THIRD QUARTER 2011 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

36 West Highway 92 Bisbee, Arizona 85603

Prepared by:

CLEAR CREEK ASSOCIATES, P.L.C. 221 North Court Avenue Suite 101 Tucson, Arizona 85701

October 7, 2011

THIRD QUARTER 2011 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

36 West Highway 92 Bisbee, Arizona 85603

Approved by:

James R. Norris

Arizona Registered Geologist No. 30842

NORRIS

Expires 12/31

TABLE OF CONTENTS

1.	INTRODUCTION	1
	1.1 Scope of Groundwater Monitoring	1
2		_
2.	GROUNDWATER MONITORING RESULTS	
	2.1 Results of Monitoring2.2 Quality Assurance/Quality Control Review	
	2.2 Quanty Assurance/Quanty Control Review	-
3.	FINDINGS	4
4.	REFERENCES	6
	TABLES	
1	Schedule for Water Quality Sampling and Water Level Monitoring	
2	Summary of Groundwater Monitoring for Third Quarter 2011	
3	Compilation of Analytical Results for Sulfate and Field Parameters	
4	Compilation of Groundwater Elevation Data	
	FIGURES	
1	Congreliged Coolegy and Well Locations	
1 2	Generalized Geology and Well Locations Sulfate Concentrations in Groundwater Third Quarter 2011	
3	Groundwater Elevations Third Quarter 2011	
4	Sulfate Concentration Over Time in Public Drinking Water Supply Wells	
5	Hydrographs for BMO Monitor Wells in Basin Fill	
6	Hydrographs for BMO Monitor Wells in Bedrock	
	APPENDICES	
A	Data Verification Report	
В	Analytical Reports	
C	Groundwater Sampling Forms	

1. INTRODUCTION

This report provides the results of groundwater monitoring conducted by Freeport-McMoRan Corporation Copper Queen Branch (CQB) in the third quarter 2011 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. The Work Plan was 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 purpose 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 plume is considered to consist 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 identified for monitoring in the third quarter, their availability for sampling, and their sampling status. Groundwater sampling and analysis methods used by Clear Creek and CQB 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.

Four new monitor wells, BMO-2010-1M, BMO-2010-2M, BMO-2010-3B, and BMO-2010-3M, were installed in the third quarter of 2010. The new wells were added to the groundwater monitoring program pursuant to Section 3 of the Work Plan (HCG, 2008).

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring

Analytical results and groundwater elevation data for the third quarter 2011 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 third quarter 2011. The most recent sample results are shown at wells where multiple samples were collected during the quarter. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 3 shows groundwater elevations in the third quarter 2011. Groundwater elevations were calculated using depth to water measurements made under static (nonpumping) conditions for all wells shown on Figure 3.

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 and analytical laboratory reports for data collected by Clear Creek and CQB during the third quarter 2011 are included in Appendix A and Appendix B, respectively. Copies of groundwater sampling forms for samples collected by Clear Creek and CQB are in Appendix C. As determined by the analytical data verification review, all data for samples collected in the third quarter 2011 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 third quarter 2011. Groundwater samples were collected from 78 wells and depth to water measurements were collected at 63 wells. The December 2010 Aquifer Characterization Report (Clear Creek, 2010) provides detailed descriptions of the hydrogeology, water quality, and sulfate plume. Findings based on the third quarter 2011 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 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 area of approximately 2.5 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 sulfate concentration in bedrock monitoring well BMO-2008-10GL was 1,020 mg/L in July 2010 and 644 mg/L in July 2011. The July 2011 sample concentration was the lowest to date. The well is currently scheduled for sampling annually because it is a monitor well within the sulfate plume but will be sampled in fourth quarter 2011 to confirm the lower concentration.
- The sulfate concentration at private drinking water supply well PANAGAKOS was below 250 mg/L for the first time since monitoring began. The lowest concentration prior to this quarter was 318 mg/L in January 2010. The sulfate concentration for the sample collected July 14, 2011 was 223 mg/L. The sample was reanalyzed and the concentration was 220 mg/L. The well was resampled on August 25, 2011. The sulfate concentration in that sample was 222 mg/L. The well owner indicated that no changes were made to the well or piping system. The well will continue to be monitored quarterly to determine long term trends and to confirm the lower concentration.
- Comparison of the third quarter 2011 sulfate concentrations with previous quarters indicates no large scale change in the plume geometry since the Mitigation Order sampling began in the fourth quarter 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 northeast to southwest in the area east of the Black Gap Fault and between the Bisbee Municipal Airport and Bisbee Junction, and from east to west across the central portion of the study area west of the Black Gap Fault (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 decrease has been 4.16 feet since July 2008. Groundwater elevations in BMO monitor wells screened in bedrock are relatively steady over time, although BMO-2008-10GL and BMO-2008-11G display increasing trends whereas BMO-2008-1G displays a decreasing trend.

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.
- 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	613396	✓	✓	✓	✓
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 ¹	219957	✓	✓	✓	✓
BMO-2010-2M ¹	219958	✓	✓	✓	✓
BMO-2010-3B ¹	219970	✓	✓	✓	✓
BMO-2010-3M ¹	219969	✓	✓	✓	✓
CHAMBERS	629807	✓	✓	✓	✓
COB MW-1	903992			✓	
COB MW-2	903984	✓		✓	
COB MW-3	906823			✓	
COB WL	593116			✓	
COOPER	623564	✓	✓	✓	✓
COOPER C	637069	✓	✓	✓	✓
DODSON	644927	✓	✓	✓	✓
DOUGLASS 791	592791	WLO		WLO	



Table 1 Schedule for Water Quality Sampling and Water Level Monitoring

Well Name	ADWR 55 Registry No.		Quarterly Sampling Second Quarter	Annual Sampling Third Quarter	Quarterly Sampling Fourth Quarter
DOUGLASS 792	592792	WLO		WLO	
DURAZO	NR	✓	✓	✓	✓
EAST	599796	✓	✓	✓	✓
EPPELE 641	805641	✓	✓	✓	✓
FLEMING	218386	WLO		WLO	
FRANCO	500101	✓	✓	✓	✓
FULTZ	212447	✓	✓	✓	✓
GARNER 557	558557	WLO		WLO	
GARNER 635	587635	✓	✓	✓	✓
GGOOSE 547	628547	✓		✓	
GOAR RANCH	610695	WLO		WLO	
HOBAN	805290	✓	✓	✓	✓
HOWARD	NR	✓	✓	✓	✓
KEEFER	209744	✓	✓	✓	✓
MCCONNELL 265	539265	✓	✓	✓	✓
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	613395	✓	✓	✓	✓
POOL	509518	✓	✓	✓	✓
RAMIREZ	216425	✓	✓	✓	✓
RAY	803772	✓	✓	✓	✓
ROGERS 596/803	573596	✓	✓	✓	✓
ROGERS E	216018	✓	✓	✓	✓
RUIZ	531770	✓	✓	✓	✓
SCHWARTZ	210865	✓	✓	✓	✓
STEPHENS	808560	WLO		WLO	
SUNBELT	201531	WLO		WLO	
SWAN	NR	✓		✓	



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
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	641802	✓	✓	✓	✓
ZANDER	205126	✓	✓	✓	✓

Notes:

ADWR = Arizona Department of Water Resources

WLO = Water Level Only

NR = No Record



¹Well installed third quarter 2010 and will be sampled quarterly for the first year and re-evaluated at the end of that year.

Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
ANDERSON	613396	Anderson	Well Inventory	236	Y	Y	Water quality sample collected in July 2011.	
AWC-02	616586	Arizona Water Company	Plume	330	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because well was pumping.	
AWC-03	616585	Arizona Water Company	Plume	269	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because well was pumping.	
AWC-04	616584	Arizona Water Company	Plume	250	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because well was pumping.	
AWC-05	590620	Arizona Water Company	Plume	1183	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because well was pumping.	
BANKS 986	647986	Banks	Well Inventory	435	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because wellhead is not accessible.	
BANKS 987	647987	Banks	Well Inventory	339	Υ	N	Water level collected in July 2011.	
BARTON 919	644919	Barton	Plume	130	N	N	Unable to access well. Unable to contact well owner.	
BF-01	539783	Copper Queen Branch	Plume	400	Y	Y	Water quality sample collected in July 2011.	
BIMA	577927	Bisbee Municipal Airport	Plume	465	N	Υ	Water quality sample collected in August 2011. Water level not collected, could not get sounder down well.	
BMO-2008-1G	909474	Copper Queen Branch	Plume	310	Υ	Υ	Water level collected in July 2011.	
BMO-2008-3B	909147	Copper Queen Branch	Plume	260	Y	Y	Water level collected in July 2011.	
BMO-2008-4B	910096	Copper Queen Branch	Plume	610	Υ	Y	Water level collected in July 2011.	
BMO-2008-5B	909653	Copper Queen Branch	Plume	285	Y	Υ	Water level collected in July 2011.	
BMO-2008-5M	909552	Copper Queen Branch	Plume	450	Υ	Υ	Water level collected in July 2011.	
BMO-2008-6B	909146	Copper Queen Branch	Plume	265	Υ	Υ	Water level collected in July 2011.	
BMO-2008-6M	909019	Copper Queen Branch	Plume	450	Υ	Υ	Water level collected in July 2011.	
BMO-2008-7M	908794	Copper Queen Branch	Plume	670	Υ	Υ	Water level collected in July 2011.	
BMO-2008-8B	910097	Copper Queen Branch	Plume	480	Υ	Υ	Water level collected in July 2011.	
BMO-2008-8M	909711	Copper Queen Branch	Plume	1210	Υ	Υ	Water level collected in July 2011.	
BMO-2008-9M	909255	Copper Queen Branch	Plume	775	Y	Y	Water level collected in July 2011.	
BMO-2008-10GL	909435	Copper Queen Branch	Plume	810	Υ	Υ	Water level collected in July 2011.	
BMO-2008-10GU	909272	Copper Queen Branch	Plume	449	Υ	Υ	Water level collected in July 2011.	
BMO-2008-11G	909434	Copper Queen Branch	Plume	760	Υ	Υ	Water level collected in July 2011.	
BMO-2008-13B	909551	Copper Queen Branch	Plume	474	Υ	Υ	Water level collected in July 2011.	
BMO-2008-13M	909760	Copper Queen Branch	Plume	1030	Y	Y	Water level collected in July 2011.	
BMO-2010-1M	219957	Copper Queen Branch	Plume	540	Y	Y	Water level collected in August 2011.	
BMO-2010-2M	219958	Copper Queen Branch	Plume	370	Υ	Υ	Water level collected in July 2011.	
BMO-2010-3B	219970	Copper Queen Branch	Plume	330	Υ	Υ	Water level collected in July 2011.	



	, , , , , , , , , , , , , , , , , , ,						
Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status
BMO-2010-3M	219969	Copper Queen Branch	Plume	532	Y	Y	Water level collected in August 2011.
CHAMBERS	629807	Chambers	Well Inventory	245	N	Y	Water quality sample collected in July 2011. Unable to collect water level because wellhead is not accessible.
COB MW-1	903992	City of Bisbee	Plume	420	Υ	Υ	Water level collected in July 2011.
COB MW-2	903984	City of Bisbee	Plume	170	Υ	Υ	Water level collected in July 2011.
COB MW-3	906823	City of Bisbee	Plume	269	Υ	Υ	Water level collected in July 2011.
COB WL	593116	City of Bisbee	Plume	150	Υ	Υ	Water level collected in July 2011.
COOPER	623564	Cooper, Teresa	Plume	325	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because wellhead is not accessible.
COOPER C	637069	Cooper, Charles	Plume	220	Y	Y	Water quality sample collected in August 2011.
DODSON	644927	Dodson	Plume	200	Y	Y	Water quality sample collected in July 2011.
DOUGLASS 791	592791	Douglass	Well Inventory	200	Ν	Z	Well identified for water level measurements only; no water level measurement collected. Well property has new owner. Unable to contact new owner to get access agreement.
DOUGLASS 792	592792	Douglass	Well Inventory	200	Y	N	Well identified for water level measurements only; water level measurement taken in July 2011.
DURAZO	NR	Durazo	Well Inventory	ND	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because wellhead is not accessible.
EAST	599796	East	Well Inventory	125	Υ	Υ	Water quality sample collected in July 2011.
EPPELE 641	805641	Eppele	Well Inventory	265	Υ	Υ	Water quality sample collected in July 2011.
FLEMING	218386	Fleming	Well Inventory	400	Y	N	Well identified for water level measurements only. Water level measurement taken in July 2011.
FRANCO	500101	Franco	Well Inventory	200	N	N	Well not operational.
FULTZ	212447	Fultz	Well Inventory	300	N	Y	Water quality sample collected in August 2011. Unable to collect water level due to obstruction in well.
GARNER 557	558557	Garner	Plume	300	Y	N	Well identified for water level measurements only. Water level measurement taken in July 2011.
GARNER 635	587635	Garner	Plume	680	Y	Y	Water quality sample collected in July 2011.
GGOOSE 547	628547	Copper Queen Branch	Plume	800	N	N	Well not operational. Unable to collect water level due to obstruction.
GOAR RANCH	610695	Goar	Well Inventory	250	Υ	N	Well identified for water level measurements only; water level measurement taken in July 2011.
HOBAN	805290	Hoban	Well Inventory	316	Υ	Υ	Water quality sample collected in August 2011.
HOWARD	NR	Howard	Well Inventory	200	Y	Y	Water quality sample collected in August 2011.
KEEFER	209744	Keefer	Well Inventory	245	Υ	Y	Water quality sample collected in July 2011.
MARCELL	NR	Marcell	Plume	220	N	Υ	Water quality samples collected in August and September 2011. Unable to collect water level because there is no available port in wellhead.
MCCONNELL 265	539265	McConnell	Well Inventory	216	Y	Y	Water quality sample collected in July 2011.



