	22.2	778	110
		8/6/08	7.08	21.6	828	97
		11/12/08	7.47	20.5	590	128
		2/26/09	7.21	21.8	737	107
	522575	2/26/09 DUP	7.21	21.8	737	102
T14.00		5/13/09	7.47	22.2	695	109
TM-03		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
	<u> </u>	5/20/08	7.50	20.7	506	32.7
	<u> </u>	8/4/08	7.41	20.7	529	31.3
	<u> </u>	10/29/08	7.55	20.2	531	34.5
		2/26/09	7.18	20.4	574	32.7
TM CC MILLED	E0000E	5/13/09	7.35	20.9	465	30.6
TM-06 MILLER	522695	8/18/09	7.50	20.9	560	30.9
		8/18/09 DUP	7.50	20.9	560	29.9
		11/12/09	7.53	20.4	530	31.1
		4/14/10	7.35 7.24	19.4	461	29.0
		7/2/10		20.1	438	29.8
		7/21/11 7/9/12	7.1 6.82	20.1 20.8	516 505	31.7 33.5
		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	22.9
		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
TM-07	522576	11/3/09	7.85	21.8	442	134
TWI OT	322013	3/2/10	7.67	21.6	422	124
		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
	I -	8/13/12	6.83	21.7	415	25.4



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/13/08	7.63	24.1	511	24.1
TM-08 SWAN	522817	5/14/08	7.44	24.4	480	12.6
		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
TM-10 USBP	522696	4/24/12	7.88	21.0	280	13.4
	-	4/24/2012 DUP	7.88	21.0	280	13.3
		9/13/12	8.09	21.1	407.0	13.3
		10/19/12	8.17	21.0	428.2	12.8
		2/27/08	7.66	21.9	344	14
		5/23/08 8/5/08	7.54 7.42	22.1 23.3	371 413	14.4 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
TM 45 MILLED	500000	5/13/09	7.61	23.1	344	13.7
TM-15 MILLER	522699	8/17/09	7.73	23.2	398	14.2
		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
		3/5/08 5/22/08	7.17 7.05	20.6 20.5	1351 1304	497 522
		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
TM 40	500570	8/19/09	7.08	21.2	1354	468
TM-16	522578	11/10/09	7.02	21.0	1310	505
		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	513 544
		7/9/12 3/6/08	6.95 8.02	21.0 22.2	1292 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
TM-19A	522581	11/4/09	7.47	24.2	522	63
		3/10/10	7.54	22.9	511	60.6
		4/9/10	6.49	23.0	435	66.5
		7/7/10	6.93	23.8	428	63.2
		2/14/11 7/15/11	6.69 7.11	21.4 24.1	511 499	61.9 62.1
		2/2/12	7.11	22.5	499	62.2
		7/10/12	7.12	23.5	505	63.7
		3/5/08	7.10	20.8	1342	482
		5/22/08	7.05	21.4	1270	483
		8/6/08	6.69	22.0	1388	467
		11/6/08	6.90	21.0	1025	477
		2/18/09	6.72	22.3	1245	429
		5/7/09	6.88	24.5	1155	430
TN4 40	EGOEF 4	5/7/09 DUP	6.88	24.5	1155	445
TM-42	562554	8/18/09	7.04	24.4	1336	428
		11/3/09	7.07	23.1	1266	430
		2/24/10 4/19/10	7.13 6.87	22.7	1236	390 444
		7/2/10	6.81	21.5 23.9	985 827	407
		7/12/11	6.83	23.9	1205	441
		2/9/12	6.76	20.5	1172	444
		7/11/12	6.72	21.1	1155	449



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
TM-43	564729	3/3/08	8.57	21.0	341	2.1
11VI 40	304723	8/4/08	8.14	25.7	436	<5
TM-43A	564726	3/3/08	6.17	19.9	2788	1420
		8/4/08	6.03	21.6	3149	1320
TM-43B	565004	3/3/08 8/5/08	6.79 6.89	20.6 21.0	514 507	0.7 31.8
	55555	8/5/08 DUP	6.89	21.0	507	32.5
		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 4/17/09 DUP	7.36 7.36	19.3	418 418	28.1
TVI 236	802236	7/21/09	7.59	19.3 22.9	484	28.3 31.3
1 11 200	002230	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
		2/21/08	7.28	21.1	739	244
	_	5/7/08 7/15/08	7.09 7.27	21.2 22.4	833 925	250 274
	_	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
T) // 075	500075	4/23/10	7.34	20.2	930.4	294
TVI 875	568875	7/15/10	7.46 7.79	21.8	842.5 890	262 242
	_	10/20/10 1/20/11	7.79	21.9 21.0	780	226
		4/11/11	7.20	21.1	820.6	235
		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
WALKER	200393	2/13/08 7/23/08	7.05 7.25	20.2 20.7	650 740	20 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 4/26/10	7.60	20.8	382	12.2
WEED	544535	7/21/10	7.69 7.36	22.1 22.1	366 354.9	13.4 13.6
	5.1000	7/21/10 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
		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



Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (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
WEISKOPF 802	641802	7/19/10	7.06	23.1	1330	573
WEIGHOIT 002	041002	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
		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
WEISKOPF 897	221897	12/6/12	7.93	23.6	398.3	18.5
WMD-2011-03M	913037	2/2/12	6.66	22.0	1190	391
		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	20.4	317	6
		4/16/09	7.47	21.7	352	5.5
		7/14/09	7.36	22.9	418	4.5
		10/13/09	7.41	21.7	407	6.3
		1/26/10	7.49	20.3	411	5.7
		4/2/10	7.55	20.0	416	6.70
ZANDER	205126	7/21/10	7.38	22.7	388.2	6.78
222	200.20	10/19/10	6.78	21.3	430	6.56
		1/18/11	7.59	18.9	380	6.14
		1/18/11 DUP	7.59	18.9	380	6.06
		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
		4/10/2012 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

ADWR = Arizona Department of Water Resources deg C = degrees Celsius M = Multi-Meter Malfunction NR = No Record

ND = No Data

SC = Specific Conductance

SU = Standard Units

 μ S/cm = microsiemens per centimeter

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

mg/L = milligrams per liter DUP = Blind duplicate



Well Name	ADWR 55 Registry No.	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
ANDEDOON OOO	040000	004404.700	0.40004.0.005	4500.54	4/21/10	147.57	4440.94
ANDERSON 396	613396	601134.729	3468816.065	4588.51	7/19/10	148.34	4440.17
					10/19/10	147.75	4440.76
					1/17/11	148.63	4439.88
					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
ANDEDOON 450	004.450	601119 600	3468826.284	4585.37	9/7/12	173.76	4411.61
ANDERSON 458	221458	601118.690	3468826.284	4585.37	10/10/12	151.82	4433.55
		598907.911	3468549.357	4547.64	8/27/08	121.12	4426.52
					4/8/08 ¹	116	4431.64
AVA/C 00	040500				10/23/08 ²	115	4432.64
AWC-02	616586				4/22/09 ²	118	4429.64
					10/9/09 ²	117	4430.64
					4/23/10 ²	119	4428.64
					8/27/08	119.40	4420.12
					4/8/2008 ¹	112	4427.52
11110 00	040505	500000 000	0.400004.000	4500.50	10/23/08 ²	106	4433.52
AWC-03	616585	599090.322	3468681.898	4539.52	4/22/09 ²	114	4425.52
					10/9/09 ²	116	4423.52
					4/23/10 ²	116	4423.52
					8/18/08	112.56	4427.92
					4/8/2008 ¹	108	4432.48
A1A/O 04	646504	E00040 000	2460747.004	4540.40	10/23/08 ²	111.31	4429.17
AWC-04	616584	598949.929	3468717.084	4540.48	4/22/09 ²	110	4430.48
					10/9/09 ²	110	4430.48
					4/23/10 ²	109	4431.48
					8/27/08	299.65	4242.86
					4/8/08	284	4258.51
					10/23/08	284	4258.51
AWC-05	590620	599269.904	3468541.692	4542.51	4/22/09	286	4256.51
					6/3/09	125	4417.51
					10/9/09 ²	289	4253.51
					4/23/10 ²	278	4264.51



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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	4411.47
					2/25/10	216.98	4431.20
BANKS 987	647987	606981.921	3469206.175	4648.18	4/20/10	219.35	4428.83
DAINING 901	047 907	000901.921	3409200.173	4040.10	7/20/10	235.60	4412.58
					10/20/10	230.24	4417.94
					1/17/11	215.28	4432.90
					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
					5/12/08	113.71	4578.65
					7/23/08	113.56	4578.80
BARTON 919	644919	606243.850	3469076.689	4692.36	10/16/08	113.20	4579.16
BARTONSIS	044313	000240.000	0403070.003	4032.30	3/11/09	112.92	4579.44
					4/10/09	112.89	4579.47
					7/7/09	112.86	4579.50
			3472151.593		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		4835.23	8/17/09	348.73	4486.50
					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	357.76	4444.29
BIMA	577927	606001.245	3471852.804	4802.05	7/8/09	365.44	4436.61
					10/5/09	370.11	4431.94
					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



BMO-2008-1G 909474 686467.681 3471723.644 4805.10 252509 61.33 4743.05 (25.00 4743.05) (25.00	Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
BMO-2008-IG 909474						8/27/08	62.05	4743.05
BMO-2008-IG 909474 806467.681 3471723.644 4805.10 4728.09 6.29.06 4742.14 49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 6.36.1 4741.49 10/27/09 10/2						11/11/08	60.95	4744.15
BMO-2008-IG 809474 608467.681 3471723.644 4805.10 1027079 6.38.15 4740.58 4740.65 177710 6.8.15 4740.58 4740.65 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 177710 6.8.15 4740.05 1771211 6.8.17 4735.73 128112 70.33 4733.47 1771211 6.8.17 1771211 6.8.17 1771211 6.8.17 1771211 6.8.17 177121 6						2/25/09	61.43	4743.67
BMO-2008-1G 909474 606467.881 3471723.644 4805.10 102709 653.61 4741.48 1470.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 645.1 4740.05 127170 127170 645.1 4740.05 127170 127170 645.1 4740.05 127170 127170 645.1 4740.05 127170 127170 645.1 4740.05 127170						4/28/09	62.01	4743.09
BMO-2008-1G 909474 606467.681 3471723.644 4805.10 2/17/10 64.51 4740.05 77/10 65.83 4740.05 77/10 65.83 4739.27 2/10/11 69.37 4737.36 77/10/11 69.37 4737.36 77/10/11 69.37 4737.36 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 4737.37 77/10/11 69.37 473.37 77/10/10 140.08 138.05 4445.51 80.09 138.05 4445.51 80.09 138.05 4445.51 80.09 138.05 4445.51 80.09 138.09 4445.51 80.09 138.00 4445.51 80.09 139.02 4444.55 10.00 138.09 139.02 4444.55 10.00 139.00 139.00 139.00 139.00 139.00 1444.39 10.00 140.07 7/10/10 140.07 4443.90 10.00 140.07 7/10/10 140.07 4443.90 10.00 140.07 7/10/10 140.07 4443.90 10.00 140.07 7/10/10 140.07 140.						8/4/09	62.96	4742.14
### Add						10/27/09	63.61	4741.49
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 71710 140.07 4443.94 4441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.24 3441.93 8009 131.94 3441.93 8009 13	BMO-2008-1G	909474	606467.681	3471723.644	4805.10	2/17/10	64.51	4740.59
## 177.4 4737.36 77/211 69.37 4735.57 4735.57 28112 77.33 4736.57 4736.57 28112 77.33 4736.57 4736.57 28112 77.33 4736.57 4736.57 28112 77.33 4736.57 4736						4/15/10	65.05	4740.05
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 37/1010 138.46 4444.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 148.95 107/1010 144.95 107/1010 148.95 107/1010 144.95 107/1010 148.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 144.95 107/1010 149.07 144.95 107/1010 149.07 14						7/7/10	65.83	4739.27
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 379.00 138.46 4445.91 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4444.95 10.2609 139.60 4443.90 17.101 140.07 1443.90 1443.90 17.101 140.07 1443.90 1443.9						2/10/11	67.74	4737.36
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 37.10 140.03 4444.57 18.08 18.00 139.00 139.00 139.00 1444.57 19.00 144.70 144.57 19.00 139.00 139.00 139.00 1444.57 19.00 144.70 144.57 19.00 139.00 139.00 1444.59 19.00 140.07 144.59 19.00 144.59 19.00 144.50 144.50 19.00 144.50 144.50 144.50 19.00 144.50 144.50 144.50 19.00 144.50 144.50 144.50 19.00 144.50 144.50 144.50 19.00 144.50 14						7/12/11	69.37	4735.73
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 37.0 140.003 4445.92 10726099 139.80 4444.37 3.07 171.00 140.07 4443.94 4441.70 140.07 4443.27 271.00 140.07 4440.07 171.00 140.07 4441.27 171.00 140.07 4441.27 171.00 140.07 4441.27 171.00 140.07 171.00 140.07 4441.27 171.00 140.00 171.00						2/8/12	70.33	4734.77
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 3/3/10 140.03 4444.95 10/26/09 138.04 444.57 8 10/26/09 138.06 4444.57 8 8/609 139.02 4444.95 10/26/09 138.08 1444.95 10/26/09 138.08 1444.37 10/26/09 138.08 1444.37 10/26/09 138.08 1444.37 10/26/09 138.08 1444.37 10/26/09 138.08 1444.37 10/26/09 138.08 1444.37 148.09 148.07 148.07 144.07 144.39 17/11/10 140.07 144.39 17/11/11 142.21 144.176 17/27/11 142.21 144.176 17/27/11 142.21 143.90 144.007 17/10/12 143.70 144.027 17/10/10 143.70 144.027 17/10/10 143.70 144.027 17/10/10 143.70 144.027 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.02 17/10/10 130.07 144.00 17/10/10 130.07 144.00 17/10/10 130.07 144.00 17/10/10 130.07 144.00 145.00 1						8/14/12	71.73	4733.37
BMC-2008-3B 909147 602012.923 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 3467919.582 4583.97 346710 140.03 4443.90 4443.90 4443.90 4443.90 4443.90 4443.90 4443.90 4443.90 4444.90 4443.90 4444.90 4440.27 4441.90 4440.27 4441.90 4440.27 4440.29 44						7/18/08	138.05	4445.92
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 3/3/10 140.03 4444.95 10/26/09 139.60 4444.37 1443.90 139.60 4444.37 1442.90 139.60 4444.39 148.90 1440.07 4443.90 7/11/10 140.07 4443.90 7/11/10 140.07 4443.90 7/11/10 140.07 4443.90 7/11/10 140.07 4443.90 7/11/10 140.07 4443.90 1441.07 1442.16 1441.07 1442.16 1440.07 1443.90 4440.07 7/11/10 140.07 4443.27 1441.07 1442.16 1440.07 7/10/12 143.70 4440.07 7/10/12 143.70 4440.07 7/10/12 143.70 4440.07 1441.93 130.07 4442.40 130.08 1442.59 130.08 4442.59 130.08 1442.59 130.08 1442.59 130.08 1441.93 180.09 131.96 4441.13 10/27/09 132.04 4441.31 10/27/09 132.04 1441.31 10/27/09 132.04 1441.31 10/27/09 132.04 4441.31 10/27/09 132.04 4441.31 10/27/09 132.04 4441.31 10/27/09 132.04 4441.31 10/27/09 132.04 4441.31 133.70 4439.39 17/21/11 133.78 4439.39 17/21/11 133.78 4439.39 17/21/11 133.78 4439.39 17/21/11 133.78 4439.39 17/21/11 133.78 4439.39 17/22/11 133.65 4440.02 14/38.65 14/38.6								
BMO-2008-3B 909147 602012-923 3467919.582 4583.97 1026/09 139.60 4444.35 140.00 4443.94 4443.94 4443.94 4443.94 4443.94 140.00 140.07 4443.94 140.00 140.07 4443.95 171/10 140.07 1443.27 171/10 141.41 4442.95 171/10 140.07 1443.09 1441.76 171/10 140.07 1443.09 1441.76 171/10 143.70 1444.07 171/10 143.70 1444.07 171/10 143.70 1444.07 171/10 143.70 1444.07 171/10 143.70 1442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14442.95 143.90 130.58 14441.31 127.95 143.90 130.58 1444.13 127.95 143.90 130.58 1444.13 127.95 143.90 130.95 1444.13 127.95 1441.95 142.95 143.95 1441.95 142.95 143.9								
BMO-2008-3B 909147 602012.923 3467919.582 4583.97 10/26/09						5/11/09	138.46	4445.51
BMO-2008-3B 909147 602012.923 3467919.582 4583.97						8/6/09	139.02	4444.95
### BMO-2008-4B BMO-2008-4B 910096 601099.405 3468383.430 4573.17 #### BMO-2008-4B 910096 601099.405 3468383.430 4573.17 ##### BMO-2008-4B 910096 601099.405 3468383.430 ###################################						10/26/09	139.60	4444.37
## BMO-2008-4B ## BMO-2008-6B ## BMO-2008-6B	BMO-2008-3B	909147	602012.923	3467919.582	4583.97	3/3/10	140.03	4443.94
BMO-2008-4B 91096 601099.405 3468383.430 4573.17 BMO-2008-4B 91096 601099.405 3468383.430 4573.17 BMO-2008-6B 91096 601099.405 3468383.430 4573.17 BMO-2008-6B 909653 600438.159 3468994.715 4585.10 105/910 146.59 4438.15 102/911 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.80 4439.30 127/11 148.80 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.30 127/11 148.81 4439.80 127/11 148.81 4439.81 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.80 127/11 148.81 4439.66 127/11 148.81 4439.66 127/11 148.85 4439.66 127/11 148.85 4439.66 127/11 148.85 4439.66 127/11 148.85 4439.66 127/11 148.85 4439.66 127/11 148.85 4439.68 127/11 148.85 4439.88 127/11 148.85 4439.88 127/11 148.85 4439.88 127/11 148.85 4439.88 127/11 148.85 4439						4/8/10	140.07	4443.90
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 450.09 131.96 4441.31 1027/09 131.96 4441.35 1027/10 133.20 4439.37 12/15/11 133.78 439.39 7/22/11 134.80 4438.65 4440.05 102/16/09 145.88 4439.39 17/22/11 134.80 4438.51 102/16/09 144.35 4440.05 102/16/09 144.35 4440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 144.35 1440.05 102/16/09 145.36 1439.30 102/16/09 145.36 1439.30 102/16/09 145.38 1439.30 102/16/09 145.38 1439.30 102/16/09 145.38 1439.30 102/16/09 145.38 1439.30 102/16/09 145.38 1439.30 102/16/10 145.80 1439.30						7/1/10	140.70	4443.27
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 22/41/10 131.82 4441.35 4436.65 12/21/99 148.47 4439.30						2/14/11	141.41	4442.56
BMO-2008-4B 91096 601099.405 3468383.430 4573.17 4473.00 130.58 4442.40 2/18/09 130.58 4442.59 4/30/09 131.24 4441.93 8/6/09 131.96 4441.13 2/224/10 131.82 4441.55 4/16/10 132.65 4440.52 7/2/10 133.20 4439.97 2/15/11 133.78 4439.39 7/22/11 134.80 4438.37 2/223/12 134.64 4438.53 9/17/12 136.15 4440.00 2/18/09 144.78 440.00 2/18/09 145.36 4439.22 2/15/10 145.80 4439.28 8/4/09 145.36 4439.28 8/4/09 145.36 4439.28 8/4/09 145.36 4439.28 8/4/15/10 145.80 4439.88 4439.22 2/15/10 145.80 4439.88 4439.22 2/15/10 145.80 4439.30 7/7/10 146.59 4438.51 10/29/09 145.88 4439.22 2/15/10 145.80 4439.30 7/7/10 146.80 4439.68 4/15/10 145.80 4439.74 10/29/09 145.88 4439.29 2/15/10 145.80 4439.30 7/7/10 146.80 4438.51 10/5/10 147.00 4438.10 2/14/11 147.56 4437.54 5/12/11 148.04 4437.66 7/13/11 148.01 148.04 4436.65 2/3/12 148.47 4436.68 7/10/12 148.65 4436.68							142.21	4441.76
BMO-2008-4B 91096 601099.405 3468383.430 4573.17 4573.17 4482.40 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 2/22/410 131.82 44441.35 4/16/10 132.65 4440.52 7/2/10 133.20 4439.97 2/15/11 134.80 4439.39 7/22/11 134.80 4439.39 7/22/11 134.81 4437.02 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 10/29/09 145.88 4439.74 10/29/09 145.88 4439.30 7/7/10 146.59 4438.51 BMO-2008-5B 909653 600438.159 3468994.715 4585.10 10/5/10 147.00 4438.10 2/14/11 147.56 4437.56 10/5/2/11 148.04 4437.06 7/13/11 148.31 4436.79 12/7/11 148.45 4436.65 2/3/12 148.47 4436.68 4/18/12 149.02 4436.08 7/10/12 148.65 4436.65						2/23/12	143.90	4440.07
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 4774.10 4775.10 4777.10 4777.10 4777.10 4777.10 4777.10 4777.10 4777.10 4777.10 4777.10 4777.10 47						7/10/12	143.70	4440.27
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 4573.17 4573.17 4476/10 131.24 4441.21 10/27/09 132.04 4441.13 2/24/10 131.82 4416/10 132.65 4440.52 7/22/11 134.80 4438.37 2/23/12 134.64 4438.53 9/17/12 136.15 4440.00 2/18/09 144.35 4440.00 2/18/09 144.78 4440.32 8/4/09 145.36 4439.39 7/22/11 134.80 4438.53 9/17/12 136.15 4437.02 9/30/08 145.10 440.00 2/18/09 144.78 4440.32 8/4/09 145.36 4439.30 7/7/10 146.59 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4438.51 5/12/11 148.69 4438.51 5/12/11 148.04 4437.54 5/12/11 148.04 4437.06 7/13/11 148.13 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.68								
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 4573.17 4573.17 4573.17 886099 131.96 4441.21 10/27/09 132.04 4441.13 2/24/10 131.82 4441.35 4440.52 7/2/10 133.20 4439.39 7/22/11 134.80 4438.37 2/23/12 134.64 4438.53 9/17/12 136.15 4440.32 8/409 144.76 4/27/09 144.78 4440.32 8/4090 145.36 4439.74 10/29/09 145.88 4439.74 10/29/09 145.88 145.10 145.10 146.59 143.64 4439.68 4/15/10 145.80 4439.30 7/7/10 146.59 4438.51 10/5/10 145.80 4439.30 7/7/10 146.59 4438.51 10/5/10 145.80 4439.68 4/15/10 145.80 4439.30 7/7/10 146.59 4438.51 5/12/11 148.04 4437.06 7/13/11 148.31 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.63 4/18/12 149.02 4436.63								
BMO-2008-4B 910096 601099.405 3468383.430 4573.17 4573.17 4573.17 4573.17 10/27/09 132.04 44441.13 2/24/10 131.82 4441.35 4440.55 7/2/10 133.20 4439.97 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 4440.00 2/18/09 144.35 4440.00 2/18/09 144.35 4440.00 2/18/09 145.36 4439.74 40/29/09 145.88 4439.22 2/15/10 145.42 4439.68 4/15/10 145.80 4439.30 7/7/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.68 4/15/10 145.80 4439.69 4/15/10 145.80 4439.69 4/15/10 145.80 4439.69 4/15/10 145.80 4439.69 4/15/10 145.80 4439.69 4/15/10 145.80 4439.69 4436.63 4/18/12 149.02 4436.68 7/10/12 148.65 4436.65								
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T/2/10	BMO-2008-4B	910096	601099.405	3468383.430	4573.17			
BMO-2008-5B 909653 600438.159 3468994.715 4585.10 10/5/10 148.04 4437.06 12/3/11 148.04 4437.06 12/3/12 148.65 4436.65 12/3/12 148.67 4436.65 12/3/12 148.67 4436.65 12/3/12 148.67 148.65 4436.65 12/3/12 148.65 4436.65 12/3/12 148.65 4436.65 12/3/12 148.65 4436.65 12/3/12 148.65 4436.65 12/3/12 148.65 4436.65 12/3/12 148.65 4436.65								
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BMO-2008-5B 909653 600438.159 3468994.715 4585.10 2/23/12 134.64 4438.53 9/17/12 136.15 4437.02 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 10/29/09 145.88 4439.22 2/15/10 145.80 4/15/10 145.80 4439.68 4/15/10 146.59 4438.51 10/5/10 147.00 4438.10 2/14/11 147.56 4437.06 7/13/11 148.04 4437.06 7/13/11 148.04 4436.65 2/3/12 148.47 4436.63 4/18/12 149.02 4436.08 7/10/12 148.65 4436.45								
BMO-2008-5B 990653 9917/12 136.15 4437.02 9930/08 145.10 4440.00 2/18/09 144.35 4440.75 4/27/09 144.78 4440.32 8/4/09 145.36 4439.74 10/29/09 145.88 4439.22 2/15/10 145.80 4439.30 7/7/10 146.59 4438.51 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 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								
BMO-2008-5B 909653 600438.159 3468994.715 4585.10 9/30/08 145.10 4440.00 2/18/09 144.35 4440.75 44/27/09 144.78 4440.32 8/4/09 145.36 4439.74 10/29/09 145.88 4439.22 2/15/10 145.42 4439.68 44/15/10 145.80 4439.30 7/7/10 146.59 4438.51 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 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								
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BMO-2008-5B 909653 600438.159 3468994.715 4585.10 144.78 4440.32 8/4/09 145.36 4439.74 10/29/09 145.88 4439.22 2/15/10 145.42 4439.68 4/15/10 145.80 4439.30 7/7/10 146.59 4438.51 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 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								
BMO-2008-5B 909653 600438.159 3468994.715 4585.10 8/4/09 145.36 4439.74 10/29/09 145.88 4439.22 2/15/10 145.80 4439.30 7/7/10 146.59 4438.51 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 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 4439.74								
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BMO-2008-5B 909653 600438.159 3468994.715 4585.10 4415/10 145.80 4439.30 7/7/10 146.59 4438.51 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 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								
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BMO-2008-5B 909653 600438.159 3468994.715 4585.10 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 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								
2/14/11 147.56 4437.54 5/12/11 148.04 4437.06 7/13/11 148.31 4436.79 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	DNO 0000 =5	0000=0	000462 152	0.40000 : 7:7	4505.10			
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7/13/11 148.31 4436.79 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								
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4/18/12 149.02 4436.08 7/10/12 148.65 4436.45								
7/10/12 148.65 4436.45								
10/16/12 149.91 4435.19								



Well Name	ADWR 55 Registry No.	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
BMO-2008-5M	909552	600445.071	3468994.282	4585.02	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
					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
					7/16/08	190.13	4437.31
					11/4/08	190.23	4437.21
		46 600366.523	3469820.644		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
BMO-2008-6B	909146			4627.44	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
					7/12/11	193.30	4434.14
					12/7/11	193.85	4433.59
					2/3/12 4/18/12	193.60	4433.84 4433.54
					7/10/12	193.90 194.75	4432.69
				-			
					10/16/12 7/10/08	195.71 191.63	4431.73 4435.27
					11/4/08	190.25	4435.27
					2/20/09	190.23	4436.20
					4/28/09	190.70	4435.92
					8/4/09	191.77	4435.92
					10/26/09	191.77	4433.13
					2/15/10	191.78	4435.12
					4/15/10	191.64	4435.26
					7/1/10	192.53	4434.37
BMO-2008-6M	909019	600367.943	3469813.885	4626.90	10/5/10	192.96	4433.94
					2/14/11	193.14	4433.76
				1	5/12/11	193.68	4433.22
					7/12/11	194.47	4432.43
					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
					–		,



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
BMO-2008-7M	908794	603099.165	3470029.283	4688.33	2/17/10	239.98	4448.35
					4/15/10	240.13	4448.20
					7/6/10	240.28	4448.05
					2/14/11	241.26	4447.07
					7/15/11	241.81	4446.52
					1/30/12	242.44	4445.89
					7/11/12	243.0	4445.33
					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
BMO-2008-8B	910097	604171.347	3471141.719	4753.25	4/16/10	298.46	4454.79
					7/1/10	298.64	4454.61
					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
					7/12/12	301.15	4452.10
			3471127.902		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
				4752.45	11/5/09	298.81	4453.64
BMO-2008-8M	909711	604167.912			3/3/10	299.18	4453.27
BIVIO-2006-6IVI	909711	004107.912			4/16/10 7/1/10	299.42 299.70	4453.03 4452.75
					1/24/11	300.46	4452.75
				-	5/13/11	301.00	4451.45
				}	7/15/11	301.00	4451.45
				}	1/30/12	301.60	4450.85
				}	7/12/12	302.45	4450.00
					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
BMO-2008-9M	909255	604668.669	3471121.675	4762.61	4/6/10	287.81	4474.80
					7/1/10	288.26	4474.35
					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



BMC-2008-10GL 909435 605264.072 3471702.043 4792.21 11/209 516.72 4271.74 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.72 4271.74 11/205 516.74 11/205 516.72 4271.74 11/205 516.74 11/205 5	Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
BMC-2008-10GL 909435 605284.072 3471702.043 4792.21 17/209 514.68 4227.53 81109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 513.23 4278.98 1109 509.43 4282.78 1280.99 17/210 5118.00 4281.33 4/810 506.31 4285.09 17/210 5118.00 4281.31 4/810 506.31 4280.01 7/13/11 512.16 4280.05 7/13/11 512.16 4280.05 7/13/11 512.16 4280.05 7/13/11 512.16 4280.05 56.09 289.35 4494.17 11/508 258.89 4497.56 56.09 289.35 4494.17 11/508 258.89 4497.56 56.09 289.35 4494.17 11/508 258.89 4495.36 11/209 289.09 4504.35 56.09 289.35 4504.10 289.37 7/810 289.35 4504.10 289.37 7/810 289.35 4504.10 289.35 7/810 289.35 4504.10 289.35 7/810 289.35 4504.52 7/13/11 301.02 4492.43 400.05 7/8/10 289.35 4504.52 7/13/11 301.02 4492.43 400.05 7/8/10 289.35 4504.52 7/13/12 328.7 4468.75 4468.75 4468.94 7/13/12 328.7 4468.75 4468.94 7/13/12 328.7 4468.75 4268.91 11/12/08 576.80 4268.76 4268.91 11/12/09 573.48 4268.91 11/12/09 573.48 4268.91 11/12/09 573.48 4268.91 11/12/09 573.48 4268.91 11/12/09 573.48 4270.99 11/12/09 573.41 4271.05 11/12/09 573.56 4271.11 7/11/0 573.56 4						8/20/08	521.75	4270.46
BMO-2008-10GL 909435 665264.072 3471702.043 4792.21 11/200 5094.3 4277.53 4271						11/5/08	520.50	4271.71
BMO-2008-10GL 909435 605264.072 3471702.043 4792.21 11/209 509.43 4278.98 4282.78 34710 510.88 4281.33 4282.78 34710 510.88 4281.33 4282.78 34710 510.88 4281.33 4281.						2/25/09	516.72	4275.49
BMO-2008-10GL 909436 605264.072 3471702.043 4792.21 11/209 509.43 4282.78 3/4/10 510.88 4281.33 3/4/10 510.88 4281.33 3/4/10 510.88 4281.33 3/4/10 510.88 4281.33 3/4/10 510.88 4281.33 3/4/10 510.88 4281.33 3/4/10 510.88 4280.65 7/2/10 511.30 4280.05 7/2/10 511.30 4280.05 7/2/10 511.30 4280.05 7/2/10 511.30 4280.05 7/2/10 511.30 4280.05 7/2/10 511.30 9/2/2/2 511.34 4280.87 7/3/12 510.99 4281.31 11/5/08 295.99 4491.71 11/5/08 295.99 4491.75 11/5/08 295.99 4491.75 11/5/08 295.99 4491.75 11/5/08 295.99 4491.75 11/5/08 295.99 4491.75 11/5/08 295.99 4491.75 11/5/08 295.99 4490.36 55/6/09 299.33 4500.10 11/5/09 299.37 4503.68 11/09 299.97 4503.68 4503.95 7/6/10 299.99 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 4503.95 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.77 4503.68 11/209 299.78 4440.78 11/209 299.78 4440.78 11/209 299.78 4440.79 11/209 299.78 4440.79 11/209 299.78 4440.79 11/209.79 11/209.79 4440.79 11/209						5/12/09	514.68	4277.53
BMO-2008-10GL 909435 605263.072 3471702.043 4792.21 3.4410 510.88 4281.33 4286.50 772/10 511.80 4280.41 77/13/11 512.16 4280.65 22/12 511.34 4280.67 77/31/12 510.90 4281.31 4280.67 77/31/12 510.90 4281.31 4280.67 77/31/12 510.90 4281.31 4280.67 77/31/12 510.90 4281.31 4280.67 77/31/12 510.90 4281.31 4280.67 57/609 298.94 4497.56 52/25/09 289.94 4497.56 52/25/09 289.93 5 4503.47 57/609 289.93 5 4503.40 10 289.77 4503.68 11/2/209 289.77 4503.68 11/2/209 289.77 4503.68 11/2/209 289.59 4400.45 77/31/1 301.02 289.59 4503.87 47/7/10 289.59 4503.87 47/7/10 289.59 4503.87 47/7/10 289.59 4503.87 47/7/10 289.59 4503.87 47/7/10 289.59 4503.87 77/31/1 301.02 4402.43 400.45 77/31/1 301.02 4402.43 400.45 77/31/1 301.02 4402.43 400.45 77/31/12 326.51 4466.94 77/31/12 326.51 4466.94 77/31/12 326.51 4466.94 77/31/10 577.80 4268.76 4269.21 81/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.48 4268.83 11/2099 575.80 4277.80 4277.90 4277.10 577.20 4277.10 4277.20 4277.30 4277.30 4277.40 4277.20 4277.30						8/11/09	513.23	4278.98
### BMO-2008-11G 909434 603800.995 3472626.482 4844.67 11/9/09 573.68 4273.67 4273.70 107308 206.42 4442.79 2473.47 107308 206.42 4442.79 2473.47 107308 207.28 4441.53 2471.64 2473.08 2471.70 2573.68 2471.97 2471.70 2573.68 2471.97 2471.70 2573.68 2471.97	BMO-2008-10GI	000435	605264 072	3471702 043	4702 21	11/2/09	509.43	4282.78
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 BMO-2008-10GU 909272 605267.551 3471731.866 BMO-2008-10GU 909272 603800.995 3472626.482 4844.67 BMO-2008-11G 909434 603800.995 3472626.482 BMO-2008-11G 909534 4442.99 BMO-2008-11G 909534 4442.99 BMO-2008-13B 909551 601657.612 3470076.358 4649.21 BMO-2008-13B 909551 601657.612 34	DIVIO-2000-10GL	909433	003204.072	3471702.043	4732.21	3/4/10	510.88	4281.33
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 BMO-2008-11G 909434 603800.995 3472626.482 4844.67 BMO-20						4/8/10	506.31	4285.90
BMO-2008-10GU 999272 605267.551 3471731.866 4793.45 4797.66 289.37 4893.87 4803.81 11/5/08 298.98 4894.75 6 289.87 4803.81 5/6/09 289.35 4504.10 871/09 289.97 4503.68 4707.60 289.97 4503.68 4707.00 289.58 4503.81 11/2/09 289.97 4503.68 4707.00 289.58 4503.87 477/10 289.58 4503.87 477/10 289.58 4503.97 477/10 289.58 4503.97 477/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 4503.98 4707/10 289.98 460.98 4707/10 289.98 4707/10 4707/10 289.98 4707/10 289.98 4707/10 289.98 4707/10 289.98 4						7/2/10	511.80	4280.41
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 11/5/08 295.89 4497.56 2/25/09 288.84 4503.61 5/600 295.89 4497.56 2/25/09 288.84 4503.61 5/600 289.59 4503.60 5/600 288.89 4503.61 5/600 288.59 4503.60 5/600 288.59 4503.60 5/600 288.59 4503.87 4503.60 5/600 288.59 4503.87 4503.68 477/10 289.5 4503.87 47/10 289.5 4503.87 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 4503.85 7/6/10 288.59 3 4504.52 7/13/11 208.57 4466.94 7/13/10 5/713/11 208.57 4466.94 7/13/10 5/713/11 5/712/0 5/713/11 5/712/0 5/713/11 5/712/0 5/713/11 5/712/0 5/713/11 5/712/0 5/713/11 5/712/0 42/713/17/10 5/712/71 5/712/11 5/712/0 42/713/17/10 5/712/71 5/712/11 5/712/0 42/713/17/10 5/712/71 5/712/11 5/712/0 42/713/17/10 5/712/71 5/712/11 5/712/0 42/73.05 42/71.91 5/712/11 5/712/0 42/73.05 42/71.91 5/712/11 5/712/0 42/73.07 42/71.91 5/712/11 5/712/0 42/73.07 42/71.91 5/712/11 5/712/0 42/73.07 42/71.91 5/712/11 5/712/0 42/73.07 42/71.91 5/712/11 5/712/0 42/73.07 42/71.91 5/712/11 5/712/0 206.57 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4442.99 8/5/09 206.79 4441.95 6/713/11 208.51 4440.70 5/713/11 208.59 4440.20 5/713/11 208.59 4440.20 5/713/11 208.59 4440.20 5/713/11 208.59 4440.70 5/						7/13/11	512.16	4280.05
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 4897.56 272509 289.84 4494.17 11/5/08 295.589 4497.56 272509 289.84 4497.56 5/6/09 289.35 4504.10 5/6/09 289.37 4503.68 311/09 289.57 4503.68 31/09 289.58 4503.87 47/10 289.55 4503.87 47/10 289.55 4503.87 47/10 289.55 4503.87 47/10 289.55 4503.87 47/10 289.55 4503.87 47/10 288.93 4504.52 7/13/11 301.02 4492.43 2/11/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 328.7 4464.75 822/08 577.76 4266.91 11/12/09 576.80 4267.87 4266.91 11/12/09 576.80 4267.87 4266.91 11/12/09 576.80 4267.87 4266.91 11/12/09 576.80 4269.21 4268.76 42/09 575.48 4269.21 42/09 576.40 4269.21 42/09 576.80 4267.87 42/09 576.80 4267.87 42/09 576.80 4267.87 42/09 576.80 427.10 570.20 427.47 427.10 570.20 570.20 427.47 427.10 570.20 570.20 427.47 427.10 570.20 570.20 427.47 427.10 570.20 570.20 427.47 427.10 570.20 570.20 427.47 427.10 570.20 570.20 570.20 570.20 570.20 570.20 570.20 570.20 570.20 57						2/2/12	511.34	4280.87
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 22509 289.84 4503.61 22509 289.35 4504.10 8/11/09 289.09 4504.36 11/209 289.37 4503.68 11/209 289.37 4503.68 47/11/0 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 7/6/10 289.58 4503.95 7/6/10 289.58 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4503.95 7/6/10 289.58 4406.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/13/10 573.68 4270.99 574.84 4268.83 11/9/09 573.41 4271.26 8/13/10 573.56 4271.11 7/11/10 573.56 4271.11						7/13/12	510.90	4281.31
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 56099 289.84 4503.61 56009 289.35 4504.10 8/11/09 289.09 4504.36 11/12/09 289.07 4503.88 3/10/10 289.57 4503.88 4503.87 47/10 289.5 4503.95 4503.95 768/10 288.93 4504.52 77/13/11 301.02 4492.43 26/14/12 326.51 4466.94 77/13/12 328.7 4464.75 88.22/08 577.76 4266.91 11/12/08 576.80 4267.87 2/26/09 575.91 4268.76 4269.21 8/12/09 574.84 4269.83 11/12/09 573.41 4271.26 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4269.21 8/12/09 575.46 4271.70 1/14/09 573.56 4271.71 7/14/0 573.56 4271.71 7/14/0 573.56 4271.71 7/14/0 573.56 4271.70 1/14/0 573.56 4271.71 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/12/09 575.29 4271.70 1/14/14/12/09 575.29 4271.70 1/14/14/14/14/14/14/14/14/14/14/14/14/14						8/4/08	299.28	4494.17
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45						11/5/08	295.89	4497.56
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 4793.45 4793.45 47010 289.59 4503.86 4503.87 47010 289.59 4503.85 4503.85 47010 289.59 4503.85 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4503.85 77.6110 289.59 4466.94 77.13/11 301.02 4492.43 27.11/2 326.51 4466.94 77.13/12 328.7 4464.75 872.260 575.80 4267.87 22.2609 575.91 4268.76 4269.21 87.209 575.46 4269.21 87.209 574.84 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4269.21 87.209 575.46 4271.47 571.10 572.97 4271.70 572.97 4271.70 572.97 4271.70 572.97 4271.70 571.61 571.61 4273.06 77.22/11 571.61 4273.06 77.22/11 571.61 4273.06 77.22/11 571.20 4273.47 17.31/12 569.83 4274.84 87.41/2 569.70 4274.87 92.17/109 206.11 4443.10 56/609 206.32 4442.89 87.509 206.79 4442.42 89.85 87.309 207.08 4442.13 10/28/09 207.08 4442.13 10/28/09 207.08 4442.13 10/28/09 207.08 4442.13 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4442.99 10/28/09 207.08 4440.70 10/28/09 207.08 4440.70 10/28/09						2/25/09	289.84	4503.61
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 4793.45 4793.45 4503.68 4503.87 3/101/10 289.5 4503.95 7/6/10 288.93 4504.52 7/13/11 301.02 4492.43 2/1/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4466.94 7/13/12 326.51 4268.76 92609 575.91 4268.76 92609 575.91 4268.76 4269.83 11/19/09 573.44 4269.83 11/19/09 573.44 4269.83 11/19/09 573.44 4269.83 11/19/09 573.46 4269.91 11/19/09 573.46 4271.10 7/1/10 572.97 4271.10 7/1/10 572.97 4271.10 7/1/10 572.97 4271.10 1/13/112 569.83 4274.84 8/14/12 569.70 4274.84 8/14/12 569.70 4274.87 10/13/12 569.83 4274.84 8/14/12 569.70 4274.87 10/13/19 206.11 4443.10 5/16/19 207.68 4442.89 8/5/09 206.32 4442.89 8/5/09 206.79 4442.42 10/13/19/19 207.08 4442.13 10/13/19/19/19/19/19/19/19/19/19/19/19/19/19/						5/6/09	289.35	4504.10
BMO-2008-10GU 909272 605267.551 3471731.866 4793.45 3/10/10 289.58 4503.87 4603.85 1 4503.85 1 4503.85 1 4503.85 1 4605.35 1 4406.34 1 2/1/12 326.51 4406.34 1 2/1/12 326.51 4406.34 1 2/1/12 326.51 4406.34 1 464.75 1 420.85 1 11/12/08 576.80 4267.87 1 4266.91 11/12/08 576.80 4267.87 1 4268.76 1 460.99 575.46 4269.21 1 470.99 573.41 4271.26 1 427						8/11/09	289.09	4504.36
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 27/10 573.68 4270.99 4271.70 4273.47 13/31/12 5698.33 4274.84 87/41/2 569.70 4274.97 13/31/12 569.83 4274.84 87/41/2 569.70 4274.97 13/31/12 569.83 4274.84 87/41/2 569.70 4274.97 13/31/12 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 87/41/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/2 569.70 4274.97 13/31/2 569.83 4274.84 13/31/31/31/31/31/31/31/31/31/31/31/31/3	BMO-2008-10GU	909272	605267 551	3471731 866	4793 45	11/2/09	289.77	4503.68
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 49/10 573.56 4271.11 7/1/10 572.97 4271.70 4273.47 1/31/12 569.83 4274.84 8/14/12 569.70 4274.97 1/31/12 569.70 4442.42 1/3 2/1/10 207.26 44441.53 2/1/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4441.55 2/1/11 209.55 4441.55 2/1/11 209.55 4441.55 2/1/11 209.55 4441.55 2/1/11 209.55 4441.55 2/1/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/11 209.55 4440.26 1/3/15/11 209.55 4440.26 1/3/15/11 209.55 4440.26 1/3/15/11 209.55 4440.26 1/3/15/15/11 209.55 4449.95 1/3/15/11 209.55 4449.95 1/3/15/11 209.55 4449.95 1/3/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.56 4439.85 1/3/15/15/11 209.57 4439.85 1/3/15/15/11 209.57 4439.85 1/3/15/15/11 209.57 4439.85 1/3/15/15/11 209.57 4439.85 1/3/15/15/11 209.57 4439.85 1/3/15/15/15/11 209.57 4439.85 1/3/15/15/15/15/15/15/15/15/15/15/15/15/15/	DINIO 2000 1000	000272	000207.001	041 1701.000	47 00.40	3/10/10	289.58	4503.87
BMO-2008-11G 909434 603800.995 3472626.482 4844.67						4/7/10	289.5	4503.95
2/1/12 326.51 4466.94 7/13/12 328.7 4464.75 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 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.68 4270.99 4/9/10 573.68 4270.99 4/9/10 573.68 4271.70 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 10/3/08 206.42 4442.79 2/17/09 206.11 4443.10 5/6/09 206.32 4442.89 8/5/09 206.79 4442.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 4/14/10 207.27 4441.95 4/14/10 207.27 4441.95 4/14/10 207.27 4441.95 4/14/10 207.27 4441.95 4/14/10 207.26 4441.95 4/14						7/6/10	288.93	
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 4269.21 4269.83 4270.99 573.64 4269.21 4269.83 4270.99 573.64 4271.10 573.68 4271.11 571.20 4273.06 772211 571.20 4273.47 1311/2 569.33 4274.97 100308-13B 909551 601657.612 3470076.358 4649.21 4141/0 207.27 4441.95 4440.70 571.511 209.36 4440.26 7715/11 209.36 4443.93 55 4440.26 7715/11 209.36 4443.95 5440.26 7715/11 209.36 4439.85 5440.26 7715/11 209.36 4439.85 5440.26 7715/11 209.36 4439.85 5440.26 7715/11 209.36 4439.85 5440.26 7715/11 209.36 4439.85 5429.91 209.78 4439.43						7/13/11	301.02	4492.43
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 8722609 575.91 4268.76 4269.21 8/12/09 574.84 4269.21 8/12/09 573.41 4271.26 8/12/09 573.41 4271.26 8/12/09 573.68 4270.99 4/1/10 573.68 4271.11 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 1/31/12 569.83 4274.97 1/31/12 569.83 4274.97 1/31/12 569.83 4274.97 1/31/12 569.83 4274.97 1/31/12 569.83 4274.97 1/31/12 569.70 4274.97 1/31/19 1/31/1								
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 2/26/09 575.91 4268.76 4269.21 41/19/09 573.41 4271.26 11/19/09 573.41 4271.26 31/10 573.68 4270.99 4271.11 7/11/10 572.97 4271.70 2/10/11 571.61 4273.06 7/22/11 571.20 4273.47 131/12 569.83 4274.84 8/14/12 569.70 4274.97 10/30/8 206.42 4442.79 2/10/13 576/09 206.32 4442.89 8/15/09 206.79 4442.42 2/10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 2/16/10 207.26								
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 4/8/09 575.46 4269.21 8/12/09 574.84 4269.83 11/9/09 573.41 4271.26 11/9/09 573.41 4271.26 11/9/09 573.41 4271.26 11/9/09 573.41 4271.26 11/9/09 573.56 4271.11 7/1/10 573.56 4271.11 7/1/10 572.97 4271.70 11/3/11 571.61 4273.06 7/22/11 571.20 4273.47 13/1/12 569.83 4274.84 8/14/12 569.70 4274.97 10/3/08 206.42 4442.79 10/3/08 206.42 4442.79 10/3/08 206.42 4442.89 8/5/09 206.32 4442.89 8/5/09 206.32 4442.89 10/28/09 206.79 4442.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 10/28/09 205.11 208.51 4440.26 7/15/11 208.55 4440.26 7/15/11 208.95 4440.26 7/15/11 208.95 4440.26 7/15/11 208.95 4440.26 7/15/11 208.96 4439.85 2/9/12 209.78 4439.43				3472626.482				
BMO-2008-11G 909434 603800.995 3472626.482 4844.67 4844.67 573.68 4269.83 11/9/09 573.41 4271.26 31/1/10 573.68 4270.99 4271.11 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 81/4/12 569.70 4274.97 10/3/08 206.42 4442.79 2/17/09 206.11 4443.10 5/6/09 206.32 4442.89 8/5/09 206.32 4442.89 8/5/09 206.79 4442.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 10/28/09 207.08 4441.95 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					4844.67			
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BMO-2008-11G 909434 603800.995 3472626.482 4844.67 3/1/10 573.68 4270.99 4/9/10 573.56 4271.11 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 10/3/08 206.42 4442.79 2/17/09 206.11 4443.10 5/6/09 206.32 4442.89 8/5/09 206.32 4442.89 8/5/09 206.09 4242.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.95 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4441.94 10/28/09 207.08 4440.70 10/28/09 207.08 4440.70 10/28/09 207.08 4440.70 10/28/09 207.08 4440.70 10/28/09 207.08 4440.70 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4440.26 10/28/09 207.08 4439.43								
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BMO-2008-13B 909551 601657.612 3470076.358 4649.21 7/15/11 209.36 4439.85 2/10/11 209.36 4439.43	BMO-2008-11G	909434	603800.995					
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 209.78 4439.85 2/9/12 209.78 4439.43								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 7/15/11 208.95 4440.26 7/15/11 209.36 4439.43								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 1/31/12 209.78 4439.43 4274.84 1/31/12 569.83 4274.84 8/14/12 569.70 4274.97								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 8745/1 209.36 4439.85 2/9/12 209.78 4439.43								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 10/3/08 206.42 4442.79 206.11 4443.10 5/6/09 206.32 4442.89 8/5/09 206.79 4442.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 4441.95 4441.95 207.27 4441.94 7/6/10 207.68 4441.53 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								
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BMO-2008-13B 909551 601657.612 3470076.358 4649.21 5/6/09 206.32 4442.89 8/5/09 206.79 4442.42 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 441.95 7/6/10 207.27 4441.94 7/6/10 207.68 4441.53 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								
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BMO-2008-13B 909551 601657.612 3470076.358 4649.21 10/28/09 207.08 4442.13 2/16/10 207.26 4441.95 4414.94 7/6/10 207.27 4441.94 7/6/10 207.68 4441.53 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								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 207.26 4441.95 4411.95 4411.95 4411.95 4411.95 4411.95 4411.95 4411.95 4411.95 4411								
BMO-2008-13B 909551 601657.612 3470076.358 4649.21 4/14/10 207.27 4441.94 7/6/10 207.68 4441.53 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								
7/6/10 207.68 4441.53 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	PMO 2009 42P	000554	604657.640	2470076 250	4640.04			
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	DIVIU-2008-13B	909551	210.160100	3410076.338	4049.21			
5/13/11 208.95 4440.26 7/15/11 209.36 4439.85 2/9/12 209.78 4439.43								
7/15/11 209.36 4439.85 2/9/12 209.78 4439.43								
2/9/12 209.78 4439.43								
7/4/40 04000 440004						7/11/12	209.78	4439.43 4438.61



Well Name	ADWR 55 Registry No.	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	209.16	4437.99
BMO-2008-13M	909760	601650.495	3470040.455	4647.15	4/13/10	209.20	4437.95
					7/2/10	209.30	4437.85
					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
					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
DMO 0040 4M	040057	005504 000	0.400005.750	4740.55	8/31/11	224.38	4494.17
BMO-2010-1M	219957	605581.263	3469935.750	4718.55	12/13/11	222.86	4495.69
					2/8/12	222.97	4495.58
					4/24/12	223.87	4494.68
					7/9/12	225.05	4493.50
					10/17/12	225.63	4492.92
					9/7/10	264.13	4482.03
					11/11/10	263.94	4482.22
		605685.549	3470564.646	4746.16	2/10/11	264.13	4482.03
					5/13/11	266.97	4479.19
BMO-2010-2M	219958				7/14/11	268.05	4478.11
DIVIO-2010-2IVI	219956	000000.049			12/13/11	270.98	4475.18
					1/30/12	271.50	4474.66
					4/18/12	272.31	4473.85
					7/9/12	273.20	4472.96
					10/17/12	274.27	4471.89
					7/28/10	115.38	4435.21
					11/10/10	115.80	4434.79
					1/20/11	115.46	4435.13
					4/7/11	116.11	4434.48
BMO-2010-3B	219970	599977.962	3468347.363	4550.59	7/13/11	117.30	4433.29
DINO 2010-0D	2.5570	000011.002	0.100047.000	-1000.00	10/13/11	117.72	4432.87
					2/2/12	117.18	4433.41
					4/24/12	117.92	4432.67
					7/5/12	118.84	4431.75
					10/18/12	119.13	4431.46
					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
BMO-2010-3M	219969	599970.801	3468353.543	4550.53	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
					7/5/12	122.05	4428.48
					10/18/12	122.06	4428.47
BMO-2012-1M	221388	606097.384	3469746.747	4719.76	11/13/12	231.90	4487.86



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					4/22/08	606.55	4249.75
					8/5/08	605.86	4250.44
DUDICE	040000	000000 007	0.470000.040	4050.00	10/28/08	604.88	4251.42
BURKE	212268	602230.087	3473029.816	4856.30	2/19/09	603.91	4252.39
					4/28/09	603.70	4252.60
					8/19/09	602.66	4253.64
					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	4448.27
COB MW-1	903992	603153.259	3469889.889	4683.26	7/22/09	234.34	4448.92
					10/22/09	234.69	4448.57
					2/4/10	235.15	4448.11
					4/20/10	235.47	4447.79
					7/13/10	235.68	4447.58
					7/14/11	236.98	4446.28
					7/12/12	238.24	4445.02
					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
COB MW-2	903984	600973.257	3468114.836	4566.21	10/22/09	125.33	4440.88
					3/3/10	124.93	4441.28
					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
				<u> </u>	7/12/12	129.58	4436.63
					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
COB MW-3	906823	599169.225	3468726.000	4538.63	7/22/09	124.09	4414.54
					10/22/09	118.03	4420.60
					3/3/10	120.14	4418.49
					4/26/10	123.12	4415.51
					7/13/10	128.60	4410.03
					7/14/11	132.41	4406.22
					7/12/12	133.89	4404.74



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/22/08	56.50	4775.56
					5/20/08	57.50	4774.56
					7/30/08	58.64	4773.42
					10/23/08	58.76	4773.30
					2/12/09	58.89	4773.17
					4/23/09	59.73	4772.33
COB WL	593116	606357.506	3472502.012	4832.06	7/22/09	61.27	4770.79
					10/22/09	62.82	4769.24
					3/3/10	65.24	4766.82
					4/26/10	66.13	4765.93
					7/13/10	67.52	4764.54
					7/14/11	73.86	4758.20
					7/12/12	78.85	4753.21
					2/12/08	289.47	4444.25
					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
COLLING	303200	002331.200	3471341.333	4/33.72	7/20/09	290.78	4442.94
					10/20/09	290.52	4443.20
					2/2/10	291.64	4442.08
					4/23/10	291.96	4441.76
					7/20/10	292.21	4441.51
					3/4/08	155.08	4444.06
					5/5/08	155.34	4443.80
					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
COOPER C	637069	601349.987	3468913.011	4599.14	4/22/10	157.31	4441.83
OOOF LIK O	037009	001040.001	3-00313.011	7000.14	7/21/10	158.00	4441.14
					10/20/10	158.41	4440.73
					1/17/11	158.37	4440.77
					4/11/11	158.74	4440.40
					8/26/11	159.51	4439.63
					10/13/11	159.81	4439.33
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					5/12/08	81.38	4604.96
					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
DODCON	044007	005504.500	0.400000 770	4000.04	4/19/10	89.53	4596.81
DODSON	644927	605594.560	3469063.772	4686.34	7/20/10	90.79	4595.55
					10/18/10	90.33	4596.01
					1/19/11	90.34	4596.00
					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
					2/13/08	22.11	4681.16
					5/13/08	24.60	4678.67
					7/22/08	27.00	4676.27
				4703.27	10/16/08	23.60	4679.67
		607632.993	3470222.677		1/19/09	26.51	4676.76
					4/8/09	28.53	4674.74
					7/7/09	31.04	4672.23
DOUGLASS 791	592791				10/5/09	31.49	4671.78
					1/21/10	34.55	4668.72
					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
					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
DOUGLASS 792	592792	607607.541	3469829.115	4681.73	10/5/09	86.19	4595.54
DOUGLAGG 192	552132	007007.341	J-03023.113	7001.73	1/21/10	86.45	4595.28
					4/19/10	87.19	4594.54
					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



Well Name	ADWR 55 Registry No.	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
EAST	599796	607076.365	3468712.215	4626.01	4/21/10	58.88	4567.13
				-	7/14/10	61.86	4564.15
				-	10/20/10 1/18/11	61.20 59.79	4564.81 4566.22
				-	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
				ļ ļ	10/4/12	73.34	4552.67
ECHAVE	219449	599701	3470168	4648	2/1/12	216.71	4431.29
					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
EPPELE 641	805641	607165.354	3469229.942	4642.86	7/20/10	50.38	4592.48
				-	10/20/10 1/17/11	48.88 51.13	4593.98 4591.73
					4/5/11	53.81	4589.05
				-	7/11/11	56.82	4586.04
				F	10/12/11	37.62	4605.24
					1/31/12	46.80	4596.06
					4/11/12	52.07	4590.79
				ļ ļ	7/6/12	62.39	4580.47
					10/3/12	71.66	4571.20
					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
FLEMING	218386	605565.701	3469342.523	4693.68	4/20/10	315.26	4378.42
					7/15/10	318.32	4375.36
					11/4/10	349.62	4344.06
					1/19/11	356.89	4336.79
				 	7/12/11 2/3/12	364.72 370.84	4328.96 4322.84
				l l	7/0/12	373 86	4310 Q2
					7/9/12 9/13/12	373.86 195.19	4319.82 4441.69
FRANCO 383	221383	602817.854	3468831.563	4636.88	7/9/12 9/13/12 10/5/12	373.86 195.19 195.00	4319.82 4441.69 4441.88



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					10/22/08	40.59	4602.33
					1/21/09	40.66	4602.26
					4/9/09	42.88	4600.04
FULTZ	212447	607452 206	2460062 002	4642.02	7/13/09	54.94	4587.98
FULIZ	212447	607153.306	3469063.892	4642.92	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	191.05	4447.40
					5/5/08	191.28	4447.17
					7/15/08	191.44	4447.01
					10/16/08	191.83	4446.62
					1/28/09	191.92	4446.53
					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
0.4.0.4.50 ===				4000 45	4/22/10	193.49	4444.96
GARNER 557	558557	602659.240	3468962.415	4638.45	7/20/10	193.93	4444.52
					10/19/10	194.29	4444.16
					1/19/11	194.61	4443.84
					4/6/11	194.86	4443.59
					7/15/11	195.25	4443.20
					10/11/11	195.72	4442.73
					2/2/12	196.09	4442.36
					4/13/12	196.30	4442.15
					7/11/12	196.72	4441.73
					10/5/12	197.08	4441.37
					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
04DN=5 00=	50=00=	000007 070	0.400007-000	40/0-1	4/22/10	196.01	4444.73
GARNER 635	587635	602665.352	3468967.902	4640.74	8/25/10	195.57	4445.17
					10/19/10	225.83	4414.91
					1/19/11	196.89	4443.85
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
00000L 047	020347	000230.037	0400020.200	4/1/.11	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
					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
					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
					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
GOAR RANCH	610605	600454.754	2469902 474	4634.43	7/7/09	185.36	4445.77
GUAR RAINCH	610695	602454.751	1 3468892.471	4631.13	10/12/09	185.72	4445.41
					2/2/10	186.25	4444.88
					4/22/10	186.44	4444.69
				-	7/13/10 1/19/11	186.76 187.52	4444.37 4443.61
				-			
				-	7/12/11 2/6/12	188.24 189.02	4442.89 4442.11
				-		190.08	
					9/13/12 2/27/08	163.05	4441.05 4444.55
					5/7/08	163.28	4444.32
					7/14/08	163.87	4444.32
					10/16/08	163.95	4443.73
					1/28/09	163.82	4443.78
					4/15/09	164.16	4443.44
					7/14/09	164.59	4443.44
					10/15/09	165.00	4442.60
					3/2/10	165.32	4442.28
HOBAN ³	805290	601705.848	3468880.329	4607.60	5/18/10	165.71	4441.89
					7/20/10	166.17	4441.43
					10/19/10	166.45	4441.15
					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
				1	10/17/12	169.40	4438.20



Well Name	ADWR 55 Registry No.	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	152.08	4441.83
					1/27/10	152.20	4441.71
HOWARD NR⁴	NR	601281.159	3468770.377	4593.91	4/21/10	152.30	4441.61
HOW IND HIN		33.231.100	3.33.70.077	.555.51	7/19/10	153.16	4440.75
					10/18/10	153.53	4440.38
					1/17/11	153.51	4440.40
					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
HOWARD 312	221312	601308.920	3468772.630	4594.9356	8/14/12	188.36	4406.58
	22.0.2	00.000.020	0.007.72.000	100 110000	10/16/12	193.33	4401.61
					2/6/08	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
KEEFER	209744	599879.175	3468119.015	4572.03	4/20/10	136.26	4435.77
ILLI LIX	2007 74	333073.173	3400113.013	7012.00	7/15/10	137.29	4434.74
					10/19/10	137.68	4434.35
					1/18/11	137.42	4434.61
					4/6/11	137.91	4434.12
					7/18/11	140.39	4431.64
					10/11/11	141.68	4430.35
					2/6/12	139.27	4432.76
İ					4/23/12	139.76	4432.27
					7/17/12	140.69	4431.34
					10/9/12	141.00	4431.03



Well Name	ADWR 55 Registry No.	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
MOOONNELLOOF	500005	004400 004	0.4000.40.400	4000 70	4/22/10	158.68	4442.02
MCCONNELL 265	539265	601463.094	3468840.139	4600.70	7/21/10	159.37	4441.33
					10/18/10	159.63	4441.07
					1/19/11	159.69	4441.01
					4/8/11	159.10	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
MCCONNELL 450	004.450	004.474.700	2460040 600	4004.55	7/27/12	170.50	4431.05
MCCONNELL 459	221459	601471.708	3468840.682	4601.55	10/8/12	166.81	4434.74
					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
METZLER	25 74 004	000004 000	0.474004.470	4700.50	5/18/10	288.65	4439.88
METZLER	35-71891	602091.308	3471381.176	4728.53	7/16/10	288.88	4439.65
					10/19/10	289.09	4439.44
					1/19/11	289.54	4438.99
					4/4/11	289.87	4438.66
					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
					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
NEGO	F00407	607060 004	2474440 404	4764.00	11/12/09	537.34	4223.89
NESS	509127	607866.391	3471419.494	4761.23	2/2/10	531.85	4229.38
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					5/13/08	339.77	4460.91
					8/27/08	344.34	4456.34
NOTEMAN	212483	606053.800	3471576.400	4800.68	11/22/08	322.26	4478.42
				Ì	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
NSD-02	527587	598820.051	3468821.474	4531.38	3/17/11	102.68	4428.70
					6/17/11	109.29	4422.09
					12/7/11	104.41	4426.97
					3/6/12	104.30	4427.08
					12/14/12	107.24	4424.14
					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
NSD-03	527586	598070.538	3468694.259	4518.28	3/17/11	86.76	4431.52
					6/17/11	88.76	4429.52
					12/7/11	89.30	4428.98
					3/6/12	89.24	4429.04
					12/14/12	90.83	4427.45
					10/27/08	160.51	4439.93
NIMO OO	500044	000477 405	0407474 070	4000.44	4/29/09 ⁵	160.5	4439.94
NWC-02	562944	600177.435	3467474.673	4600.44	9/10/09 ⁵	155	4445.44
					4/2010 ⁵	131	4469.44
					11/3/08	131.48	4443.51
NIMO 00	000004	004450 057	0.400050.000	4574.00	4/29/09 ⁵	130	4444.99
NWC-03	203321	601153.857	3468350.838	4574.99	9/10/09 ⁵	126	4448.99
					10/9/09 ⁵	125	4449.99
					2/2/09	130.03	4442.79
					4/23/09	130.62	4442.20
					7/21/09	131.26	4441.56
					10/21/09	131.60	4441.22
					2/3/10	131.34	4441.48
					4/21/10	131.86	4440.96
NAMO 00 0 A D6	607604	601151 704	2469242 652	4570.00	7/20/10	131.50	4441.32
NWC-03 CAP ⁶	627684	601151.704	3468343.653	4572.82	1/18/11	132.91	4439.91
					7/15/11	134.42	4438.40
					10/13/11	134.73	4438.09
					1/31/12	134.50	4438.32
					4/25/12	135.09	4437.73
					7/18/12	135.73	4437.09
					10/10/12	135.97	4436.85
		•			12/2/08	352.11	4338.66
NIMO 04	EE4940	605920 909	2460074 050	4690.77	4/29/09 ⁵	328	4362.77
NWC-04	551849	605829.808	3469071.959	4090.77	9/10/09 ⁵	324	4366.77
					4/2010 ⁵	216	4474.77
					4/29/09 ⁵	156	4436.50
NIMO OG	E7E700	E00000 004	2467740.054	4500 50	9/10/09 ⁵	155	4437.50
NWC-06	575700	599822.821	3467749.954	4592.50	10/9/09 ⁵	148	4444.50
					4/2010 ⁵	140	4452.50



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
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
					7/9/12	74.63	4637.32
					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	171.78	4519.62
					10/18/10	176.39	4515.01
PANAGAKOS	35-76413	605304.234	3469323.140	4691.40	7/14/11	173.78	4517.62
					8/25/11	172.89	4518.51
					2/6/12	169.09	4522.31
					2/29/12	169.32	4522.08
					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
			3471263.549	4727.21	5/15/08	279.78	4447.43
					8/18/08	280.06	4447.15
					11/3/08	280.39	4446.82
PARRA	576415	602170.716			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
					2/25/09	149.68	4442.45
					4/14/09	150.01	4442.12
					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
PIONKE 395	613395	601045.471	3468960.981	4592.13	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
					7/12/11	153.57	4438.56
					10/11/11	153.87	4438.26
					2/1/12	153.92	4438.21
					4/12/12	154.35	4437.78
					7/11/12	154.97	4437.16
					10/17/12	155.31	4436.82
PIONKE 517	221517	600909.967	3468866.654	4587.20792	9/18/12	152.00	4435.21
					10/11/12	152.15	4435.06



Well Name	ADWR 55 Registry No.	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
5001	500540	500000 000	0.470040.000	4000.00	4/21/09	204.87	4434.22
POOL	509518	599683.603	3470013.823	4639.09	7/20/09	205.69	4433.40
					10/20/09	206.06	4433.03
					2/24/10	205.59	4433.50
					4/22/10	205.48	4433.61
					7/14/10	206.58	4432.51
					10/20/10	206.74	4432.35
					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
			3467584.363	4596.61	4/21/10	159.96	4436.65
RAMIREZ	040405	599730.649			7/21/10	161.05	4435.56
KAWIKEZ	216425	599730.649	3407304.303		10/19/10	161.23	4435.38
					1/18/11	161.22	4435.39
					4/11/11	161.48	4435.13
					7/18/11	162.39	4434.22
					10/12/11	163.04	4433.57
					4/10/12	163.22	4433.39
					7/6/12	163.85	4432.76
					10/8/12	164.38	4432.23
					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
RAY	803772	607083.422	3469195.147	4647.91	4/20/10	49.78	4598.13
KAT	003/72	607063.422	3409195.147	4047.91	7/14/10	51.36	4596.55
					10/20/10	49.85	4598.06
					1/17/11	50.51	4597.40
					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	54.50	4593.41
					7/6/12	58.75	4589.16
					10/3/12	60.98	4586.93



Well Name	ADWR 55 Registry No.	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
ROGERS 596	573596	601001.503	3468491.639	4577.35	4/8/11	137.68	4439.67
					7/14/11	138.09	4439.26
					10/12/11	138.09	4439.26
					1/30/12	137.91	4439.44
					4/23/12	138.61	4438.74
					7/13/12	139.65	4437.70
					10/10/12	139.55	4437.80
					2/7/08	129.85	4449.17
				4579.02 7/29/08 10/22/08 2/10/09 4/29/09 8/3/09	7/29/08	131.86	4447.16
ROGERS 750 ⁷	641750	600977.690	3468417.386		132.08	4446.94	
ROGERS 750	041730	600977.090	3400417.300		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
					10/6/09	150.76	4439.90
ROGERS E	216018	600449.648	3467636.029	4590.66	1/25/10	150.64	4440.02
ROOLROL	210010	000110.010	3407030.029	4590.00	4/21/10	150.97	4439.69
					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
				\Box	2/5/08	293.29	4441.89
					5/15/08	293.57	4441.61
					7/30/08	293.86	4441.32
					10/20/08	294.18	4441.00
					2/12/09	294.62	4440.56
RUIZ	531770	602857.357	3471424.219	4735.18	4/21/09	294.66	4440.52
					8/3/09	294.98	4440.20
					10/28/09	295.33	4439.85
					2/1/10	295.70	4439.48
					4/26/10	295.96	4439.22
					4/8/11	297.20	4437.98
					4/13/12	298.47	4436.71



Well Name	ADWR 55 Registry No.	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
SCHWARTZ ⁸	210865	600811.014	3468269.622	4564.49	4/21/10	124.65	4439.84
SCHWARIZ	210003	000611.014	3406209.022	4304.49	7/21/10	125.80	4438.69
					10/19/10	126.30	4438.19
					1/17/11	125.35	4439.14
					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
					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
STEPHENS	808560	606981.766	3469072.799	4651.22	10/7/09	50.33	4600.89
OTETTIENO	000300	000301.700		4031.22	1/26/10	51.13	4600.09
					4/20/10	51.24	4599.98
					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
					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
SUNBELT	201531	605998.250	3471735.149	4806.52	10/5/09	Dry	<4426
		111130.200	2		1/21/10	Dry	<4426
					4/19/10	Dry	<4426
					7/12/10	Dry	<4426
					1/19/11	Dry	<4426
					8/25/11	Dry	<4426
					2/3/12	Dry	<4426
					7/9/12	Dry	<4426
				<u> </u>	9/13/12	Dry	<4426



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
SWAN	NR	607378.547	3470648.298	4716.59	10/5/09	35.12	4681.47
					1/21/10	36.64	4679.95
					4/21/10	38.06	4678.53
					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
					3/4/08	346.62	4461.81
					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
				8/1 4808.43 11. 3/1 4/ 7/ 2/1 7/1 2/ 8/1	5/6/09	349.38	4459.05
					8/12/09	349.13	4459.30
TM-02A	522574	604152.059	3472008.794		11/4/09	348.97	4459.46
					3/10/10	348.19	4460.24
					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
					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
				-	2/26/09	126.94	4770.91
TM-03	522575	606366.130	3473711.046	4897.85	5/13/09 8/18/09	113.86 128.80	4783.99 4769.05
					11/10/09	125.38	4772.47
					3/2/10	128.02	4769.83
					4/14/10	130.56	4769.83
				1	7/7/10 2/1/12	131.25 135.04	4766.60 4762.81
					2/26/08	158.78	4549.10
				}	5/20/08	158.76	4549.10
				1	8/4/08	158.80	4549.08
				1	10/29/08	158.85	4549.03
					2/16/09	159.28	4548.60
					5/13/09	158.81	4549.07
TM-06 MILLER	522695	606055.975	3468376.658	4707.88	8/18/09	158.91	4548.97
					11/12/09	158.96	4548.92
					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



TM-10 USBP 522696 601586.268 3471816.397 4741.18 42412 279.30 3 4461.88 4215 279.03 4462.15 9/13/12 278.30 4462.88 10/19/12 277.45 4465.73 3/15/18 11.00 453.71 465.73 3/15/18 11.00 453.71 465.73 3/15/18 11.00 453.71 465.73 3/15/18 11.00 453.71 463.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11/15/18 11.75 433.66 11.75 433.	Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
TM-10 USBP 52696 601586,268 3471816.397 4741.18 9/13/12 278.30 4462.88 10.019/12 277.45 4463.73 10/19/12 277.45 4463.73 4463.73 469197.426 465.87 17/19/12 278.30 4462.88 1.00 4658.71 11/10/19/12 277.45 463.56 11/508 81.00 4636.71 11/508 81.00 4636.71 11/508 81.00 4636.89 11/508 81.00 4635.83 11/508 81.00 4635.83 11/508 81.75 4635.83 11/509 82.01 4635.80 11/508 81.75 4635.83 11/509 82.01 4635.70 11/509 82.37 4633.34 11/509 82.37 4633.34 11/509 82.37 4633.49 11/509 82.37 4633.49 11/509 82.37 4633.49 11/509 82.37 4633.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4634.49 11/509 82.35 4646.16 11/509 82.35 4646.16 11/509 82.35 4646.16 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4446.25 11/509 82.35 4445.35 11/509 82.35 4445.35 11/509 82.35 4445.35 11/509 82.35 4445.35 11/509 82.35 4445.35 11/509 82.35 4445.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 4455.35 11/509 82.35 11/509 82.35 4455.35 11/509 82.35						3/15/12	279.30	4461.88
1M-19A 522581 602458.710 3469197.426 4645.87 TM-19A 522581 602458.710 3469197.426 4666.87 TM-19A 522581 602588.075 4645.87 TM-19A 522581 602588.075 4645.87 TM-19A 522581 602588.075 4645.87 TM-19A 522588 610.87 TM-19A 522588 610.	TM 40 HODD	500000	004500 000	0.474040.007	4744.40	4/24/12	279.03	4462.15
TM-19A 522581 602458.710 3469197.426 TM-12 TM-142 562554 603698.271 3469104.903 4866.67 52208 81.00 81.00 81.65 8436.87 84636.83 5713/09 82.01 4835.73 4835.83 5713/09 82.01 4835.70 4835.83 5713/09 82.01 4835.83 4834.88 372/10 83.09 4834.82 471/10 83.51 4834.20 77/210 83.51 4834.20 77/210 83.51 4844.02 57208 199.95 4446.02 57208 199.95 4446.02 57208 199.95 4446.03 4846.87 11/4/09 201.16 4444.71 4444.71 479/10 201.36 4444.71 479/10 201.36 4444.71 479/10 201.36 4444.53 479/10 201.55 4444.52 77/15/11 203.30 4442.57 77/110 202.35 4442.57 77/110 202.35 4442.57 77/110 202.35 4442.57 77/111 203.30 4442.57 77/111 203.30 4442.57 77/15/11 203.30 4442.57 77/15/11 203.30 4442.57 77/15/11 203.30 4442.57 77/15/11 203.30 4442.57 77/16/0 202.55 4443.52 21/44/11 203.70 4445.63 4455.63 87/200 210.98 4455.69 8/608 211.98 212.37 4455.63 4456.60 7/22/10 213.51 4453.16 7/22/10 213.51 4453.16 7/22/10 213.51 4453.16 7/22/10 213.51 4455.62	TM-10 USBP	522696	601586.268	34/1816.39/	4/41.18	9/13/12	278.30	4462.88
TM-19A 522581 602458.710 3469197.426 4645.87 TM-19A 522581 602458.710 3469197.426 4646.87 TM-19A 522581 602458.710 3469197.426 4645.87 TM-19A 522581 602458.710 3469197.426 465.87 TM-19A 522581 602458.710 3469197.426 465.87 TM-19A 522581 602588.075 TM-21A 602						10/19/12	277.45	4463.73
TM-16 522578 605588.075 3469842.199 4717.71 871909 82.83 4635.89 1171009 82.83 4635.83 4635.83 312/10 83.09 4634.62 4714/10 83.51 4635.34 1171009 82.83 4634.88 312/10 83.09 4634.62 4714/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4634.82 772/10 83.51 4635.83 4446.02 85/22/08 199.95 4446.02 85/22/08 199.95 4446.02 85/22/08 199.95 4446.02 85/22/08 199.96 4446.13 373/09 199.81 4446.06 42/22/09 200.57 4445.30 42/22/09 200.57 4445.30 872/22/09 201.46 4444.41 11/40/200.00 4444.81 370/10 201.34 4444.53 449/10 201.35 4444.32 77/10/10 203.35 4443.52 21/41/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/11 203.00 4442.87 77/10/10/203.54 4443.53 65/22/08 210.98 4455.69 81/608 207.05 4455.81 81						3/5/08	81.00	4636.71
TM-16 52578 605588.075 3469842.199 4717.71 81909 82.01 4655.70 4653.69 117009 82.01 4655.70 82.07 42009 82.07 4253.04 420.00 82.00 420.00 82.00 420.00 82.00 420.00 82.00 420.00 82.						5/22/08	81.24	4636.47
TM-16 522578 605588.075 3469842.199 4717.71 81990 82.37 4653.53 4635.83 513009 82.01 4653.70 4653.74 4653.63 4717.70 813.05 4656.83 4717.70 820.10 82.00 82.						8/6/08	81.65	4636.06
TM-16 522578 605588.075 3469842.199 4717.71 81909 82.27 4635.34 4634.88 32/10 83.09 4634.82 41/4/10 83.22 4634.89 7/2/10 83.51 4634.20 7/14/11 80.41 4637.30 7/9/12 72.55 4645.16 3/6/08 199.19 4446.02 5/2/208 199.50 4446.37 8/6/08 199.19 4446.68 11/18/08 11/18/09 201.46 4444.41 444.51 3/3/09 199.81 4446.61 3/3/09 199.81 4446.61 3/3/09 199.81 4446.63 8/7/14/10 201.54 4444.31 4/9/10 201.55 4444.31 4/9/10 201.34 4444.53 4/9/10 201.36 4442.67 7/11/11 203.30 4442.67 7/11/12 203.00 4442.67 7/11/12 205.02 4441.12 107/6/12 205.02 4441.12 107/6/12 205.02 4441.12 107/6/12 205.02 4441.12 107/6/12 205.02 4440.85 5/2/208 2/18/09 211.35 4455.69 8/6/08 211.55 4455.69 8/6/08 211.55 4455.69 8/6/08 211.55 4455.69 8/6/08 211.35 4455.69 8/6/08 211.35 4455.69 8/6/08 211.35 4455.69 8/6/08 212.37 4453.62 2/24/10 213.36 4453.62 2/24/10 213.36 4453.62 2/24/10 213.36 4453.62 2/24/10 213.36 4453.15 7/12/11 214.62 4452.65						11/5/08	81.75	4635.96
TM-16						2/26/09	81.88	4635.83
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## A						11/10/09	82.83	4634.88
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7/12/11 214.62 4452.05								
						7/12/11	216.10	4452.05



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					5/7/08	123.30	4438.68
					7/15/08	121.55	4440.43
					10/15/08	122.35	4439.63
					2/11/09	121.28	4440.70
					4/17/09	122.73	4439.25
					7/21/09	123.96	4438.02
TVI 236	802236	600552.215	3467978.431	4561.98	10/19/09	123.88	4438.10
					2/2/10	122.26	4439.72
					4/23/10	122.70	4439.28
					7/15/10	125.08	4436.90
					7/15/11	127.23	4434.75
					7/16/12	127.81	4434.17
					10/9/12	128.45	4433.53
					5/7/08	127.10	4440.12
					7/14/08	126.30	4440.92
					10/15/08	130.00	4437.22
					2/11/09	149.87	4417.35
					4/17/09	126.73	4440.49
					7/21/09	127.36	4439.86
				10/19/09 2/2/10		127.79	4439.43
						126.71	4440.51 4439.69
TVI 713	567713		4/23/10	127.53			
1 11 7 13	307713		3468412.946	4507.22	7/15/10 10/20/10	129.14 130.84	4438.08 4436.38
					1/20/10	134.36	4430.36
					4/11/11	135.72	4431.50
					7/15/11	131.61	4435.61
					10/12/11	130.33	4436.89
					2/3/12	130.01	4437.21
					4/25/12	131.33	4435.89
					7/16/12	131.97	4435.25
					10/9/12	132.16	4435.06
					2/15/08	143.31	4443.58
				-	5/7/08	143.90	4442.99
					7/16/08	144.22	4442.67
					10/28/08	145.81	4441.08
					1/29/09	143.99	4442.90
					4/15/09	144.38	4442.51
					7/15/09	144.99	4441.90
					10/15/09	145.66	4441.23
					2/2/10	145.28	4441.61
WEIGKODE 000	644000	604454.054	2469650.055	4590.00	4/22/10	145.72	4441.17
WEISKOPF 802	641802	601154.951	3468658.855	4586.89	7/19/10	146.46	4440.43
					10/20/10	147.11	4439.78
					1/17/11	146.72	4440.17
					4/11/11	146.31	4440.58
					8/26/11	148.06	4438.83
					10/13/11	148.30	4438.59
					2/1/12	148.23	4438.66
					4/25/12	148.82	4438.07
ı					7/13/12	149.79	4437.10
				<u> </u>	10/11/12	149.73	4437.16
WEISKOPF 897	221897	601096.780	3468647.358	4585.70	12/6/12	149.27	4436.43



Well Name	ADWR 55 Registry No.	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
				4746.28 2/2/12 226.66	4435.61		
					7/16/08	146.01 144.83	4434.54
					10/28/08	146.01	4434.93
					2/10/09	28/08 146.01 0/09 144.83 6/09 144.94 4/09 146.14	4436.11
				7/14/09 146.14 10/13/09 146.77 1/26/10 146.34 4/22/10 146.27 7/21/10 147.81	144.94	4436.00	
					7/14/09	146.14	4434.80
					10/13/09	146.77	4434.17
					4434.60		
ZANDER	205126	599678.880	2467000 406		4/22/10	146.27	4434.67
ZANDER	203120	599076.660	3407990.400		7/21/10	147.81	4433.13
					147.80	4433.14	
					1/18/11	147.52	4433.42
					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