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
METZLER	35-71891	Metzler	Well Inventory	351	Y	Y	Water quality sample collected in July 2011.	
MOORE	538847	Moore	Well Inventory	220	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because wellhead is not accessible.	
NESS	509127	Ness	Well Inventory	812	Y	Y	Water quality sample collected in July 2011.	
NOTEMAN	212483	Noteman	Well Inventory	400	N	Y	Water quality sample collected in July 2011. Unable to collect water level due to obstruction in well.	
NSD-02	527587	Naco Sanitary District	Water Level	120	N	N	Well identified for water level measurements only. Unable to contact well owner to collect water level measurement.	
NSD-03	527586	Naco Sanitary District	Water Level	100	N	N	Well identified for water level measurements only. Unable to contact well owner to collect water level measurement.	
NWC-02	562944	Naco Water Company	Plume	312	N	Y	Water quality sample collected in July 2011. Unable to collect water level because the well was pumping.	
NWC-03	203321	Naco Water Company	Plume	312	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because the well was pumping.	
NWC-03 CAP	627684	Naco Water Company	Plume	179	Υ	N	Well identified for water level measurements only. Water level measurement taken in July 2011.	
NWC-04	551849	Naco Water Company	Well Inventory Sulfate Trend	795	N	Υ	Water quality sample collected in July, September, and October 2011. Unable to collect water levels because the well was pumping.	
NWC-06	575700	Naco Water Company	Well Inventory	410	N	Υ	Water quality sample collected in July 2011. Unable to collect water level because the well was pumping.	
OSBORN	643436	Osborn	Plume	258	Υ	Υ	Water quality sample collected in July 2011.	
PALMER	578819	Palmer	Well Inventory	220	N	Y	Water quality sample collected in July. Unable to collect water level because wellhead is inaccessible.	
PANAGAKOS	35-76413	Panagakos	Well Inventory	200	Y	Y	Water quality samples collected in July and August 2011.	
PARRA	576415	Parra	Plume	355	N	Y	Water quality sample collected in July 2011. Unable to collect water level because of obstruction in well.	
PIONKE	613395	Pionke	Well Inventory	300	Y	Y	Water quality sample collected in July 2011.	
POOL	509518	Pool	Well Inventory	313	N	N	Unable to access well. Unable to contact well owner .	
RAMIREZ	216425	Ramirez	Well Inventory	300	Y	Y	Water quality sample collected in July 2011.	
RAY	803772	Ray	Well Inventory	100	Y	Y	Water quality sample collected in July 2011.	
ROGERS 596	573596	Rogers, Ernest D	Plume	290	Y	N	Well is turned off. Rogers residence uses ROGERS 803. Water level measurement collected in July 2011.	
ROGERS 803	641803	Rogers, Ernest D	Plume	140	N	Y	Water quality sample collected in July 2011. Unable to colle water level measurement because wellhead is not accessible.	
ROGERS E	216018	Rogers, Ernest M	Well Inventory	290	N	Y	Water quality sample collected in July 2011. Unable to collect water level because of obstruction in well.	
RUIZ	531770	Ruiz	Well Inventory	312	N	Y	Water quality sample collected in August 2011. Unable to collect water level measurement because wellhead is not accessible.	
SCHWARTZ	210865	Schwartz	Well Inventory	305	Y	Y	Water quality sample collected in July 2011	



Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet bls)	Water Level Measured?	Water Sample Collected?	Status	
STEPHENS	808560	Stephens	Well Inventory	NR	Y	N	Well identified for water level measurements only. Water level measurement taken in July 2011.	
SUNBELT	201531	Sunbelt Marketing, Inc.	Well Inventory	380	Υ	N	Well identified for water level measurements only. Water level measurement taken in July 2011	
SWAN	NR	Swan	Well Inventory	NR	Υ	Y	Water quality sample collected in July 2011.	
TM-02A	522574	Copper Queen Branch	Plume	925	Υ	Y	Water quality sample collected in July 2011.	
TM-06 MILLER	522695	Miller	Plume	200	Y	Y	Water quality sample collected in July 2011.	
TM-07	522576	Copper Queen Branch	Plume	350	N	Y	Water quality sample collected in July 2011. Unable to collect water level measurement because of obstruction in well.	
TM-15 MILLER	522699	Miller	Well Inventory	325	N	Υ	Water quality sample collected in July 2011. Unable to collect water level measurement because of obstruction in well.	
TM-16	522578	Copper Queen Branch	Plume	115	Υ	Y	Water quality sample collected in July 2011.	
TM-19A	522580	Copper Queen Branch	Plume	700	Υ	Y	Water quality sample collected in July 2011.	
TM-42	562554	Copper Queen Branch	Plume	250	Υ	Υ	Water quality sample collected in July 2011.	
TVI 236	802236	Turquoise Valley, Inc.	Well Inventory	222	Υ	Υ	Water quality sample collected in July 2011.	
TVI 713	567713	Turquoise Valley, Inc.	Well Inventory	200	Υ	N	Well identified for water level measurements only. Water level measurement taken in July 2011.	
TVI 875	568875	Turquoise Valley, Inc.	Plume	330	N	Y	Water quality sample collected in July 2011. Unable to collect water level because well head is not accessible.	
WEED	544535	Weed	Plume	320	N	Y	Water quality sample collected in July 2011. Unable to collect water level because well head is not accessible.	
WEISKOPF	641802	Weiskopf	Plume	200	Υ	Υ	Water quality sample collected in August 2011.	
ZANDER	205126	Zander	Well Inventory	280	Y	Y	Water quality sample collected in July 2011.	

ADWR = Arizona Department of Water Resources

BIMA = Bisbee Municipal Airport

ft amsl = feet above mean sea level

NR = No Record

35-71891 = ADWR 35 Database

Y = Yes

N = No



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

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	7.27	21.0	965	488				
	1	4/14/09	7.12	21.8	1229	534				
	l	7/14/09	7.03	22.2	1372	550				
ANDERSON	613396	10/12/09	6.98	21.5	1375	510				
	I	1/27/10	7.93	20.1	1449	523				
	1	4/21/10	7.40	20.7	1439	627				
	I	7/19/10	6.93	24.1	1420	648				
	1	10/19/10 1/17/11	7.03 7.02	20.6	1229	416 562				
	I			20.6	1334					
	I	4/11/11 7/14/11	6.92 7.23	15.1 24.4	1485 1451	609 678				
	1	1/7/08	7.23 ND	ND	ND	14				
	I	3/3/08	ND ND	ND ND	ND	16				
	H	5/5/08	ND ND	ND ND	ND	13.3				
	H	8/12/08	7.01	22.3	630	14.3				
	1 H	10/23/08	7.31	23.1	464	15.9				
	1 F	3/11/09	7.19	21.8	420	15.5				
	1 F	4/22/09	7.17	22.6	430	14.7				
	l F	7/22/09	7.24	22.7	444	14.2				
AWC-02	616586	10/21/09	7.19	21.3	468	16.8				
	1	2/3/10	7.44	19.7	449	18.6				
	1	4/23/10	7.56	19.7	526	18.3				
	1	7/20/10	7.27	23.9	450	18.2				
	1	11/4/10	7.72	21.3	465.9	18.8				
	1	1/19/11	7.84	19.0	500	18.4				
	1	4/7/11	7.27	20.3	488.5	17.3				
		7/13/11	5.93	23.9	431.5	12.9				
		1/7/08	ND	ND	ND	41				
	1 [3/3/08	ND	ND	ND	38				
		5/5/08	ND	ND	ND	37.3				
		8/12/08	7.28	22.4	469	38.8				
	1	10/23/08	7.48	21.0	462	41.8				
		3/11/09	7.25	21.2	445	64.2				
	1	4/22/09	7.30	21.4	452	42.4				
	l	7/22/09	7.39	22.6	456	41.8				
AWC-03	616585	10/21/09	7.48	21.3	540	50.5				
	I	2/3/10	7.44	19.7	449	42.0				
	1	4/23/10	7.57	19.7	468	44.4				
		7/20/10	7.29	23.8	460	46.7				
		11/4/10	7.80	20.8	452.3 560	46.3 49.0				
		1/19/11 4/7/11	7.07 7.28	19.6	469.8					
	F	7/13/11	6.33	19.9 23.1	459.8 458.8	46.8 47.6				
	F	7/13/11 7/13/11 DUP	6.33	23.1	458.8	46.2				
	1	2/4/08	ND	ND	436.6 ND	18				
		4/7/08	ND ND	ND ND	ND	18				
		6/2/08	ND ND	ND ND	ND	14.3				
	F	8/12/08	7.08	22.5	458	21.6				
		10/23/08	6.91	22.2	616	24				
		3/11/09	7.02	21.3	539	27.2				
		4/22/09	6.93	22.1	560	26.1				
A1A1O 04	040504	7/22/09	7.13	22.5	587	26.2				
AWC-04	616584	10/21/09	7.00	21.2	607	25.7				
		2/3/10	7.35	19.3	438	16.3				
		4/23/10	7.14	19.2	625	27.4				
		7/20/10	7.02	24.1	600	26.6				
		11/4/10	7.41	20.3	593.2	24.0				
		1/19/11	8.15	20.5	690	26.2				
		4/7/11	7.00	20.4	637.2	25.8				
	1	7/13/11	6.88	20.4	610.1	25.7				



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

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	13				
		4/7/08	ND	ND	ND	14				
		6/2/08	ND	ND	ND	14.3				
		8/12/08	6.74	23.3	425	14.9				
		10/23/08	7.45	21.0	422	15.4				
		3/11/09	7.31	22.1	398	16.5				
		6/3/09	7.33	22.0	418	12.1				
AWC-05	590620	7/22/09	7.49	24.4	423	14.1				
	I	10/21/09	7.37	21.1	433	16.5				
		2/3/10 4/23/10	7.35 7.62	19.3 18.9	438 443	16.3 17.6				
		7/20/10	7.62	24.2	440	19.1				
		11/4/10	7.92	20.7	427.1	18.4				
	I F	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				
		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				
BANKS 986	1	4/8/09	7.56	22.7	933	47				
	047000	7/9/09	7.59	23.1	871	70.9				
	647986	10/7/09	7.50	22.2	838	67.7				
	I	2/25/10 4/20/10	7.56 7.71	21.1 22.8	1020	50.5 53.9				
	I	7/20/10	7.70	23.2	1013 828.3	71.5				
		10/20/10	7.60	22.4	948.7	73.4				
		1/17/11	7.73	20.6	1038	53.5				
		4/5/11	7.66	21.5	965.0	64.5				
	I	7/11/11	7.72	25.4	890.0	68.8				
		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				
BF-01	539783	5/6/09	5.98	23.9	2632	1280				
		8/17/09	6.21	29.7	2948	1250				
		11/4/09	6.24	23.0	2846	1280				
	I	3/1/10	6.34	21.1	2945	1260				
		4/7/10 7/6/10	5.83 5.93	20.4 22.6	1853 1403	1450 1310				
		7/0/10	6.26	21.3	2960	1350				
	+	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				
	<u> </u>	10/22/08	6.41	22.3	1801	285				
DIAAA	[1/20/09	6.40	21.7	1233	190				
BIMA	577927	1/20/09 DUP	6.40	21.7	1233	200				
		4/7/09	6.45	23.4	1436	212				
		7/8/09	6.31	23.4	1483	189				
		10/5/09	6.34	22.7	1525 NA	233 222				
		1/20/10 4/19/10	6.88 6.70	17.0 21.9	1533	256				
	 	7/12/10	6.70	24.0	1577	273				
		10/18/10	6.47	24.3	1702	296				
	F	1/19/11	6.65	21.2	1672	283				
		4/4/11	6.61	24.0	1643	282				
	1 F	8/25/11	6.27	25.9	1460	300				