Notes

ADWR = Arizona Department of Water Resources

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

ft amsl = feet above mean sea level

NR = No Record



¹ Measuring point elevation for third quarter 2008 changed to reflect well survey completed on September 18, 2008

 $^{^{\}rm 2}$ Depth to Water measurement provided by Arizona Water Company

³ Measuring point elevation changed to reflect survey results June 2012 and applied to all measurements collected

⁴ Measuring point elevation changed to reflect survey results September 10, 2010 and applied to all measurements collected

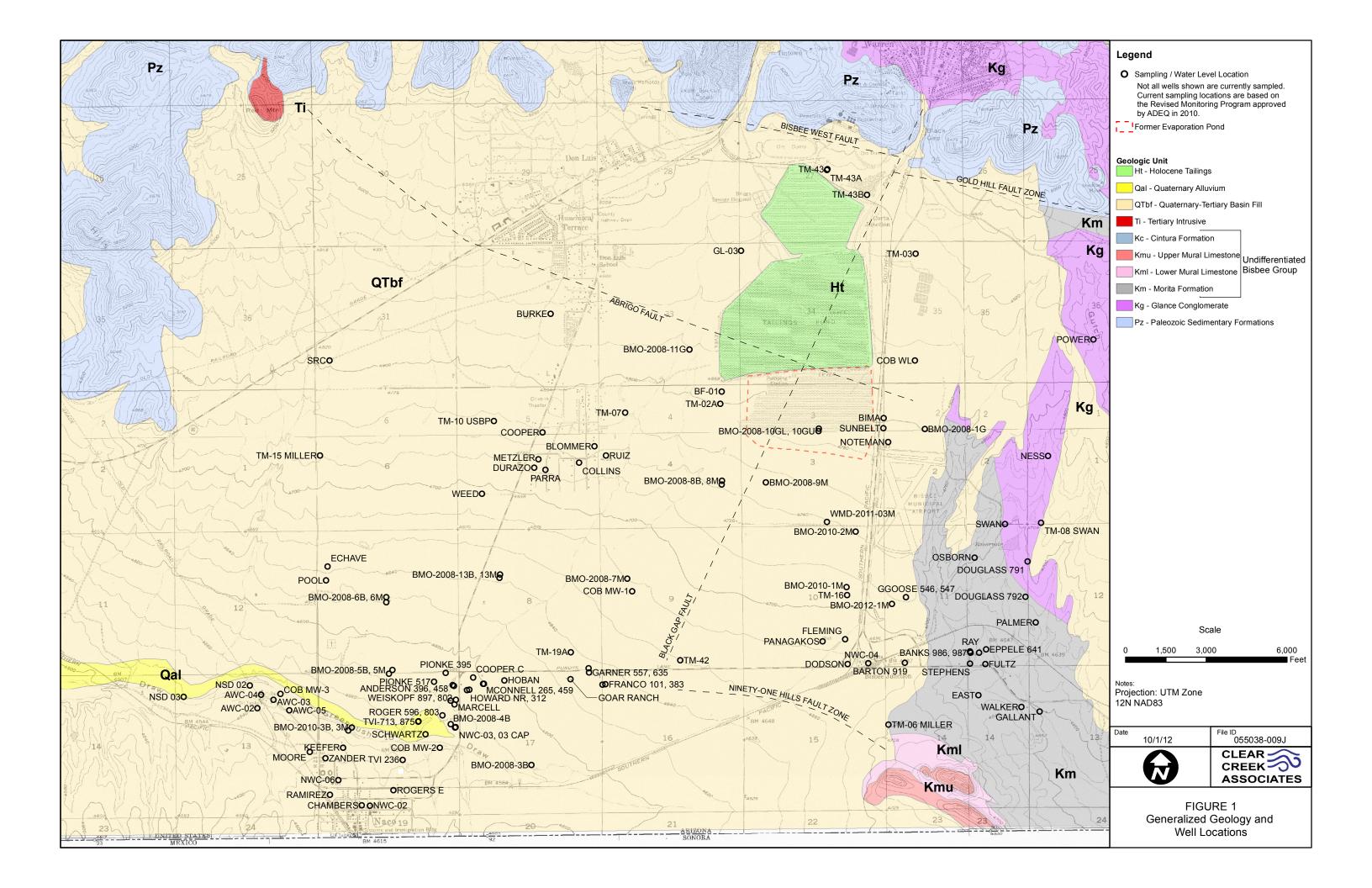
⁵ Depth to Water measurement provided by Naco Water Company

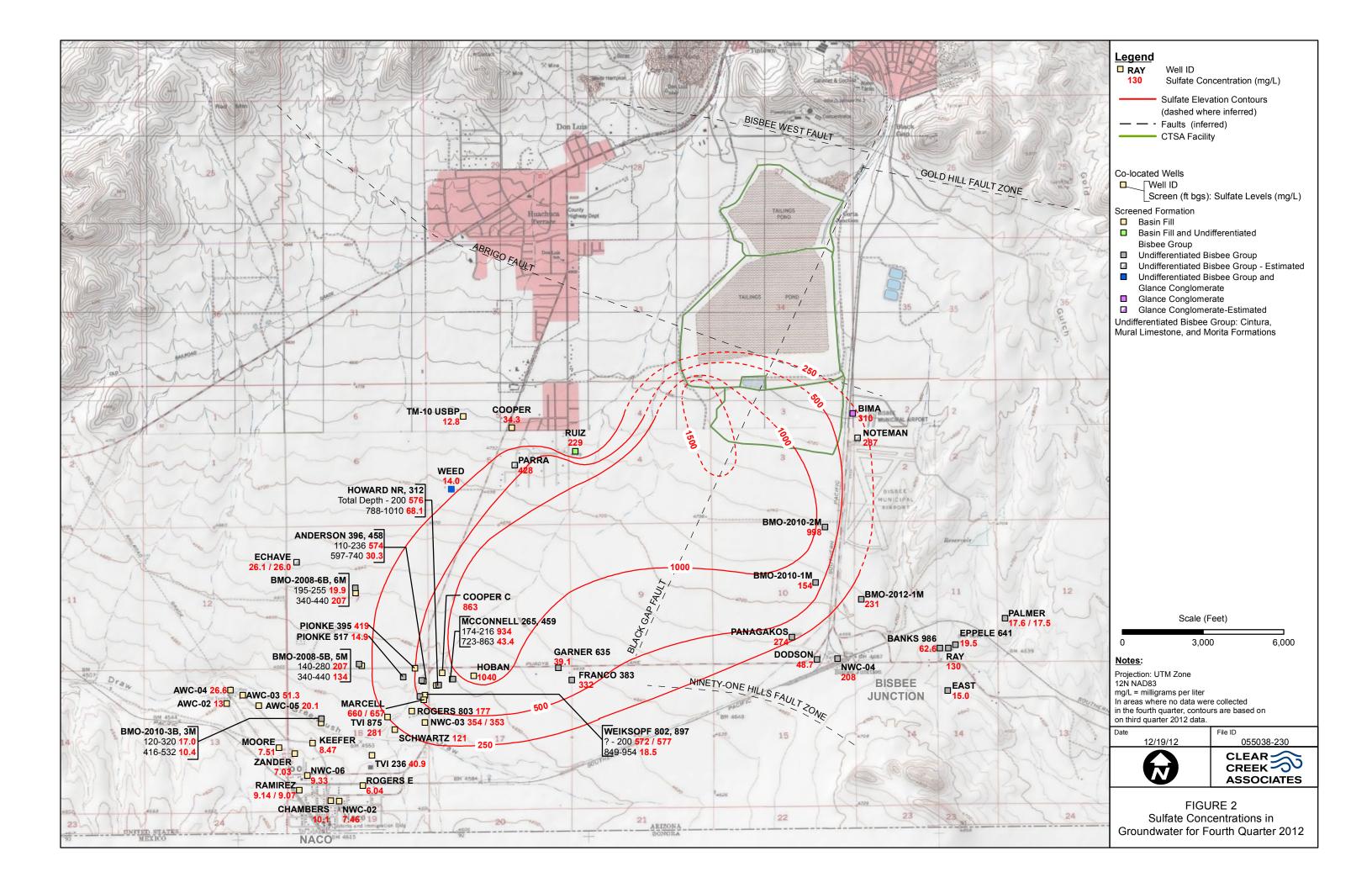
⁶ Measuring point elevation for second quarter 2009 changed to reflect well survey completed on April 27, 2009

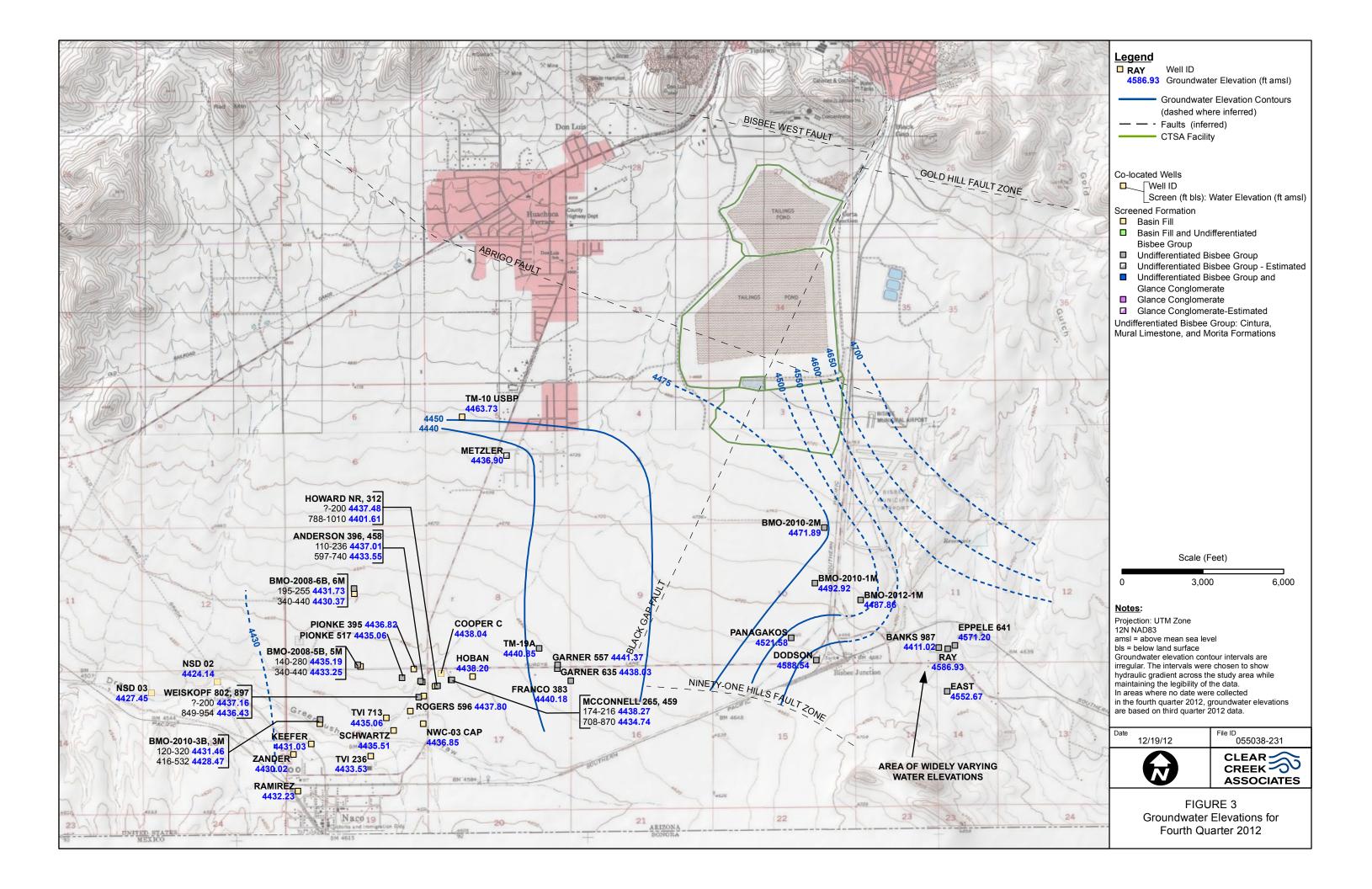
⁷ Well previously identified as ROGERS 803

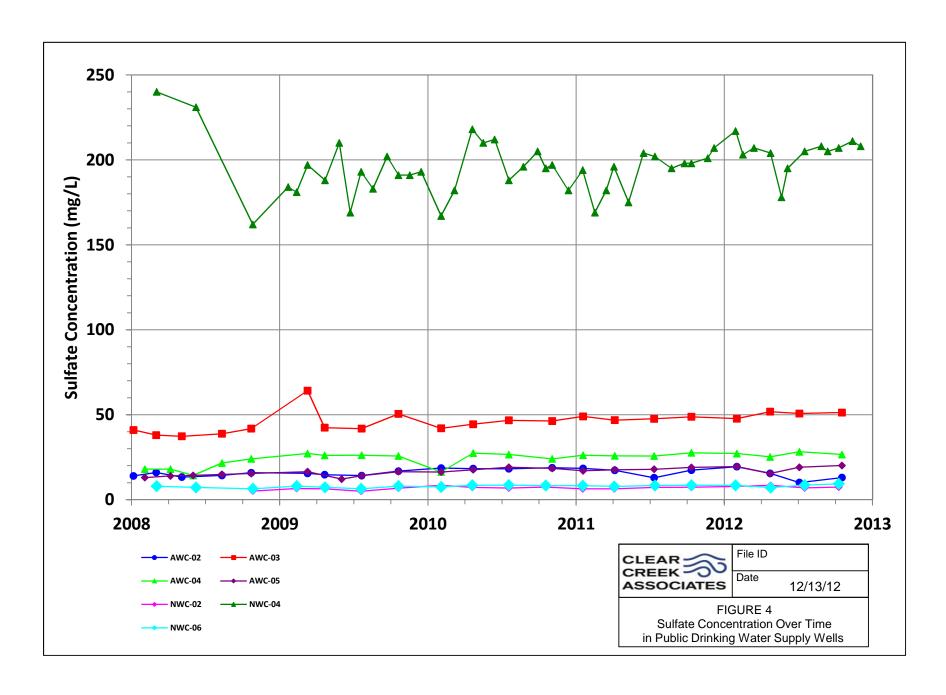
⁸ Measuring point elevation changed to reflect survey results September 10, 2010 and applied to all measurements collected

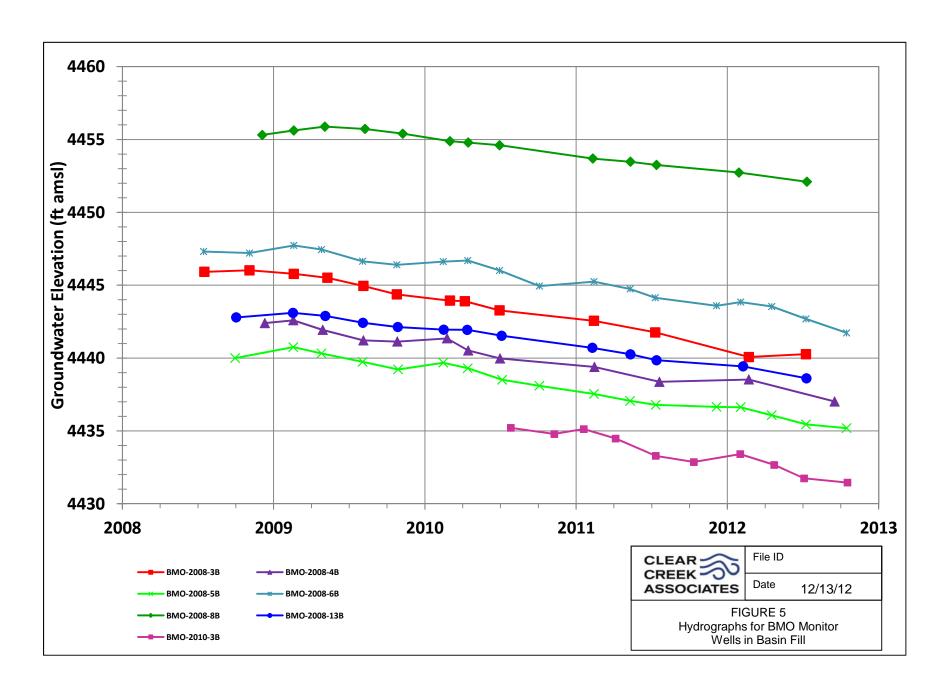
FIGURES

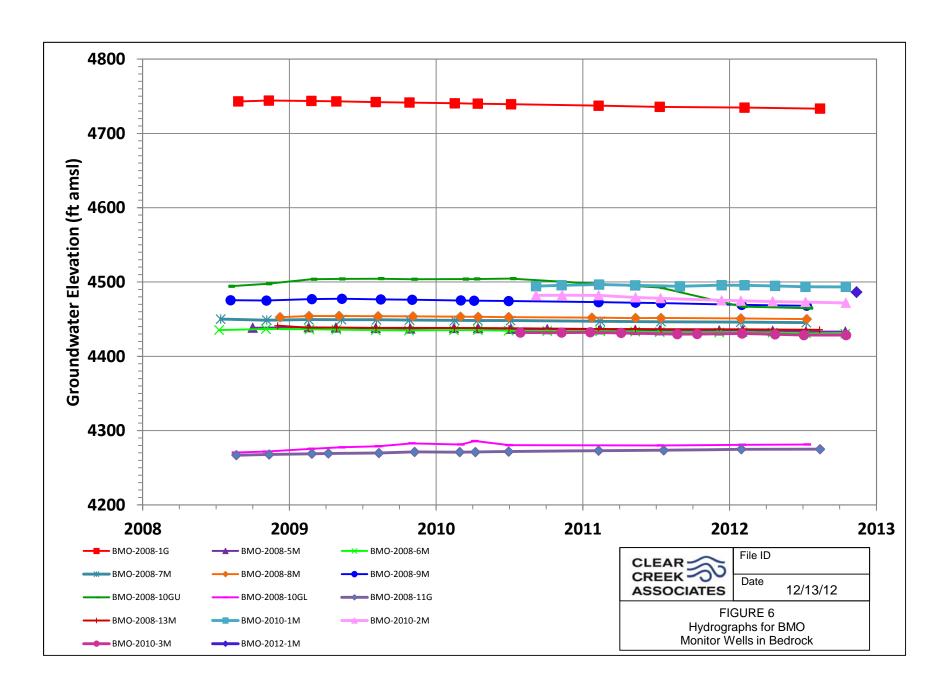












APPENDIX A SURVEY DATA

APPENDIX A Survey Results for New Wells

Point ID	Survey Location	Northing (UTM meters)	Easting (UTM meters)	Elevation (meters)
BMO-2012-1M	Top of Well Pad	3469746.484	606097.322	1438.144
BMO-2012-1M	Top of Sounding Tube	3469746.747	606097.384	1438.587
WEISKOPF 897	Top of Well Pad	3468647.620	601096.918	1397.112
WEISKOPF 897	Top of Sounding Tube	3468647.358	601096.780	1397.724

All coordinates listed in UTM Zone 12n WGS84 Geoid 09 (Meters) Data Provided by CQB



APPENDIX B DATA VERIFICATION REPORT

APPENDIX B

DATA VERIFICATION REPORT

FOURTH QUARTER 2012 GROUNDWATER MONITORING REPORT

Prepared for:

FREEPORT-MCMORAN CORPORATION COPPER QUEEN BRANCH

36 West Highway 92 Bisbee, Arizona 85603

Prepared by:

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January 18, 2013

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1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the fourth quarter 2012 by Clear Creek Associates (Clear Creek) and Freeport-McMoRan Corporation Copper Queen Branch (CQB) 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 fourth quarter 2012 were provided to Clear Creek by SVL Analytical, Inc. (SVL) of Kellogg, Idaho for preparation of the fourth quarter 2012 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 fourth quarter 2012 samples including COC forms, laboratory correspondence, QC summaries, data qualifiers, internal QA/QC tests performed by the laboratory are presented with the laboratory reports included in Appendix C. Based on the results of laboratory control samples, matrix spike/recovery and blank spikes, SVL did not advise that any modifications be made regarding the usability and data validation status of the laboratory test results. The analytical results for all 81 samples collected by Clear Creek and CQB are contained in 13 reports having the Laboratory Project numbers identified in the following table.

SVL ID	WELLS REPORTED
Number of duplicate sa	r samples collected (including duplicates): 67 imples collected: 6 uipment blanks collected: 14
W2J0162	BANKS 986, EAST, EPPELE 641, PALMER, DUP10032012, RAY, NOTEMAN, EB10032012, FB10032012
W2J0299	FRANCO 383, GARNER 635, FB10042012, EQB10042012
W2J0369	MCCONNEL 265, MCCONNELL 459, CHAMBERS, RAMIREZ, DUP10082012, MOORE, ZANDER, KEEFER, TVI 236, TVI 875, ECHAVE, DUP10092012, WEED, RUIZ, PARRA, COOPER, NWC-04, NWC-03, DUP10102012, NWC-06
W2J0370	NWC-02, ROGERS 803, COOPER C, ANDERSON 396, ANDERSON 458, FB10082012, EQB10082012, FB10092012, EQB10092012, FB10102012, EQB10102012, FB10112012, EQB10112012, PIONKE 517, WEISKOPF 802, DUP10112012
W2J0426	BMO-2008-5M, BMO-2008-5B, BMO-2008-6M, BMO-2008-6B, BMO-2010-1M, BMO-2010-2M, (NOTE: BMO-2010-1M and BMO-2010-2M were incorrectly logged by the laboratory as BMO-2008-1M and BMO-2008-2M), HOBAN
W2J0432	HOWARD NR,HOWARD 312, ROGERS E, SCHWARTZ, PIONKE 395, MARCELL NR, FB20121017,EQB20121017, DUP20121017
W2J0528	BMO-2010-3B, BMO-2010-3M, AWC-05, AWC-03, AWC-02, AWC-04, TM-10 USBP, DODSON
W2K0329	BMO-2012-1M
W2K0330	NWC-04, FRANCO 383
W2K0556	PANGAKOS
W2L0026	BIMA
W2l0027	NWC-04, FRANCO 383
W2L0122	WEISKOPF 897

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, and
- Equipment decontamination.

Documentation of the field activities was evaluated for quality assurance and has been deemed to have 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

During this monitoring period, an attempt was made to collect groundwater samples from wells designated in the groundwater 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.

Pre-Sampling Field Activities 2.2.1

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 probe to ensure accurate measurement. 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 deionized 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 deionized 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.

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 D) 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 0.2 standard units for pH, 2 degrees Celsius for temperature and 200 microSiemens/centimeter for specific conductance as described in Section 4.2.1.2 of the QAPP.

During this monitoring period 67 groundwater samples (duplicate and multiple samples included) were collected for analysis from 57 wells. Groundwater samples were collected by filtering the sample into a 250 milliliter bottle using 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 a standard stock solutions



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 a small amount of Alconox[®] detergent and deionized water. After washing, the equipment was rinsed with deionized water.

After sample collection, samples from each well were placed into a plastic bag and stored on ice until they could be packed securely for shipping to SVL. In addition, the sample collected from each well was placed in a bag without ice to prevent the label from getting soaked with water and rubbing off or becoming illegible.

3. SAMPLE HANDLING

All samples collected by Clear Creek and CQB were shipped to SVL. Chain of Custody (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 the laboratory. As noted on the analytical data reports from each laboratory, all of the sample bottles were received intact, properly preserved, and in good condition except for the 36 samples included in SVL Work Order W2J0369 and W2J0370, which arrived outside of published United States Environmental Protection Agency (EPA) guidelines for preservation temperatures (0-6°C). All samples were shipped within one to four days of sample collection and the time between sample collection and receipt of samples by the laboratory was one to eight days. Samples in work order W2J0369 and W2J0370 were shipped on a Thursday and not received by the laboratory until the following Monday. The shipping service (FedEx) indicated by phone that the truck carrying the samples, was delayed by traffic and that the overnight shipping request was not fulfilled. Clear Creek reviewed the sample handling procedures used for the fourth quarter 2012 sampling and found the procedures to meet protocols established in the QAPP. No modification of sample handling procedures will be made at this time. The samples were collected, shipped, and received by the laboratory within the established holding time for dissolved sulfate analysis in accordance with EPA Method 300.0.

The results for the samples that were received outside of published temperature guidelines were compared to historical results. The samples were in line with historical results and it is believed the samples results are usable for all 36 samples.

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 was equal to or less than the target MDL identified in the QAPP.

Method	MDL	RL	Target MDL ¹
	(mg/L)	(mg/L)	(mg/L)
EPA 300.0	0.07	0.30	10

mg/L = milligrams per liter

¹ Target MDL from Table F.2 of QAPP

4.4 Timeliness

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 samples were analyzed for the EPA Method 300.0. The spike samples were prepared by adding a sulfate spike to randomly chosen samples. Instances in which analytical spike recoveries were unusable were qualified with an "M3" flag indicating that the analyte concentration was disproportionate to the spike level or an "M1" flag indicating that the spike level was too high. In each case where an M1 or M3 qualifier was used the laboratory control sample recovery was acceptable and no corrective action was required. The laboratory 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 quality data verification report. Field duplicate samples are discussed in Section 5.1. 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.

4.5.4 Sample Re-Analysis

No samples required re-analysis for the fourth quarter 2012.

4.5.5 Blank Samples

During the third quarter 2012, 14 blank samples were collected, including seven field blanks (FB10032012, FB10042012, FB10082012, FB10092012, FB10102012, FB10112012, FB20121017) and seven field equipment blanks (EB10032012, EQB10042012, EQB10082012, EQB10092012, EQB10102012, EQB10112012, EQB20121017). None of the blank samples collected in the fourth quarter 2012 had sulfate concentrations above the reporting limit of 0.30 mg/L. The results demonstrate that the sulfate concentrations reported in the fourth quarter 2012 were not affected by sample collection and sample handling procedures. 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.

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 fourth quarter 2012 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. For the purposes of QA/QC, 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 6 field filtered duplicate samples (DUP10032012, DUP10082012, DUP10092012, DUP10102012, DUP10112012, DUP20121017) were collected by Clear Creek for analysis. The collection of 6 duplicate samples meets the QA/QC method and quantity goal stated in Section 4.2.1.5 of the QAPP.

Sulfate results for the 6 duplicate samples collected are provided in the table below. The range of RPD values was between 0.28 and 0.87 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 deemed to be met.

SVL Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
<u>W2J0162</u>	PALMER	DUP10032012	17.6	17.5	0.57%
<u>W2J0369</u>	RAMIREZ	DUP10082012	9.14	9.07	0.77%
W2J0369	ECHAVE	DUP10092012	26.1	26	0.38%
W2J0369	NWC-03	DUP10102012	354	353	0.28%
W2J0370	WEISKOPF 802	DUP10112012	572	577	0.87%
W2J0432	MARCELL NR	DUP20121017	660	657	0.46%

mg/L = milligrams per liter

RPD = Relative Percent Difference

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, none of the blank samples had measurable concentrations of sulfate indicating 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, none of the blank samples had measurable concentrations of sulfate indicating that the sampling collection and analysis procedures did not contribute sulfate to the results. Based on this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

5.4 Representativeness

All samples were taken from locations specified in the revised groundwater monitoring program (ADEQ, 2010) following sampling procedures specified in the QAPP. Therefore, the samples are

judged to provide a good representation of groundwater quality at the sampled locations. The sampling procedures are judged to be representative of groundwater quality at the sampled locations because no sulfate was detected in the field or equipment blanks. The analytical data are judged to be 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 are judged to 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 meet the MDL requirements specified in Table F.2 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 C ANALYTICAL REPORTS



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W2J0162

Reported: 16-Oct-12 12:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BANKS 986	W2J0162-01	Ground Water	04-Oct-12 11:52	05-Oct-2012
EAST	W2J0162-02	Ground Water	04-Oct-12 09:15	05-Oct-2012
EPPELE 641	W2J0162-03	Ground Water	03-Oct-12 11:31	05-Oct-2012
PALMER	W2J0162-04	Ground Water	03-Oct-12 08:57	05-Oct-2012
DUP10032012	W2J0162-05	Ground Water	03-Oct-12 08:57	05-Oct-2012
RAY	W2J0162-06	Ground Water	03-Oct-12 14:22	05-Oct-2012
NOTEMAN	W2J0162-07	Ground Water	04-Oct-12 13:02	05-Oct-2012
EB10032012	W2J0162-08	Water	03-Oct-12 17:33	05-Oct-2012
FB10032012	W2J0162-09	Water	03-Oct-12 17:35	05-Oct-2012

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 04-Oct-12 11:52 Client Sample ID: BANKS 986 Received: 05-Oct-12

SVI. Sample ID: W2.I0162-01 (Ground Water) Sample Report Page 1 of 1

	5 v E Sample 1D. 17200 102-01 (Ordana Water)				Sample Report 1 age 1 of 1			Sampled By:		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ıs by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	62.6	mg/L	1.50	0.24	5	W241223	AEW	10/11/12 18:40	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: W2J0162
Reported: 16-Oct-12 12:51

Client Sample ID: EAST

SVL Sample ID: W2J0162-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

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 15.0 mg/L 0.30 0.05 W241223 AEW 10/11/12 18:50

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 03-Oct-12 11:31 Client Sample ID: EPPELE 641 Received: 05-Oct-12

W241223

AEW

10/11/12 19:00

SVL Sample ID: W2J0162-03 (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 19.5 mg/L 0.30 0.05

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John Ken

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: W2J0162
Reported: 16-Oct-12 12:51

Client Sample ID: PALMER
Sampled: 03-Oct-12 08:57
Received: 05-Oct-12

SVL Sample ID: W2J0162-04 (Ground Water)

Sample Report Page 1 of 1

Sample By:

					Sample Report Luge 1 of 1			Sampled By:		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	17.6	mg/L	0.30	0.05		W241223	AEW	10/11/12 19:32	

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 03-Oct-12 08:57 Client Sample ID: **DUP10032012** Received: 05-Oct-12

SVL Sample ID: W2J0162-05 (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 17.5 mg/L 0.30 0.05 W241223 AEW 10/11/12 19:42

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 03-Oct-12 14:22 Client Sample ID: RAY Received: 05-Oct-12

SVI. Sample ID: W2.10162-06 (Ground Water) Sample Report Page 1 of 1

	5 TE Sample ID. 11200102-00 (Clound Water)				Sample Report 1 age 1 of 1			Sampled By:		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	130	mg/L	1.50	0.24	5	W241223	AEW	10/11/12 19:53	D2

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Client Sample ID: NOTEMAN Sampled: 04-Oct-12 13:02 Received: 05-Oct-12

	SVL Sample ID: W2J0162-07 (Ground Water)					Page 1 of 1	Sampled By:					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	287	mg/L	3.00	0.47	10	W241223	AEW	10/11/12 20:03	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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 03-Oct-12 17:33 Client Sample ID: EB10032012 Received: 05-Oct-12

SVL Sample ID: W2J0162-08 (Water) Sample Report Page 1 of 1

SVE Sumple 15. W200 102 00 (Water)					Sample Report 1 age 1 of 1			Sampled By:		
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	0.05		W241294	AEW	10/15/12 11:21	

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: W2J0162 Bisbee, AZ 85603 Reported: 16-Oct-12 12:51

Sampled: 03-Oct-12 17:35 Client Sample ID: FB10032012 Received: 05-Oct-12

SVL Sample ID: W2J0162-09 (Water) Sample Report Page 1 of 1 Sampled By:

	1	1					Sampled By.			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion C	hromatography									
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W241294	AEW	10/15/12 11:31	

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: W2J0162

Reported: 16-Oct-12 12:51

Disocc, AZ 650							Кероп	. 10-OCI-1	2 12.31
Quality Cont	rol - BLANK Data								
Method	Analyte	Units	Result	MDL	N	MRL	Batch ID	Analyzed	Notes
- Managa			Ttoball				Butti 1B	111111111111111111111111111111111111111	110105
Anions by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	0.05	0	0.30	W241294	12-Oct-12	
Dissolved Anio	ons by Ion Chromatogr	anhv							
Dissolved Anions by Ion Chromatograph EPA 300.0 Sulfate as SO4		mg/L	< 0.30	0.05	0.30		W241223	11-Oct-12	
Quality Cont	trol - LABORATORY (CONTROL SA	MPLE Data						
Madeal	A	T.T:4	LCS	LCS	%	Acceptance	D-4-l- ID	A	N-4
Method	Analyte	Units	Result	True	Rec.	Limits	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	10.2	10.0	102	90 - 110	W241294	12-Oct-12	
D:II A:-	b I Cb								
DISSOIVEG ANIC EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	apny mg/L	10.4	10.0	104	90 - 110	W241223	11-Oct-12	
2171 300.0	Surface as 50 i	mg/L	10.1	10.0	101	<i>70</i> 110	***2 11223	11 001 12	
Quality Cont	rol - DUPLICATE Dat	a							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	2240	2300	2.3	20	W241294	12-Oct-12	D2
Dissolved Anio	ons by Ion Chromatogr	anhv							
EPA 300.0	Sulfate as SO4	mg/L	29.4	29.6	0.5	20	W241223	11-Oct-12	
Quality Cont	trol - MATRIX SPIKE	Data							
		-,	Spike Sample	Spike	%	Acceptance			
Method	Analyte	Units	Result Result (F		Rec.	Limits	Batch ID	Analyzed	Notes
Anione by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	2240 2300	10.0	R > 4S	90 - 110	W241294	12-Oct-12	D2,M3
EPA 300.0	Sulfate as SO4	mg/L	11.4 <0.30	10.0	113	90 - 110	W241294	12-Oct-12	M1
D:L 4	b I Ch t								
Dissolved Anio EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	aphy mg/L	40.6 29.6	10.0	110	90 - 110	W241223	11-Oct-12	
EPA 300.0	Sulfate as SO4	mg/L	40.8 29.5	10.0	113	90 - 110	W241223	11-Oct-12	M1
		-							



Freeport McMoRan - BisbeeProject Name: Copper Queen Branch Sulfate Mitigation Order36 West Hwy 92Work Order:W2J0162Bisbee, AZ 85603Reported:16-Oct-12 12:51

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



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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W2J0299
Reported: 23-Oct-12 10:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
FRANCO 383	W2J0299-01	Ground Water	05-Oct-12 10:05	BD	11-Oct-2012
GARNER 635	W2J0299-02	Ground Water	04-Oct-12 12:55	BD	11-Oct-2012
FB10042012	W2J0299-03	Ground Water	04-Oct-12 17:44	BD	11-Oct-2012
EQB10042012	W2J0299-04	Ground Water	04-Oct-12 17:43	BD	11-Oct-2012

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
Bisbee, AZ 85603
Work Order: W2J0299
Reported: 23-Oct-12 10:01

Client Sample ID: FRANCO 383

SVL Sample ID: W2J0299-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	S v E Sumple 1B: W200200 01 (Ground Water)				Sample Report 1 age 1 of 1			Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	ns by Ion Chromatograp	ohy									
EPA 300.0	Sulfate as SO4	324	mg/L	7.50	1.18	25	W242256	AEW	10/18/12 16:21	D2	

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

John Kern



EPA 300.0

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: W2J0299
Reported: 23-Oct-12 10:01

Client Sample ID: GARNER 635

SVI, Sample ID: W2,10299-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sumple 1B. 1120	Sample Report 1 age 1 of 1			Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogra									

0.30

0.05

W242256

AEW

10/18/12 16:31

mg/L

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

39.1

John Kern

Sulfate as SO4



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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W2J0299
Reported: 23-Oct-12 10:01

Client Sample ID: **FB10042012**SVI, Sample ID: **W2.10299-03 (Ground Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sumple 1D. W200233-00 (Clound Water)				Sample Report Lage 1 of 1			Sampled By: BD			
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	0.05		W242238	AEW	10/18/12 21:23		

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
Bisbee, AZ 85603
Work Order: W2J0299
Reported: 23-Oct-12 10:01

Client Sample ID: EQB10042012

SVL Sample ID: W2J0299-04 (Ground Water)

Sample Report Page 1 of 1

Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.05 W242256 AEW 10/18/12 16:42

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

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Bisbee, AZ 85603

Kellogg ID 83837-0929

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Fax (208) 783-0891

Freeport McMoRan - Bisbee
36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W2J0299

Reported: 23-Oct-12 10:01

Quality Cont	trol - BLANK Data								
Method	Analyte	Units	Result	MDL	N	MRL .	Batch ID	Analyzed	Notes
	GI.								
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	< 0.30	0.05	0	0.30	W242238	18-Oct-12	
		_							
Dissolved Anion	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	< 0.30	0.05	0	0.30	W242256	18-Oct-12	
2171 300.0	Surface as 50 1	mg L	0.50	0.03	v		***2 12230	10 001 12	
Quality Cont	trol - LABORATORY (CONTROL SA							
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	10.1	10.0	101	90 - 110	W242238	18-Oct-12	
		_	10.1	10.0	101	90 - 110	W 242230	16-001-12	
	ons by Ion Chromatogra		0.00	10.0	00.0	00 110	W242256	10.0 + 12	
EPA 300.0	Sulfate as SO4	mg/L	9.99	10.0	99.9	90 - 110	W242256	18-Oct-12	
Quality Cont	trol - DUPLICATE Data	a							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
4 . 1 .	Cl. 4 I								
Anions by ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	19.3	19.3	0.1	20	W242238	18-Oct-12	
D. 1 1 1 1		-							
Dissolved Anio EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	162	164	1.3	20	W242256	18-Oct-12	D2
2111300.0	Surface as 50 .	g. L	102	10.	1.5	20		10 000 12	22
Quality Cont	trol - MATRIX SPIKE	Data							
Method	Analyte	Units	Spike Sample Result Result (R	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	30.1 19.3	10.0	108	90 - 110	W242238	18-Oct-12	
EPA 300.0	Sulfate as SO4	mg/L	222 212	10.0	98.4	90 - 110	W242238	18-Oct-12	D2,M3
Dissolved Ani	ons by Ion Chromatogra	aphy							
EPA 300.0	Sulfate as SO4	mg/L	171 164	10.0	R > 4S	90 - 110	W242256	18-Oct-12	D2,M3
EPA 300.0	Sulfate as SO4	mg/L	14.5 3.58	10.0	109	90 - 110	W242256	18-Oct-12	



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Freeport McMoRan - Bisbee
36 West Hwy 92
Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order
W2J0299
Reported: 23-Oct-12 10:01

Notes and Definitions

D.0	0 1 1	111 41 1 4	1.1.1	C 1 .
D2.	Sample required	dilution due to	high concentration of	it target analyte.

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 - Bisbee

Project Name: Copper Queen Branch Sulfate Mitigation Order 36 West Hwy 92 Work Order: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
MCCONNELL 265	W2J0369-01	Ground Water	08-Oct-12 09:21	VH	15-Oct-2012
MCCONNELL 459	W2J0369-02	Ground Water	08-Oct-12 12:38	VH	15-Oct-2012
CHAMBERS	W2J0369-03	Ground Water	08-Oct-12 13:34	VH	15-Oct-2012
RAMIREZ	W2J0369-04	Ground Water	08-Oct-12 15:04	VH	15-Oct-2012
DUP10082012	W2J0369-05	Ground Water	08-Oct-12 15:05	VH	15-Oct-2012
MOORE	W2J0369-06	Ground Water	08-Oct-12 15:47	VH	15-Oct-2012
ZANDER	W2J0369-07	Ground Water	08-Oct-12 16:49	VH	15-Oct-2012
KEEFER	W2J0369-08	Ground Water	09-Oct-12 09:37	VH	15-Oct-2012
TVI 236	W2J0369-09	Ground Water	09-Oct-12 10:36	VH	15-Oct-2012
TVI 875	W2J0369-10	Ground Water	09-Oct-12 11:24	VH	15-Oct-2012
ECHAVE	W2J0369-11	Ground Water	09-Oct-12 13:27	VH	15-Oct-2012
DUP10092012	W2J0369-12	Ground Water	09-Oct-12 13:28	VH	15-Oct-2012
WEED	W2J0369-13	Ground Water	09-Oct-12 14:12	VH	15-Oct-2012
RUIZ	W2J0369-14	Ground Water	09-Oct-12 15:14	VH	15-Oct-2012
PARRA	W2J0369-15	Ground Water	09-Oct-12 15:50	VH	15-Oct-2012
COOPER	W2J0369-16	Ground Water	09-Oct-12 16:32	VH	15-Oct-2012
NWC-04	W2J0369-17	Ground Water	10-Oct-12 08:58	VH	15-Oct-2012
NWC-03	W2J0369-18	Ground Water	10-Oct-12 09:44	VH	15-Oct-2012
DUP10102012	W2J0369-19	Ground Water	10-Oct-12 09:44	VH	15-Oct-2012
NWC-06	W2J0369-20	Ground Water	10-Oct-12 10:12	VH	15-Oct-2012

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.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C). The guidelines do not pertain to nitric-preserved metals.

Default Cooler	(Received Temperature	: 14.2°C)			
<u>Labnumber</u>	Container	Client ID	<u>Labnumber</u>	<u>Container</u>	Client ID
W2J0369-01 A	Filtered Raw HDPE	MCCONNELL 265	W2J0369-02 A	Filtered Raw HDPE	MCCONNELL 459
W2J0369-03 A	Filtered Raw HDPE	CHAMBERS	W2J0369-04 A	Filtered Raw HDPE	RAMIREZ
W2J0369-05 A	Filtered Raw HDPE	DUP10082012	W2J0369-06 A	Filtered Raw HDPE	MOORE
W2J0369-07 A	Filtered Raw HDPE	ZANDER	W2J0369-08 A	Filtered Raw HDPE	KEEFER
W2J0369-09 A	Filtered Raw HDPE	TVI 236	W2J0369-10 A	Filtered Raw HDPE	TVI 875
W2J0369-11 A	Filtered Raw HDPE	ECHAVE	W2J0369-12 A	Filtered Raw HDPE	DUP10092012
W2J0369-13 A	Filtered Raw HDPE	WEED	W2J0369-14 A	Filtered Raw HDPE	RUIZ
W2J0369-15 A	Filtered Raw HDPE	PARRA	W2J0369-16 A	Filtered Raw HDPE	COOPER
W2J0369-17 A	Filtered Raw HDPE	NWC-04	W2J0369-18 A	Filtered Raw HDPE	NWC-03
W2J0369-19 A	Filtered Raw HDPE	DUP10102012	W2J0369-20 A	Filtered Raw HDPE	NWC-06



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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: MCCONNELL 265

SVL Sample ID: W2J0369-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample ID. W200000 01 (Ground Water)				ampic report	1 age 1 of 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	934	mg/L	15.0	2.35	50	W243167	AEW	10/24/12 13:55	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: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Sampled: 08-Oct-12 12:38 Client Sample ID: MCCONNELL 459 Received: 15-Oct-12 SVI. Sample ID: W2.10369-02 (Ground Water) Sample Report Page 1 of 1

	5 TE Sample 15. 11200005-02 (Ground Trater)					1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	43.4	mg/L	1.50	0.24	5	W243167	AEW	10/24/12 14:25	D1

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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: CHAMBERS

Sumple ID: W2.10369-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sample 15. 11200003-00 (Ground Water)				Sample Report Lage 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	10.1	mg/L	0.30	0.05		W243167	AEW	10/24/12 14:35			

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

John Kern



EPA 300.0

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: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Sampled: 08-Oct-12 15:04 Client Sample ID: RAMIREZ Received: 15-Oct-12 SVL Sample ID: W2J0369-04 (Ground Water) Sample Report Page 1 of 1

	s + 2 sample is: 11200000 01 (of oatha 11ator)				Sample Report 1 age 1 of 1			Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anie	ons by Ion Chromatogra	phy									

0.30

0.05

W243167

AEW

10/24/12 14:45

mg/L

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

9.14

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
Bisbee, AZ 85603
Work Order: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: **DUP10082012**SVI. Sample ID: **W2.10369-05 (Ground Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. W250505-05 (Ground Water)				Sample Report 1 age 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	9.07	mg/L	0.30	0.05		W243167	AEW	10/24/12 14:55		

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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: MOORE

SVI. Sample ID: W2.10369-06 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sample 1D. W20003-00 (Ground Water)				Sample Report 1 age 1 of 1				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	7.51	mg/L	0.30	0.05		W243167	AEW	10/24/12 15:05			

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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: ZANDER

SVI. Sample ID: W2.10369-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 TE Sumple ID. W200003-07 (Oround Water)				ашріс Керогі	1 age 1 of 1	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	7.03	mg/L	0.30	0.05		W243167	AEW	10/25/12 11:16		

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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: KEEFER

SVI_Sample ID: W2.10369-08 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample 1D. VV230303-00 (Ground vvaler)				Sample Report Page 1 01 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	8.47	mg/L	0.30	0.05		W243167	AEW	10/25/12 14:47			

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 - Bisbee Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Hwy 92
Bisbee, AZ 85603
Work Order: **W2J0369**Reported: 26-Oct-12 14:43

 Client Sample ID:
 TVI 236
 Sample ID:
 Sample ID:
 Sample ID:
 W2J0369-09 (Ground Water)
 Sample Report Page 1 of 1
 Method Analyte Result Units RL MDL Dilution Batch Analyst Analyzed Notes

Dissolved Anions by Ion Chromatography

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 **Sulfate as SO4** 40.9 mg/L 0.30 0.05 W243167 AEW 10/25/12 14:57

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: **W2J0369**Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Client Sample ID: **TVI 875**SVI_Sample ID: **W2.I0369-10 (Ground Water)**Sample Report Page 1 of 1

Sample ID: **W2.I0369-10 (Ground Water)**Sample Report Page 1 of 1

	5 v E Sumple 1D. 11200003-10 (Ground Trater)					1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	281	mg/L	3.00	0.47	10	W243167	AEW	10/25/12 19:55	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: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Sampled: 09-Oct-12 13:27 Client Sample ID: ECHAVE Received: 15-Oct-12 SVL Sample ID: W2J0369-11 (Ground Water) Sample Report Page 1 of 1

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

John Ken

EPA 300.0 Sulfate as SO4 26.1 mg/L 0.30 0.05 W243167 AEW 10/25/12 20:05

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

John Kern



EPA 300.0

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

36 West Hwy 92 Work Order: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Sampled: 09-Oct-12 13:28 Client Sample ID: **DUP10092012** Received: 15-Oct-12 SVL Sample ID: W2J0369-12 (Ground Water) Sample Report Page 1 of 1

	SVL Sample ID: W2J	S	ample Report	Page 1 of 1	Sampled By: VH					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatogra	phy	•		_					

0.30

0.05

W243167

AEW

10/25/12 20:25

mg/L

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

26.0

John Ken John Kern

Sulfate as SO4



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: W2J0369
Reported: 26-Oct-12 14:43

Client Sample ID: WEED

SVL Sample ID: W2J0369-13 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	2 . = 2		,	5.	impic report	ruge r or r	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	14.0	mg/L	0.30	0.05		W243167	AEW	10/25/12 15:27	

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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
Bisbee, AZ 85603
Work Order: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: RUIZ

SVI, Sample ID: W2,10369-14 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E bumple 1D. 11200003-14 (Oloulla Tratel)					1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	229	mg/L	3.00	0.47	10	W243167	AEW	10/25/12 15:37	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
Bisbee, AZ 85603
Work Order: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: PARRA

SVI_Sample ID: W2.10369-15 (Ground Water)

Syl_Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. W250505-15 (Ground Water)					Tage I of I	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	428	mg/L	7.50	1.18	25	W243167	AEW	10/25/12 15:47	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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: COOPER

SVI. Sample ID: W2.10369-16 (Ground Water)

Sample Penert Page 1 of 1

Sample ID: W2.10369-16 (Ground Water)

	SVL Sample ID: W230	water)	Sample Report Page 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	34.3	mg/L	0.30	0.05		W243167	AEW	10/25/12 15:57	

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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
Bisbee, AZ 85603
Work Order: W2J0369
Reported: 26-Oct-12 14:43

Client Sample ID: NWC-04

SVI_Sample ID: W2.I0369-17 (Ground Water)

SvI_Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. 11200003-17 (Ground Water)					1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	207	mg/L	7.50	1.18	25	W243167	AEW	10/25/12 16:07	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: **W2J0369**Reported: 26-Oct-12 14:43

Client Sample ID: NWC-03

SVL Sample ID: W2J0369-18 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sample 15. 1720000 10 (Ground Trator)					1 age 1 of 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	354	mg/L	7.50	1.18	25	W243167	AEW	10/25/12 16:17	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: **W2J0369**Reported: 26-Oct-12 14:43

 Client Sample ID:
 DUP10102012
 Sample ID:
 Sample ID:
 Sample Report Page 1 of 1
 10-Oct-12 09:44
 15-Oct-12 09:44
 Received:
 15-Oct-12 09:44
 15-Oct-12 09:44</t

	S . E Sumpre IB : 1120	ruto.,	5.	ampic report	1 450 1 01 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	353	mg/L	7.50	1.18	25	W243167	AEW	10/25/12 16:27	D2

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

John Kern



EPA 300.0

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

36 West Hwy 92 Work Order: W2J0369 Bisbee, AZ 85603 Reported: 26-Oct-12 14:43

Sampled: 10-Oct-12 10:12 Client Sample ID: NWC-06 Received: 15-Oct-12 SVL Sample ID: W2J0369-20 (Ground Water) Sample Report Page 1 of 1

Sampled By: VH Method Units RLDilution Batch Analyst Analyzed Notes Dissolved Anions by Ion Chromatography

0.30

0.05

W243167

AEW

10/25/12 16:36

mg/L

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

9.33

John Ken

Sulfate as SO4

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: **W2J0369**Reported: 26-Oct-12 14:43

Quality Contr	ol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anion EPA 300.0	ns by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.05	0.30	W243167	24-Oct-12	

Quality Cont	rol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	10.6	10.0	106	90 - 110	W243167	24-Oct-12	

Quality Contr	rol - DUPLICATE Da	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog	raphy							
EPA 300.0	Sulfate as SO4	mg/L	921	934	1.3	20	W243167	24-Oct-12	D2

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
issalvad Ani	one by Ion Chromatog	ranhy								
vissolved Ani	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	925	934	10.0	R > 4S	90 - 110	W243167	24-Oct-12	D2,N

Notes and Definitions

D1	Sample requir	ad dilution (due to matrix
171	Sample requir	cu ununon c	auc to mania.

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 - Bisbee

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

Work Order: **W2J0370**Reported: 26-Oct-12 14:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
NWC-02	W2J0370-01	Ground Water	10-Oct-12 10:43	VH	15-Oct-2012
ROGERS 803	W2J0370-02	Ground Water	10-Oct-12 12:38	VH	15-Oct-2012
COOPER C	W2J0370-03	Ground Water	10-Oct-12 14:17	VH	15-Oct-2012
ANDERSON 396	W2J0370-04	Ground Water	10-Oct-12 15:21	VH	15-Oct-2012
ANDERSON 458	W2J0370-05	Ground Water	10-Oct-12 18:31	VH	15-Oct-2012
FB10082012	W2J0370-06	Water	08-Oct-12 14:23	VH	15-Oct-2012
EQB10082012	W2J0370-07	Water	08-Oct-12 14:25	VH	15-Oct-2012
FB10092012	W2J0370-08	Water	09-Oct-12 12:55	VH	15-Oct-2012
EQB10092012	W2J0370-09	Water	09-Oct-12 12:56	VH	15-Oct-2012
FB10102012	W2J0370-10	Water	10-Oct-12 14:25	VH	15-Oct-2012
EQB10102012	W2J0370-11	Water	10-Oct-12 14:24	VH	15-Oct-2012
FB10112012	W2J0370-12	Water	11-Oct-12 12:57	VH	15-Oct-2012
EQB10112012	W2J0370-13	Water	11-Oct-12 13:00	VH	15-Oct-2012
PIONKE 517	W2J0370-14	Ground Water	11-Oct-12 11:49	VH	15-Oct-2012
WEISKOPF 802	W2J0370-15	Ground Water	11-Oct-12 13:16	VH	15-Oct-2012
DUP10112012	W2J0370-16	Ground Water	11-Oct-12 13:17	VH	15-Oct-2012

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

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.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C). The guidelines do not pertain to nitric-preserved metals.

	(Received Temperature	<i>'</i>			
<u>Labnumber</u>	<u>Container</u>	Client ID	Labnumber	<u>Container</u>	Client ID
W2J0370-01 A	Filtered Raw HDPE	NWC-02	W2J0370-02 A	Filtered Raw HDPE	ROGERS 803
W2J0370-03 A	Filtered Raw HDPE	COOPER C	W2J0370-04 A	Filtered Raw HDPE	ANDERSON 396
W2J0370-05 A	Filtered Raw HDPE	ANDERSON 458	W2J0370-06 B	Raw HDPE	FB10082012
W2J0370-07 B	Raw HDPE	EQB10082012	W2J0370-08 B	Raw HDPE	FB10092012
W2J0370-09 B	Raw HDPE	EQB10092012	W2J0370-10 B	Raw HDPE	FB10102012
W2J0370-11 B	Raw HDPE	EQB10102012	W2J0370-12 B	Raw HDPE	FB10112012
W2J0370-13 B	Raw HDPE	EQB10112012	W2J0370-14 A	Filtered Raw HDPE	PIONKE 517
W2J0370-15 A	Filtered Raw HDPE	WEISKOPF 802	W2J0370-16 A	Filtered Raw HDPE	DUP10112012



EPA 300.0

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

36 West Hwy 92 Work Order: W2J0370 Bisbee, AZ 85603 Reported: 26-Oct-12 14:45

Sampled: 10-Oct-12 10:43 Client Sample ID: NWC-02 Received: 15-Oct-12 SVL Sample ID: W2J0370-01 (Ground Water) Sample Report Page 1 of 1

	S + E Sumpre 1B : 1126	00:00: (O:0aiia 1:	uto.,	5	ampic report	I age I of I	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatogra	phy								

0.30

0.05

W242256

AEW

10/18/12 18:26

mg/L

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

7.46

John Ken

Sulfate as SO4

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: **W2J0370**Reported: 26-Oct-12 14:45

Client Sample ID: ROGERS 803

SVL Sample ID: W2J0370-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled By: VH

					ampie report	T mgc T OT T	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	177	mg/L	3.00	0.47	10	W243168	AEW	10/24/12 16:49	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: **W2J0370**Reported: 26-Oct-12 14:45

Client Sample ID: COOPER C

SVI, Sample ID: W2,10370-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 TE Sumple 15. 1120010-00 (Clound Water)				ampie Keport	1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	863	mg/L	15.0	2.35	50	W242256	AEW	10/18/12 18:36	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: W2J0370

Reported: 26-Oct-12 14:45

Client Sample ID: ANDERSON 396

SVI, Sample ID: W2.10370-04 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sumple 1D. 11200070-04 (Ground Water)				Sample Report Lage 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	574	mg/L	15.0	2.35	50	W242256	AEW	10/18/12 18:47	D2		

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

John Kern



EPA 300.0

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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W2J0370

Reported: 26-Oct-12 14:45

Client Sample ID: ANDERSON 458

SVL Sample ID: W2J0370-05 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

0.30

0.05

W242256

AEW

10/18/12 18:57

	*	•	,		. r . r .			Sampice	aby. VII	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	nhy								

mg/L

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

30.3

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: **W2J0370**Bisbee, AZ 85603 Reported: 26-Oct-12 14:45

Client Sample ID: **FB10082012**SVI_Sample ID: **W2.10370-06 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. 11230370-00 (Water)					1 age 1 01 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion C	Chromatography									
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 21:29	

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: **W2J0370**Reported: 26-Oct-12 14:45

Client Sample ID: **EQB10082012**SVI_Sample ID: **W2J0370-07 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sample 15. W2000 0-07 (Water)					1 age 1 01 1		Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Anions by Ion C	Chromatography										
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 21:39		

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: **W2J0370**Bisbee, AZ 85603 Reported: 26-Oct-12 14:45

Client Sample ID: **FB10092012**SVI, Sample ID: **W2,10370-08 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. 11230370-00 (Water)					1 age 1 of 1	Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion C	Chromatography									
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 21:49	

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: **W2J0370**Reported: 26-Oct-12 14:45

 Client Sample ID:
 EQB10092012
 Sample Report Page 1 of 1
 Sample described:
 09-Oct-12 12:56

 SVL Sample ID:
 W2J0370-09 (Water)
 Sample Report Page 1 of 1
 Sample Report Page 1 of 1
 Sample Report Page 1 of 1

SVE Sumple 12. W2007 CO (Water)				52	rage rorr		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	0.05		W243117	AEW	10/23/12 21:59	

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

Bisbee, AZ 85603

Work Order: W2J0370

Reported: 26-Oct-12 14:45

Client Sample ID: **FB10102012**SVI. Sample ID: **W2.10370-10 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

SVE Sample 15. W250570-10 (Water)				Sample Report 1 age 1 of 1				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	0.05		W243117	AEW	10/23/12 22:29	

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: **W2J0370**Reported: 26-Oct-12 14:45

Client Sample ID: **EQB10102012**SVI. Sample ID: **W2.10370-11 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1D. W230370-11 (Water)					ragerori		Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Anions by Ion C	Chromatography										
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 22:39		

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: W2J0370

Reported: 26-Oct-12 14:45

Client Sample ID: **FB10112012**SVI, Sample ID: **W2,10370-12 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. 11200510-12 (Water)					Sample Report Lage 1 of 1				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion C	Chromatography									
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 22:49	

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: **W2J0370**Bisbee, AZ 85603 Reported: 26-Oct-12 14:45

 Client Sample ID:
 EQB10112012
 Sample Report Page 1 of 1
 Sampled:
 11-Oct-12 13:00

 SVL Sample ID:
 W2J0370-13 (Water)
 Sample Report Page 1 of 1
 Sampled By: VH

5 v E sample 1D. vv Zooo v - v (vvater)					Sample Report 1 age 1 of 1				Sampled By: VH		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Anions by Ion C	hromatography										
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.05		W243117	AEW	10/23/12 22:59		

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

John Kern



EPA 300.0

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: W2J0370 Bisbee, AZ 85603 Reported: 26-Oct-12 14:45

Sampled: 11-Oct-12 11:49 Client Sample ID: PIONKE 517 Received: 15-Oct-12 SVL Sample ID: W2J0370-14 (Ground Water) Sample Report Page 1 of 1

	5 / 2 Sumpre 12 : 1126661	5 + 2 5 sample 12 . Tractore 11 (Stouris Tractor)					Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatography	7								

mg/L

0.30

0.05

W242256

AEW

10/18/12 19:08

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

14.9

John Ken

Sulfate as SO4

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
Bisbee, AZ 85603
Work Order: **W2J0370**Reported: 26-Oct-12 14:45

Client Sample ID: WEISKOPF 802

SVI. Sample ID: W2.I0370-15 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sumple 15. W200010-10 (Slound Water)				Sample Report Lage 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	572	mg/L	15.0	2.35	50	W242256	AEW	10/18/12 19:18	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: W2J0370

Reported: 26-Oct-12 14:45

Client Sample ID: DUP10112012 Sample ID: W2.I0370-16 (Ground Water) Sample Report Page 1 of 1

	5 v E sample 15. 11200010-10 (Olouna Water)				Sample Report Lage 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatograp	phy										
EPA 300.0	Sulfate as SO4	577	mg/L	15.0	2.35	50	W242256	AEW	10/18/12 19:29	D2		

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

John Kern



Bisbee, AZ 85603

Kellogg ID 83837-0929

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Freeport McMoRan - Bisbee

36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W2J0370

Work Order: **W2J0370**Reported: 26-Oct-12 14:45

Quality Cont	trol - BLANK Data								
Method	Analyte	Units	Result	MDL	N	ИRL	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	0.05	0	.30	W243117	23-Oct-12	
Dissolved Anio	ons by Ion Chromatogr	raphy							
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	0.05	0	.30	W242256	18-Oct-12	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.05	0	.30	W243168	24-Oct-12	
Quality Cont	trol - LABORATORY (CONTROL SA	AMPLE 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	W243117	23-Oct-12	
Dissolved Anio	ons by Ion Chromatogr	raphy							
EPA 300.0	Sulfate as SO4	mg/L	9.99	10.0	99.9	90 - 110	W242256	18-Oct-12	
	Sulfate as SO4	mg/L	9.99	10.0	99.9	90 - 110	W243168	24-Oct-12	
EPA 300.0									
EPA 300.0	trol - DUPLICATE Dat Analyte	t a Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Quality Cont	Analyte				RPD		Batch ID	Analyzed	Notes
Quality Cont Method Anions by Ion	Analyte Chromatography			Result		Limit			
Quality Cont Method Anions by Ion	Analyte				RPD		Batch ID W243117	Analyzed 23-Oct-12	Notes D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogr	Units mg/L	Result 2050	Result 2090	1.6	Limit 20	W243117	23-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0	Analyte 1 Chromatography Sulfate as SO4 1 Chromatography Sulfate as SO4	Units mg/L raphy mg/L	2050 162	2090 164	1.6	Limit 20 20	W243117 W242256	23-Oct-12 18-Oct-12	
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogr	Units mg/L	Result 2050	Result 2090	1.6	Limit 20	W243117	23-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 EPA 300.0	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogr Sulfate as SO4 Sulfate as SO4	Units mg/L raphy mg/L mg/L	2050 162	2090 164	1.6	Limit 20 20	W243117 W242256	23-Oct-12 18-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 EPA 300.0	Analyte 1 Chromatography Sulfate as SO4 1 Chromatography Sulfate as SO4	Units mg/L raphy mg/L mg/L	2050 162 4.61	2090 164 4.59	1.6 1.3 0.3	20 20 20 20	W243117 W242256	23-Oct-12 18-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 EPA 300.0	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogr Sulfate as SO4 Sulfate as SO4	Units mg/L raphy mg/L mg/L	2050 162	2090 164 4.59	1.6	Limit 20 20	W243117 W242256	23-Oct-12 18-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 EPA 300.0 Quality Cont Method	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatography Sulfate as SO4 Sulfate as SO4 Trol - MATRIX SPIKE	mg/L raphy mg/L mg/L	2050 162 4.61 Spike Sample	2090 164 4.59	1.6 1.3 0.3	20 20 20 20 Acceptance	W243117 W242256 W243168	23-Oct-12 18-Oct-12 24-Oct-12	D2
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogra Sulfate as SO4 Sulfate as SO4 Trol - MATRIX SPIKE Analyte	mg/L raphy mg/L mg/L	2050 162 4.61 Spike Sample	2090 164 4.59	1.6 1.3 0.3	20 20 20 20 Acceptance	W243117 W242256 W243168	23-Oct-12 18-Oct-12 24-Oct-12	D2 D2 Notes
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion EPA 300.0	Analyte Chromatography Sulfate as SO4 ons by Ion Chromatogr Sulfate as SO4 Sulfate as SO4 trol - MATRIX SPIKE Analyte Chromatography	mg/L raphy mg/L mg/L Units Data Units	Result 2050 162 4.61 Spike Sample Result (R)	2090 164 4.59 Spike Level (S)	1.6 1.3 0.3 % Rec.	20 20 20 20 20 Limits	W242256 W243168 Batch ID	23-Oct-12 18-Oct-12 24-Oct-12 Analyzed	D2 D2 Notes
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion EPA 300.0 EPA 300.0	Analyte Chromatography Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 trol - MATRIX SPIKE Analyte Chromatography Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 Ons by Ion Chromatograpy	mg/L mg/L mg/L Data Units mg/L mg/L mg/L	Result 2050 162 4.61 Spike Sample Result (R) 2030 2090	2090 164 4.59 Spike Level (S)	1.6 1.3 0.3 % Rec.	20 20 20 20 Acceptance Limits 90 - 110 90 - 110	W243117 W242256 W243168 Batch ID	23-Oct-12 18-Oct-12 24-Oct-12 Analyzed	D2 Notes D2,M
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion EPA 300.0 EPA 300.0 Dissolved Anio EPA 300.0 Dissolved Anio EPA 300.0 Dissolved Anio EPA 300.0	Analyte 1 Chromatography Sulfate as SO4 ons by Ion Chromatography Sulfate as SO4 trol - MATRIX SPIKE Analyte 1 Chromatography Sulfate as SO4 Sulfate as SO4	mg/L mg/L mg/L Data Units mg/L mg/L mg/L	Result 2050 162 4.61 Spike Sample Result (R) 2030 2090	Result 2090 164 4.59 Spike Level (S) 10.0 10.0	1.6 1.3 0.3 % Rec. R > 4S R > 4S R > 4S	20 20 20 20 Acceptance Limits 90 - 110 90 - 110	W243117 W242256 W243168 Batch ID	23-Oct-12 18-Oct-12 24-Oct-12 Analyzed	D2 Notes D2,M D2,M
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion EPA 300.0 EPA 300.0	Analyte Chromatography Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 trol - MATRIX SPIKE Analyte Chromatography Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 Ons by Ion Chromatograpy	mg/L mg/L mg/L Data Units mg/L mg/L mg/L mg/L mg/L	Result 2050 162 4.61	2090 164 4.59 Spike Level (S) 10.0 10.0	1.6 1.3 0.3 % Rec. R > 4S R > 4S	20 20 20 20 20 Acceptance Limits 90 - 110 90 - 110 90 - 110	W243117 W242256 W243168 Batch ID W243117 W243117	23-Oct-12 18-Oct-12 24-Oct-12 Analyzed 23-Oct-12 23-Oct-12	D2 Notes D2,M D2,M
Quality Cont Method Anions by Ion EPA 300.0 Dissolved Anio EPA 300.0 Quality Cont Method Anions by Ion EPA 300.0 EPA 300.0 Dissolved Anio EPA 300.0 Dissolved Anio EPA 300.0 Dissolved Anio EPA 300.0	Analyte Chromatography Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 Sulfate as SO4 Chromatography Sulfate as SO4	mg/L mg/L mg/L Data Units mg/L mg/L mg/L mg/L	Result 2050 162 4.61	Result 2090 164 4.59 Spike Level (S) 10.0 10.0	1.6 1.3 0.3 % Rec. R > 4S R > 4S R > 4S	20 20 20 20 Acceptance Limits 90 - 110 90 - 110	W243117 W242256 W243168 Batch ID W243117 W243117 W242256	23-Oct-12 18-Oct-12 24-Oct-12 Analyzed 23-Oct-12 23-Oct-12	D2



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

Freeport McMoRan - BisbeeProject Name: Copper Queen Branch Sulfate Mitigation Order36 West Hwy 92Work Order:W2J0370Bisbee, AZ 85603Reported:26-Oct-12 14:45

Notes and Definitions

-		111	1 1 1 1 1 1 1	
D2.	Sample required	dilution due to	high concentration of	target analyte

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



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

Project Name: Copper Queen Branch Sulfate Mitigation Order

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603 Work Order: **W2J0426**Reported: 29-Oct-12 09:06

Fax (208) 783-0891

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMD-2008-5M	W2J0426-01	Ground Water	16-Oct-12 08:25	CLS	18-Oct-2012
BMD-2008-5B	W2J0426-02	Ground Water	16-Oct-12 11:25	CLS	18-Oct-2012
BMD-2008-6M	W2J0426-03	Ground Water	16-Oct-12 13:10	CLS	18-Oct-2012
BMD-2008-6B	W2J0426-04	Ground Water	16-Oct-12 14:00	CLS	18-Oct-2012
BMD-2008-1M	W2J0426-05	Ground Water	17-Oct-12 10:50	CLS	18-Oct-2012
BMD-2008-2M	W2J0426-06	Ground Water	17-Oct-12 11:30	CLS	18-Oct-2012
HOBAN	W2J0426-07	Ground Water	17-Oct-12 12:20	CLS	18-Oct-2012

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.



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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-5M

SVL Sample ID: W2J0426-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 16-Oct-12 08:25 Received: 18-Oct-12

	5 v E bumple 1D. W200420-01 (Glound Water)				Sample Report Lage 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ıs by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	134	mg/L	3.00	0.47	10	W243168	AEW	10/24/12 18:43	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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-5B

SVI. Sample ID: W2.10426-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 16-Oct-12 11:25 Received: 18-Oct-12

Sampled By: CLS	

	SVL Sample 1D. W230426-02 (Ground Water)				Sample 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	ohy										
EPA 300.0	Sulfate as SO4	207	mg/L	7.50	1.18	25	W243168	AEW	10/24/12 18:54	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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-6M

SVL Sample ID: W2J0426-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 16-Oct-12 13:10 Received: 18-Oct-12

					Sumple Report 1 uge 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatograp	ohy										
EPA 300.0	Sulfate as SO4	207	mg/L	3.00	0.47	10	W243168	AEW	10/24/12 19:04	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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-6B

SVI. Sample ID: W2.I0426-04 (Ground Water)

Sampled: 16-Oct-12 14:00 Received: 18-Oct-12

SVL Sample ID: W2J0426-04 (Ground Water)					ample Report	Page I of I		Sample	ed By: CLS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	19.9	mg/L	1.50	0.24	5	W243168	AEW	10/24/12 19:15	D1

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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-1M

SVL Sample ID: W2J0426-05 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 10:50 Received: 18-Oct-12

5 v E Sample 15. 11250420-05 (Ground Water)					Sample Report 1 age 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Ani	ons by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	154	mg/L	3.00	0.47	10	W243168	AEW	10/24/12 19:25	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: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: BMD-2008-2M

SVL Sample ID: W2J0426-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 11:30 Received: 18-Oct-12

recourred.		-	
Sampled By:	CI	S	

Result Units RL MDL Dilution Bate	n Analyst Analyzed Notes
98 mg/L 15.0 2.35 50 W243	68 AEW 10/24/12 19:35 D2
98 mg/L 15.0 2.35 50 W243	68

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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W2J0426

Reported: 29-Oct-12 09:06

Client Sample ID: HOBAN

SVL Sample ID: W2.J0426-07 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 12:20 Received: 18-Oct-12

	SVL Sample ID. WZJU	5	ampie Kepori	Page 1 of 1		Sampl	ed By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions										
EPA 300.0	Sulfate as SO4	1040	mg/L	15.0	2.35	50	W243168	AEW	10/24/12 19:46	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
W2J0426
Reported: 29-Oct-12 09:06

Quality Control	- BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anions EPA 300.0	by Ion Chromatogr Sulfate as SO4	raphy mg/L	<0.30	0.05	0.30	W243168	24-Oct-12	

Quality Cont	rol - LABORATORY	CONTROL SAM	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogo Sulfate as SO4	raphy mg/L	9.99	10.0	99.9	90 - 110	W243168	24-Oct-12	

Quality Control - DUPLICATE Data											
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes		
Dissolved Anio	ns by Ion Chromatogi	ranhv									
EPA 300.0	Sulfate as SO4	mg/L	4.61	4.59	0.3	20	W243168	24-Oct-12			

Quality Control - MATRIX SPIKE Data											
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes	
Dissolved Ani	ons by Ion Chromatog	raphy									
EPA 300.0	Sulfate as SO4	mg/L	15.4	4.59	10.0	108	90 - 110	W243168	24-Oct-12		
EFA 300.0	Bullate as BOT	mg/L	13.4	4.37	10.0	100	70 - 110	VV 2-13 1 0 0	21 000 12		

Notes and Definitions

D1	Sample required dilution due to matrix.
171	Sample required undulon due to matrix.

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

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

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: W2J0432

Reported: 29-Oct-12 09:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
HOWARD NR	W2J0432-01	Ground Water	16-Oct-12 12:05	ML	18-Oct-2012
HOWARD 312	W2J0432-02	Ground Water	16-Oct-12 16:53	ML	18-Oct-2012
ROGERS E	W2J0432-03	Ground Water	17-Oct-12 09:27	ML	18-Oct-2012
SCHWARTZ	W2J0432-04	Ground Water	17-Oct-12 11:26	ML	18-Oct-2012
PIONKE 395	W2J0432-05	Ground Water	17-Oct-12 14:45	ML	18-Oct-2012
MARCELL NR	W2J0432-06	Ground Water	17-Oct-12 15:26	ML	18-Oct-2012
FB20121017	W2J0432-07	Ground Water	17-Oct-12 14:18	ML	18-Oct-2012
EQB20121017	W2J0432-08	Ground Water	17-Oct-12 14:23	ML	18-Oct-2012
DUP20121017	W2J0432-09	Ground Water	17-Oct-12 18:00	ML	18-Oct-2012

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 Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: HOWARD NR

SVI. Sample ID: W2.10432-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 16-Oct-12 12:05 Received: 18-Oct-12

Samp	led	$\mathbf{R}_{\mathbf{W}}$	ML.	

	SVE Sample 1D. W230432-01 (Ground Water)				Sample Report Lage 1 of 1				Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anions by Ion Chromatography												
EPA 300.0	Sulfate as SO4	576	mg/L	15.0	2.35	50	W243168	AEW	10/24/12 19:56	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: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: **HOWARD 312**

SVL Sample ID: W2J0432-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 16-Oct-12 16:53 Received: 18-Oct-12

SVL Sample ID: W2J0432-02 (Ground Water)				S	ample Report	Page 1 of 1	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

Dissolved Anions by Ion Chromatography

John Ken

EPA 300.0 Sulfate as SO4 68.1 mg/L 1.50 0.24 W243168 AEW 10/24/12 20:07

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: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: ROGERS E

SVL Sample ID: W2J0432-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 09:27 Received: 18-Oct-12

Sampled By: ML

	Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
I	Dissolved Anions	by Ion Chromatogra	nphy								

John Ken

EPA 300.0 Sulfate as SO4 mg/L 0.30 0.05 W243168 AEW 10/24/12 20:38

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: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: SCHWARTZ

SVL Sample ID: W2J0432-04 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 11:26 Received: 18-Oct-12

Received.	10-00
Commlad Dru	MI

					Sumple Report Fuge For F			Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	ns by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	121	mg/L	3.00	0.47	10	W243168	AEW	10/24/12 20:48	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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: PIONKE 395

SVL Sample ID: W2J0432-05 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 14:45 Received: 18-Oct-12

Received:	18-Oct-12
Sampled By:	MI

	3 VL Sample 1D. W230432-05 (Ground Water)				Sample Report Page 1 01 1				Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anions	s by Ion Chromatograp	ohy										
EPA 300.0	Sulfate as SO4	419	mg/L	15.0	2.35	50	W243168	AEW	10/24/12 20:59	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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: MARCELL NR

SVL Sample ID: W2J0432-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 15:26 Received: 18-Oct-12

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Samn	led I	3v·	٨	ÆΤ		

				sumple report ruge 1 of 1			Sampled By. ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	660	mg/L	15.0	2.35	50	W243168	AEW	10/24/12 21:09	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: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: FB20121017

SVL Sample ID: W2J0432-07 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 14:18 Received: 18-Oct-12

	S TE Sumple 1B: 11200	56	1 age 1 of 1	Sampled By: ML						
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	0.05		W243241	AEW	10/25/12 17:41	

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: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: EQB20121017

SVL Sample ID: W2J0432-08 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 14:23 Received: 18-Oct-12

Sampled By: ML

		-	•					Sampre	34 B j : 111E	
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	0.05		W243241	AEW	10/25/12 17:51	

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: W/210422

Work Order: W2J0432

Reported: 29-Oct-12 09:08

Client Sample ID: DUP20121017

SVI. Sample ID: W2.10432-09 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Oct-12 18:00 Received: 18-Oct-12

Compled Dry MI

	5 v L Sample 1D. vv230432-03 (Ground vvater)					ragerori	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	657	mg/L	15.0	2.35	50	W243168	AEW	10/24/12 21:20	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 Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92

Work Order: W2J0432

Bisbee, AZ 85603 Reported: 29-Oct-12 09:08

Quality Cont	trol - BLANK Data									
Method	Analyte	Units	Result		MDL	N	MRL		Analyzed	Notes
Anions by Ion	Chromatography									
EPA 300.0	Sulfate as SO4	mg/L	< 0.30		0.05	0	.30	W243241	25-Oct-12	
Dissolved Anie EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	<0.30		0.05	0	.30	W243168	24-Oct-12	
Quality Cont	trol - LABORATORY (CONTROL SA								
Method	Analyte	Units	LCS Result		LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	9.34		10.0	93.4	90 - 110	W243241	25-Oct-12	
Dissolved Anie EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	9.99		10.0	99.9	90 - 110	W243168	24-Oct-12	
Quality Cont	trol - DUPLICATE Data	a Units	Duplicate		Sample	RPD	RPD	Batch ID	Analogad	Notes
Method	Analyte	Units	Result		Result	KrD	Limit	Batch ID	Analyzed	Notes
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	15.0		14.9	0.6	20	W243241	25-Oct-12	
Dissolved Anie EPA 300.0	ons by Ion Chromatogra Sulfate as SO4	aphy mg/L	4.61		4.59	0.3	20	W243168	24-Oct-12	
Quality Cont	trol - MATRIX SPIKE	Data								
Method	Analyte	Units		Sample Result (R)	Spike Level (S)	% 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		14.9 52.7	10.0 10.0	108 91.2	90 - 110 90 - 110	W243241 W243241	25-Oct-12 26-Oct-12	D2,M3
	ons by Ion Chromatogra	• •								
EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	mg/L mg/L		4.59 62.7	10.0 10.0	108 R > 4S	90 - 110 90 - 110	W243168 W243168	24-Oct-12 25-Oct-12	D2,M3



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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: **W2J0432**Reported: 29-Oct-12 09:08

Notes and Definitions

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

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 / 055038

Work Order: **W2J0528**Reported: 29-Oct-12 09:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2010-3B	W2J0528-01	Ground Water	18-Oct-12 10:07	ML	23-Oct-2012
BMO-2010-3M	W2J0528-02	Ground Water	18-Oct-12 13:00	ML	23-Oct-2012
AWC-05	W2J0528-03	Ground Water	18-Oct-12 13:32	ML	23-Oct-2012
AWC-03	W2J0528-04	Ground Water	18-Oct-12 13:46	ML	23-Oct-2012
AWC-02	W2J0528-05	Ground Water	18-Oct-12 14:05	ML	23-Oct-2012
AWC-04	W2J0528-06	Ground Water	18-Oct-12 14:26	ML	23-Oct-2012
TM-10 USBP	W2J0528-07	Ground Water	19-Oct-12 09:46	ML	23-Oct-2012
DODSON	W2J0528-08	Ground Water	04-Oct-12 13:28	ML	23-Oct-2012

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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order / 055038

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Client Sample ID: BMO-2010-3B

SVL Sample ID: W2J0528-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Oct-12 10:07 Received: 23-Oct-12

	SVL Sample 1D. w230528-01 (Ground water)					Page I of I	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	17.0	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 18:16	D1

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

John Ken

 $Project\ Name:\ Copper\ Queen\ Branch\ Sulfate\ Mitigation\ Order\ /\ 055038$

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Client Sample ID: BMO-2010-3M

SVL Sample ID: W2J0528-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Oct-12 13:00 Received: 23-Oct-12

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Sa	mnle	d	R_{V}	MI		

	2 · - 2 · · · · · · · · · · · · · · · ·					i uge i oi i	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	10.4	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 18:26	D1

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 Sulfate Mitigation Order / 055038

36 West Highway 92
Bisbee, AZ 85603
Work Order: **W2J0528**Reported: 29-Oct-12 09:21

Client Sample ID: AWC-05

SVI_Sample ID: W2.10528-03 (Ground Water)

Sample Report Page 1 of 1

Sample ID: W2.10528-03 (Ground Water)

Sample Report Page 1 of 1

	SVE Sample ID. WZ30	valei)	3	ашріе керогі	rage 1 of 1	Sampled By: ML				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	20.1	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 18:35	D1

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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order / 055038

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Fax (208) 783-0891

Client Sample ID: AWC-03

SVL Sample ID: W2.10528-04 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Oct-12 13:46 Received: 23-Oct-12

Samn	led By	MI.

	5 v E Sample 1D. vv250520-04 (Ground vvater)					rage 1 01 1	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	51.3	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 19:05	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

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order / 055038 Work Order: W2J0528

Reported: 29-Oct-12 09:21

Fax (208) 783-0891

Client Sample ID: AWC-02

SVL Sample ID: W2J0528-05 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Oct-12 14:05 Received: 23-Oct-12

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	5 VL Sample 1D. W230320-03 (Ground Water)					ragerori	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	13.0	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 19:15	D1

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 Project Name: Copper Queen Branch Sulfate Mitigation Order / 055038

36 West Highway 92

Bisbee, AZ 85603

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Client Sample ID: AWC-04

SVI_Sample ID: W2.10528-06 (Ground Water)

Svi_Sample Report Page 1 of 1

Sample ID: W2.10528-06 (Ground Water)

Sample Report Page 1 of 1

SVL Sample 1D. W230326-06 (Ground Water)					Sample Report Page 1 of 1				Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ons by Ion Chromatograp	phy										
EPA 300.0	Sulfate as SO4	26.6	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 19:25	D1		

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 Sulfate Mitigation Order / 055038

36 West Highway 92

Bisbee, AZ 85603

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Client Sample ID: TM-10 USBP

SVL Sample ID: W2J0528-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1D. W230320-07 (Ground Water)					1 age 1 of 1	Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	12.8	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 19:35	D1

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 - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

John Ken

 $Project\ Name:\ Copper\ Queen\ Branch\ Sulfate\ Mitigation\ Order\ /\ 055038$

Work Order: W2J0528

Reported: 29-Oct-12 09:21

Client Sample ID: **DODSON**

SVL Sample ID: W2J0528-08 (Ground Water)

Sample Report Page 1 of 1

Sampled: 04-Oct-12 13:28 Received: 23-Oct-12

Received.	23-00
Commled Dry	MI

	5 v E sample 15. vv 200020-00 (Ground vvator)					Sample Report Lage 1 of 1				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	48.7	mg/L	1.50	0.24	5	W243202	AEW	10/25/12 19:45	D1

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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Kellogg ID 83837-0929

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Freeport McMoRan - Copper Queen Branch Project Name: Copper Queen Branch Sulfate Mitigation Order / 055038 36 West Highway 92 Work Order: W2J0528 Bisbee, AZ 85603 Reported: 29-Oct-12 09:21 Quality Control - BLANK Data MDL MRL Method Analyte Units Result Batch ID Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 mg/L< 0.30 0.05 0.30 W243202 25-Oct-12 Quality Control - LABORATORY CONTROL SAMPLE Data LCS LCS % Acceptance Limits Method Analyte Units Batch ID Analyzed Notes True Rec. Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 10.4 10.0 104 90 - 110 W243202 25-Oct-12 Quality Control - DUPLICATE Data Duplicate Sample RPD RPD Method Units Batch ID Analyzed Notes Analyte Result Result Limit Dissolved Anions by Ion Chromatography EPA 300.0 26.3 26.2 Sulfate as SO4 0.2 20 W243202 25-Oct-12 Quality Control - MATRIX SPIKE Data Spike Sample Spike Acceptance Method Analyte Units Batch ID Analyzed Notes Result Result (R) Level (S) Rec. Limits Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 37.8 26.2 10.0 116 90 - 110 W243202 25-Oct-12 M1 **Notes and Definitions** D1 Sample required dilution due to matrix. Sample required dilution due to high concentration of target analyte. D2Matrix spike recovery was high, but the LCS recovery was acceptable. M1 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

Method Detection Limit

Not Applicable

MDL

N/A



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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: **W2K0329**Reported: 21-Nov-12 10:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO 2012 1M	W2K0329-01	Ground Water	13-Nov-12 14:08	VH	15-Nov-2012

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.