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

For Sulfate and Fleid Parameters									
Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)			
		2/5/08	7.43	20.2	714	206			
		4/21/2008 ¹	7.06	21.9	753	201			
	1 F	5/15/2008 ¹	7.16	22.2	845	211			
	l h	6/23/2008 ¹	6.93	21.5	903	193			
BLOMMER	633472	7/29/2008 ¹	7.21	22.2	921	203			
	1	8/27/2008 ¹	7.12	22.1	864	189			
		9/23/2008 ¹	7.16	22.3	818	193			
		10/22/08	7.17	21.3	873	200			
		8/27/08	7.09	24.2	808	107			
	1	11/11/08	7.00	20.8	721	143			
		2/25/09	7.01	22.0	860	109			
		4/28/09	7.04	22.2	762	198			
		8/4/09	7.23	22.8	950	104			
BMO-2008-1G	909474	10/27/09	7.11	21.9	922	103			
BIVIO-2000-1G	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			
		7/18/08	7.35	23.9	615	106			
	1	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			
	ı	5/11/09	7.23	22.1	631	149			
	1	8/6/09	7.33	21.4	718	151			
BMO-2008-3B	909147	8/6/09 DUP	7.33	21.4	718	156			
	1	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			
		12/11/08	7.34	22.8	374	9.4			
		2/18/09	7.17	23.2	370	13.4			
	L	4/30/09	7.33	24.5	376	11.4			
	L	4/30/09 DUP	7.33	24.5	376	11.8			
	L	8/6/09	7.53	24.6	397	11.5			
BMO-2008-4B	910096	10/27/09	7.53	23.7	379	11.2			
		2/24/10	7.48	21.8	362	9.7			
]	4/16/10	7.70	23.4	330	9.73			
		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			
		9/30/08	7.08	22.0	688	193			
		2/18/09	7.03	21.5	691	192			
		4/27/09	7.32	22.1	605	177			
		8/4/09	7.35	22.3	724	174			
		10/29/09	7.29	21.8	731	181			
DMO 0000 FF	200050	10/29/09 DUP	7.29	21.8	731	185			
BMO-2008-5B	909653	2/15/10	7.22	21.7	720	185			
		4/15/10	7.21	23.0	571	194			
]	7/7/10	6.94	22.2	551	183			
]	10/5/10	6.85	22.3	722	201			
]	2/14/11	6.90	21.8	725	203			
]	5/12/11	7.06	21.5	722	195			
		7/13/11	6.99	22.0	712	200			



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

For Suitate and Field Parameters									
Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)			
		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			
	1	2/15/10	7.31	22.5	581	123			
BMO-2008-5M	909552	4/16/10	7.28	22.6	509	125			
		4/16/10 DUP	7.28	22.6	509	124			
		7/7/10	7.02	23.5	482	123			
		10/5/10	6.81	22.5	602	127			
		2/14/11	6.95	22.2	591	124			
		5/12/11	7.16	23.0	558	119			
		7/12/11	7.22	22.7	590	126			
		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			
	ľ	10/26/09	7.29	22.5	448	48.7			
BMO-2008-6B	909146	2/15/10	7.53	21.2	391	33.5			
	F	4/15/10	7.47	21.0	362	37.0			
	l F	7/1/10	7.24	22.2	361	40.1			
	l F	10/5/10	7.05	21.0	407	37.2			
	l F	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			
		7/10/08	M	22.1	702	182			
	1	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			
	909019	10/26/09	7.18	22.4	727	187			
BMO-2008-6M		2/15/10	7.18	20.8	733	193			
DIVIO-2000-01VI		4/15/10	7.29		619	208			
		7/1/10	7.15	20.2 22.0	571	198			
		10/5/10	6.87	21.3	720	202			
						202			
		2/14/11 5/12/11	6.80	21.3	731 709				
			7.12	21.9		189			
	+	7/12/11	7.06	21.8	709	194			
	-	7/14/08	7.63	25.2	500	31.4			
	-	11/6/08	7.53	22.6	380	34.5			
		2/18/09	7.31	23.3	452	27.6			
		5/11/09	7.43	24.4	426	26.0			
		8/6/09	7.81	24.1	486	25.1			
BMO-2008-7M	000704	10/27/09	7.53	23.0	470	26.1			
DIVIO-2008-7IVI	908794	2/17/10	7.57	23.4	452	25.4			
		2/17/10 DUP	7.57	23.4	452	25.0			
	L	4/15/10	7.52	23.2	415	26.0			
		7/6/10	7.28	23.5	391	22.8			
	L	2/14/11	7.18	22.0	465	27.5			
	<u> </u>	2/14/11 DUP	7.18	22.0	465	26.4			
		7/15/11	7.1	22.8	466	26.5			
	<u> </u>	12/5/08	6.47	20.1	2480	1890			
	L	2/19/09	6.19	21.0	2958	1570			
	<u> </u>	5/5/09	6.18	21.3	2888	1370			
	<u> </u>	8/10/09	6.42	21.5	2897	1250			
BMO-2008-8B	910097	11/9/09	6.33	21.8	2889	1510			
	L	11/9/09 DUP	6.33	21.8	2889	1520			
	<u> </u>	3/3/10	6.51	20.4	3016	1320			
	l L	4/16/10	6.06	21.4	1682	1470			
		7/1/10	6.10	21.4	1594	1440			
	1 [7/15/11	6.21	21.2	2940	1380			



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

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
DMO 0000 0M	000744	8/10/09	7.49	24.8	673	107
BMO-2008-8M	909711	11/5/09	7.30	25.4	675	104
		3/3/10	7.70	24.1	641	99.5
		4/16/10 7/1/10	7.29 6.99	24.5 25.0	541 502	97.0 94.7
		1/24/11	7.05	23.4	595	98.2
		7/15/11	6.89	22.1	590	79.9
		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
	l L	8/17/09	7.76	25.6	534	53.4
BMO-2008-9M	909255	11/3/09	7.82	24.9	552	56.9
		3/4/10	8.07	22.4	520	58.6
		4/6/10	6.74	23.8	484	60.1
		7/1/10	7.40	24.6	425	61.0
		2/10/11 7/15/11	6.79 7.56	24.0 24.3	520 516	64.2 67
		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
D140 0000 4001	000405	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	6.32	24.8	1726	644
		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 8/11/09	5.99	23.2 22.5	3359 3348	1710 1690
BMO-2008-10GU	909272	11/2/09	6.28 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
		8/22/08	8.02	28.2	359	14.2
		11/12/08	7.96	24.2	257	13.9
		2/26/09	7.92	25.1	319	12.3
	<u> </u>	4/28/09	8.14	25.5	273	11.8
	<u> </u>	8/12/09	8.24	25.3	365	11.2
BMO-2008-11G	909434	11/9/09	8.03	25.5	339	13.9
		3/1/10	8.37	23.2	338	13.0
		4/9/10 7/1/10	6.88	24.5	301	13.0 12.3
		2/10/11	6.97 6.99	25.4 24.0	298 327	12.3
		7/22/11	7.26	24.6	331	12.1
		7/22/11 DUP	7.26	24.6	331	12.0
	1	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
BMO-2008-13B	909551	10/28/09	6.81	19.7	2259	1010
		2/16/10	6.87	20.8	2093	997
		4/14/10	6.38	21.2	1346	974
		7/6/10	6.37	21.8	1208	972
		7/15/11	6.44	20.8	2160	1010



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

		For Sulfate and				
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
	1 F	2/17/09	8.21	22.7	1340	441
	I	4/29/09	8.04	24.8	1126	217
	I	8/5/09	8.04	25.4	1392	387
BMO-2008-13M	909760	10/28/09	8.12	21.4	1347	403
	I	2/16/10	8.07	24.9	1297	375
	I	4/13/10	8.06	23.2	1130	398
	1	7/2/10	8.30	23.9	1027	386
		7/15/11	8.4	23.4	1331	388
		9/9/10	7.82	24.6	727.0	150
		11/11/10	8.68	19.9	570	98
BMO-2010-1M	219957	2/11/11	8.15	20.8	589	138
		5/12/11	7.74	23.0	710	129
		8/31/11	7.74	23.2	562	154
		9/15/10	6.66	22.6	2054	915
		11/11/10	6.97	20.6	1800	935
BMO-2010-2M	219958	2/10/11	6.53	20.8	2120	950
		5/13/11	6.54	21.1	2160	887
		7/14/11	6.62	21.5	2160	917
		7/29/10	7.48	23.1	420	16.0
		11/10/10	7.43	21.2	370	14.9
BMO-2010-3B	219970	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
		7/31/10	7.73	24.3	390	14.8
		11/10/10	7.66	21.8	340	12.6
BMO-2010-3M	219969	11/10/10 DUP	7.66	21.8	340	12.7
26 20.10 6		1/20/11	7.72	22.6	380.4	11.5
	-	4/7/11	7.38	23.5	376.5	12.3
		8/25/11	7.17	24.3	340	10.4
		2/7/08	7.17	23.0	411	29.5
		4/22/08	7.13	27.0	423	26
		8/5/08	7.06	26.8	496	21.9
		10/20/08	7.57	26.0	466	20.5
	I	2/11/09	7.23	25.0	363	23.9
BURKE	212268	4/28/09	7.16	26.1	369	24.2
		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
		3/6/08	7.73	17.8	408	7.7
		5/5/08	7.15	22.1	421	6
		7/14/08	7.43	23.2	434	5.8
		10/15/08	7.41	22.5	420	4
		1/27/09	7.57	21.5	312	5.3
	-	4/14/09	7.42	22.4	384	6.8
CHAMPEDO	600007	7/15/09	7.83	23.4	414	4.3
CHAMBERS	629807	10/13/09	7.41	22.6	410	6.5
	-	1/26/10	7.31	21.3	416	5.7
	-	4/23/10	7.47	20.9	427.5	8.34
	-	7/21/10	7.49	23.1	430	7.75
	-	10/19/10	8.00	23.0	440	7.04
	-	1/18/11	7.47	22.4	390	7.30
	-	4/11/11	7.18	22.0	427.3	7.74
		7/18/11	7.18	23.8	420.2	8.18



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Mall Name	ADMD SE De sieta Ne	Carrala Data	pН	Temp	SC	Sulfate, dissolved
Well Name	ADWR 55 Registry No.	Sample Date	(SU)	(deg C)	(μS/cm)	(mg/L)
		2/22/08	6.93	21.2	1401	720
		5/20/08	6.88	22.0	2050	980
	-	7/30/08 10/23/08	6.88	21.7	1780 1690	730 750
	-	2/12/09	6.95 6.92	21.2 21.1	1313	750 750
	-	4/21/09	7.15	22.7	1366	720
COB MW-1	903992	7/22/09	6.94	21.6	1570	680
002 11111	-	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	7.02	22.3	2004	919
		7/14/11	6.78	21.4	1924	927
		5/20/08	7.32	21.2	490	40.5
		7/30/08	7.34	20.8	511	37.6
	<u> </u>	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
COB MW-2	903984	7/22/09	7.36 7.24	21.3	483 454	33.5
COD IVIVV-Z	303304	10/22/09 3/3/10	7.24	21.0 19.7	454 450	32.2 33.5
	-	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
		2/28/08	7.39	21.0	416	57.8
		3/27/08	ND	ND	ND	57.7
		4/30/08	ND	ND	ND	37
	<u> </u>	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 7.42	ND	ND 507	52.5
COB MW-3	906823	10/23/08 2/12/09	7.43 7.35	20.8 21.1	432	76.6 112
00B IIIIV 0	000020	4/23/09	7.35	22.6	407	43.7
	-	7/22/09	7.38	21.5	460	52.3
		10/22/09	7.40	21.3	466	74.2
		10/22/09 DUP	7.40	21.3	466	73.9
		3/3/10	7.36	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
		2/22/08	6.99	20.6	919	90
		3/24/08	ND	ND ND	ND	98.2
	<u> </u>	4/28/08	ND 7.20	ND	ND	98.7
		5/20/08 7/30/08	7.30 7.17	21.9 22.0	1053 1098	98 97.1
		7/30/08	ND	22.0 ND	1098 ND	100
	-	10/15/08	ND ND	ND ND	ND ND	107
		10/23/08	7.23	21.4	1075	104
COB WL	593116	2/12/09	6.98	20.6	814	94
		4/23/09	7.29	22.2	923	98
	ľ	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
	<u> </u>	7/13/10	7.18	22.3	1013	88.7
		7/14/11	6.91	21.6	1019	87.3