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: **W2K0329**Reported: 21-Nov-12 10:27

Client Sample ID: BMO 2012 1M

SVI. Sample ID: W2K0329-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

5 vi sample ib. Wiltons-01 (Stoulia Water)					Sample Report 1 age 1 of 1				Sampled By: VH			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	s by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	231	mg/L	7.50	1.75	25	W246294	AEW	11/16/12 15:17	D2		

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

John Kern

Laboratory Director



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

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W2K0329**Reported: 21-Nov-12 10:27

Quality Contro	l - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anions EPA 300.0	s by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W246294	16-Nov-12	

Quality Cont	rol - LABORATORY	CONTROL SA	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog	raphy							
EPA 300.0	Sulfate as SO4	mg/L	10.4	10.0	104	90 - 110	W246294	16-Nov-12	

Quality Cont	rol - DUPLICATE Dat	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogi	raphy							
EPA 300.0	Sulfate as SO4	mg/L	0.95	0.96	1.4	20	W246294	16-Nov-12	

Quality Contr	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	ns by Ion Chromatog	ranhv										
EPA 300.0	Sulfate as SO4	up- -3	12.2	0.96	10.0	113		W246294	16-Nov-12	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< 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 36 West Hwy 92

Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W2K0330**Reported: 27-Nov-12 15:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
NWC-04	W2K0330-01	Ground Water	13-Nov-12 08:36	VH	15-Nov-2012
FRANCO 383	W2K0330-02	Ground Water	13-Nov-12 16:02	VH	15-Nov-2012

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.



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: W2K0330

Reported: 27-Nov-12 15:11

Client Sample ID: NWC-04

SVI, Sample ID: W2K0330-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

5 v E sample 15. vv El tooo - o i (Ci o a ila vvate)					ampie Keport	Tage I of I				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	211	mg/L	3.00	0.70	10	W247181	AEW	11/21/12 12:32	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: W2K0330

Reported: 27-Nov-12 15:11

Client Sample ID: FRANCO 383

SVL Sample ID: W2K0330-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled By: VH

	S VE Sumple 12: VIZIV	occo oz (Greana	···ator,	54	ampic report	1 age 1 of 1		Sampl	ed 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	349	mg/L	3.00	0.70	10	W247181	AEW	11/21/12 12:41	D2

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

John Kern

Laboratory Director



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

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W2K0330**Reported: 27-Nov-12 15:11

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	raphy mg/L	<0.30	0.07	0.30	W247181	21-Nov-12	

Quality Cont	rol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	10.7	10.0	107	90 - 110	W247181	21-Nov-12	

Quality Cont	rol - DUPLICATE Dat	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogi	raphy							
EPA 300.0	Sulfate as SO4	mg/L	2.65	2.69	1.6	20	W247181	21-Nov-12	

Quality Con	trol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatog	raphy								
Dissolved Ani EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	14.5	2.69	10.0	118	90 - 110	W247181	21-Nov-12	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< 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 Work Order: **W2K0556**Bisbee, AZ 85603 Reported: 11-Dec-12 10:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
PANAGAKOS	W2K0556-01	Ground Water	27-Nov-12 16:34	VH	29-Nov-2012

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.



Birby Gray

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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W2K0556

Reported: 11-Dec-12 10:04

Client Sample ID: PANAGAKOS
SVL Sample ID: W2K0556-01 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: VH

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Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	274	mg/L	7.50	1.75	25	W249101	AEW	12/04/12 20:35	D2

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

Kirby Gray

Technical Director



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

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W2K0556**Reported: 11-Dec-12 10:04

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W249101	04-Dec-12	

Quality Cont	rol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	10.3	10.0	103	90 - 110	W249101	04-Dec-12	

Quality Contro	ol - DUPLICATE Da	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
	ns by Ion Chromatog								
EPA 300.0	Sulfate as SO4	mg/L	9.39	9.38	0.0	20	W249101	04-Dec-12	

Quality Con	trol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatog	raphy								
ED . 2000	S-16-4 SO4	/T	20.6	9.38	10.0	112	90 - 110	W249101	04-Dec-12	
EPA 300.0	Sulfate as SO4	mg/L	20.6	9.38	10.0	112	90 - 110	W 249101	04-Dec-12	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< 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: **W2L0026**Bisbee, AZ 85603 Reported: 10-Dec-12 12:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID		Date Sampled	Sampled By	Date Received
BIMA	W2L0026-01	Ground Water	29-Nov-12 16:30	VH	04-Dec-2012

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.

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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W2L0026

Reported: 10-Dec-12 12:50

Client Sample ID: BIMA

SVL Sample ID: W2L0026-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

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Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	310	mg/L	3.00	0.70	10	W249166	AEW	12/06/12 20:48	D2

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

Kirby Gray

Technical Director



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

36 West Hwy 92 Bisbee, AZ 85603 Work Order: **W2L0026**Reported: 10-Dec-12 12:50

Quality Contr	ol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anion EPA 300.0	ns by Ion Chromatogo Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W249166	06-Dec-12	

Quality Cont	rol - LABORATORY	CONTROL SAM	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	10.1	10.0	101	90 - 110	W249166	06-Dec-12	

Quality Contr	rol - DUPLICATE Dat	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatogi	ranhv							
EPA 300.0	Sulfate as SO4	mg/L	0.51	0.49	5.4	20	W249166	06-Dec-12	

Quality Control	- MATRIX SPIKE D	ata								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anions	by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	mg/L	11.1	0.49	10.0	106	90 - 110	W249166	06-Dec-12	

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
T CC	T. 1

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

 $R > 4S \hspace{1cm} \% \ recovery \ not \ applicable, \ sample \ concentration \ more \ than \ four \ times \ greater \ than \ spike \ level$

<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: W2L0027

Bisbee, AZ 85603 Reported: 10-Dec-12 12:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
FRANCO-383	W2L0027-01	Ground Water	03-Dec-12 09:25	ML	04-Dec-2012
NWC-04	W2L0027-02	Ground Water	03-Dec-12 08:43	ML	04-Dec-2012

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.

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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: **W2L0027**Reported: 10-Dec-12 12:51

Client Sample ID: FRANCO-383

SVL Sample ID: W2L0027-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled By: MI

	2 · - 2 · · · · · · · · · · · · · · · ·				Sample Report Luge 1 of 1			Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	ons by Ion Chromatograp	phy									
EPA 300.0	Sulfate as SO4	332	mg/L	3.00	0.70	10	W249166	AEW	12/06/12 20:57	D2	

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

Kirby Gray

Technical 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: W2L0027
Reported: 10-Dec-12 12:51

Client Sample ID: NWC-04

SVL Sample ID: W2L0027-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled By: MI

	STE Sample 13. WELOUP OF (Stoulia Water)				Sample Report 1 age 1 of 1				Sampled By: ML			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	208	mg/L	3.00	0.70	10	W249166	AEW	12/06/12 21:25	D2		

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

Kirby Gray

Technical Director



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

36 West Hwy 92 Bisbee, AZ 85603 Work Order: W2L0027 Reported: 10-Dec-12 12:51

Quality Control	l - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anions EPA 300.0	s by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W249166	06-Dec-12	

Quality Conti	rol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	10.1	10.0	101	90 - 110	W249166	06-Dec-12	

Quality Contr	rol - DUPLICATE Dat	ta							
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatogi	ranhv							
EPA 300.0	Sulfate as SO4	mg/L	0.51	0.49	5.4	20	W249166	06-Dec-12	

Quality Control	- MATRIX SPIKE D	ata								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anions	by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	mg/L	11.1	0.49	10.0	106	90 - 110	W249166	06-Dec-12	

Notes and Definitions

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

RPD 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: **W2L0122**Reported: 11-Dec-12 09:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
WEISKOPF 897	W2L0122-01	Ground Water	06-Dec-12 13:35	ML/BD	07-Dec-2012

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.

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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

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W2L0122

Reported: 11-Dec-12 09:16

Client Sample ID: WEISKOPF 897

Sampled: 06-Dec-12 13:35 Received: 07-Dec-12

	SVL Sample ID: W2L (0122-01 (Ground	Water)	Sa	ample Report	t Page 1 of 1		Sample	ed By: ML/BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	18.5	mg/L	0.30	0.07		W249277	AEW	12/10/12 12:05	

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

Kirby Gray

Technical Director



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Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order 36 West Highway 92 Project Name: Copper Queen Branch Sulfate Mitigation Order Work Order: W2L0122

Reported: 11-Dec-12 09:16

Quality Cont	trol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W249277	07-Dec-12	

Quality Cont	rol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogo Sulfate as SO4	raphy mg/L	9.98	10.0	99.8	90 - 110	W249277	07-Dec-12	

Quality Contr	ol - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
	ns by Ion Chromatogra	aphy								
EPA 300.0	Sulfate as SO4	mg/L	19.9	8.76	10.0	111	90 - 110	W249277	07-Dec-12	M1

II .									
Method Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anions by Ion C	0 1 0	20.0	19.9	10.0	0.9	20	W249277	07-Dec-12	M1

Notes and Definitions

M	1	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

 $R \! > \! 4S \hspace{1cm} \% \ recovery \ not \ applicable, \ sample \ concentration \ more \ than \ four \ times \ greater \ than \ spike \ level$

< RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable

APPENDIX D GROUNDWATER SAMPLING FORMS

55038 1,0 Andw 50,	n 39	6 (01	-				
<u>Andw50.</u>	n 39	6 (01	L	oate:	10/10/12		
			(a) V	Veather:	Sunny, 7	O's	
n (ft bis):					WH + 3		
n (ft bls):			WELL DATA				
ı (ft bls):	つく	ノ		Nominal S	Casing Ca	Capacity Gallons per Line	ear Foot
, 		85'		NOTIBIEL	2	0.16 0.65	
neter (in):	(%			5	1.02	
evel (ft bmp):	151	.50'		•	6	1,47 2,61	
		x3 =			10	4.08	
-		N-4		Casing	Volume = gallons	/foot * water column	(feet)
Purged (gal):		EJEL	D SAMPLIN	G DATA			
Elapsed Time (min)	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commer	nts
	(gpm)						
ables mest in mest material and			7.40	24,0	1414	TOS=1001p	<u>pm</u>
			,				
ELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	adings within C).3 su pH, 2 degree	es C, and 100 μS/cr	n) watawa ka
		SAI	VIPLE INFOF	RMATION			
pple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	,	Filtered (y/n)
29/0	1521	Palv	250m L)	300.0	NA	
<u> </u>	7 2 -	1 7					
			MEVENDE	MENT COLL	ECTION		
		VAJEK LEVE					
	el measuremer	Purged (gal): Purged (gal): Elapsed Time (min) Pump On 3 ELD PARAMETER STABILIZ Iple ID Time 394 // /521	Purged (gal): FIEL FIEL Flapsed Time (gpm) Flate (gpm) Pump On Pump On Time Container Type 394 /521 Poly WATER LEVE	Purged (gal): Elapsed Time (gpm) Discharge Rate (gpm) (gallons) Pump On 3 7,40 ELD PARAMETER STABILIZATION: Three consecutive reasonable in the policy of the policy o	Casing Purged (gal): Purged (gal): FIELD SAMPLING DATA Flapsed Time (min) Casing pH (SU) Cycl (gallons) Flex D SAMPLING DATA Temp (°C) Flex D SAMPLING DATA Temp (°C) Flex D SAMPLE INFORMATION SAMPLE INFORMATION Time Container Type Volume No. of Containers SAMPLE INFORMATION WATER LEVEL MEASUREMENT COLUME (Market Measurement collected).	The gal): X3 = 10 Casing Volume = gallons	Tell Discharge (gall): FIELD SAMPLING DATA FIELD SAMPLING DATA Field Discharge (gallons) Field Dis

roject No:	055038				Client: F	reeport Copper	Queen Branch	1
ask No:	0,				Date:	10/10/12		
ell ID:	Anders	on 4.	58 (N	-ew)	Weather:	SUNNY,	70's	
					Sampler:		「です	
DWR No:				WELL DAT				
	tt. (Q.L.L.)	73	4		Nominal	Casing (Size (inches)	Capacity Gallons per Lir	ear Foot
Well D	epth (ft bls):		<u>.</u> 5"		, ,	2	0.16 0.65	
Casing I	Diameter (in):					5	1.02	
Static Water	er Level (ft bmp):	151.	82			6 8	1.47 2.61	
Casing '	Volume (gal):	594	x3 =	782		10	4.08	
_	•	11	<u>ه</u> ک		Casing	g Volume = gallons	/foot * water colum	n (feet)
Total Volum	me 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
1529	Pump On							
1559	30	9	270	8.18	24,0	430.2		
1629	60	9	540	8.14	24.3	418,9		
1659	90	9	810	8.19	23,9	414.0		
1729		9	1080	8.14	23,8	410,9		
1759		9	1350	8.20	23,7	409,0		
1829	180	9	1620	8,13	23.8	412.3		
10-1							22.0	
							Pump Off	>
	FIELD PARAMET	ER STABILIZ).3 su pH, 2 degree	es C, and 100 μ5/C	
			SAI	MPLE INFO	RMATION			
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Ander	50n 458	1831	Poly	250mL	1	300.0	NA	- 1
7 \7 00 0			(
			VATER LEVE	MEASURE	MENT COL	LECTION		
	level measuremer							
	iter level measuren				ort in Weilnead			•
	iter level measuren iter level measuren							
☐ Other								
			WELL	PURGING IN	IFORMATION			
Purge	ed 3 well volumes a	nd field param	eters stabilized	, ,		·nd		
	ed 3 well volumes b			and tield parei	meters stabiliz	eu.		,
☐ Purge ☐ Other	ed well until field pa 	rameters stab	mecu.					<u> </u>
	al Comments:							
AGUISION	., <i>Common.</i>							

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	<u>h</u>
Task No:					Date:	10/18/12		
Well ID:	AWC-)2_			Weather:	Sunny 8	<u> </u>	
ADWR No:					Sampler:	MML		
				WELL DAT				
Wall D	epth (ft bls):				Nominal	Casing Size (inches)	Capacity Gallons per Li	near Foot
						2	0.16	
Casing I	Diameter (in):					5	0.65 1.02	1
Static Wate	er Level (ft bmp):	414				6 8	1.47 2.61	i i
Casing '	Volume (gal):		x3 =			10	4.08	
	,				Casin	g Volume = gallons	/foot * water colun	nn (feet)
l otal Volum	ne Purged (gal):		and a second	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commo	∍nts
	Pump On							
1402		3 () () () () () () () () () (7.48	21.6	448.9		
7-10-05								
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three o	onsecutive rea	idings within (0.3 su pH, 2 degree	s C, and 100 μS/c	m) 30008080808080808080808
			SAN	IPLE INFOR	MATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Aug	-00	1405	Poly	250	1	300.0	N	\forall
1 11 100		<u> </u>	7					7
			ATER LEVEL	MEASURE	MENT COLL	ECTION		
	level measuremen							
1	er level measurem				rt in wellhead			
	er level measurem er level measurem							
☐ Other:	er iever meadaren	ioni donodiou.	***************************************					
			WELL	PURGING IN	FORMATION			
□ Purgeo	l 3 well volumes a	nd field parame	ters stabilized.	open Ingar Lec'ri				
☐ Purgeo	i 3 well volumes ba	ased on previou	us water level a	nd field parem	eters stabilize	ed.		
1	l well until field par	ameters stabili	zed.					
Other:							·	
Additiona	Comments:				····			

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	:h	
Task No:					Date:	10/18/1	2		
Well ID:	AWC-	-03			Weather:	sunny	80		
ADWR No:					Sampler:	MML			
				WELL DAT	A				
Well D	epth (ft bls):				Nominal	Size (inches)	Capacity Gallons per L	inear Foot	
						2 4	0.16 0.65	Į.	
_	Diameter (in):	1,		···		5	1.02	2	
Static Wate	er Level (ft bmp):	NA				6 8	1.47 2.61		
Casing	Volume (gal):		x3 =			10	4.08		
Total Volu	me Purged (gal):				Casin	g Volume = gallons	/foot * water colun	nn (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	
	Pump On								
1344				7.44	21.3	477.4			
							Pump Off		
	FIELD PARAMET	ER STABILIZA		reston testat Amalonge a tiertanske	okana and daga bayan ya sa	0.3 su pH, 2 degree	s C, and 100 μS/c	m) meneral and plant	
		indi singanda Busan singan	SAN	IPLE INFOR	MATION				
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
AW	2-03	1346	Poly	250	1	300.0	N	<u> </u>	
								,	
			ATER LEVEL	MEASURE	MENT COLL	ECTION			
□ Water	level measuremen								
	ter level measurem		No access to we	ellhead/No por	rt in wellhead				
☐ No wat	ter level measuren	nent collected.	Obstruction in w	vell.					
4	ter level measurem	nent collected. \	Well is pumping) .					
□ Other:			Wen	PURGING IN	FORMATION				
		ed fold parame							
1	d 3 well volumes at d 3 well volumes ba			nd field parem	eters stabilize	ed.			
1 -	d well until field par			•					
□ Other:									
Additiona	l Comments:								
		<u></u>							
wa									

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:					Date:	10/18/12		
Well ID:	AUIC-	04			Weather:	sunny	<u>08</u>	
ADWR No:					Sampler:	MML		
				WELL DA				
Mail Da	meh /# hin):				Nominal	Casing Size (inches)	Capacity Gallons per Li	near Foot
vven De	epth (ft bls):				Homma	2	0.16	
Casing D	liameter (in):					4 5	0.65 1.02	1
Static Wate	r Level (ft bmp):	NA				6	1.47	i i
Casino \	/olume (gal):	,	x3 =			8	2.61 4. 0 8	i i
					Casin	g Volume = gallons	/foot * water colum	ın (feet)
Total Volum	ne Purged (gal):			D SAMPLIN	IG DATA			
	ALL PROTEINS CHI AND REAL ESTANCER HIS	Discharge	Total	pН	Temp	Specific		
Time	Elapsed Time (min)	Rate	Discharge (gallons)	(SU)	(°C)	Conductance (µS/cm)	Commo	ents
	Pump On	(gpm)	(gallons)					
313013				7.20	20.8	606.7	alata ing amarahada kan akan asar	
1424				1.40	×0.0	<u> </u>		
							Pump Off	
	FIELD PARAMET	<u> </u> ER STABILIZ/	ATION: Three c	I onsecutive rea	dings within	L 0.3 su pH, 2 degree		m)
			in an income and a factor appropriate and income with	APLE INFOR	STRUCKTERSON GENERAL BETREEN B			
			Container		No. of			Filtered
Sa	mple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)
ALLIC	-04	1420	Pales	250	1	300.0	N	\forall
		<u> </u>	1 0					,
			L /ATER LEVEL	MEASURE	MENTICOLI	L EGIION		
1	evel measuremen er level measuren		No access to w	elihead/No po	rt in wellhead			•
1	er level measuren							
No water	er level measuren	nent collected.	Well is pumping	3.				
☐ Other:	er andere er en deur Albert Statis	Hallense voelleskoadki isall	dagarlaga (SAgurla verseberbin)	16. sta 11882 Nejsiar agasai	sandaren heriorakoan etak			
				PURGING IN	FORMATION			
	3 well volumes a			ad finld accoun	sakare ptabilis	ari		
	3 well volumes b well until field par			no nelo paren	lefeta aranımı	eu.		
Other:	TOR MINI HOSE PAR							
L,	Comments:							
							3	
						<u> </u>		

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h
Task No:	AWC-	Ø5			Date:	10/18/12		
Well ID:	\bigcirc	/			Weather:	Slinny 8	Ø	
ADWR No:					Sampler:	MML		
				WELL DA	A			
Well De	epth (ft bis):				Nominal	Size (inches)	Capacity Gallons per Li	
	•					2	0.16 0.65	1
1	Sk No: AUC-Ø5 Ill ID: WR No: Well Depth (ft bls): Casing Diameter (in): tatic Water Level (ft bmp): Casing Volume (gal): Time Elapsed Time (min) Discharge (gpr Pump On 329 FIELD PARAMETER STA					5	1.02	
Static Wate	Well Depth (ft bis): Casing Diameter (in): atic Water Level (ft bmp): Casing Volume (gal): atial Volume Purged (gal): Pump On Pump On Sample ID Water level measureme No water level measureme No water level measure	NA				6 8	1.47 2.61	
Casing \	Volume (gal):		x3 =			10	4.08	
Total Volum	ne Purged (gal):				Casin	g Volume = gallons	/foot * water colum	ın (feet)
			FIEL	D SAMPLIN	G DATA			
Time	1	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pump On #							
1329				7.66	27.6	436.		
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three co	Ionsecutive rea	dings within (u 0.3 su pH, 2 degree	s C, and 100 μS/c	m)
			SAN	IPLE INFOR	MATION			
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
AWO	C-Ø5	1332	Poly	250	l	300,0	N	<u> </u>
			j					ŕ
		, i i i i i	ATER LEVEL	MEASURE	MENT COLL	ECTION		
1								
i i					rt in wellhead			İ
No wat	er level frieasuren	ieni conecteu.	AACH IS barribing	, .				
Elvor (15) 40 4 1550 Elvor (15) 40 4 1550			WELL	PURGING IN	FORMATION			45: 45: 65: 94:86: 13: 51: 52: 51: 52: 53: 61:
□ Purged	3 well volumes a	nd field parame	eters stabilized.	Principle in the party of the strate	(1-1) 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			
☐ Purged	3 well volumes b	ased on previou	us water level a	nd field parem	neters stabiliz	ed.		
	well until field par			0.01	ر د دم _ا	10		
	Collect Para	moter	readings	ava	Sump	<u> </u>		
Additiona	Comments:							

Project No:	055038				Client:	Freeport Coppe	r Queen Branc		
Task No:	ŀΟ				Date:	10 (4/13	2		
Well ID:	Banks	986			Weather:	SUNNYI	80 s		
ADWR No:	1/00.11				Sampler:	VNH			
	Panjalana da karisa kalenda			WELL DAT				on heimige estreach Agairtí geolgaíosaga	
THE THE STREET STREET		435	· (Morning	Casing Size (inches)	Capacity Gallons per Li	near Foot	
Well De	epth (ff bis):				2 0.16				
Casing D	Diameter (in):	6				5	0.65 1.02		
Static Wate	r Level (fl bmp):					6	1,47	li i	
Casing \	Volume (gal):	291	x3 = \gamma	73		8 10	2.61 4.08		
_	ne Purged (gal):				Casin	g Volume = gallons	s/foot * water colum	in (feet)	
			FEI	D SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents `	
0951	Pump On								
1001	10	8	90	7.08	22.0	876.4			
1011	20	8	160	7,71	2(,8	864.6			
1031	40	7.5	310	7.71	21,9	857.6			
1051	60	7,5	460	7,74	22.0	459.3	Water is clou	dy brown	
1111	80	7,5	610	7.73	21,8	852,9	water is cloudy	brown.	
1131	100	7.5	760	7.74	22.0	846,7	Water is clea	rer, but not cle	
114 Ce	115	7.5	472.5	7.73	22,0	845.4	Water is clo	dy brown	
	723								
							Pump Off		
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive re	adings within	0.3 su pH, 2 degree	es C, and 100 μS/c	m) roman dues diales diales diales de 2001	
			SAN	IPLE INFOR	RMATION				
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Bank	25 986	1152	Poly	25UML	1	300.0	NA	Y	
		1//							
			I VATER LEVEL	MEASURE	MENT COL	LECTION			
			rendilsask där destabli	gjestejnakshakildes de					
	level measuremer ter level measuren		No access to w	ellhead/No po	ort in wellhead	 		-	
	ter level measuren								
1	ter level measuren								
☐ Other:		sadrinan ili milli Perfect (1919 and)	onio (latina con che la consintiaza lei	og falgette (resus optike	a kompransent en 1885 timp.				
			GO GODUSELIONATURADEN	PURCING IN	IFORMATION				
	d 3 well volumes a				undara atahilin	rod			
	i 3 well volumes b						·		
	d well until field pa Puraed	samelers stadi	uzeu. Volumes.	wased	on s	WL@ B	anks 987		
Ludanin	l Comments:	SWL @	Banks	. 987	= 237	WL@ B.			

Project No:	055038				Client:			Π	
Task No:	1.0				Date: _	10/4/12			
Well ID:	Banks	987			Weather.	Sunny	GO'5		
ADWR No:					Sampler:	VNH			
		<u>liijä</u>		WELLDAY	A				
Task No: 1.0 Well ID: Banks 987 Weather: Sunny 80's ADWR No: Sampler: VNU		near Foot							
	•		·			2	0.16		
Casing 1	Diameter (in):								
Static Water	er Level (ft bmp):	43	7.16			i i		i	
Casing	Volume (gal):		x3 =		· · · · · · · · · · · · · · · · · · ·				
	•			-	Casin	g Volume = gallons	/foot * water colum	nn (feet)	
lotal Volu	me Purgeo (gai):	tri i i i i i	elel	D SAMPLIN	G DATA				
Time		Rate	Discharge			Conductance (µS/cm)	-		
	Pump On		文 書音唱音制	iuri Gerliji, kişli cekulor Lapadi, kaşlı kişli dönliği					
			aceann-eografia						
	+								
	+/	<u> </u>							
	/								
				<u> </u>					
/							Pump Off		
	FIELD PARAMET	<u>I</u> ER STABILIZ	ATION: Three c	I onsecutive rea	dings within	I 0.3 su pH, 2 degree	s C, and 100 μS/c	m)	
			to the second of the beautiful to the second	the attempts of the participation of the participat	Part totales. Marchetter of the 60				
					T			Filtered	
s	ample ID	Time	1	Volume	1	Analysis Method	Preservative	(y/n)	

•									
				HMEACHDE	MENT COL	ECTION			
			Caula de la calcalo.	ada sa Augusta da					
			No access to w	ellhead/No po	rt in wellhead			-	
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
1									
□ Other:					nossovjeski kara - visali	rascangles trivialis Territoria i restilitoria i Pe	s (is manus espesal se il Nasa (se		
			WEÜL	PURGING IN	FORMATION				
				and field paren	neters stabiliz	ed.			
, -		rameters stabi	lized.						
L		4 . 1	1 , i .	-1 0	1. /				
Additiona	al Comments:	Wa	ter Lov	el On	· Y				

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1,0				Date:	1/29/12		
Well ID:	Bina				Weather:	Sunny,	170's	
ADWR No:					Sampler:	UNH		
				WELL DAT	A			
Well D	epth (ft bis):	462	<u> </u>		Nominal	Size (inches)	Capacity Gallons per Li	
	•	4"				2 4	0.16 0.65	1
	Diameter (in):					5	1.02 1.47	
Static Water	r Level (ft bmp):					6 8	2.61	1
Casing \	Volume (gal):		x3 =			10	4.08	
Total Volur	ne Purged (gal):				Casin	g Volume = gallons	s/foot * water colum	in (feet)
				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pump On							
1627	Protection 1886/218 46/2004/2008/2008			6.51	20,6	1664	TDS= 1200	
							£	
							Pump Off	
	I FIELD PARAMET	ER STABILIZ/	ATION: Three c	nsecutive rea	adings within (0.2 su pH, 2 degree	es C, and 200 μS/c	m)
			SAN	IPLE INFOR	MATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Bina		1630	Poly	250mL	and the state of t	300.0	AN	У
			 /ATER!LEVEL	MEASURE	MENT COLL	ECTION		
	level measuremen er level measuren		No access to w	ellhead/No po	rt in wellhead			
1	er level measuren							
1	er level measuren	nent collected.	Well is pumping] .				
☐ Other:	esions de la company			PURGING IN	CODMATION			
	i 3 well volumes a i 3 well volumes b			nd field paren	neters stabiliz	ed.		
	i well until field par				*			, *
	One Field	! paramet		sample	<u> 2. "Νο</u>	purage per	owner se	guest"
Additiona	l Comments: \	^	able to	get s	nunder	+0 400f4	bis, the	ore
was vi	o water	from Q	3-400i	<u> </u>				

	Proundwa	ter Samp	ling Form	•							
roject No:					Glient _	Freeport Coppe	er Queen Bran	ch			
_			,		Date: _	10-16-12					
sk No:		BM 0-200	8-5R		Weather:	Sunn					
'eli ID:		A10 :00-0			Sampler:	Christopla	- L'Sliver	*1			
OWR No:	,			MELT DI							
							Capacity				
ell Depth (ft bis)): _	28	5		Nominal (Sixe (inches) 2	Gallons per 0.1				
asing Diameter (Rmt.	5-11		·		4	0.6 1.5				
-			149.91			5	1.4	17			
latic Water Love	i (ft bmp):		7 *			8	2.6				
asing Volume (g	rals):		38	10 4.08 Casing Volume = gallons/foot * water column (feet)							
Casing Volume:	s (gais):	41	14			8 Adimin – Asser					
	,		FIE	LD SAMPL	NG DATA						
. Time	Etapsed Time (min)	Discharge Rate (gun)	Total Discharge (galions)	pH (SU)	Temp (°C)	Spacific Conductance (µS/cm)	Com	nents			
1100		(Man)	(Garrier)		, .						
1100	5	27	135	1.52	2/17.	707					
1185	15	27	405	Gold	2/49	710	7/2				
1125	25	27	675	Gel A	21.4	1 00/2					
			·								
			S 2	MPI F INFO	ORMATION						
Samp	le (D	Time	Container Typo	Volume	No. of Containers	Analysis Method	Preservative	Comment			
BM0-20	008-5B	1/25	plastic	250 ml	1	EPA 300.0	попе	flitered			
12								,			
			<u></u>								
·											
	<u> </u>	·									
	monte:							The second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a section in the second section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section in the section is a section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section in the section i			
Additional Com											
			بىياتنىنىبىلاتلى		· ·			· · · · · · · · · · · · · · · · · · ·			

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					Client i	reeport Coppe	r Queen Bran	<u>ch</u>
Project No:		**************************************			Date:	10-16-	12	
Task No:	Pina C	1-2008	5m		Weather:		•	
Well ID:	ביין איינא	- 4011 O.			,			
ADWR No:				WELL D	Sampler:			
				X4 Francisco		Casing	Capacity	
Well Depth (ft b	del:	4	50	,	Nominal S	ize (inches)	Gallons per 0.1	
			r-11	•		2 4	0.6	15
Casing Diamete	er (in):		<u> </u>		1	5	1.0	
Static Water Le	vel (ft bmp): ्	15	1.77			8	2.0	91
Oin- Values	(naie):		3041			10	4.0	
Casing Volume			12.3		Casin	g Volume = gallons	/foot * water colu	enun (l
3 Casing Volun	nes (gals):	/_		LD SAMPL	ING DATA			
Time	Elapsed Time (min)	Discharge Rate	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (uS/cm)	Соли	nents
10320		(gpm)	(Britisha)					
0730	10	13	120	6.64	12,1	584		
0755	13/-	18	450	1.82	21.8	590		
0815	45	18	810	4.84	22.0	591		
0825	55	13	190	1.86	719			
								A-1-2-1-4-11
					,			
				<u> </u>				
				AMPLE INF	ORMATION			· (
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	- Preservative	<u> </u>
	2008-5M	0825	plastic	250 mi	1	EPA 300.0	ngne,	
	Marie Marie							+
								-
			ĺ					_
	-							
				and the same of the same				
Additional C								

Groundwater Sampling Form Freeport Copper Queen Branch Client Project No: Date: Task No: BMD-2008 6B Weather: Well ID: Sampler: ADWR No: WELL DATA Casing Capacity Gallons per Linear Foot Nominal Size (inches) Well Depth (ft bis): 0.65 Casing Diameter (in): 1.02 1.47 Static Water Level (ft bmp): 2.61 4.08 10 Casing Volume (gals): Casing Volume = gallens/foot * water column (fest) 3 Casing Volumes (gals): FIELD SAMPLING DATA Specific Discharge Total pН Temp Comments Conductance Elapsed Time Discharge Rate (SU) (°C) Time (µS/cm) (mim) (gallons) (gpm) 333 150 SAMPLE INFORMATION No. of Comments Analysis Method . Preservative Container Volume Sample ID Time Containers Type filtered **EPA 300.0** none 250 ml 1 piastic Additional Comments: 19.3

					Client:	Freeport Copp	er Queen Brar	ach	
roject No:					Date:	10-16			
ask No:	7	ė.	1			<i>/</i> !			
Yell ID:	Bm0-20	108-6	/V _[Weather:	Sunny	L Shir		
IDWR No:				أبجبب	Sampler:	Chastopler	1. Sur	12	
	***			WELL D/	AIA	Casina	Capacity		
Vell Depth (ft b	ıls):	450			Nominal	Size (inches)	Gallons per Linear Fo 0.16		
-		5	-4	٠		2	0.	65	
lasing Clameb	-		196.53			5		02 47	
tatic Water Le	wel (ft bmp):				:	8	2.51 4.98		
asing Volume	(gals):		2585			10 g Volume = gallon			
Casing Volum	nes (gals):		76			8 Acinus a Battou	SIROL WARE CO	minn (tees)	
				LD SAMPL	NG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallone)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments		
1230									
1240	10	21	21P	4.89	2:2	707 708		,	
179	β δ	31	420	1.35	51.9	•			
1300	30 40	21	63D 84D	6.37	31.8	1708			
1514	17//		<i>8</i> 1 <i>7</i>	(e + ')	77				
	,								
-		***************************************							
			· · · · · · · · · · · · · · · · · · ·						
			8/	WPLE INFO	RNATION				
San	nple ID	Time	Container Type	Valume	No. of Containers	Analysis Method	Preservative	Comment	
BMO	-2008-6M	1310	plastic	250 ml	11	EPA 300.0	попе	filtered	
						•			
•									
								<u></u>	
Additional Co	mments:				A SHIP SHIP SHIP SHIP SHIP SHIP SHIP SHIP				
STATES OF STATES AND ADDRESS OF THE PERSON O	1 (3.47								

Task No:		·····			Client:			
1					Date:		17-12	
Weil ID:	B	mo-20	10 - [m		Weather:	Sun	n/	
ADWR No:	7				Sampler:	2 0.16 4 0.65 5 1.02 6 1.47 8 2.81 16 4.08 Ing Volume = gallons/foot * water column (feee) Conductance (vision) 3 45 5 5 7 6 7 7 7 7 7 Analysis Method - Preservative Con		
		New York Control of the Control of t		WELL D	ATA			
HELD C. L. C.								
Well Depth (It b	ila):		50		Nominal			
Casing Diamete	ar (in):	4	T"			4	0	.65
_	,		225.69			S	-	
Static Water Lo	vel (it bmp):					•		
Casing Volume	(gals):	33						
3 Casing Volum	ses (cals):	99	13		Casin	g Volume = gallor	ne/foot * water co	lumn (fi
		, and the second		LD SAMPL	NG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallona)	pH (SU)	Temp (°C)	Conductance	Com	ments
0620								
0/30	10	10	100	7.62	21.8			
0635	15	10	150	7.67	821.7	6 35		
การก	60	5	375	7.70	22.0	567		
0820	120	3	555	7.28	240			
0920	180	3	735	7.25	23.5	6/1/		
1020	240	3	915	7.30	23.9			
1050	270	3	1005	(271)	/- 51/ -	- (6.4.)		
<u></u>								
							•	
			SA	MPLE INFO				
Sam	ple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	-Preservative	Co
			plastic	250 ml	1	EPA 300.0	none	fi
		<u> </u>				•		,
								
Additional Com		<u></u>				<u> </u>		

Groundwater Sampling Form Client: Freeport Copper Queen Branch Project No: Date: Task No: BMQ-2010-2 Sunn Weather: Well ID: Sourmon Sampler: ADWR No: **WELL DATA Casing Capacity** Gallons per Linear Foot Nominal Size (inches) Well Depth (It bis): 0.16 0.65 Casing Diameter (In): 1.92 1.47 Static Water Level (ft bmp): 2.61 8 4.08 10 Casing Volume (gals): Casing Volume = gallons/foot * water column (fest) 3 Casing Volumes (gals): FIELD SAMPLING DATA Specific Total Discharge Temp рH Comments Elapsed Time Conductance Rate **Olscharge** Time (SU) (PC) (min) (uS/am) (gallens) (gpm) ไปก 1.11 1/20 30 1/30 SAMPLE INFORMATION Comments No. of Container Preservative Analysis Method Volume Time Sample ID Containers Type EPA 300.0 none. 250 mi 1 plastic Boot Sample toKon Additional Comments:

273

minort blos	055038			(Client: <u>F</u>	reeport Copper	Queen Branch	
-,					Date:	10 18 12		
isk No:	BM0 - 8)(X10) - (3.A.	\	Weather:	Sunner	70's	
eli ID:	DMO - c	XØ10 ,			Sampler:	MML O		
OWR No:	TELEGONT GLAUDIANSKA VERUGARNIKA			WELL DAT				
		マス			Nominal	Casing C Size (inches)	Capacity Gallons per Lin	ear Foot
Well De	pth (ft bis):	33			MOITHING C	2	0.16 0.65	
Casing Di	iameter (in):	5				5	1.02	
Static Water	Level (ft bmp):	119.1	3		1 0 1		1,47 2,61	
	_	a)5		45		10	4.08	
Casing V	olume (gal):	012	<u>~~</u>		Casing	Volume = gallons	/foot * water column	n (feet)
Total Volum	e Purged (gal):			D SAMPLIN	G DATA			
		Discharge	Total	A) Complete Hallman Co. Co. Co. Co. Co. Co. Co. Co. Co. Co.		Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	
0842	Pump On						orangy-to-mun	
1902	ao	8	160	7.62	21.7	410.2	<u>clear, odo</u>	rloss
2912	30		240	7.59	21.6	423.7		
0922	40		320	7.60	21.16	410.0		
0932	50		400	7.59	<u>al.7</u>	410.5		
0942	60		480	7.58	1910	410.9		
0952	70		560	7.58	1917	411.1		
1005	83		664	7,58	21.6	411.9		
							Pump Off	
						0.3 cu pH 2 degree	•	m)
	FIELD PARAME	TER STABILIZ	ATION: Three c	onsecutive re	adings within		es C, and 100 μS/c	
			SA	MPLE INFO				Filtered
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
RMA-	-2010-3R	1007	Poly	250	1	300,0	N	<u> </u>
<u> </u>	CPIE DIS							
		artingstiller die	NATER LEVE	LMEASUR	EMENT COL	LECTION		
□ No wa	level measureme ter level measure ter level measure ter level measure	ment collected ment collected	. Obstruction in . Well is pumpir	well. ng.	ort in wellhead			
☐ Purge	d 3 well volumes	and field parar	neters stabilized	phyropenscheelesse L	Model (Mar Chambrids Ocanicies	The state of the s		
☐ Purge	ed 3 well volumes ed well until field p	based on previ arameters stat	ious water iever oilized.	and new pare	attinguin manualin			
☐ Purge		and the extending the first state of						
	al Comments:							
Addition	A. C. (1111)(011)(01)							

roject No:	055038				Client: <u>F</u>	reeport Copper	Queen Branch	
ask No:					Date:	10/18/12		
ask No. Vell ID:	BMO-	30105-3	<u></u> ⊰M		Weather:	Bunny	breeny	
	121111	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			Sampler:	MML 0	<u> </u>	eddickinatayenceddines oe 16
ADWR No:		建铁矿工厂	东京美国电影	WELL DAT	A	Casing C	Panacity	
Mall De	epth (ft bls):	53			Nominal S	Size (inches)	Galions per Lin	ear Foot
	_	5				2	0.16 0.65	
Casing I	Diameter (in):		m			5	1.02 1.47	
Static Water	er Level (ft bmp):	122	.00			6 8	2.61	
Casing \	Volume (gal):	417	x3 = 1	252		10	4.08	- 45 43
Total Volum	me Purged (gal):				_	Volume = gallons	foot * water colum	n (teet)
			FIEL	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
1018	Pump On						Locanii .	. w/a ,
1038	80	8	160	7.87	22.3	344.0	clear w/yellou	
1058	40		320	7,74	22.8	381.7	Yellow tinted, few	ent odd
1118	60		480	7.74	23.		clear very-fains	
1138	80		640	7.72	23.0	379.4	olear, very	wint adox
1158	100		800	15.7	23.1	379,5	<u> </u>	
1218	120		960	7.73	23.2	379.7		
1238	140		1120	7.71	33.2	379.9	clean, very to	und odor.
1258	+ 160		1280	17.71	123.3	379.9	Pump Off	
			<u> </u>		-dinon within (3 cu nH 2 degree		m)
osuccimpapab (Bratica):	FIELD PARAMET	ER STABILIZ		MPLE INFO).3 su pH, 2 degree		
								Filtered
s	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
BMO	-2010-3M	1300	Poly	250	\	300.0	N	Y
			VATER LEVE	MEASUR	EMENTICOL	ECTION		
Water	r level measuremen	t collected						·
□ No wa	ater level measuren	nent collected	No access to w	velihead/No p	ort in wellhead			
	ater level measuren ater level measuren							
☐ No wa		refit demoted		-		Reprinted to the State of the London Control		
			WELL	PURGING I	NFORMATION		ng chilinges, dairing an (41). Baran an chiling an an	
□ Purge	ed 3 well volumes a	nd field paran	neters stabilized					
	ed 3 well volumes b			and field pare	meters stabiliz	zed.		
1	ed well until field pa -	rameters stab	ilized.			•		
☐ Othe			1	1	e-brown	oalor clari	dinass. A	t then
	al Comments:	dischau	go began		ocoximate		to starte	ng pun
	borred to	me. area	nish bla		h stone	sdor . TV	is lasted	21 min

Project No:	055038				Client:	Freeport Coppe	er Queen Branch	
Task No:					Date:	11/3/12		······································
Well ID:	BMO 2017	1M			Weather:	Sunny, 6	<i>O</i> 3	
	55- 2213				Sampler:	VNU		
				WELL DA	JA - L. L. L. L. L. L. L. L. L. L. L. L. L.			
Wall D	epth (ft bls):	4051			Nominal	Size (inches)	Capacity Gallons per Lin	ear Foot
	•	5"				2 4	0.16 0.65	
Casing I	Diameter (in):		~ . /			5	1.02	
Static Water	er Level (ft bmp):	231.0				6 8	1. 4 7 2.61	1,1
Casing '	Volume (gal):	1779) x3 = '	<u>531 yal</u>		10	4.08	
Total Volum	ne Purged (gal):	534	,			ig Volume = galions	s/foot * water columi	n (teet)
				D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
1203	Pump On							
1223	20	5	100	7.58	21,6	884.2	Stightly doudy, brow	n tinge
1243	40	4.5	190	7.59	21.9	888.6	Worler is clear,	
1303	60	4	270	7.56	21,5	917,1	,	LI II
1323	80	4	350	7,55	21-4	920.0	ν	ı Ls
1343	100		4300	7.56	21.5	938,8		6.5
1403	120	4	510	7.55	21.3	933.7	ζ(
1410	127		538					
							5 6#	
							Pump Off	m)
econoses anamones o iorris	FIELD PARAMET	ER STABILIZ				0.2 su ph, 2 degle	es C, and 200 μS/cr	
		til die bei	SA	MPLE INFO				Filtered
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
BMO ?	2012 1M	1408	Poly	250mL	1	300.0	NA	<u> </u>
			(
			VATER LEVE	L MEASURE	EMENT COL	LECTION		
Ø Water	level measuremen	nt collected.						
□ No wa	iter level measurer	nent collected.	No access to w	ellhead/No p	ort in wellhead	d .		
	iter level measurer							
☐ No wa	iter level measurer	nent collected.	wes is partiput	9.				
		korte del karade del El 1981 en elektrose	WELL	PURGING II	NFORMATION			
Ø Purge	d 3 well volumes a	ınd field param	eters stabilized					
☐ Purge	ed 3 well volumes b	ased on previ	ous water level a	and field pare	meters stabili	zed.		
Į	ed well until field pa	rameters stab	ilized.					
Other								
Addition	al Comments:							
				<u></u>				

Project No:	055038			(Client: E		er Queen Branch	1			
Task No:	1,0				Date:	10/8/12					
Well ID:	Cham be	ers		1	Weather: _	Sunny, 70	o's				
ADWR No:					Sampler:	VNH					
				WELL DAT	A in the second						
Well D	epth (ft bls):	241	, ,		Nominal	Casing Size (inches)	Gallons per Lir	near Foot			
	·	/1	<u> </u>			2 4					
Casing I	Diameter (in):					5	1.02				
Static Water	er Level (ft bmp):					6 8	2.61				
Casing '	Volume (gal):	- Andrews - Andr	x3 =			10	4.08				
Total Volum	ne Purged (gal):		19.5			g Volume = gallons	s/foot * water colum	Dacity Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61			
			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			
1314	Pump On			e, and a doc							
1319	5	~1.3	6.5	7.43	22,5	431.4					
1324	10	~1.3	i3	7.44	27,5	4131. Q					
1329	l5	~1.3	19.5	7.44	22.4	430,0					
		<u> </u>					· · · · · · · · · · · · · · · · · · ·				
	FIELD PARAME	TER STABILIZ		A STREET AND THE STREET, AND THE STREET		0.3 su pH, 2 degre	es C, and 100 μs/ci				
				MPLE INFOR				Citored			
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method		(y/n)			
Chen	y bers	1334	Poly	250m2	1	300,0	NA	7			
			,								
		n markalay	VATER LEVE	MEASURE	MENT COLI	ECTION					
□ Water	level measuremer						ga (nd. in) Katalulugu da la stini i indi umatik	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1			
	ter level measurer		No access to w	ellhead/No po	rt in wellhead						
□ No wa	iter level measurer	nent collected.	Obstruction in	well.							
!	iter level measurer	ment collected.	Well is pumpin	g.							
Other:			nw≓ii	PURGING IN	FORMATION						
	d 3 well volumes a	and field naram				ospesti sinasa (Carla Sel Pare) (Capilé		, Acres Grand Constitutions, ACC 400 ACC			
☐ Purge	d 3 well volumes b	pased on previous	ous water level	and field paren	neters stabiliz	ed.					
	d well until field pa										
□ Other											
Additiona	al Comments:	From	n sink	ι'n	garden.						
					<u> </u>						

Project No:	055038				Client: [. /				
Task No:	1.0				Date:	10/9/12				
Well ID:	Coope	. (**			Weather:	Sunny,	70's			
ADWR No:	<u> </u>				Sampler:	VNH				
				WELL DAT	A					
VAC-II D	anth (fi bla):	.32	5		Nominal			near Foot		
	epth (ft bls):	$\frac{\sqrt{\lambda}}{2}$	71			2	0.16 0.65			
Casing I	Diameter (in):	(v				5	1.02			
Static Wate	er Level (ft bmp):					6				
Casing '	Volume (gal):		x3 =		Weather: Sampler: VNU ATA Casing Capacity Nominal Size (inches) Gallons per Linear Foot 2 0.16 4 0.65 5 1.02 6 1.47 8 2.61 4.08 Casing Volume = gallons/foot * water column (feet) ING DATA Temp (°C) Conductance (µS/cm) Casing Volume = Comments Comments Pump Off readings within 0.3 su pH, 2 degrees C, and 100 µS/cm) DRMATION No. of Containers Analysis Method Preservative Filtered (y/n)					
_	•		57.5		Casin	g Volume = gallons	Casing Capacity (inches) Galions per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 ume = gallons/foot * water column (feet) Specific onductance (µS/cm) Pump Off u pH, 2 degrees C, and 100 µS/cm) alysis Method Preservative Filtered (y/n) SGG . O. N.A.			
i otai Volui	me Purged (gal):			D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)		Conductance	Comme	nts		
1614	Pump On				gris grislja					
166	5	10.5	52.5	7.55	22.1	435,3				
1624	w	10.5	50	7.70	21.9	434,7				
1629	15	10,5	157.5	7,70	22.1	432.8				
						,				
	FIELD PARAMET	ER STABILIZ				0.3 su pH, 2 degree	is C, and 100 μS/ci	n) Barris (1888)		
			SAN	VIPLE INFOR	RMATION					
s	ample ID	Time	Container Type	Volume	1		Preservative	(y/n)		
(200	25	1632	Poly	250ML	l l	368.0	40	<u> </u>		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			1					_		
			VATER LEVEL	MEASURE	MENT COL	LECTION				
	level measuremer									
					ort in wellhead					
	iter level measuren iter level measurer									
☐ Other:			The state of the s	J.						
			WELL	PURGING IN	IFORMATION					
□ Purge	d 3 well volumes a	nd field param	eters stabilized.							
	ed 3 well volumes b ed well until field pa			and field parer	neters stabiliz	ed.				
□ Other										
Additiona	al Comments:	2	191 5 1	Jaco Hi	NY					
	7 0			<u> </u>	side of	nouse				
	Sample (con 5	1:304 6.	<u>/1 N</u>	100 Osk	MOSC				

roject No:	055038			(Olient: <u>F</u>	reeport Coppe	r Queen Branch	1
ask No:	1,0			Į	Date:	10/10/12		
Vell ID:	Cooper	C,		1	Weather:	Bunny	70's	
ADWR No:					Sampler:	VN4 CUTC	エニ	
				WELL DAT	August	Casing (
Wall D	epth (ft bis):	220)	-	Nominal	Size (inches)	Gallons per Lir	near Foot
	•	6"				2	0.16 0.65	
Casing I	Diameter (in):	<u> </u>	1			5	1.02	
Static Wate	er Level (ft bmp):	<u>1(e1.</u>	10,			6	1,47 2.61	
Casing '	Volume (gal):	87	x3 = 2	261		10	4.08	
_	·		330		Casing	g Volume = gallons	/foot * water colum	n (feet)
i otal Volur	ne Purged (gal):		FIE	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1342	Pump On							
1352	10]]	ll O	10.96	21,2	2075	TOS=147	8 pm
1402	2-0	11	220	6.97	21,2	1994	TDS = 145	5 ppm
1412	30	11 .	330	6,98	21,2	1985	TDS=145	0 ppm
							Pump Off	
	FIELD PARAME	TER STABILIZ	ATION: Three o	consecutive rea	adings within (0.3 su pH, 2 degree	es C, and 100 μS/c	m) Haragasan ka 188
			SAI	MPLE INFOR	RMATION			
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Coope	r C	1417	Poly	250mc		380.0	NA	Υ
COOpe								
			VATER LEVE	LMEASURE	MENT COL	ECTION		
Water	level measurementer level measurer	nt collected.	No access to v	vellhead/No po	rt in wellhead			
	iter level measurer iter level measurer							
	iter level measurer							
☐ Other		osi jajala ahtassutusain onaan se 200					ivasijse i svijelosvog nes	
				PURGING IN	HURMAHUN			
Purge	d 3 well volumes a	and field param	eters stabilized	and field perce	notore etahiliz	red.		
	ed 3 well volumes b ed well until field pa			and neid parei	netera atabilit	ourse)		
☐ Purge		namotora atabi						
L	al Comments:							
AGGINGTIC	JOIIIII							
-								

roject No:	055038			(Client: F	reeport Coppe	r Queen Branch	1
ask No:	i.0			Į	Date:	10/4/12		
/ell ID:	Dodson			,	Weather:	Sunny, sligh	+ breeze	180's
					Sampler:	NNH		
DWR No:				WELL DAT	A			
Militaria in America	(F. 1-1-)	200	,		Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot
Well D	epth (ft bls):					2	0.16 0.65	
Casing	Diameter (in):	<u>(e"</u>				5	1.02	
Static Wate	er Level (ft bmp):	97,8	<u> </u>			6 8	1.47 2.61	
Casing	Volume (gal):	150	x3 = 4	50		10	4.08	
_	•			Casing Volume = gallons/foot * water colun		/foot * water colum	n (feet)	
Total Volu	me 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	ents
1446	Pump On							
1451	り	14	70	7.28	21.0	1728	TDS=1243	ppm
1456	10	[4]	140	7.31	20.9	1697	TDS: 1270	ppm
1501	VB	14	210	7,30	20.6	1688	TBS: 1209	ppm
1506	20	14	240	7.29	20,9	1675	TOS= 1200	ppm
15U	25	14	35 D	7.27	20.6	1653	TOS= 1189	jpm_
1516	30	14	420	7.29	20,6	1633	TDS= 1172	ppm
1521	スち	14	490	7,27	70.ce	1626	TDS= 1167	ppm_
							D O#	
						 	Pump Off	m)
	FIELD PARAMET	ER STABILIZA				0.3 Su pri, 2 degre	es C, and 100 μS/c	
			SAI	MPLE INFOR				Filtered
S	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
Dodso	٠	1327	Poly	250ml	\	300 · D	NK	(0
Dir.	00042012	1328	Poly	250 mb	<u> </u>	- 300, C		
			VATER LEVEL	MEASURE	MENT COL	LECTION		
□ Nowa	r level measuremer ater level measurer ater level measurer ater level measurer	nent collected. nent collected.	Obstruction in v	well.	ort in wellhead	i		
⊠ Purge □ Purge	ed 3 well volumes a ed 3 well volumes b ed well until field pa	ased on previo	eters stabilized. ous water level a	PURGING IN	ericustipianini sidenusia	Handalah Heri Istin Isti Herida bergaran		
<u> </u>	al Comments:S	SINL. CO	Sample	Jaken	From	well hea	d in w	hite
		sell is	on E	- 41de	Cof	backyard.		



Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1,0				Date:	10/4/12		
Well ID:	Durazo				Weather:	Sunny, 8	70 's	
ADWR No:					Sampler:	VNH		
				WELL DAT				
					Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot
Well D	epth (ft bls):				Norma	2	0.16	
Casing	Diameter (in):					4 5	0.65 1.02	
Static Water	er Level (ft bmp):					6	1.47	
			x3 =			8 10	2.61 4.08	
Casing	Volume (gal):		AU		Casin		/foot * water colum	
_Tetal Volu	me Purged (gal):		rengi kisancen marasi 7 2	D SAMPLIN				
		Diseberes	Total	D SAWFLIN	GEVAIA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (ºC)	Conductance (µS/cm)	Comme	ents
	Pump On							
								P. 2
								18.55
							Pump Off	
4	FIELD PARAMET	I ER STABILIZA	TION: Three co	ı onsecutive rea	ı ıdings within l	0.3 su pH, 2 degree	es C, and 100 μS/cr	n)
			and the state of t	IPLE INFOR	ng demonstration of the control of t			
			Container		No. of			Filtered
s	ample ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)
					I CONTRACTOR			
			ATER LEVEL	MEASUKE	VIENI CULI			
1	level measuremen			D)	4 t			
l	ter level measuren ter level measuren				t in weiineau			
110 110	ter level measuren ter level measuren							
Other:	•		well, so		port ?	s rusted	Shut	
				PURGING INI				
□ Purae	d 3 well volumes a	nd field parame	eters stabilized.		Ministry and a second s			
	d 3 well volumes b			nd field parem	eters stabiliz	ed.		
☐ Purge	d well until field par	ameters stabil	ized.			160	~/~/	
Ø Other:	<u>PVO pu</u>	rge, a	rell (s	pom	p are	<u>aisconne</u>	cted. e, & sour	
Additiona	ıl Comments:	" well	is discon	ne ded	no 1.0.	nger in us	e, 🔇 500r	iding_
port i	s rusted.	shut. S	ee pics			V		
1								

roject No:	055038			(Client: <u>F</u>	reeport Coppe	r Queen Branch	
ask No:	(,0				Date:	10/4/12		
Veli ID:	Fast			\	 Weather:	Sunny, 80	5	
	- Casi				 Sampler:	NNH		
ADWR No:				WELL DAT				
ten virnet vinda (1556 Histori)	r em tastroaciposament Postspiolei	125	,)		Nominal :	Casing Size (inches)	Capacity Gallons per Lin	ear Foot
Well D	epth (ft bis):	t.			- Party Esteads	2	0.16 0.65	
Casing [Diameter (in):	<u>(e</u>	5			5	1.02	
Static Wate	er Level (ft bmp):	73.3				6 8	1.47 2.61	
Cacina \	Volume (gal):	76	x3 = 2	.28		10	4.08	
-					Casing	y Volume = gallons	s/foot * water column	n (feet)
Total Volur	ne Purged (gal):		EIEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
0646	Pump On							
0851	()	10	50	7,51	20.3	621.9		
095G	10	10	100	7,51	20.3	623.3		
6901	15	10	150	7.49	20.3	\$24,0		-
0906	20	10	200	7.50	20,3	623,4		11
09(1	25	10	150	7.49	20,4	623,8	Pump 0	
							Y	
							Pump Off	
	FIELD PARAME	TER STABILIZA				0.3 su pH, 2 degre	es C, and 100 μS/ci	
		ud septeti Maret in	SAN	MPLE INFOR	MATION			
s	ample ID	Time	Container Type	Volume `	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
East		0915	Poly	250mL	l	300.0	NA	<u> </u>
Last			`					•
a de de de de de de de de de de de de de			L VATER LEVEI	MEASURF	MENT COL	ECTION		
					gagragio estrujen o en la		wiere en de de la communication de la communic	eussajudusjajukausijaj
Water □ No wa	level measureme iter level measurer	nt collected. ment collected.	No access to w	elihead/No po	rt in wellhead			-
	iter level measure							
	ater level measure							
☐ Other				PURGING IN	EGRMATION			
				puero de maioritation			Million of Nath Paris And Paris	esertinistinii (leningo) (6.5)
Purge	ed 3 well volumes a ed 3 well volumes b	and field param	eters stabilized.	and field parer	neters stabiliz	ed.		
☐ Purge	ed 3 well volumes t ed well until field pa	arameters stabi	lized.	parage				
☐ Other								
L	al Comments:							
						<u></u>		

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	n .
Task No:	1,0				Date:	10/9/12		
Well ID:	Fehove				Weather:	Sunny,	70'5	
ADWR No:					Sampler:	VNH'		
				WELL DA			Canaciby	
Well Do	epth (ft bis):	345)		Nominal	Size (inches)	Capacity Gallons per Li	near Foot
		(a "				4	0.16 0.65	
	Diameter (in):)/	10		5	1.02 1.47	1
Static Wate	er Level (ft bmp):	216,71		,		6 8	2.61	
Casing \	Volume (gal):	i 48	x3 = "	<u> 564</u>	İ		4.08	(f 6)
Total Volur	ne Purged (gal):		560			g Volume = gallons	/foot * water colum	n (feet)
			Section of the base of the section o	D SAMPLIN	ICI DATIA	C		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1202	Pump On							
1222	20	7	140	7.59	22.4	402.8		
1242	40	7	288	7.72	22,2	403.8	,	
1302	60	フ	420	7.73	25.5	403,4		
1322	80	7	560	7.69	21.9	404.7		
							Pump Off	
		ED CTADILIZ	ATION: Throng	oncocutive re-	adings within (0.3 su pH, 2 degree	<u>'</u>	m)
	FIELD PARAME	ERSTABILIZ	area de la contracta de la companya	VPLE INFOR	enriculation de la la la la la la la la la la la la la			
					No. of			Filtered
S	ample ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
Echav	0	1327	Pata	250ml	l	300.0	NA	Y
		1328	Poly	ZonL	. 1	300.0	NA	Y
	loga zoiz		VATER LEVE		MENT COLL	Harry County (Add 1971) per 20 temption by the fact at least		
	level measuremer ter level measuren		No access to w	ellhead/No po	ort in wellhead			·
	ter level measurer							
	ter level measurer							:
☐ Other:					CORVENIAN			
				PURGING IN				
Purge	d 3 well volumes a d 3 well volumes b	nd tield param ased on previr	eters stabilized. ous water level a	and field paren	neters stabiliz	ed.		
	d well until field pa							
☐ Other:								
Additiona	l Comments:	# 520	236 61	54				
			0 .	22/2 /2020	())la	ruction in h	ro.ll	
		<u>Use SWL</u>	, from (02/01/2012	1 00510	andien in m	J	

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	1.0				Date:	10/3/12		
Well ID:	EPPELE	(a41		ar.	Weather:	Sunny, slig	h-1 bree=	ze <u>'70'</u>
ADWR No:					Sampler:	WH +丁C	T	
表数数 No.				WELL DAT				
)A/all D	anth (# bla):	265	Î.I		Nominal	Size (inches)	Capacity Gallons per Li	near Foot
VVeil D	epth (ft bls):	<u> </u>				2	0.16	
Casing	Diameter (in):					4 5	0.65 1.02	1
Static Wate	er Level (ft bmp):	71.	66'			6 8	1.47 2.61	i i
Casing	Volume (gal):	505	x3 = 15	15		10	4.08	1
					Casin	g Volume = gallons	/foot * water colum	ın (feet)
i otal volui	me Purged (gal):		FIE	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1016	Pump On							
1026	10	10	100	7.71	z6.8	561.1		
1036	20	11	210	1.74	20.6	5592		
1046	30	11	320	7.77	20.7	563.9		
1056	40	11	430	7.84	20,7	558.8		
1100	44		년무4		Wante	<u></u>	Pump 0.	ff
11.00								
							Pump Off	
	FIELD PARAMET	ER STABILIZ	ATION: Three o	onsecutive rea	dings within	0.3 su pH, 2 degree	es C, and 100 μS/ci	m)
			SAN	IPLE INFOR	MATION			
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
FRPEU	5 641	1131	Poly	250mL	1	300.0	NA	Y
10/100		1 4 - 1						
			L VATER LEVEL	MEASURE	MENT COL	LECTION		
T≸ Water	level measuremer							
	ter level measuren		No access to w	ellhead/No po	rt in wellhead			
1	ter level measuren							
□ No wa	ter level measuren	nent collected.	Well is pumping] .				
Other:				PURGING IN	EODMATION			
	d 3 well volumes a d 3 well volumes b			and field parem	neters stabiliz	ed.		
	d well until field pa							
☐ Other:						. **-		
Additiona	al Comments:	well w	ent dy	10 41	tmin, o	r 474 go	il dischar	ge.
Wait	<u>30 mia .</u>	for rech.	arge:					~
	•	<u> </u>	· •					



Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h			
Task No:	1.0				Date:	10/5/12					
Well ID:	FRANCO	5 (0)			Weather:	SUNNY,	70s				
ADWR No:	-				Sampler:	VAH					
Signe de de de de de de de de de de de de de				WELL DAT	A uguman i						
Mell D	epth (ft bis):				Nominal	Casing Size (inches)	Capacity Gallons per Li	near Foot			
		<u></u>			110,,,,,,	2	0.16				
Casing	Diameter (in):					4 5	0.65 1.02				
Static Wate	er Level (ft bmp):	<u>D</u>	<u> </u>			6	1,47 2,61				
Casing	Volume (gal):		x3 =			8 10		2.61 4.08 ot * water column (feet) Comments			
					Casin	g Volume = gallons	s/foot * water colum	ın (feet)			
Total Volui	ne Purged (gal):		ara Wallefel	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										
						NEWSTREET ALEXANDRINATE DESIRE		ALLE PER PER PER PER PER PER PER PER PER PE			
							Pump Off				
	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within (0.3 su pH, 2 degree	es C, and 100 μS/ci	n)			
			SAN	IPLE INFOR	MATION						
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
		l Haring	ATER LEVEL	I MEASUREI	L MENT COLL	ECTION					
□ Water	level measuremen	t collected.			Masica Ireinierre Fraderic II.a.S						
☐ No wat	er level measurem	nent collected. I	No access to we	ellhead/No por	t in wellhead						
☐ No wat	er level measuren	nent collected.	Obstruction in w	æll.							
☐ No wat	er level measuren		Well is pumping	J.							
A Other:	\\ <u>i</u> \\!	S Dry	untidamiksi liidi Stericelija								
		in die 126 960 John I Strokials of 165 - 65	WELL	PURGING INI	ORMATION						
	l 3 well volumes a										
1	3 well volumes b			nd field parem	eters stabilize	ed.					
- 2	well until field par		ή	dru	wel						
Other:		urg e	due do	- 5/7 -	WUI						
Additiona	Comments:			`							

Project No:	055038				Client: F	reeport Coppe	r Queen Branch]	
Task No:	(,0				Date:	10/5/12			
Well ID:	FRANC	0 383			Weather:	Sunny 1	70's		
	1/2/00	<u> </u>			Sampler:	MA			
ADWR No:			godio particolar da	WELL DAT					
ng lyangang namang ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga ng mga n Ng mga ng mg					Nominal S	Casing (Size (inches)	Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 coot * water column (feet) Comments		
Well D	epth (ft bls):				1400000	2	0.16		
Casing I	Diameter (in):					5	1.02		
Static Water	er Level (ft bmp):	191	5.00			6 8			
Casinn	Volume (gal):		x 3 =			10			
	•				Casing	Volume = gallons	/foot * water colum	n (feet)	
Total Volu	ne Purged (gal):		FIE	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents	
0926	Pump On								
0931	5	7.5	37.5	7.6el	24.2	1004			
0936	10	7.5	75	7,72	24,6	1003			
0941	15	7.5	112.5	7,69	2460	1007			
0946	20	7,5	150	7,69	23,3	1009			
0951	25	7.95	47.5	765	24.2	1001	Boster pur	np on	
095Ce	30	7.5	225	7.63	24,3	1001	Berster pu	mip of	
100 L	35	7.6	262.5	7.103	24,4	1002	Booster pu	mp on	
1003			·	23	<u> </u>		pun Off		
							Pump Off	>	
	FIELD PARAMET	TER STABILIZ).3 su pH, 2 degree	es C, and 100 μS/c		
				MPLE INFO	KS68 pagallar/4059 ksta40			Filtered	
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
Franc	0 363	1005	Poly	250ml		500.0	Nt	1	
1 1000									
-: 445 (183) (-35, (184))			VATER LEVE	L MEASURE	MENT COLL	LECTION			
□ No wa	r level measuremer ater level measurer ater level measurer ater level measurer	nent collected. ment collected.	Obstruction in	well.	ort in wellhead			San Habby Administra	
			WELL	PURGING II	NFORMATION				
☐ Purge	ed 3 well volumes a	and field param	eters stabilized						
☐ Purge	ed 3 well volumes b	oased on previ	ous water level	and field pare	meters stabiliz	ed.			
$X \setminus$	ed well until field pa	arameters stab	ilized.						
□ Othe		_ ^	f s	1.1.4	3.11'	above land	1 Burfaces		
	al Comments:	Top of	sounding	tube 10	tanks	inside wel		se, 2	
hoses	ch hose to to dischi	7 3 ;		00 W	Gide	of FRANCO	loop.		
Thos	e on site	in 6	rass di	rectly	W 0\$	shed.		CLEAR	

Project No:	055038				Client:	Freeport Coppe	oper Queen Branch			
Task No:					Date:	11/13/12				
Well ID:	FRANCO	383			Weather:	Sonny (6	0''5			
ADWR No:					Sampler:	VNH				
				WELL DAT	A					
Well	epth (ft bls):	711			Nominal	Casing Size (inches)	Capacity Gallons per Li	near Foot		
		5"				2 4	0.16 0.65			
Casing I	Diameter (in):					5	1.02			
Static Water	er Level (ft bmp):					6 8	1.47 2.61	1		
Casing '	Volume (gal):		x3 =			10	4.08			
-	me Purged (gal):	23	4		Casin	g Volume = gallons	/foot * water colum	ın (feet)		
Total Voidi	ne Fulged (gai).			D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents		
1523	Pump On									
1528	5	(e	30	7.48	19.3	986.7				
1538	15	G	90	7.63	19.4	1004				
1548	25	(6	150	7.65	1918	1008				
1508	357	(0	210	4.09	19.9	988,2				
1602	39		234							
-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							Pump Off			
	FIELD PARAMET	TER STABILIZ	ATION: Three c	onsecutive rea	adings within (0.2 su pH, 2 degree	s C, and 200 μS/c	m)		
			SAN	MPLE INFOR	MATION		en de sia de Signas en			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
FRANCI	o 383	1602	Doly	250mL	1	300.0	NA	<u> </u>		
7 / (2.50								,		
			L VATER LEVEI	MEASURE	MENT COL	ECHON				
			ed soëverk en en sakee							
1	level measuremen ter level measuren		No access to w	ellhead/No po	rt in wellhead					
	ter level measuren									
₩ No wat	ter level measuren	nent collected.	Well is pumping	g .						
☐ Other:	acinos penagorio:									
				PURGING IN						
	d 3 well volumes a d 3 well volumes b			and field paren	neters stabiliz	ed.				
· ·	d well until field pa			nora paran		•				
☐ Other:										
Additiona	l Comments:	well wa	s pm	ng Upo	~ aris	<u>e</u>				
				<i>J</i> ,			·			

Project No:	055038				Client:	Freeport Coppe	er Queen Brancl	<u> </u>
Task No:					Date:	12/3/1	12	
Well ID:	Franco	383			Weather:	Sunny	60	
ADWR No:	55-271	28·3>			Sampler:	MML-		
				-WELL DAT	A			
Well D	epth (ft bls):	71(Nomina	Casing I Size (inches)	Capacity Gallons per Li	near Foot
	Diameter (in):	5				2 4	0.16 0.65	
	•	1967	Λ			5 6	1.02 1.47	
Static vvate	er Level (ft bmp):	1 (41)				8	2.61	
Casing	Volume (gal):		x3 =			10	4.08	
Total Volu	me Purged (gal):				<u> </u>	ng Volume = gallon:	s/foot * water colum	n (teet)
				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
0915	Pump On							
0919	\	(0		7060	18,5	1001		
0923				7.54	19.4	1001		
					<u>.</u>			
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three c	onsecutive rea	adings within	0.2 su pH, 2 degree	es C, and 200 μS/cr	TT)
			SAN	IPLE INFOR	MATION			
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Fran	.c_383	09:25	Poly	750	l	300.0	N	<u> </u>
)					,
			L /ATER LEVEL	MEASURE	MENT COL	I ECTION		
	level measuremer ter level measuren		No access to w	elihead/ N o po	rt in wellhead	l		
3	ter level measuren							
1	ter level measuren							
☐ Other:		išuraj iz manojimu korana (alians)			5 (15 (15 (15 (15 (15 (15 (15 (15 (15 (1			
			WELL	PURGING IN	FORMATION			
	d 3 well volumes a							
	d 3 well volumes b			nd field paren	neters stabiliz	cea.		
☐ Purge	d well until field pa	rameters stabil	izea.					
Li.	l Comments:	Punge (intil (nmph	ισιτζε	pemp.	tuns	<u>0900). ~</u>
***************************************		~	-			1		

Project No:	055038			(Olient: <u>F</u>		r Queen Branch)		
ask No:	1,0				Date: _	10/5/12				
Vell ID:	Garver	557		1	Weather:	Sunny.	70'5			
	JW VY	<u> </u>			Sampler:	VNH				
ADWR No:	en Guda estida Sallada			WELL DAT						
		itanentikisi ninav-soomatisse.	er oo maksii see in alaan saa aa aa aa aa				Capacity	ear Foot		
Well D	epth (ft bis):				Nominal	Size (inches)	0.16	ica: r oot		
Casing l	Diameter (in):					4	0.65			
		101	7.08'			5	1.47			
Static Water	er Level (ft bmp):					8	2.61	acity Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 t* water column (feet) Comments Imp Off , and 100 µS/cm)		
Casing '	Volume (gal):		x3 =			10		- /K K		
Total Volu	ne Purged (gal):					g Volume = gallons	/toot - water column	ı (ieer)		
			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		
	Pump On									
				ersencen men madmerer.						
***************************************							Pump Off			
	FIELD PARAMET	TER STABILIZA	ATION: Three a	onsecutive rea	adings within (0.3 su pH, 2 degree	es C, and 100 μS/cr	n) ::::::::::::::::::::::::::::::::::::		
			SAN	IPLE INFOR	NOITAM					
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative			
			n de la substitution de la particio	gliggings, terpendikan						
ا را ا			WATER LEVEL	MEASURE	MENI GOLI	EECHON:				
	level measuremer							•		
	iter level measurer				rt in wellhead					
	iter level measurer									
1	iter level measurer	nent collected.	vveii is pumping	3 .						
☐ Other			High Web	PURGING IN	FORMATION					
			STATISTICA PER ITALIAN DE	Kanggan agan kalam.	mangemolfalidhi (diskti		Communitation of the angle of the delication of the communitation of the	guar umaman, samba (Amazaum 1944) his aasta 197		
Purge	d 3 well volumes a d 3 well volumes b	ing tielg paraiti socod on provid	eleis stabilizeu. Hie water level a	nd field paren	neters stabiliz	ed.				
	ed well until field pa									
☐ Other										
L	al Comments:	NLO								
Additions	ar Comments.									
<u></u>										

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	1.0				Date:	10/5/12		
Well ID:	Grane	635			Weather:	Gunny	70's	
ADWR No:					Sampler:	VNU		
				WELL DAT	AHELL			
Well D	epth (ft bis):	640)		Nomina	Size (inches)	Capacity Gallons per Li	near Foot
	•	5″				2	0.16 0.65	1
Casing L	Diameter (in):		7 17/)			5	1.02	
Static Wate	er Level (ft bmp):	100	2.71'			6 8	1.47 2.61	
Casing \	Volume (gal):	487	x3 = / ²	161		10	4.08	
Total Volur	ne Purged (gal):				Casir	ng Volume = gallons	/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)	Comme	ents
1100	Pump On							
1120	20	12	240	7.91	24,0	466.		
1140	40	13	500	7.86	24.0	472.0		
1200	(40	13	760	7.84	24,0	465.1		
1220	90	13	1020	7.89	23,7	4646		
1240	100	13.5	1290	8.09	23.8	465.6		5//
1250	110	13,5	1425	8.09	23,1	472.9	Pung c	H
							Pump Off	
	FIELD PARAMET	ER STABILIZ	to the case of the product of states.	automaticina maggiotological	Company of the Compan	0.3 su pH, 2 degree	es C, and 100 μS/c	m) Popusantanika
			SAN	#PLE INFOF	MAI ION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Garne	r 635	1255	Poly	250mL	l	300,0	MA	γ
			,					
			/ATER LEVEL	MEASURE	MENT COL	LECTION		
17 \	level measuremen					-		*
1	er level measurem				rt in wellhead	1 '		
I	er level measuren er level measuren							
□ Other:	01 1040, 11100001011							
			WELL	PURGING IN	FORMATION			
	3 well volumes a							
1	3 well volumes b			nd field paren	neters stabiliz	zed.		
☐ Purged ☐ Other:	l well until field par	rameters stabil	izea.					
I	l Comments:	Mate	ur tree	19 Ja	6.	of well		
, wattoria	· Commence	N V Or V	11/5	<u> </u>				

	Groundwa	ter Samp	ling Form	·			•		
rojest No:					Client:	Freeport Copp	er Queen Bran	ch	
-			•		Date:	10-1	7-12		
lask No:		41			Weather:	Sann			
Veil ID:		Moban_			Sampler:	(lacest notes	1 Shumon		
DWR No:				WELL D		Lacisi dom	12,1800000		
				AAPINE M.		Casing	Capacity		
Well Depth (ft is	is):		00		Nominal	ainai Size (Inches) Gallons per Linear F 2 0.16			
- "		Ž.	54	•		4	0.1	35 "	
Casing Diamete			1,9.40			5	1.1 1.1		
Italic Water Lo	vei (ft bmp):		133,	<i>a</i>		8	2.61 4.08		
Casing Volume	(gals):			<u> </u>		10 g Volume = gailon			
3 Casing Volum	nes (azis):		400			8 Adinis = 8stou	SHORE MAIN ON	Will franch	
, casing	, .		FIE	ld sampl	NG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (uS/cm)	Com	nexts	
1/50		652413							
1200	10	171	176	4,72	22.4	1855			
1210	20	17.1.	352	1.69	22.2	1854		<u> </u>	
1220	30	171	528	6.74	ALU	1816			
,									
			Ť						
							· .		
		<u>l</u>	8/	AMPLE INFO	DRIVATION				
Şan	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment	
			plastic	250 ml	1	EPA 300.0	попе	·filtered	
							`		
Lace Brown Market Brown					Bost	talken (28	90/10	
Additional Co		,				1	153		
$\frac{13 \rho}{}$	<u> </u>							,	

Project No:	055038			·	Client:	Freeport Coppe	er Queen Branch			
Task No:					Date:	10/16/12				
Well ID:	Howar	D NR			Weather:	701s or	vercast.			
ADWR No:					Sampler:	MML				
				WELL DA	ĪΑ					
Well D	epth (ft bis):	20	\circ		Nominal	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
		1				2 4	0.16 0.65			
_	Diameter (in):	1.0	/17			5	1.02	2		
Static Wate	er Level (ft bmp):	156.	7)		1 1	5 8	1.47 2.61			
Casing	Volume (gal):	64	x 3 = /9	<u> </u>		10	4.08	3 .		
Total Volu	me Purged (gal):	~ 240			Casin	ng Volume = gallons	s/foot * water colum	ın (feet)		
			FIEI	D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents		
1143	Rump On									
1153	10	//	110	7.12	21.6	1325	to start, clear	ulin 10 min.		
1158	15		165	7.07	21.5	/382				
1203	20		230	7.06	21.1	1417				
								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
1200							Pump Off			
	FIELD PARAMET	ER STABILIZ	keettesusustalsatalalainist	etenearquonteliagesi	Jargulu garatazan 60450	0.3 su pH, 2 degree	s C, and 100 μS/c	m) 		
			TO REPORT OF SAN	UPLE INFOR	RMATION III					
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Howas	ONR	12:05	Poly	250	1	300,0	N	У		
11000.14										
			I VATER LEVEL	_ MEASURE	MENT COLL	ECTION		de a de la complexión de la complexión de la complexión de la complexión de la complexión de la complexión de La complexión de la complexión d		
- Water	level measuremen	t collected								
100	ter level measurem		No access to w	ellhead/No po	rt in wellhead					
1	ter level measuren									
I	ter level measuren	nent collected.	Well is pumping] .						
☐ Other:		Edikiyê û	u ven	PURGING IN	FORMATION					
D Purrier	i 3 well volumes a	nd field parami								
T .	d 3 well volumes b			nd field paren	neters stabiliz	ed.				
1 -	d well until field par									
☐ Other:				, , , , ,				····		
Additiona	l Comments:	Hand	Pumped	field	tiltered					
			ſ	, ,						

roject No:	055038				Client: F	<u> Freeport Coppe</u>	r Queen Branch	<u> </u>
ask No:	1				Date:	10/10/12		
Vell ID:	HOWAR	D 312			Weather:	705 par	tly cloud	4
ADWR No:	22131				Sampler:	MML	C	/
				WELL DA				
IAI~II T	epth (ft bls):	980			Nominal	Casing Size (inches)	Capacity Gallons per Lin	ear Foot
						2	0.16 0.65	
Casing I	Diameter (in):	5	20			5	1.02	
Static Water	er Level (ft bmp):	193.				6 8	1.47 2.61	
Casing '	Volume (gal):	803	<u>x3 = </u>	409		10	4.08	(C - 1)
Total Volum	me Purged (gal):	~ 2500				g Volume = gallons	s/foot * water column	n (feet)
			ejojajniotetetejenejalainioteksiskiaan de	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
1214	Pump On							
1224	10	7	70	8,22	22.8	680,5		
1259	45	8	350	8,22	24.8	6854		
1334_	80	8	630	8-90	36.4	679.77		
1359	115	8	910	8.19	86.5	671.8		
1439	155	8	1230	8,19	26.6	665.3		
1519	195	8	1550	8.18	265	659.8		
1559	235	10	1950	8.18	265	655.1		
1649	285	10	2450	8.18	26.6	648.3	Pump Off	
			ATION!: There are	000011110	adings within	N 3 suinH 2 denrei	es C, and 100 μS/cr	n)
isiserinen kara	FIELD PARAMET	IER STABILIZ		ONSECUTIVE TE			on grafforsku staten dia rijos Dago ostan stanovno starovno	
s	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
40	1RD 312	1653	POLY	250	1	300.0	N	\forall
11000+	<u> KN UIX</u>							
			L VATER LEVEI	I _MEASURI	MENT COL	Leghon ———		
₩ Water	r level measuremei			se nasu nikonenta ursi lak		en na erenaces de la partición de la material de la	THE SECOND CONTRACT OF THE PROPERTY OF THE PRO	
□ No wa	ater level measurer	nent collected.			ort in wellhead	l		
□ No wa	ater level measurer	ment collected.	Obstruction in v	well.				
l	ater level measurer	nent collected.	Well is pumpin	g.				
☐ Other			WELL	PURGING II	NEORMATION			
Durne	ed 3 well volumes a	and field param			ng pasakan ng paggara Esta Bristol C	teen man teen teen teen teen teen teen teen te		
□ Purge	ed 3 well volumes t	pased on previ	ous water level a	and field pare	meters stabiliz	zed.		
	ed well until field pa							
☐ Other								
Addition	al Comments:							