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

		For Sulfate and		1		
Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/12/08	6.88	21.6	1470	520
	1	5/29/08	7.01	22.0	1459	520
		7/31/08	6.86	21.6	1502	536
		10/20/08	8.44	24.7	1510	518
	1 [2/11/09	6.68	21.4	1147	567
COLLINS	565260	4/21/09	6.92	22.5	1150	499
	1	7/22/09	7.00	22.4	1413	460
	1 4	10/20/09	6.60	21.9	1432	513
		2/2/10	6.98	21.2	1439	471
	1	4/23/10	6.99	20.6	1472	561
	1	7/20/10	6.69	25.0	1420	569
	1 h	2/14/08	7.02	20.8	371	33
	1 F	5/14/08	8.08	22.1	419	34.2
	1 F	7/31/08	7.81	28.4	455	33.7
	1	10/20/08	8.44	24.7	448	31.2
		2/11/09	7.32	19.2	333	34.3
		4/21/09	8.19	24.9	346	33.4
COOPER	622564	7/20/09	8.45	29.8	430	32.3
COOPER	623564	10/14/09	7.85	24.6	423	33.6
	1 F	2/1/10	7.83	13.6	433	32.4
	1 F	4/22/10	7.82 7.98	17.9 29.3	433 420	34.5 35.0
	1 H	7/19/10 10/18/10	7.12	73.1	450	33.1
	1 H	1/19/11	8.83	18.4	410	32.1
		4/11/11	7.65	21.0	442.6	34.3
	1 H	7/11/11	7.45	24.2	426.5	32.1
	+ +	3/20/08	6.93	21.3	2081	880
	1 H	5/5/08	6.78	22.4	2139	990
	1 F	7/15/08	6.86	22.3	2162	1040
	1 -	7/15/08 DUP	6.86	22.3	2162	960
	1 -	10/16/08	6.80	21.4	2078	1020
	1 t	1/27/09	6.92	20.5	1489	950
	1 t	4/14/09	6.85	21.6	1833	930
000000		7/14/09	6.75	22.1	1972	910
COOPER C	637069	10/12/09	6.70	21.8	1858	830
	1	1/27/10	7.27	19.6	1930	620
	1	4/22/10	6.76	19.5	1921	884
	1 1	7/21/10	6.84	22.9	1761	921
	1 [10/20/10	7.16	20.9	1980	829
		1/17/11	6.95	20.5	1880	756
		4/11/11	6.82	21.0	1942	834
		8/26/11	6.84	21.8	1800	847
		2/20/08	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
DODSON	644927	10/6/09	7.07	21.1	1140	49.3
		1/21/10	7.15	18.9	1227	44.6
		4/19/10	7.46	19.9	1261	48.8
		4/19/10 DUP	7.46	19.9	1261	48.6
		7/20/10	7.16	22.7	1260	47.5
		10/18/10	6.43	21.2	1260	49.3
		1/19/11	7.88	19.5	1120	57.9
1		4/5/11	7.03	20.9	1300	49.0
		7/12/11	6.86	23.7	1352	52.9



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

			rieiu raiailie			
Mall Nama	ADMP SE Dominim Ale	Comple Data	pН	Temp	SC	Sulfate, dissolved
Well Name	ADWR 55 Registry No.	Sample Date	(SU)	(deg C)	(µS/cm)	(mg/L)
		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
DURAZO	NR	4/26/10	7.22	23.1	1099	388
20.0.00		7/20/10	7.28	23.0	1070	405
		10/19/10	7.28	21.9	1112	398
		1/19/11	7.94	21.6	1050	360
	1	4/4/11	7.20	21.9	1119	383
	1	7/14/11	7.01	23.6	1101	409
		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
	I	7/13/09	7.33	21.2	613	13.8
EAST	599796	10/8/09	7.29	20.8	593	13.4
EAST	599796	1/25/10	7.08	19.0	585	10.7
		4/21/10	7.42	20.5	616	14.4
		4/21/10 DUP	7.42	20.5	616	13.9
		7/14/10	7.45	22.2	577.1	12.1
		10/20/10	7.64	21.2	650	12.1
		1/18/11	7.44	21.0	615.9	13.1
		4/5/11	7.19	20.8	612.5	13.8
		7/12/11	7.23	21.7	595.1	12.7
		3/11/08	7.98	21.4	646	21.7
		5/12/08	7.21	21.7	667	24.7
	l L	7/21/08	7.49	23.9	605	19
	l L	10/14/08	7.56	20.4	642	21.8
		1/21/09	7.60	21.1	500	22.7
		4/8/09	7.56	22.4	538	19.7
EPPELE 641	805641	7/9/09	7.43	24.3	550	17.5
		7/20/10	7.58	23.3	529.2	21.1
		10/20/10	7.66	21.0	572.1	17.2
		1/17/11	7.43	21.0	576.4	17.3
		4/5/11	7.43	21.5	569.2	16.7
		7/11/11	7.27	23.5	563.1	18.6
	040000	7/11/11 DUP	7.27	23.5	563.1	18.3
FLEMING	218386	7/15/10	6.98	24.2	1390	573
		2/6/08	7.47	19.6	1301	670
		5/5/08	6.93	23.1	1557	680 680
		7/14/08 10/15/08	7.00 7.20	22.7	1586 1560	680
		1/22/09	7.20	20.5 20.1	1178	740
FRANCO	500101	4/14/09	7.19	20.1	1416	690
INANCO	300101	7/13/09	7.30	27.3	1532	690
		10/12/09	7.16	24.2	1493	650
		1/26/10	6.91	18.5	1529	640
		4/23/10	7.43	15.8	1559	699
		7/13/10	7.48	28.6	901.6	188
		1/13/10	7.40	۷٥.0	901.0	100



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/27/08	6.76	21.1	1827	152
	F	4/21/2008 ¹	6.74	22.0	1739	137
	I F	5/14/2008 ¹	6.88	22.3	1532	131
	1 [6/23/2008 ¹	6.74	22.0	1788	111
	1 [7/29/2008 ¹	6.74	22.2	1989	152
	1	8/28/2008 ¹	М	21.6	1889	137
		9/23/2008 ¹	6.82	21.9	1821	137
	L	10/22/08	6.80	21.4	1940	145
	L	1/21/09	6.74	21.2	1481	82
		4/9/09	6.78	21.5	1695	138
FULTZ	212447	7/13/09	7.04	23.4	1452	81
		10/8/09	7.00	21.6	1262	72
		10/8/09 DUP	7.00	21.6	1262	71.8
		1/25/10	7.11	21.8	1282	66.7
		4/20/10	7.32	21.2	1202	68.3
		7/14/10	7.75	22.2	1132	57.0
		10/20/10	7.27	20.5	1091	54.7
	-	1/18/11	7.23	20.4	1136	56.9
		4/5/11	7.08	22.1	1082	49.5
		4/5/11 DUP	7.08	22.1	1082	51.7
		8/25/11	6.45	23.3	940	50.6
GALLANT	502527	2/11/08	7.46	20.2	604	17.9
	+	7/23/08	7.26	21.2	925	20.9
		2/4/08 5/5/08	7.61	22.7	479	37.8
	1 ⊢		7.26	24.9	468	35.8
		7/15/08	7.63	25.6	480	37.4
		10/15/08 1/28/09	7.65 7.69	24.1 23.4	472 368	36 37.4
		4/15/09	7.83		412	36.9
	⊢	7/16/09	7.56	24.1 25.1	445	35.7
	I	10/14/09	7.58	25.2	446	36.1
GARNER 635	587635	2/2/10	7.79	22.8	465	35.1
		4/22/10	7.84	23.7	464.1	36.9
		7/20/10	7.57	25.3	458.2	38.8
	1 F	10/19/10	8.23	25.4	510	37.9
	1 F	1/19/11	7.82	24.1	463.4	35.7
	1 F	1/19/11 DUP	7.82	24.1	463.4	35.7
	F	4/6/11	7.76	23.4	467.4	35.8
	F	7/15/11	7.19	25.0	457.40	37.7
	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
GL-03	539782	5/5/09	6.91	28.1	682	43.9
GL - 03	338102	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
	1	7/7/10	6.48	26.3	546	44.4