Project No:	055038			(Client:	Freeport Coppe	r Queen Branch	
rask No:	1,0				Date: _	10/9/12		
Well ID:	Keefer				Weather:	Sunny,	70's	
ADWR No:		~			Sampler:	VNH		onell Scanner of period report
				WELL DAT	A		Capacity	
/Alala/	epth (ft bis):	245	, r		Nominal	Size (inches)	Gallons per Lin	ear Foot
	•		1			2	0,16 0.65	
Casing	Diameter (in):		1,00'			5	1.02 1.47	
Static Wate	er Level (ft bmp):	······································		1 - 0:		6 8	2.61	
Casing	Volume (gal):	153	x3 = L	199		10	4.08	n (foot)
Total Volu	me Purged (gal):	L	162			ng Volume = gallons	s/foot * water colum	n (leet)
ŦĎŨŨĠ				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
0853	Pump On W							
0903	10	1 (llo	7.55	20,2	480.3		
6013	20	11	270	7.57	20,3	488.8		
0923	30	٧(330	7.48	20.3	499.6		
0933	40	l	440	7.58	20.1	506.6		
0935	니긴	ţ(4(02				 91	
							Pump Off	
		TED CTABILIZ	ATION! Three o	noserutive re	adings within	0.3 su pH, 2 degre		m)
	FIELD PARAME	IER STABILIZ		MPLE INFO				
S	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Lee	-0/	0937	Palv	250ml	l	300,0	NA	λ
1,700	(0)							
		罗斯斯肯斯塔	I VATER LEVE	LMEASURE	MENT COL	LECTION		
□ No w	r level measureme ater level measurer	nt collected. ment collected.	No access to v	velihead/No p	entrebungsvere men vest	HISSELT CONTROL OF THE PROPERTY OF THE AMERICAN CONTROL OF THE AMERICAN CONTRO	and the second s	-
	ater level measure ater level measure							
☐ No w		men concern.						
			WEL	PURGING II	VFORMATIO	N		
Purgi	ed 3 well volumes	and field param	eters stabilized	l.		:a		
	ed 3 well volumes l			and field pare	meters stabili	zea.		
☐ Purg	ed well until field pa r	arameters Stab	mZQU.					
ł	al Comments:							
/ wano	u. commono.							
					<u></u>			

Project No:	055038				Client:	Freeport Coppe	r Queen Branch	1		
Task No:					Date:	10/17/12				
Well ID:	MARCE	-1.1.			Weather:	Sun	<u> 30 </u>			
ADWR No:	1111/00				Sampler:	MMC				
AUVVK NO:				WELL DA						
		~ 220)		Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot		
Well De	epth (ft bls):				140/11///(2	0.16			
Casing [Diameter (in):	6		<u></u>		4 5	0.65 1.02	1		
Static Water	er Level (ft bmp):	~180				6	1,47 2.61			
Cacina \	Volume (gal):	(00)	x3 = \	80		8 10	4.08			
	·	~360			Casin	g Volume = gallons	/foot * water colum	n (feet)		
Total Volur	ne Purged (gal):			D SAMPLIN	I IG DATA					
		Discharge	Total		Temp	Specific	_			
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	(°C)	Conductance (µS/cm)	Comme	ents		
1451	Pump On									
1501	10	10	100	7.26	21.7	1659				
1511	20	10	200	7.22	21.4	1549				
1521	30	lΩ	300	7.18	21.3	1546				
							Pump Off			
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive re	adings within (0.3 su pH, 2 degree	es C, and 100 μS/ci	m) Museus sustantia		
			SAM	MPLE INFOR	RMATION					
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
MAG	CELL NR	1526	Poly	250	į	300.0	N	Υ		
		1,8001,	Poly	250	l	300.0	\sim	\forall		
DWP 2	Q121017		J VATER LEVEI	220-00-20-1-20-00-00-00-00-00-00-00-00-00-00-00-00-	MENT COL	elegija pijegiji de pelegge pijegeje kiljog i deploji.		es estresuserescime En de la companya		
	level measuremer ter level measuren		No access to w	ellhead/No po	ort in wellhead					
	ter level measuren									
	ter level measuren									
□ Other:	erian berger (virger er jälj salastran (siste) talastra									
					IFORMATION	nee pasymeetheth valuetii 1950 i Aan lastora ega eel sallatii s				
☐ Purge	d 3 well volumes a	nd field param	eters stabilized.	ad field	natara atabili-	orl				
	d 3 well volumes b d well until field pa			ina neia parer	neleis Slauiilz	cu.				
☐ Purge		ametera atabi								
L	al Comments:						,			
/ 100100110										

Project No:	055038				Client:	Freeport Coppe	r Queen Branch	1
ask No:	1.0				Date:	10/8/12		
Vell ID:	McConnel	(265	(di))	Weather:	Sunny	80's	
	1 COUNTRY	/v - y y	<u> </u>		Sampler:	VNH		
ADWR No:	eknapi serneli leh (bi kela			WELL DAT		in Albanda		
		211	(n)		Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot
Well D	epth (ft bis):				740,771130	2	0.16	
Casing I	Diameter (in):	<u> 70'</u>				5	0.65 1.02	
Static Water	er Level (ft bmp):	160	2.43			6	1,47 2,61	
Casina	Volume (gal):	201	x3 = 2	137		8 10	4.08	
_	·		260		Casin	ng Volume = gallons	/foot * water colum	n (feet)
Total Volu	ne Purged (gal):			D SAMPLIN	IG DATA			
	den in sustainen rein nest neuronen re	Discharge	Total	Hq	Temp	Specific	<u> </u>	
Time	Elapsed Time (min)	Rate	Discharge (gallons)	(SU)	(°C)	Conductance (µS/cm)	Comme	inus
over he i	Pump On	(gpm)	iganoria)					
0454	Application of the second second		15 6 6 1 2 1 2 1 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1	7.15	21.0	1907	water is brown	14
0903	5	13	<u>65</u> 130	7,30	20,8	1884	Water has cle	1 sulfor
060g	(0)	13	195	7.11	20.9	1864	Water is clear.	
0913	[5	12		7.11	20,9	18 62	100/14-05 1-31-1-00-1-	J
0918	20	12	260	100	120, 1	13		
							Pump Off	
	FIELD PARAMET	I ER STABILIZ/	L ATION: Three o	onsecutive re	adings within	0.3 su pH, 2 degree	es C, and 100 μS/c	m)
				WPLE INFO				
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
1. 6	11 216	0921	0.1.	250 pl	l t	300.B	NA	Y
Miclon	nell 265	0121	Poly	120000	<u> </u>	1		
andičao irrhedički ožmi	irrende hoedeen zuwerende daaidpo	cultification allocation for seale	dang seográpa yedan sérapatan					
			VATER LEVE	LMEASURE				
火 Water	level measuremen	nt collected.		allinani/Ala m	art in watlhaar	4		
	iter level measurer iter level measurer				JIE III WOMICO			
1	iter level measurer							
□ Other								
			WELL	PURGING II	NFORMATION	И		
₩ Purge	d 3 well volumes a	ind field param	eters stabilized	•				
	d 3 well volumes b			and field pare	meters stabili	zed.		
1	ed well until field pa	rameters stabi	lizea.					\$
Other							***************************************	
Addition	al Comments:							
					· · · · · · · · · · · · · · · · · · ·			

Project No:	055038			i	Client: F	reeport Coppe	r Queen Branch	1
rask No:	1.0				Date:	10/8/12		
Well ID:	Mc Con.	noll	459	(new)	Weather	SUMMY	80°s	
ADWR No:	1 (00)	<u> </u>		,	Sampler:	VNH		
				WELL DAT				
		863	1		Nominal	Casing (Size (inches)	Capacity Gallons per Lir	near Foot
Well D	epth (ft bis):		<u>,, </u>		NOMBINAL	2	0.16	
Casing	Diameter (in):	5"				5	0.65 1.02	1
Static Wat	er Level (ft bmp):	166.9) l			6	1,47 2.61	
	Volume (gal):	7102	x 3 = 2	130		8 10	4.08	
-	·		2340		Casing	g Volume = gallons	/foot * water colum	in (feet)
Total Volu	me Purged (gal):			D SAMPLIN	G DATA			
		Discharge	Total	. 1 515.07400 7 1 1	Temp	Specific		1 -
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	(°C)	Conductance (µS/cm)	Comme	ents
0930	Pump On						den et en den en en en en Light et en den en en en en en	
0940	10	[3	130	8.07	23,0	54621	VERY strong solf	ir oder
1,000	30	13	390	8.08	24,4	546,6	<u> </u>	ľ
U 030	(00	13	780	8.06	25.0	550.9	X	4
(100)	90	t3	1170	8.07	25.1	541,0	Moderate Sul	phur oder
1130	120	13	1560	8.14	24.4	531.5	c. '	· k
1200	150	13	1950	8.14	25.0	528,7	Sight Sul	phur oder
1230	180	13	2340	8,12	25.3	517.3	4 3 .	
							Pump Off	
	FIELD PARAME	TER STABILIZ				0.3 su pH, 2 degree	es C, and 100 μS/c	an) Dagang beserver
			SAI	VIPLE INFO	RMATION			
S. S. S. S. S. S. S. S. S. S. S. S. S. S	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
McCon	nell 459	1238	Paly	250ml	. (500.0	NA	1/
7-0000	100 VI 10:							,
		uppassis	L WATER LEVE	MEASURE	MENT COL	LECTION		
					nggang spanggangan			
Wate	r level measuremei ater level measurer	nt collected. wort collected	No access to w	relihead/No o	ort in wellhead	1		•
	ater level measurer ater level measurer							
	ater level measurer							
□ Othe	T	SAUDESCOURSE APARESCAND ON	ouroussuusensa Needlesii viii	aparto, economico de 191				
				MOPPHICAL DESIGNATION	NFORMATION			
□ Purg	ed 3 well volumes a	and field param	neters stabilized		t-hili	eod		
	ed 3 well volumes t			and field pare	meters Stabiliz	250.		
☐ Purg	ed well until field pa r	irameters stau	illizeu.					
L	al Comments:	Connect	hose	to pro	essure	taurs	spigoti	
	horae to	5 of	shad	7, 0			10	
	TY TY							

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	:h	
Task No:	1,0				Date:	10/4/12			
Well ID:	Meteler	,			Weather.	Sunny	80's		
ADWR No:					Sampler.	YNH			
				WELL DAT					
Well D	epth (ft bis):				Nominal	Size (inches)	Capacity Gallons per L	inear Foot	
	Diameter (in):					2 4	0.16 0.65	1	
_	•	001	121 1	^		5	1.02	2	
Static Water	er Level (ft bmp):	291.	60 P.	m P		6 8	1,47 2.61	1	
Casing	Volume (gal):		x3 =			10	4.08	······	
Total Volu	me Purged (gal):					ng Volume = gallons	/foot * water colum	nn (feet)	
			FIE	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On								
	5,520,6978,012,75070,013,016,6950,000,000		73						
							Pump Off		
	FIELD PARAMET	ER STABILIZA	t julia cara e a mentena tijak period		Hitti Orlaisu, Malajo (Utija Krasa)	0.3 su pH, 2 degree	es C, and 100 μS/c	m) Sieranioskappieneski	
			SAN	IPLE INFOR	MATION				
S	ample ID	Time	Container Type	Volume `	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
				,					
						}			
		N A	ATER LEVEL	MEASURE	MENT COLI	ECTION			
. □∵Water	level measurement	i collected.	ing piggang pangang dan bersai dan		<u>leaks a teoral cine il solo</u>				
☐ No wat	ter level measurem	ent collected.	No access to we	ellhead/No po	rt in wellhead			·	
•	ter level measurem								
☐ No wat	ter level measurem	ent collected.	Well is pumping	! .					
			WELL	PURGING IN	FORMATION				
□ Purget	d 3 well volumes ar	nd field parame	eters stabilized.	erneterministen etakiek	(4) Mary 1223 An American (4) (2017) - 123	landi katan estemente katan wasan ilihin ilis	Held 38 in the SSC Company in the State of the United in	(A) - A) (A) (A) (A) (A) (A) (A) (A) (A) (A)	
	3 well volumes ba			nd field parem	eters stabiliz	ed.			
1 -	d well until field par	ameters stabil	ized.	1	/				
4 Other:		- Punya	<u> </u>	and ctod			A. (a	1.0	
h-4	Comments:	<u> </u>	Metzlec	- gays	they	are 0/	<u> AWC</u>	mort or	
<u>Xa have</u>	nt used a	the well	<u> 10 C</u>	While.					

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	1.0				Date:	10/8/12		
Well ID:	Moore				Weather:	Sunny , 7	01's	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
ADWR No:					Sampler:	NNH		
				WELL DAT	A			
Wall	epth (ft bls):	221	٥,		Nominal	Casing Size (inches)	Capacity Gallons per Li	near Foot
						2	0.16 0.65	
Casing	Diameter (in):		2 //			5	1.02	1
Static Wate	er Level (ft bmp):					6 8	1,47 2.61	1
Casing	Volume (gal):		x3 =			10	4.08	
	,		250		Casin	g Volume = gallons	/foot * water colum	in (feet)
i otal Volu	me Purged (gal):			D SAMPLIN	G DATA			
Logi (Liggi Osimon) osadi. Data	Elapsed Time	Discharge	Total	На	Temp	Specific	Comme	inte
Time	(min)	Rate (gpm)	Discharge (gallons)	(SU)	(℃)	Conductance (µS/cm)	Consinc	,,,,,,
1522	Pump On							
1527	5	12.5	(e2.5	7.65	21.8	429,0		
1537	1	12.5	125	7,64	21.7	431.3		
(537	19	12.5	187.5	7,55	21.8	U33.		
1542	Tio	12.5	250	7,64	21.4	433,2		
1,7% =		<u> </u>	200	1 2				
							Pump Off	
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	dings within	0.3 su pH, 2 degree	s C, and 100 μS/α	m)
			SAM	IPLE INFOR	MATION			
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Moor	-0_	1547	Poly	150 ml		300,0	NA	1
7000;		<u> </u>	<u> </u>	<u> </u>				
		l V	L VATER LEVEL	MEASURE	MENT COL	LECTION		
T Wester	level measuremer		នានីហើត ម៉ាទី ។ ប៉ុន្តែកក្នុងប៉ុន្មាន។ -	rin dale in diament	Lugarija i se provins			
	ter level measuren		No access to w	ellhead/No po	rt in wellhead			•
	ter level measuren							
	ter level measuren	nent collected.	Well is pumping	3 .				
☐ Other.		elerrine		PURGING IN	EORMATION			
			en estado de la composição de la composição de la composição de la composição de la composição de la composição					
	d 3 well volumes a d 3 well volumes b			ind field parem	neters stabiliz	ed.		
	d well until field pa			,				
□ Other:								
Additiona	al Comments:							
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

Project No:	055038				Client:	Freeport Coppe	r Queen Branch	1
Fask No:	(,0				Date:	10/4/12		***************************************
Well ID:	Noteman				Weather:	Sunny: &C	S's	
ADWR No:					Sampler:	VNH'		
			ana ae a	WELL DA	IA (II)			
		470	1		Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot
Well D	epth (ft bls):				140.11	2	0.16	
Casing	Diameter (in):	5		2/25/2		4 5	0.65 1.02	
Static Water	er Level (ft bmp):	NA, use	329054	2/25/09 from		6	1,47 2.61	
Casing	Volume (gal):	145	x3 = 4	36		10	4.08	
Total Volu	me Purged (gal):					g Volume = gallons	/foot * water colum	n (feet)
			FE	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1218,	Pump On							
1228	10	[[]	110	6.88	23.6	1413		
1238	70	1 1	220	(e, 89	23.le	1414		
1248	30	10	320	6.86	23.7	1413		
1258	40	9	410	6,80	23,6	1412		<u> </u>
1300	42	e _l	428	_	~		Pump c	H
							,	<i>r</i> -
							Pump Off	
						0.2 ov pH 2 degree		m)
	FIELD PARAME	TER STABILIZ		onsecutive re MPLE INFO		0.3 su pH, 2 degree		
					No. of			Filtered
s	Sample ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
Noten	100	1302	Poly	250mL	Į	300,0	NA	γ
7000007			1 7					
		e sije je dina sav	I VATER LEVEI	MEASURE	MENT COL	LECTION		
	r level measureme							
	ater level measurer		No access to w	ellhead/No p	ort in wellhead	I		
No wa	ater level measurer	ment collected.	Obstruction in v	well.				
□ No wa	ater level measurer	ment collected.	Well is pumping	g.				
☐ Other				DURGING II	NFORMATION			
				FERSELESSE CLEEKE				
☐ Purge	ed 3 well volumes a ed 3 well volumes b	and new param pased on previo	ous water level a	and field pare	meters stabiliz	red.		
	ed well until field pa			•				
□ Other	r							
Addition	al Comments:	use su	VL= 327,	54' <u>5,</u>	rom 21	25/09		



Project No:	055038				Client:	Freeport Coppe	er Queen Brand	ch
Task No:	2./				Date:	12-14-1	2	
Well ID:	WSD=1	53 NS	0-02		Weather:	305 (/ou	J. dy	
ADWR No:			B	Q	Sampler:	B50	/	
				WELLDA	A			
Well De	epth (ft bls):				Nomina	l Size (inches)	Capacity Gallons per L	
Casing D	Diameter (in):	/	/			2 4	0.16 0.65	i
_	r Level (ft bmp):	107.0	24			5 6	1.02 1.47	l l
	/olume (gal):		/ x3 =			8 10	2.6 ⁻ 4.08	
			<u> </u>		Casir	ng Volume = gallons		
l otal Volun	ne Purged (gal):			D SAMPLIN	IG DATA			
		Discharge	Total		12 Tel Vitter Landal and Landal to	Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (ºC)	Conductance (µS/cm)	Comm	ents
	Pump On :=	(SPIN)						
						11 / 12 13 14 15 15 15 15 15 15 15		
					.,,,,,			

							Pump Off	
		/	TION. There are		alinan wishin	 0.2 su pH, 2 degree	•	m)
	FIELD PARAMET	ER STABILIZA	4	a Grandi da sentan magai haga		u.z su pri, z degree	s C, and 200 μο/C	
			SAN	IPLE INFOR	(MAIIION III			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
TO COMMUNICATIVADA, CARACTOR								
		W	ATER LEVEL	MEASURE	MENT COLI	ECTION		
Water Is	evel measurement	t collected.						
☐ No wate	r level measurem	ent collected. I	No access to we	ellhead/No poi	t in wellhead			
□ No wate	er level measurem	ent collected. (Obstruction in w	ell.				
□ No wate	er level measurem	ent collected. \	Well is pumping					
☐ Other:			aspliskiesisaaktai ka	agapaptikosposiisišisišisisi	rosenjagiga rana sala			
			WELLI	PURGING IN	-ORMATION			
1 "	3 well volumes ar							
1 -	3 well volumes ba			nd field parem	eters stabilize	ed.		
_	well until field par	ameters stabili	zed.					
☐ Other:								
Additional	Comments:	$-\zeta \wedge \zeta$						
							<u> </u>	

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	ch
Task No:	2.1				Date:	12-14-12		
Well ID:	(CV)	-67	120.0	ో>	Weather:	30's clo	udy	
ADWR No:			•	Bor	Sampler:	ろびの	•	
			álerská megy	WELLDA	IA E E E			
Well De	pth (ft bls):	•			Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot
Casing D	iameter (in):		/			2 4	0,16 0,68	" I
_	•	90.0	(3			5	1.0	2
Static water	Level (ft bmp):	(().(.)			6 8	1.4° 2.6°	
Casing V	olume (gal):		x3 =			10	4.00	
Total Volum	e Purged (gal):				<u> </u>	ng Volume = gallons	/foot * water colun	nn (feet)
				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (℃)	Specific Conductance (µS/cm)	Comm	ents
	Pump On	rales duáncia						
								,
							Dump Off	
	IFI D PARAMET	FR STARII 174	TION: Three or	nsecutive rea	dinas within ().2 su pH, 2 degree	Pump Off	m)
			aSentes Xeal-Lakes available some	IPLE INFOR	s Sandro population complete green			
			Container		No. of			Filtered
Sar	nple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)
								·

		M. E. E. W.	ATER LEVEL	I MEASUREI	MENT COLL	ECTION		
Water le	vel measurement	hiğin enviktika işti						
, ,	r level measurem		No access to we	ellhead/No por	t in wellhead			
☐ No wate	r level measurem	ent collected. (Obstruction in w	ell.				
l .	r level measurem	ent collected. \	Nell is pumping	•				
□ Other:				PURGING INF	ORMATION			
□ Purged 3	3 well volumes an	d field narame	iii kakalaan menatan					
i	3 well volumes an 3 well volumes ba			nd field parem	eters stabilize	ed.		
	well until field para							
☐ Other:								
Additional (Comments:	WLO						

Project No:	055038				Client:	Freeport Coppe	r Queen Branch	1	
ask No:	10				Date:	10/10/12			
Vell ID:	NWCZ	<u> </u>			Weather:	Sunny, 70'5			
DWR No:					Sampler:	VNIt'			
				WELL DA	A Haller				
Wall D	epth (ft bls):				Nominal	Casing (Size (inches)	Gallons per Lir	near Foot	
	-					2 4	0.16 0.65		
Casing I	Diameter (in):					5	1.02		
Static Water	er Level (ft bmp):					6 8	1.47 2.61		
Casing '	Volume (gat):		x3 =			10	4.08		
Total Volum	me Purged (gal):					g Volume = gallons	/foot * water colum	n (feet)	
			ᇙ	D SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents	
	PumpiOn								
1026	BUSSINEERS AURESTONEERS AUG			7.52	21,6	426.2			
1032				7.61	21.5	424.6			
1037				7.58	21,7	423.9			
		ļ		<u> </u>			Pump Off		
			ATION! Three o	encourtive to	adings within	 0.3 su pH, 2 degree	·	m)	
	FIELD PARAME I	ER STABILIZ		MPLE INFO					
s s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
NWE	- 102	1043	Poly	250ml	C	300.0	NA	1	
<u> 10 00 C</u>		1012	l i l					·	
			I VATER LEVEI	MEASURE	MENT COL	LECTION			
	level measuremer ater level measuren		No access to w	ellhead/No po	ort in wellhead	l			
	ater level measuren								
No wa	ater level measurer	nent collected.	Well is pumpin	g.					
☐ Other				DURGING !!	NFORMATION				
	ed 3 well volumes a	nd fold param					(A152009) Sauder 1665 augustus (Sa		
□ Purge	ed 3 well volumes a ed 3 well volumes b	ased on previo	ous water level	and field pare	meters stabiliz	zed.			
□ Purge	ed well until field pa		lized.		ſ	<			
Other	: Wel	hus per	2 pump	ing a	il more	ng			
Addition	al Comments:			V		V			

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	1.0				Date:	10/10/12		
Well ID:	NWC-	03			Weather:	Sunny 7	<u>O´5</u>	
ADWR No:					Sampler:	VNH		
				WELL DAT	Author			
\Mell C	epth (ft bls):				Nominal	Size (inches)	Capacity Gallons per Li	
	•					2	0.16 0.65	1
Casing	Diameter (in):					5	1.02	
Static Wat	er Level (ft bmp).					6 8	1.47 2.61	-
Casing	Volume (gal):		x3 =			10	4.08	
Total Volu	me Purged (gal):					g Volume = gallons	/foot * water colum	in (feet)
				D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pump On							
0925				7.30	21,	1054		
,930				7.31	21.1	to 33		
7935				7.31	21.1	1029		
				ļ				
							m	
							Pump Off	m)
Bendeshielden GR	FIELD PARAMET	TER STABILIZ	aria transferational administration	water nga milagnarjatukisi		0.3 su pH, 2 degree	s C, and του μο/c	
			SAI	MPLE INFO				Cilered
8	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC	- 03	0944	Poly	250ml		300 10	NA	4
DED IV	102012	6944	Palv	Boml		300 0 0	NA	Y
			VATER LEVE	To see that the service of the second	MENT COL			
☐ Wate	r level measuremer	ot collected			iganiam (dalumikan)			Vigitarian (Vigitalian Inc.)
	ater level measuren		No access to w	ellhead/No po	ort in wellhead			
□ No wa	ater level measuren	nent collected.	Obstruction in v	well.				
10	ater level measuren	nent collected.	Well is pumpin	g.				
☐ Other		er erigimen saken	we i	PURGING IN	IFORMATION			
		and field naram					sromentiitistassa päätitätä pääkkäitäi	
☐ Purge	ed 3 well volumes a ed 3 well volumes b	na new param pased on previo	ous water level a	and field parer	neters stabiliz	ed.		
	ed well until field pa			•				
Ø Other			3					
Addition	al Comments:	Well	ou been	pimp	ing			
				1	()			

oject No:	055038			C	lient: <u>F</u>	reeport Coppe	r Queen Branch	
sk No:				C	ate:			
il ID:	Nin/C-OF	3 cA f	>	v	Veather:			
	4.000	<u> </u>		9	ampler:			
WR No:				WELL DAT	The second secon			
				<u> </u>		Casing (Size (inches)	Capacity Gallons per Lin	ear Foot
Well De	epth (ft bis):				Nominal	2	0.16	
Casing [Diameter (in):					4	0.65 1.02	
	•	125	.97)			5	1,47	
Static Wate	er Level (ft bmp):					8	2.61 4.08	
Casing \	Volume (gal):		x3 =			10 <u>l</u>		n (foot)
Total Volur	me Purged (gal):				_	Volume = gallons	/foot * water colum	n (leet)
			FELI	SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
		(gpiii)						
	(Pump On							
····								
							Pump Off	
	FILE D DADAME	 TER STABILIZ/	ATION: Three co	nsecutive rea	dings within C).3 su pH, 2 degree	es C, and 100 μS/ci	m)
	LICTO LALVAINE			IPLE INFOR				
	FIELD PARAME					The training frame and an expension of the second contract of the se		
s	Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
s		Time	Container	Volume		Analysis Method	Preservative	
S		Time	Container	Volume		Analysis Method	Preservative	
s			Container Type		Containers		Preservative	
s			Container		Containers		Preservative	
€ Water	Sample ID	nt collected.	Container Type VATER LEVEL	MEASURE	Containers MENT COLL	ECTION	Preservative	
MQ Water □ No wa	Sample ID r level measurementer level measurer	nt collected.	Container Type VATER LEVEL No access to we	MEASURE	Containers MENT COLL	ECTION	Preservative	
M Water □ No wa	Sample ID r level measurementer level measure	nt collected. ment collected. ment collected.	Container Type VATER LEVEL No access to we Obstruction in w	MEASURE	Containers MENT COLL	ECTION	Preservative	
Muter □ No wa	r level measurementer leve	nt collected. ment collected. ment collected.	Container Type VATER LEVEL No access to we Obstruction in w	MEASURE	Containers MENT COLL	ECTION	Preservative	
Water □ No wa	r level measurementer leve	nt collected. ment collected. ment collected.	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping	MEASURE	Containers WENT COLI	ECTION	Preservative	
MQ Water □ No wa □ No wa □ No wa □ Other	r level measurementer leve	nt collected. ment collected. ment collected. ment collected.	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping	MEASURE	Containers WENT COLI	ECTION	Preservative	
Water No wa No wa Other	r level measurementer leve	nt collected. ment collected. ment collected. ment collected. ment collected.	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized.	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	
Water No wa No wa Other Purge	r level measurementer leve	nt collected. ment collected. ment collected. ment collected. ment dilected. and field parameters based on previous	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized. ous water level a	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	
No wa No wa Dother Purge Purge	r level measurementer leve	nt collected. ment collected. ment collected. ment collected. ment dilected. and field parameters based on previous	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized. ous water level a	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	
Water No wa No wa Other Purge Purge Purge Other	r level measurement ater level measurementer l	nt collected. ment collected. ment collected. ment collected. ment dilected. and field parameters based on previous	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized. ous water level a	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	
Water No wa No wa Other Purge Purge Purge Other	r level measurementer leve	nt collected. ment collected. ment collected. ment collected. ment dilected. and field parameters based on previous	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized. ous water level a	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	
Water No wa No wa Other Purge Purge Purge Other	r level measurement ater level measurementer l	nt collected. ment collected. ment collected. ment collected. ment dilected. and field parameters based on previous	Container Type VATER LEVEL No access to we Obstruction in w Well is pumping WELL eters stabilized. ous water level a	MEASURE ellhead/No po /ell.	Containers MENT COLI It in wellhead	ECTION	Preservative	



t. at blac	055038			c	lient: <u>F</u>	reeport Copper	Queen Branch	
oject No:	<u>t,0</u>				Date:	10/10/12		
ask No:	NWC-	021		V	Veather:	Sunny } }	₽ 's	
/ell ID:	1 00			\$	Sampler:	UN H		
DWR No:				WELL DATA	A many financial	Casing C	anacity	
386-21 D-	_th (6 hla):				Nominal S	Size (inches)	Galions per Line	ear Foot
	epth (ft bls):					2	0.16 0.65	
Casing D	Diameter (in):					5	1.02 1.47	
Static Wate	r Level (ft bmp):					6 8	2.61	
لـCasing	fotume (gal):		x3 =			10]	4.08	(feet)
-Total Volun	ne Purged (gal):					J Volume = gallons/	root " water coluirii	(leet)
			standing and a second second	D SAMPLIN	GIDATA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Commet	nts
	Pump On							
582H	petial usai notavišias das massellis	est eximulteristi itaalisi sääneristensi		7,52	22.1	967.8		
08 29				7.48	27,7	854.5		
05 34				7.55	23/1	8 Cel. 8		
08 39				7,49	23,2	869.8		
6844				7,48	23,2	883: 6		
2								
							Pump Off	
					adinas within l	0.3 su pH, 2 degree		m)
	FIELD PARAME	TER STABILIZ		MPLE INFOR				
s s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
11111	E-04	U858	Poly	250 ML		300,0	NA	<u> </u>
70 00								
			J VATER LEVE	L MEASURE	MENT COL	LECTION		
No wa	ed 3 well volumes	ment collected ment collected ment collected and field paran	Obstruction in Well is pumpir WELL neters stabilized	well. ng. PURGING II I.	NFORMATION	V		
☐ Purge	ed 3 well volumes ed well until field p	based on previ	ous water level	and field pare	meters stabilia	zed.		
Othe	1 (& ~34	S. St.					
Addition	al Comments:	rump	is off t	00				
					····			

Project No:	055038			(Client: F	Freeport Coppe	opper Queen Branch			
Task No:	1.0				Date:	11/13/12				
Well ID:	NWC-04			1	Weather:	Sunny, 4	o's			
ADWR No:	NOVVO- U I				Sampler:	NNA				
		is di un seces es		WELL DAT	A					
					Nominal	Size (inches)	Capacity Gallons per Lir	near Foot		
Well D	epth (ft bls):	··········	<u></u>		14011111111	2	0.16			
Casing	Diameter (in):					5	0.65 1.02	1		
Static Water	er Level (ft bmp):					6	1,47 2.61			
Coning	Volume (gal):		x3 =			8	4.08			
_	•				Casing	g Volume = galions	/foot * water colum	n (feet)		
Total Volu	me Purged (gal): ~		ms suciei	D SAMPLIN	G DATA					
	Elapsed Time	Discharge	Total	рН	Temp	Specific Conductance	Comme	nte		
Time	(min)	Rate (gpm)	Discharge (gallons)	(SU)	(°C)	Conductance (μS/cm)	00111170			
	Pump On									
0621				7.73	19.7	883.4	TDS = 619.1 pp	м		
0826				7.55	21.4	848 ₁ 1	11			
0831				7.49	21.9	849.2	TDS= 587,000	ρM		
0836				7.50	21.7	849.8	705= 587,000 705= 591.0 pp	v.v.		
0030										
								:		
							Pump Off			
	FIELD PARAMET	TER STABILIZA	ATION: Three c	onsecutive rea	dings within (0.2 su pH, 2 degree	es C, and 200 μS/c	m) vermesmasurerrensississ		
			SAM	IPLE INFOR	MATION					
S	sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
NWC	124	08 36	Paly	250ml	(300.0	44	У		
	<u> </u>		1 307							
			I VATER LEVEI	MEASURE	MENT COLI	LECTION				
	r level measuremer ater level measuren		No access to w	ellhead/No po	rt in wellhead					
	ater level measurer									
No wa	ater level measurer	nent collected.	Well is pumpin	g.						
☐ Other					FORMATION					
				PURGING IN						
☐ Purge	ed 3 well volumes a ed 3 well volumes b	ind field param	eters stabilized. We water level :	and field paren	neters stabiliz	ed.				
	ed 3 well volumes o ed well until field pa			and now paren	,01010					
☐ Other										
Addition	al Comments:	well h	as been	pump	ed on	O of	all more	ning		
						1.)		<u> </u>		
`.										

Project No:	055038				Client:	Freeport Coppe	r Queen Branci	1
Task No:	<u> </u>				Date:	12/3/12		
Well ID:	NWC-	04			Weather:	Sunny :	50 15	
ADWR No:					Sampler:	MMO		
				WELL DAT	ra isi isi si			
Mary Co.					Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot
vveli De	epth (ft bls):					2	0.16 0.65	
Casing E	Diameter (in):					4 5	1.02	
Static Wate	r Level (ft bmp):					6 8	1.47 2.61	
Casing \	/olume (gal):		x3 =			10	4.08	
_	·				Casin	g Volume = gallons	/foot * water colum	n (feet)
Total Volun	ne Purged (gal):			D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pume On							
A020			asuuseus kaanka siddi kii kii käälii	7.33	22.4	899.60		
10835 10835)			7,39	22.8	894-1		
0846				7.40	23.0	898.6		
0070								
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three o	onsecutive re	adings within	0.2 su pH, 2 degree	es C, and 200 μS/ci	n)
			SAI	UPLE INFOR	RMATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
NWC	~~J	0843	Poly	250	1	300.0	2	7
10000								
			I /ATER LEVE	MEASURE	MENT COL	LECTION		
	level measuremer er level measuren		No access to w	relihead/No po	ort in wellhead	I		
	er level measuren							•
i	er level measuren							
☐ Other:		***************************************		ansi de andicarata a daga da				
				PURGING IN	IFORMATION			
	3 well volumes a				natam atahilis	rod		
	i 3 well volumes b i well until field pa			ino neio parei	Hetels Stabilic			
D Other:	ı wen unun nero pa	iailieleis stavii	LUI.					
L	l Comments:							
Additiona	,							

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	[.0				Date:	10/10/12		
Well ID:	NWC- (200			Weather:	SURRY 5	70s	
ADWR No:		<u> </u>			Sampler:	UNH,		
ADVK NO.				WELL DAT				
					Nominal		Capacity Gallons per Li	near Foot
Well D	epth (ft bls):				Nominai	Size (inches)	0.16	
Casing	Diameter (in):					4	0.65 1.02	
Static Wate	er Level (ft bmp):					5 6	1.47	
						8 10	2.61 4.08	E .
Casing	Volume (gal):		x3 =		Conin	ig Volume = gallons		
(otal Volu	me Purged (gal):				<u> </u>	ig voidine – gallons		STANDOLOS SALVOS DE SENSES.
			99921200114001115701411414	D SAMPLIN	G DAIA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
	Pump On							
0957	TESTINES AT INC RECENT LIFE IN SEC.	egi-Joseph Hillian Hillian (12 vol 4 v) eg		7, 55	2109	391.2		
1002				7,64	22.0	390,7		
1007	-			7.62	21.9	393.60		
1004								
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three c	onsecutive rea	adings within	0.3 su pH, 2 degree	es C, and 100 μS/c	m)
			treperatural period probabilistics	IPLE INFOR				
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
A11.10	6 1.	1012	D.A.	250mL	1	300,0	NA	Y
NWC-	00	1012	Poly	120MC		2001		
TORNOCCI DANOS (COLICO)		Bos Adlenia i i issa kadi Marin.						
		W	IATER LEVEL	MEASURE	MENT COL	E=6 I (6 N		
1	level measuremen							
1	ter level measurem				rt in wellhead			
ł .	ter level measuren ter level measuren							
Other:		ieni conecteu.	wen is pumping	.				
			WELL	PURGING IN	FORMATION			
☐ Purae	d 3 well volumes a	nd field parame	eters stabilized.	Bundarin mudelma				
□ Purge	d 3 well volumes b	ased on previo	us water level a	ind field paren	neters stabiliz	ed.		
	d well until field par							
Other								
Additiona	al Comments:							

Project No:	055038				Client:	Freeport Copp	er Queen Bran	ch
Task No:	<u>l.Ö</u>				Date:	30CT12		
Well ID:	Palmer				Weather:	Sunny, ~	, 70°F	
ADWR No:					Sampler:	WH' + =		
				WELL DA	A			
Well De	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
Casing [Diameter (in):					2 4	0.1 0.6	
						5	1.0	2
	r Level (ft bmp):	***************************************				6 8	1.4 2.6	
Casing \	/olume (gal):		<u>x3 = </u>			10	4.0	
Tetal Volun	ne Purged (gal):	annen kenasuraksan saankan	Becopping Menting Stiller - 17-11	8-48-471-8	<u> </u>	ng Volume = gallon	s/foot * water colur	nn (feet)
		Discharge	FIEL Total	D SAMPLIN	G DATA	Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comments	
	Pump On							
0852				8.09	25.7	526.7	****	
			~~····································					
				**				

				,			Pump Off	
teopromonary narrown gaps makenes	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within (0.3 su pH, 2 degree	s C, and 100 μS/c	m)
			SAN	IPLE INFOR	MATION			
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Palme	<u> </u>	0857	Poly	ZSOML	Ĵ	300.0	NA	<u> </u>
DUP 100	032012	C857	Poly	250mL	Į	300.0	NA	У
			ATER LEVEL	MEASUREN	MENT COLL	ECTION		
□ Water le	vel measurement	collected.	19.191900001112011110011119011190111	den in instrumental de la company de la comp				
. ,	r level measurem				t in wellhead			
i	r level measurem r level measurem							
☐ Other:		orn oundotou.	, rok to partipling.	•				
			WELLE	PURGING INF	ORMATION		en ekan er erriktiski en ekan acamaten	
1	3 well volumes an							
1	3 well volumes ba well until field para			id field pareme	eters stabilize	ed.		,
^ /	Quick gsal), モ う	ide of	house		
	Comments: \	•	۳ کاران کی غرص	decrease	ed rap	idly (w/	in Inin)	of
discharge		grab sand	ole afte	es- pur	ging 5	991		
V		·		, (<i>.</i>	<u> </u>		·····

Project No:	055038				Client: _	reeport Coppe	er Queen Branc	h	
Task No:	1.0				Date:	11/27/12			
Well ID:	Dannige	7/205			Weather:	Gunny,	704		
ADWR No:	7				Sampler:	VAIH			
				WELLIDA	AMARIN				
Well D	epth (ft bis):	200'	•		Nominal	Size (inches)			
	•	1.1				2		1	
Casing I	Diameter (in):	(0	a >			5	1.02	acity Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 t * water column (feet) Comments car, brown fint for a brown fint lear mp Off and 200 µS/cm) Filtered	
Static Water	er Level (ft bmp):	169,8				6 8			
Casing \	Volume (gal):	44	x3 = /	<u> 37 </u>		10			
Total Volur	ne Purged (gal):					g Volume = gallons	s/foot * water colum	n (feet)	
			FIEL	D SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents	
1603	Pump On								
1608	5	7-	35	7.02	20,7	1214		t	
1613	ro	7	70	7.11	20.3	1072	Gear of brow.	a that	
1618	15	7	105	7.4/3	20.3	1106	Clear		
1623	20	ワ	140	7.48	20.1	1143	``		
1628	25	マ	175	7.51	20,1	1164	(\		
							D. Off		
					<u> </u>	No III O de meso		m)	
	FIELD PARAMET	ER STABILIZ				J.Z Su pri, Z degrei	es O, and 200 perc		
				VPLE INFO				Eiltarad	
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
Panagada	? o.e	1634	Poly	250mc	1	300.0	NA	7	
Tana Geo.	203								
			I VATER LEVEI	MEASURE	MENT COL	ECTION			
	level measuremer ter level measuren		No access to w	eilhead/No po	ort in wellhead				
	ter level measurer								
	ter level measurer	nent collected.	Well is pumpin	g.					
☐ Other:				DIDCING IN	IFORMATION				
Purge	d 3 well volumes a d 3 well volumes b	ased on previo	ous water level a	and field parer	neters stabiliz	ed.			
	d well until field pa			•					
☐ Other:								***************************************	
Additiona	al Comments:								
<u></u>									

Project No:	055038				Client: <u>F</u>		r Queen Branch	1		
rask No:	(.0				Date:	10/9/12				
Well ID:	Parra				Weather:	Sinny '	70′3			
					Sampler:	MM				
ADWR No:				WELL DAT						
param (dissolation (lighter	/C /C I. I	2 1	55 ⁷		Nominal	Casing Size (inches)	Capacity Gallons per Lir	near Foot		
Well D	epth (ft bls):		2.1		140,111,120	2	0.16 0.65			
Casing f	Diameter (in):		<u>o''</u>			4 5	1,02			
Static Wate	er Level (ft bmp):					6 8	1.47 2.61	1.47 2.61 4.08 * water column (feet) Comments		
Casing '	Volume (gal):		x3 =			10				
_	·		240		Casing	g Volume = gallons	/foot * water colum	n (feet)		
Total Volur	ne Purged (gal):		- V	D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents		
1528	Pump On									
1533	5	16	80	7.42	21.8	1208				
1538	10	16	160	7.27	21.6	1205				
1543	15	100	240	7.30	21,3	(209		<u> </u>		
							Pump Off			
		ED CTABILIZA	ATION: Three C	onsecutive re	dinas within (l 0.3 su pH, 2 degre	es C, and 100 μS/ci	m)		
	FIELD FARANC		and a firm of the contract of	MPLE INFOR	deletioner (Biskinskinger) in					
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
2		1550	Poly	esani	· l	300	NA	8		
Parro		1 1 7 70	1 - 1	1 - 30/n C						
			I VATERILEVEI	MEASURE	MENT GOLI	LECTION				
No wa		nent collected. nent collected. nent collected.	Obstruction in v	vell. g. PURGING IN						
☐ Purge	d 3 well volumes a	ind field param	eters stabilized.			end				
	d 3 well volumes b			and neid parer	neters stabiliz	eu.				
Purge Other	d well until field pa	nameters Stabl	II£							
L	al Comments:									
Additions	ai Committenia.									

Project No:	055038				Client: F	reeport Coppe	r Queen Branch)
Task No:					Date:	10/17/10	Σ_	
Well ID:	PIONK	E 395)		Weather:	sunny	<u>,80s</u>	
ADWR No:					Sampler:	MML)	
				WELL DA	A III			
Well D	epth (ft bls):	ر 	0		Nominal	Size (inches)	Capacity Gallons per Lin	ear Foot
	•	(0	U	······································		2	0.16 0.65	
Casing I	Diameter (in):		1			5	1.02 1.47	
Static Water	er Level (ft bmp):	15-	5.31			6	2.61	
Casing '	Volume (gal):	<u> 213</u>	x3 =	038 <u> </u>		10	4.08	
Total Volur	ne Purged (gal):				Casing	y Volume = gallons	/foot * water columi	n (feet)
			ΠE	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	
1210	Pump On						water is oran potent s	g-brown small
1240	30	3.5	105	7.18	21.8	1186	same but slig	hlyclearet
1310	60	2,5	180	7.21	22.3	1141	11	
1340	90	2.5	255	7,17	22.5	1102	11	Crancut Coloc (
1410	120	7	447	7.19	22.3	1112	4min@25, 86@7	deleaner 3
1430	140	7	587	7.20	22.Q	1130	yellowish byo	uncleaver
1440	150	7	657	7.16	22.3	11360	yellow-brown for	15mil.
							- 0"	
						OII O dograd	Pump Off	w)
	FIELD PARAMET	ER STABILIZ	and a defendance of the control of the term of the control of the	onsecutive re	: Normal Department of the Color	J.2 su pn, 2 degree	es C, and 200 μS/cr	
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
0	U_ 20K	1485	Poly	250	İ	300.0	N	7
PION	KE 395	1400	roly	1-00				
nanagaipie (Engel)			 VATER LEVE		NEXT COLL			
			VATER BESTE					
Water	level measuremer	t collected.	**	Bloom and find the second	art in wallbaad			
	ter level measuren iter level measuren				OIT III Meinicad			
	iter level measurer							
☐ Other:								
			e zamel WELL	PURGING II	IFORMATION			
Purge	d 3 well volumes a	nd field param	eters stabilized	•				
	d 3 well volumes b			and field pare	meters stabiliz	ea.		
☐ Purge☐ Other	d well until field pa	rameters stabi	IIIZEO.					
L				broad	Zean hi	chind (sorth of Du	mobour
Additiona	al Comments:	1474	<u> </u>	U COUV				7
								· · · · · · · · · · · · · · · · · · ·

Project No:	055038				Client:	Freeport Coppe		1
Task No:	1.0				Date:	while	2_	
Well ID:	Pinnhe	517			Weather:	Sunny, 7	0 's	
ADWR No:					Sampler:	VNH toJ	·C.ゴ	
				WELL DA	ГА			
W. U.D.	tb_/&_bla\/	(QOL	-1 7		Nominal	Size (inches)	Capacity Gallons per Lir	near Foot
vveii Di	epth (ft bis):	5				2	0.16	
Casing [Diameter (in):	~				5	1.02	
Static Water	er Level (ft bmp):	152	.15			6	1.47	
Casing \	Volume (gal):	461	x3 = \	383		8 10	4.08	
	ne Purged (gal):		1326		Casin	g Volume = gallons	apacity Gallons per Linear Foot 0.16 0.65 1.02 1.47 2.61 4.08 oot * water column (feet) Comments	
I Otal Volui	ne Fuigeu (gai).			D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1005	Pump On			ligi istika l				
1025	20	13	260	7.80	22,7	401.3		
1045	40	13	520	7.79	22.9	398.8		
11.05	(ev	(3)	740	7,76	22.8	396.1		
1125	80	13	1040	7,75	7_3.0	2a6.3		
1145	100	13	1300	7.75	22,8	394.7		
1147	lor	1,4	1324					
*								
							Pump Off	
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive re	adings within (0.3 su pH, 2 degree	es C, and 100 μS/cr	n)
			SAI	VIPLE INFO	rmation -			
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	
Plank	517	1149	Poly	250mL	. 1	300,0	AN	Y
(10/110)		1 1 1 1 1						(
		ilis i kiri i	I VATER LEVEI	I MEASURE	MENTE COL	LECTION		
	level measuremer							
	ter level measuren				ort in wellhead			
1	ter level measuren ter level measuren							
☐ No wat	er level measuren	ien wiected.	AACII IS barribini	9.				
			WELL	PURGING IN	IFORMATION			ding at Moranda. Graficia at decida
1 Purgeo	d 3 well volumes a	nd field param	eters stabilized.					
D Purgeo	d 3 well volumes b	ased on previo	us water level a	and field parer	neters stabiliz	ed.		
1	d well until field pa	rameters stabi	lized.					
☐ Other:								
Additiona	l Comments:							

Project No:	055038			(Client: _	Freeport Coppe	er Queen Branch			
Task No:	1.0				Date: _	10/8/12				
Well ID:	Bamire	2		1	Weather:	Sunny, 70	' 5			
ADWR Na:	I lock til C	<u>~</u>			Sampler:	HUV				
			独字的技术品	WELL DAT						
101-11-11	- A - A - L - L	3 <i>0</i> c	₃)		Nominal	Casing (Size (inches)	Capacity Gallons per Lir	near Foot		
vveii D	epth (ft bis):		<u> </u>			2	0.16 0.65			
Casing I	Diameter (in):	(a "				5	1.02			
Static Water	er Level (ft bmp):	1604	, 38'		6 1.47 8 2.61					
Casing '	Volume (gal):	200	x3 =	G00	8 2.61 10 4.08					
_	ne Purged (gal):		605		Casin	g Volume = gallons	/foot * water colum	n (feet)		
				D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents		
1406	Pump On									
1416	10	/1	110	7.50	27.6	409,1				
1426	20	1(220	7,57	22.7	410.3				
1436	30	1(330	7.61.	27.7	411,9				
1446	40	11	440	7.67	22.6	411.9				
1456	50	\((550	7.57	22.6	411.6				
1501	55	Ì	605	7.6.1	22,5	412.0				
						<u> </u>	Pump Off	>		
	FIELD PARAMET	ER STABILIZ		to contage most have give made change, alt-	CARROLL AND COMPANY OF THE PART	0.3 su pH, 2 degree	es C, and 100 μS/C	n) Tarandanka		
			SAM	MPLE INFOR	RMATION					
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Ramir	-2/7	1504	Poly	250nl	l	300,0	NA	Υ		
		1505	Poly	250mL	(300,0	NA	4		
製物開始製	<u>0082012</u>	en Berenneille en ette balds	VATER LEVEL	ana kaling balang at 1866	MENT COL	er. I. Chareconing (vija) of apalpeerd (2000) i				
₩ Water	level measuremer			jakoer Kralissiak				inchili (schrödi) (iclimi turcimia).		
	ter level measuren		No access to w	ellhead/No po	rt in wellhead			•		
	ter level measurer									
☐ No wa	ter level measurer	nent collected.	Well is pumping	g.						
☐ Other.				PURGING IN	EORMATION					
			STANCESTANTIA (ACCUSATION	Mari desimali esti sic						
Purge	d 3 well volumes a d 3 well volumes b	no nelo parami Issed on previo	eters stabilizeu. ius water level a	and field paren	neters stabiliz	ed.				
1	d well until field pa			•						
☐ Other										
Additiona	al Comments:	well :	<u>s (a s</u>	hed b	etween.	big hove	ic Oq	sailes.		
()0	twough	N-faci	ny door.			J				
	<u> </u>		-							

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	<u>h</u>
Task No:	1.0				Date:	10/3/1	! 7	
Well ID:	RAY				Weather:	Sunny, bre	ezy, 80's	
ADWR No:					Sampler:	VNH x J		
				WELL DAT	A			
Weil D	epth (ft bis):	100,			Nominal	Size (inches)	Capacity Gallons per Li	
		(e "				2 4	0.16 0.65	l l
_	Diameter (in):	(90.				5	1.02 1.47	1
Static Wate	er Level (ft bmp):			170		6 8	2.61	
Casing \	Volume (gal):	57	x3 =	177		10	4.08	
Total Volur	me Purged (gal):					ig Volume = gallons	i/foot * water colum	in (teet)
			Patrician de la companya de la compa	D SAMPLIN	G DATA	Casalia .		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1353	Pump On							
1358	5	7	<i>35</i>	7.10	70,77	1457		
1403	70	7	70	7,10	20,6	1456		
1408	15	7	105	7.07	20.6	1445		
1413	20	7	140	7.10	21.1	1462		<i>γ</i> ^
1418	25	'7	175	7.12	21,1	1464	Pump Of	<i>f</i>
							f	
							Pump Off	
	FIELD DADAMET	TO CTABILIZA	ATION: Throng	one acutive res	dings within	l 0.3 su pH, 2 degree	·	m)
	PIELU PARAWET	ER STABILIZA		IPLE INFOR				
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Ray		1422	Palle	250ml	1	300,0	NA	Y
- "/			Υ	1 2 2 2 2 2 2				
) 	L VATER LEVEL	I MEASURE	I MENT COLI	ECTION		
	level measuremen							
E .	ter level measurent ter level measuren				rt in weilnead			
	ier level measuren ier level measuren							
☐ Other:								
			WELL	PURGING IN	FORMATION			
1/ \	d 3 well volumes a							
	d 3 well volumes b d well until field par			nd tield parerr	ieters stadiliz	ea.		
☐ Other:	a wen antii neta pai	amero olabii						
L	l Comments:	watered	l Tree	Ø 25.	3, 5)	de of	yard p	er
owner	requestr						t .	

Project No:	055038				Client:	Freeport Copp	er Queen Brand	ch	
Task No:					Date:	10/17/17			
Well ID:	ROGER	S E			Weather:	sunny.	70		
ADWR No:		•			Sampler:	MML			
				WELL DA	ΓΑ				
Well De	epth (ft bis):	296			Nominal	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
Casina F	Diameter (in):	(o ^{ti}				2 4	0.10 0.6	·	
		. /		\		5	1.02	2	
Static Water	r Level (ft bmp):		153.79 from			6 8	1.47 2.6	i	
Casing V	/olume (gal):	<u> </u>	x3 = (001		10	4.0		
Total Volum	ne Purged (gal):					ig Volume = gallon:	s/foot * water colur	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	
0835	Pump On			en esendulucia, saucu Gradia Reboglobij					
0845	10	13	130	7,53	21.9	429.5			
0855	20		260	7.53	21.8	429.2			
0905	30		390	7.50	21.9	438.4			
0915	40		5 2 0	7.54	31.8	429.6			
0925	50		650	7.55	21.7	429.0			
							Pump Off		
TERRES DO SE AMENA	FIELD PARAMET	ER STABILIZA	acetrariostas fideraram metebo	ovajenski prijadnja svanska čirga	aggregate denouglaterades	0.3 su pH, 2 degree	es C, and 100 µS/c	m) Lieuwana na mara	
				MPLE INFOR					
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
ROGE	ers E	0927	POLY	250	١	300,0	N	Υ	
		w	ATER LEVEL	MEASURE	MENT COLL	ECTION			
□ Water le	vel measuremen	t collected.			Versich Nelsche Versiche	ardagustas. Sistemaala kulajusessa verde			
☐ No wate	r level measurem	ent collected. I	No access to we	ellhead/No por	t in wellhead				
	r level measurem								
□ No wate □ Other:	r level measurem	ent collected. \	Well is pumping	,					
			iii ii wele	PURGING INF	ORMATION				
Purged	3 well volumes ar	id field parame		Pilonija programa programa programa programa programa programa programa programa programa programa programa pr Programa programa pr	ikuspiones (1966-1961) (24)		ete nisem se palar iselah sulatnan se		
1/	3 well volumes ba			nd field parem	eters stabilize	ed.			
□ Purged	well until field par	ameters stabili:	zed.						
☐ Other:			······································		, ,		<u> </u>		
Additional	Comments:	Sounder	- reast	y stu	ck at-	~ 49.5 ft, f	inally cam	u free.	
	use (10/13	-fX	· · · · · · · · · · · · · · · · · · ·	bmp		*	√	.,	
	USE(10/13/11)WL = 153, 191 bmp								

Project No:	055038				Client:		r Queen Brancl	1
Task No:	100				Date:	10/10/13		
Well ID:	Nocers	596			Weather:	gunny,	770's	
ADWR No:	- + 8 -				Sampler:	VNH E	JCJ	
				WELL DAT	A			
)Alali D	epth (ft bls):				Nominal	Size (inches)	Capacity Gallons per Li	near Foot
						2	0.16 0.65	
Casing	Diameter (in):	_	a			4 5	1.02	
Static Water	er Level (ft bmp):	139.	<u> 55</u>			6 8	1.47 2.61	
Casing	Volume (gal):		x3 =			10	4.08	
_	•				Casin	g Volume = gallons	/foot * water colum	n (feet)
lotal Volu	me Purged (gal):		i i i i i i i i i i i i i i i i i i i	D SAMPLIN	I IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pump On							

			· · · · · · · · · · · · · · · · · · ·					
							Pump Off	
	FIELD PARAMET	ER STABILIZA	TION: Three co	onsecutive re	adings within (0.3 su pH, 2 degree	es C, and 100 μS/ci	n)
			∕ SAN	IPLE INFOR	RMATION			
S	ample ID	7/ime	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
			ATER LEVEL	MEASURE	MENT COLI	ECTION		
X Mator	level measuremer							
	iter level measuren		No access to w	elinead/No po	ort in wellhead			
	iter level measuren							
ł	iter level measuren	nent collected. \	Well is pumping).				
☐ Other				DUDCING IN	FORMATION			
					d deprivati de protestado			
	d 3 well volumes a d 3 well volumes b			nd field parer	neters stabiliz	ed.		
	d well until field pa			L				
☐ Other								
Additiona	al Comments:	NLE)			<u>, , , , , , , , , , , , , , , , , , , </u>		

Project No:	ect No: 055038					Client: Freeport Copper Queen Branch				
Task No:	1,0	1,0				10/10/12				
Well ID:	Rogers	803			Weather:	5,000	/, 70'S			
ADWR No:					Sampler:	VNH +				
				WELL DAT	A michigas					
141-11-5		14	01		Nominal Size (inches)		Capacity Gallons per Linear Foot			
vven Di	epth (ft bis):		<u> </u>			2	0.16 0.65			
Casing [Diameter (in):	in O of Fil				5	1.02	1		
Static Wate	er Level (ft bmp):	13	9.55'			6	1.47 2.61	1		
Caeina \	Volume (gal):		x3 =			8 10	4.08			
	·	. 40		Casing Volume = gallons/foot * water column (feet)						
Total Volur	me Purged (gal):		[U	D SAMPLIN	I IG DATA					
		Discharge	Total			Specific		_		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents		
1224	Pump On									
1227	3	11.5	34,5	7,52	24,1	670.7	Discharge of Air in clis	ropped		
1230	(0	<u></u>	~37	7.46	24,2	673,1	Air in dis	charge		
1233	9	41	~40	7,41	24.3	671.4		· · · · · · · · · · · · · · · · · · ·		
							Pump Off			
	FIELD PARAMET	TER STABILIZ	a construction of the contract	 Company description of the company of		0.3 su pH, 2 degree	es C, and 100 μS/c	m)		
			SAI	VIPLE INFO	RMATION					
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Roger	5 GOD	1238	Poly	250mL	1	300.0	NA	<u>Y</u>		
1,1000	<u> </u>		 							
		V	L VATER LEVE	L MEASURE	MENT COL	LECTION				
□ Water	level measuremer	nt collected.								
	iter level measuren				ort in wellhead	I				
	iter level measurer									
!	iter level measurer	nent collected.	well is pumpin	g.						
□ Other:			WELL	PURGING IN	IFORMATION					
☐ Purge	d 3 well volumes a	ind field param	eters stabilized			(100) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110) (110)				
	d 3 well volumes b				meters stabiliz	zed.				
r	d well until field pa	rameters stabi	lized.							
☐ Other	*	, ,	1	1		11 . P.	- 2 \	30		
Additiona	al Comments:	Discha	rge trop	sped 51	gnitican	itly afte	or Omir	0+		
	funpina.									

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	h	
Task No:	1,0				Date:	10/9/12			
Well ID:	Ruiz				Weather:	SUNDYI	705		
ADWR No:		······································			Sampler:	VN4			
		ğı Hayin Hayin	is is is as is is.	WELL DAT					
Wali	epth (ft bis):	31	2.1		Casing Nominal Size (inches)		Capacity Gallons per L	inear Foot	
		<i>6</i> "		11000	2	0.16 0.65	3		
Casing I	Diameter (in):		^			4 5	1,02	2	
Static Water Level (ft bmp):			7.20° (sa	m 4/11/11		6 8	1,47 2.61	1	
Casing Volume (gal):		22	x3 =	le(o		10	4.08		
Total Volume Purged (gal):			66		Casin	Casing Volume = gallons/foot * water column (feet)			
			FE	D SAMPLIN	G DATA				
Time	Dota Diccharge		pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commo	ents		
14516	Pump On								
1450	3	4.4	13,2	7,69	21.4	488, Ce			
1504	8	4,4	35.2	7.18	21.3	891.9			
1500	13	4,4	57.2	7.19	21.4	891.8			
1511	15	4.4	66	7.18	21.4	890,6			
							Pump Off		
	EIELD DARAMET	ED STARII 17/	TION: Three co	nsecutive rea	dinas withia ().3 su pH, 2 degree		m)	
				IPLE INFOR	Saletqui (Al-Telligi) et epaggist				
Se	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Quia	<u> </u>	1514	Paly	250ml	(300,0	NA	7	
			/						
		, i	ATER LEVEL	MEASURE	MENT COLL	ECTION			
☐ Water	level measuremen	t collected							
☐ No wat	er level measuren er level measuren er level measuren	nent collected. nent collected.	Obstruction in w	rell.	rt in wellhead				
☐ Other:	er level measuren	ient consoled.	rren io pumping	,					
			WELL	PURGING INI	FORMATION				
1 -	i 3 weli volumes a								
1	I 3 well volumes but well until field par			nd field parem	eters stabilize	ed.			
	Commente:	VSL	SWL (FA 100 12	Take	29.7.201			
Additiona	Additional Comments: VGL SWL 450m			ACLANT.	14 27 1 33	~ 1 1 1 -			



Project No:	055038				Client:	Freeport Coppe	r Queen Branc	<u>h</u>		
Task No:					Date:	10/17/17	7			
Well ID:	SCHWAR	TZ_			Weather:	Sunny	080			
ADWR No:					Sampler: MML					
				WELL DAT						
Well De	epth (ft bls):	305	>		Casing Capacity Nominal Size (inches) Gallons per Linear Fo			near Foot		
		110			2 4		0.16 0.65			
	Casing Diameter (in): 0" Static Water Level (ft bmp): 128.9%					5	1.02 1.47	1		
Static Wate	r Level (ft bmp):		812.			6 8	2.61			
Casing Volume (gal):		259	x3 = \(\(\tau\)	77		10	4.08			
Total Volum	ne Purged (gal):					g Volume = gallons	/foot * water colum	n (feet)		
			Self-Marie Construction of the Construction of	D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (ºC)	Specific Conductance (µS/cm)	Comme	ents		
1002	Pump On									
1013	10	10	100	7.50	21.8	630,5				
1023	20		८ ७०	7.48	21.6	631.7				
1033	30		330	7.52	21,5	633.5				
1043	40		400	7.49	21.5	636.3				
1053	50		500	747	a1.5	639.0				
1103	60		600	7.48	21.60	64a.1				
1113	าง		700	7,49	21.6	643.8				
1123	80		800	7.48	21.6	(d15.0				
							Pump Off			
pozodadalidas interstutes sole	FIELD PARAMET	ER STABILIZ	and and and and are are a second and are a second as a	The temporary representation of the complete training	preprinting and property	0.2 su pH, 2 degree	is C, and 200 μ5/ci	11)		
			S/AN	/PLE INFOR						
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
SCHW	IARTZ	1126	Poly	250	1	300.0	7	7		
		V	VATER LEVEL	MEASURE	MENT COLL	EGTION				
	evel measuremen			-13 1961	1 ° 105 al					
1	er level measuren er level measuren				π in weiinead					
1	er level measuren									
☐ Other:						esconski menopis valiki (kin gerkum		egoven est estructura este est.		
			WELL	PURGING IN	FORMATION					
	3 well volumes a							:		
☐ Purged ☐ Other:	1									
L	Comments:									
Audidona	OUMBIERS.									

Project No:	055038				Client: F	reeport Coppe	<u>r Queen Brancl</u>	1
-					Date:	10/19/12		
Task No:	TM-10	USBP				Sunnu	70'5	
Well ID:	MITO	<u> Valest</u>			Sampler:	MML		
ADWR No:		energiikani jillebii		WELL DA				
						Casing (Capacity	
Well De	epth (ft bls):				Nominal	Size (inches)	Gallons per Lir 0.16	near root
Casino I	Diameter (in):					4	0.65	
-	-	27-	145			5	1.02 1.47	
Static Water	er Level (ft bmp):					8	2.61 4.08	
Casing \	Volume (gal):		x3 =			10]		n /feet)
Total Volur	ne Purged (gal):					g Volume = gailons	/100t Water colum	
			FIE	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
	Pumo On				rija i ja ja ja			
0846		en en en en en en en en en en en en en e		T8,20	20.0	414.9	ckar, brown	n tint.
<u> </u>				8.16	20,3	.416,5	٧.	
0856				8.14	20,3	419.6	clear	
0906				8.43	20.8	405.7	inator is la	moord the
1916				8.20	20.9	428.2	brann Somerm Sedument set	due black par
0926				8,18	20,9	427.6	mostly clear	0 /
0936				8.17	21.0	428. Q	1105114 ETEAL	F
0946	<u> </u>			0 61 (100	-120° W		
							Pump Off	
			TiON: Throad	nancecutive re	adings within	l 0.3 su pH, 2 degree	1	m)
	FIELD PARAME	ERSTABILIZ		MPLE INFO				
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
		(9/7W):		260	\	300.0	N	Y
1-MT	<u>o USBP</u>	0946	Poly	250				
		and the second s		esuvesapolikaisins (s. 90-ii)				
		٧	VATER LEVE	LMEASUR	EMENT COL	LECTION		
⊠ Water	level measuremer	nt collected.						
	ater level measurer				ort in wellhead			ļ
	ater level measurer							
1	ater level measurer	ment collected.	Well is pumpir	ng.				
☐ Other			WE!	PI RCING I	NEORMATION			
								DESTRUCTOR CONTRACTOR STATES AND ADDRESS OF TAXABLE STATES AND ADD
	ed 3 well volumes a ed 3 well volumes b				meters stabiliz	zed.		
	ed well until field pa			•				
□ Other								
<u> </u>	al Comments:	Well dr	1. with	each	runco	llow reck	rarge for	10 minute
153 rur			J)		0 '	
2º rur	~ ~ 20sec			·····				
3°~	10/20	,						

Cilent Freeport Copper Queen Branch Project No: Date: Task No: Weather: Well D: Sampler: ADWR No: WELL DATA **Casing Capacity** Gallons per Linear Foot Nominal Size (inches) Well Depth (ft bis): 0.16 0.65 Casing Diameter (In): 1.02 1.47 6 Static Water Level (it bmp): 2.51 8 4.08 Casing Volume (gals): Casing Volume = gallens/foot * water column (feat) 3 Casing Volumes (gals): FIELD SAMPLING DATA Specific Discharge Total ρH Temp Comments **Elapsed Time** Conductance Discharge Rate Time (SU) (°C) (min) (uS/cm) (gallons) (apm) 500 SAMPLE INFORMATION No. of Comments Analysis Method -Preservative Container Volume Sample ID Time Containers Type filtered EPA 300.0 none 250 ml plastic Additional Comments:

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h	
Task No:	<u>i,0</u>				Date:	10/9/12			
Well ID:	TVI 2	36			Weather:	Sunny 70	ی		
ADWR No:					Sampler:	UNY			
i akar				WELL DAT	A				
Well De	epth (ft bls):	22	2,		Nomina	Size (inches)	Capacity Gallons per L		
Casing D	iameter (in):	12) i			2 4	0.16 0.65	1	
_	r Level (ft bmp):		3.45'			5 6	1.02 1.47	i i	
	/olume (gal):	N397		191		8 10	2.61 4.08		
_	ne Purged (gal):	(EM)			Casing Volume = gallons/foot * water column (feet)				
Total Volum	ie ruigeu (gai).			D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commi	ents	
1013	Pump On								
1018	ち	100	500	7.52	20,3	516.3			
1023	10	100	1000	7.64	20.3	512.3			
1028	(5	(00	1500	7.56	20,4	513,7	lump of	3	
							5 05		
							Pump Off		
	FIELD PARAMET	ER STABILIZ	TO APPROXIMATE OF THE PROPERTY	onsecutive rea MPLE INFOR	een cook a codor Cale Cale	0.3 su pH, 2 degree	es C, and 100 μS/c	m) En en en en en en en en en en en en en en	
			alinga kasimatan dalah I						
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
TVI	V3G	1036	Poly	250ml		300.0	NA	7	
			ATER LEVEL	MEASURE	VIEN I CULI	ECHON			
<i>x</i> ¬	evel measuremen		N	ulika and Alama	t in wallhood				
	er level measurem er level measurem				in wenneau				
	er level measurem								
□ Other:				Jan 1981	valorsarana besiteteta	eressources (Vicador acros a deservir la mari		10 10 0 15 50 2 20 5 15 15 15 15 15 15 15 15 15 15 15 15 1	
			WELL	PURGING IN	ORMATION				
-	3 well volumes ar			. =					
	3 well volumes be well until field par			nd field parem	eters stabiliz	ed.			
Other.	weii unui neio pai	ameters staum	izeu.						
	Comments: 4	mu ins	ide old	winda	iii b(da, pump	Q sami	ole	
/ walloude		near Por	···		e fiel	d paramet	es @ 5	کنم ۵۲۰	
		Į	1)-1/			/		υ	
Colle	ict samp	le, O	filter_	w/ va	ccoum	pomp.	e4s I en		

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>h</u>	
Task No:	(,0				Date:	10/9/12			
Well ID:	TVI	713			Weather:	Sunny 70	5		
ADWR No:					Sampler:	VNIT			
				WELL DA					
Well De	epth (ft bis):				Nomina	Casing Size (inches)	Capacity Gallons per L	Gallons per Linear Foot	
						2	0,16	3	
Casing L	Diameter (in):	170	i ,		4 0.65 5 1.02				
Static Wate	r Level (ft bmp):	132.	16			6 8	1.47 2.6	i i	
Casing \	/olume (gal):		x3 =			10	4.08		
Total Volun	ne Purged (gal):				Casin	ig Volume = gallons	s/foot * water colun	nn (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	
	Pump On								
							Pump Off		
menimanimateron .a44vv	FIELD PARAMET	ER STABILIZA	Colta 146 on Nellegia Schlasserer	marena esta contrata da contrata da contrata da contrata da contrata da contrata da contrata da contrata da co	ama ka azala da agam yalek yany	0.3 su pH, 2 degree	es C, and 100 μS/c	m) sassassassassass	
			SAN	IPLE INFOR	mation =				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
		en en en en en en	ATER LEVEL	MEASURE	MENT COLL	ECTION			
`	evel measuremen								
ł	er level measurem er level measurem				t in wellhead				
	r level measurem r level measurem								
□ Other.			, , , , , , , , , , , , , , , , , , ,						
			WELL	PURGING INF	ORMATION				
	3 well volumes ar								
_	3 well volumes ba			nd field parem	eters stabilize	ed.			
☐ Purged☐ Other:	well until field par	ameters stabili	zea.						
	Comments:	WLO	ب م ' ل	215-la	721 1	e 2: of	ched		
, wantional	COLLECTIONS		-11/14		-12 (2, h	~ - T	<u> </u>		
<u> </u>			·····						

Project No:	055038				Client:	Freeport Coppe	****	:h
Task No:	j.O				Date:	10/9/13	······	
Well ID:	TVIS	575			Weather:	Sunny 1	770'5	
ADWR No:					Sampler:	VNGF		
			美丽那边的	WELL DAT	A排制制			con little per per per de l'ac ser seconditable lapres
Well Da	epth (ft bis):	3	30°	+4	Nominal	Size (inches)	Capacity Gallons per L	
Casing [Diameter (in):		S"			2 4	0.16 0.65	
_	- '		<u> </u>			5	1.02 1.47	2
Static Wate	r Level (ft bmp):					8	2.61	
Casing \	/olume (gal):	x3 =				10	4.08	
Total Volun	ne Purged (gal):			Casing Volume = gallons/foot * water column (feet)				
		FIELD SAMPLI		G DA1A Specific				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (℃)	Conductance (µS/cm)	Comme	ents
1110	Pump On							
1115	5	500	2500	7,24	21.5	885,6		
1120	10	500	5008	7,37	21.3	881,2		
1(22	12	500	(0000	7.39	26.9	882,8		
							Pump Off	
	I FIELD PARAMET	I ER STABILIZ	L ATION: Three c	I onsecutive rea	(dings within	l 0.3 su pH, 2 degree		m)
			m. moto ago, fort substantials (table base)	/PLEINFOR	para setta en la casa persona de menero			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
TUIS	575	1124	Poly	250mL)	300.0	NA	4
				1				
		ν	I VATER LEVEL	MEASURE	MENT COLL	ECTION		
, , , , ,	evel measuremen		81.	- 155	t in wellhood			-
22	er level measurem er level measurem				(III Wellifeau			
1	er level measurem							
☐ Other:		eireneteira 201 Gürnediği derê		engan majurikan dari eta	norther (T) Lind Fillings		John Krisueren (h. 1886)	
				PURGING INF	ORMATION			
1 / 🔪	3 well volumes at 3 well volumes be			nd field natem	eters stahiliza	∍rl		
_	well until field par			na nelo parem	Ctc.io otubilac			
□ Other:								
Additional	Comments:							

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1.0				Date:	10/9/11	2	
Well ID:	Weed				Weather:	Sunny	70's	
ADWR No:					Sampler:	VNH "		
				WELL DA	Austra			
Well De	pth (ft bis):	32	Ο.		Nomina	Size (inches)	Capacity Gallons per Linear Foot	
	iameter (in):					2 4	0.16 0.65	
	•	s 1.				5	1.02	2
Static Water	Level (ft bmp):	AN				6 8	1,47 2,61	
Casing V	olume (gal):		x3 =			10	4.08	
Total Volum	ie Purged (gal):		(00			g Volume = galions	/foot * water colum	ın (feet)
				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	∍nts
1400	Pump On							
M05	5	G	. 30	7.68	21.7	383.7		
1409	9	(a	54	7.67	21.5	385,0		
1411	(l	(e	66	7.66	21.5	385,1		
							D 0#	
			TION: TI			0.3 su pH, 2 degree	Pump Off	~~\
	-IELD PARAME I	ER STABILIZA		IPLE INFOR		J.5 su ph, 2 degree	s C, and 100 po/G	
								Filtered
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
Wee	d	1412	Poly	250~L	ł	3000-0	MA	Y
V 1			l					
			L /ATER LEVEL	I MEASUREI	MENT COLL	ECTION		
U Weterle	vel measuremen							ugu galudii yaan sen yes
- /2	r level measuremen		No access to we	ellhead/No por	t in wellhead			
`	r level measurem							
i	r level measurem	ent collected.	Well is pumping	ļ.	,			
□ Other:	acia di angana angan sa ma					NED SEE VERVIEW SEEN SEE KEEL DE		
				PURGING INI				
1	3 well volumes ar 3 well volumes ba			nd field parem	eters stabilize	ed.		
1 ~ ~	well until field par			no no paren				
Other:								
Additional	Comments:	use meta	ul nipple	in '4	<u> 25 ' 602</u>	. Pull be	2)/ Valve	
			1 1					

roject No:	055038			(Client: _	reeport Coppe	r Queen Branch	
ask No:	\ 10			Į.	Date:	10/11/1	7	
	Weighoof	° °602	!	1	Weather:	Partly clou	dy, windy	
Vell ID:	MEISICOPY				Sampler:	HNV	•	mawanananananananananananananananananana
DWR No:				WELLDAT	A	Casing		
AAI-E C	ath (6 ble):	200)		Nominal	Size (inches)	Gallons per Lin	ear Foot
	epth (ft bls):	Cs				2 4	0.16 0.65	
Casing D	Diameter (in):					5	1.02 1.47	
Static Wate	r Level (ft bmp):		73'	707		6 8	2.61	
Casing \	/olume (gal):	<u> 74</u>	x3 =	222		10	4.08	n (faat)
Total Volun	ne Purged (gal):		220 <u> </u>			g Volume = gallons	/foot * water colum	
				D SAMPLIN	g data	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (℃)	Conductance (µS/cm)	Comme	nts
1233	Pump On							
1243	10	ちん	55	7,25	21.1	1205		
1253	20	5,5	110	7.22	21.5	1374_		
1303	30	5.5	165	7.25	21.4	1370	1	
1313	40	5,5	220	7.26	21.3	1369		
							-	·
							Pump Off	
		TED STADULT	ATION: Three o	consecutive re	 adings within	0.3 su pH, 2 degre	es C, and 100 μS/c	m)
	FIELD PARAME	IER STABILIZ		MPLE INFO				
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
141 (Knof 502	1316	Poly	250 mL	1-1	300.0	NA	Y
Weis	. \		0 1		ſ	300,0	NA	Y
DODI	W12012	1317	VATERILEVE	250mC	MENT COL	near research to the second or member of the release res		
☐ No wa	level measureme ater level measuren ater level measuren ater level measuren	ment collected. ment collected.	Obstruction in	well.	ort in wellhea	d		
☐ Other			WEI	L PURGING II	NFORMATIO	N		
₩ Purge	ed 3 well volumes a	and field param						
Purge	ed 3 well volumes i	based on previ	ous water level	and field pare	meters stabil	ized.		
	ed well until field pa							
☐ Othe						<u> </u>	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	
Addition	al Comments:				<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			



Project No:	05503	8			Client:	Freeport Coppe	er Queen Branc	h <u> 64</u>	
Task No:	}			Mary & Branch Company	Date:	n/0/2			
Well ID:	WEISK	UPF 89	7		Weather:	Sunnel	}		
ADWR No:					Sampler:	MML/BJE			
		departure.	Life de la company	WELL DAT	A			one one one Carpo de Guilles	
Well De	pth (ft bls):	1030	3		Casing Nominal Size (inches)		Capacity Gallons per L	inear Foot	
	iameter (in):	5			2		0.16 0.65		
	•	11/1	9.27			4 5	1.02	2	
Static Water	Level (ft bmp):				·	6 8	1.47 2.61	1	
Casing V	olume (gal):	899 x3 = 2700				10	4.08	<u>-</u>	
Total Volum	e Purged (gal):		9	$J^{(1)}$		g Volume = gallons	s/foot * water colun	nn (feet)	
			III FIEL	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
1:11	Pump On								
1131	20	20	400	8118	2316	397.1			
1151	40		800	8.06	23.1	409-1			
1211	60		1200	7,94	23,4	403.9			
1231	80		1600	7,92	23,3	400-1			
1251	100	***	2000	7.89	23.7	403.8			
1311	120		2400	7.92	23,55	396.5			
1331	140		2800	7,93	236	398.3			
							Pump Off		
F	FIELD PARAMET	ER STABILIZA	lankkustai olfaldiga sõlkiridrasta tadb	udvaruene en en gestelen	ájállógiákkadagátlógjásálábakiáp).3 su pH, 2 degree	es C, and 100 μS/c	m) Roseni Senos Gregoria	
			SAN	IPLE INFOR	MATION				
San	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
WEISKOD	p 897	1335	Poly	250	1	300 <u>.0</u>	· N	Y	
			J	~		***************************************			
		A TOTAL	ATER LEVEL	MEASUREI	MENT COLL	ECTION			
Ø Water le	vel measurement	collected.	Engal Sugar Sugar process credit runges proce		111111111111111111111111111111111111111	See A Sept 11 2 and by college stems, and fined 1 and 1 and 1 and 1 and 1		STATE OF THE PROPERTY OF THE P	
10.	r level measurem		No access to we	ilhead/No por	t in wellhead				
	r level measurem					•			
į	r level measurem	ent collected.	Well is pumping	•					
	□ Other: WELL PURGING INFORMATION								
□ Purged 3	□ Purged 3 well volumes and field parameters stabilized.								
i "	<u> </u>								
·	well until field par	ameters stabil	ized.						
Other:									
Additional (Comments:	w	. <u>.</u>						

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	h
Task No:	1,0				Date:	10/8/12		
Well ID:	Zandes				Weather:	SUNNY, VNH	703	
ADWR No:					Sampler:	VNH.		
				WELL DA	A 4 (4 (4) (4)			
 Well D	epth (ft bls):	280			Nominal	Size (inches)	Capacity Gallons per L	inear Foot
		6"				2 4	0.16 0.65	i i
Casing t	Diameter (in):					5	1.02	
Static Wate	er Level (ft bmp):		92'			6 8	1.47 2.61	1
Casing \	Volume (gal):	<u>190</u>	x3 = 5	70		10	4.08	
Total Volur	ne Purged (gal):	j	526,5		Casin	g Volume = gallons	/foot * water colum	nn (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
1610	Pump On							
1620	lu	12,5	125	7,58	21.3	428.4		
1630	20	12.5	250	7.61	21.2	431.8		
1640	30	12.5	375	7.64	20,9	431.2		
1650	40	12.5	500	7.59	21.2	433.2		
1655	45	12.5	562,5	7,58	8.05	431.4		
							Pump Off	
	FIELD PARAMET	ER STABILIZA	nga kangata i Alisa da da mangata da da da da da da da da da da da da da			0.3 su pH, 2 degree	is C, and του με/c	11) 12.45.15.15.15.15.15.15.15.15.15.15.15.15.15
				IPLE INFOR				
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Zand	<u>ی ۲</u>	1659	Poly	250mL	· \	300.0	NA	<u> </u>
		- A	ţ					
		N S	ATER LEVEL	MEASURE	WENT COLL	ECTION		
Ø Water I	evel measuremen	t collected.	Nega Blende Serreberpseich Ereit		100153151561515616556116631			
□ No wat	er level measurem	ent collected.			t in wellhead			
1	er level measurem							
□ No wat	er level measurem	ient collectea.	vveii is pumping].				
			WELL	PURGING INI	ORMATION			
Purged	3 well volumes a	nd field parame	eters stabilized.	deline de molentales estadomes	HERRE HERRITARE HERRITAREN		uti oj Chi deplomi je in helpeta 2. 2. a g 54 il 1951:	0.2000000000000000000000000000000000000
V \	3 well volumes be			nd field parem	eters stabilize	ed.		
1	well until field par	ameters stabil	ized.					
Other:		- בולד	<i>a</i> - \	(L	enocts to	; P. J /	1/2000
Additional	Comments:	Please	<u> send</u>	al to	ture re	sports to	? Patry Lee	Hayes 4035
							Bisbee A	7 85603