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

		For Suitate and				1
Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/27/08	6.93	22.1	1359	510
		5/7/08	6.88	22.3	1532	670
	1 .	7/14/08	6.88	23.1	1719	690
	1 .	10/16/08	6.98	22.4	1624	692
		1/28/09	6.82	21.3	1220	580
HOBAN	805290	4/15/09	7.07	21.7	1423	700
		7/14/09	6.78	22.6	1551	670
		10/15/09	6.75	22.7	1487	670
		10/15/09 DUP	6.75	22.7	1487	780
		3/2/10	7.12	19.8	1575	580
	+	8/31/11	6.64	22.3	1772	893
		3/4/08 5/8/08	7.06	20.4	1280 1494	571
		7/14/08	6.95 7.00	21.0 21.1	1566	673 610
		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
HOWARD	NR	10/12/09	6.89	21.4	1414	600
	I	1/27/10	7.35	20.0	1714	440
		1/27/10 DUP	7.35	20.0	1714	520
		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
	1	4/11/11	7.20	20.6	1489	616
	1	8/26/11	7.11	23.2	1160	498
		2/6/08	7.70	19.0	378	6.8
	1	5/6/08	7.19	20.3	512	9
	Ī	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
	1 [4/16/09	7.29	20.0	452	7.7
		7/14/09	7.35	22.1	533	7
KEEFER	209744	10/13/09	7.24	20.7	516	8.7
	L	1/26/10	7.15	18.8	483	7.3
		4/20/10	7.44	20.5	540.9	8.77
		7/15/10	7.50	22.2	535.8	8.84
		10/19/10	6.72	20.2	470	7.89
		1/18/11	7.45	20.6	450	7.24
		4/6/11	7.48	19.1	546.2	8.04
	+ +	7/18/11	7.19	23.2	492.3	7.79
MARCELL	NR	8/26/11	7.12	25.1	1390	669
	+ +	9/26/11	6.63	22.1	1502	638
		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 1/28/09	6.82 6.85	21.3	1686 1274	703 660
		4/15/09	7.04	21.3	1472	657
		7/15/09	7.04	22.2	1607	662
MCCONNELL 265	539265	10/12/09	6.77	21.7	1594	666
WICCOLVINELL 200	303200	1/26/10	6.71	21.7	1641	685
		4/22/10	6.95	20.1	1691	811
		7/21/10	6.86	23.5	1560	805
		10/18/10	6.97	22.0	1704	775
		1/19/11	7.38	20.6	1610	711
		4/8/11	7.04	19.8	1775	810
		7/12/11	6.60	23.7	1773	790
		1/12/11	0.00	20.1	1102	130



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

			pН	Temp	SC	Sulfate, dissolved
Well Name	ADWR 55 Registry No.	Sample Date	(SU)	(deg C)	(µS/cm)	(mg/L)
		3/5/08	7.27	21.6	1055	317
		5/15/08	7.12	22.8	1051	329
		7/31/08 10/20/08	7.16 7.24	22.5 22.2	1078 1080	317 305
		10/20/08 DUP	7.24	22.2	1080	326
		2/11/09	7.12	21.3	818	321
		4/20/09	7.22	23.2	845	313
		7/15/09	7.41	22.9	1031	293
METZLER	35-71891	7/15/09 DUP	7.41	22.9	1031	309
		10/14/09	7.1	22.7	989	315
		2/1/10	7.22	21.7	1021	286
		5/18/10 7/16/10	7.56 7.20	21.0	1053	330
	-	10/19/10	7.20	24.1 22.6	1007 1006	330 319
		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
		2/20/08	7.69	22.2	362	7.1
	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 4/16/09	7.11 7.40	21.7 22.1	328 374	6.6 6.4
		7/15/09	7.44	23.3	439	5.8
		10/13/09	7.36	22.6	429	7.1
MOORE	538847	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
	<u> </u>	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 4/6/11	7.48 7.39	21.1 21.4	390 426.3	6.42 6.70
	-	7/13/11	6.91	23.2	423.4	7.62
		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
NEGO	500407	8/11/09	7.56	28.7	525	39.8
NESS	509127	11/12/09	7.53	24.5	537	51.3
	-	2/2/10 4/21/10	7.67 7.70	19.7 23.5	535 518.9	48.7 42.1
		7/19/10	7.58	28.9	524.7	48.1
		1/18/11	7.49	21.8	536.6	50.1
	<u> </u>	7/12/11	7.48	26.3	520.0	43.5
		2/5/08	6.70	19.9	1317	310
		5/13/08	6.67	23.0	1445	272
		7/24/08	6.68	24.2	1539	274
		10/23/08 1/19/09	6.57 6.38	23.2 22.9	1643 1098	356 322
		4/7/09	6.56	23.8	1375	303
	F	7/8/09	6.55	24.6	1405	260
NOTEMAN	240,400	10/5/09	6.48	24.1	1442	281
NOTEMAN	212483	1/20/10	6.79	20.3	1450	289
		4/19/10	6.81	22.4	1446	307
	<u> </u>	7/19/10	6.77	24.6	1438	309
		10/18/10	6.08	24.6	1430	280
		1/19/11	6.84 6.72	22.3	1446	266 276
		4/4/11 4/4/11 DUP	6.72	22.9 22.9	1446 1446	276
		7/11/11	6.78	23.9	1406	272
NCD 00	F07507	2/5/08	ND	ND	ND	43
NSD-02	527587	7/7/08	8.02	21.0	609	44
NSD-03	527586	2/5/08	ND	ND	ND	70.7
1400-03	021000	7/7/08	7.64	21.0	570	58.9



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
NWC-02	562944	2/3/10	7.68	19.6	423	8.5
1444 C-02	302944	4/21/10	7.57	22.1	413	7.26
		7/20/10	7.36	23.7	412.5	6.87
	L	10/19/10	7.42	22.5	416.2	7.39
	_	1/18/11	7.47	23.2	390	6.43
		4/6/11 7/15/11	7.27 7.03	22.9 22.5	413.5 416.3	6.4 7.24
		3/4/08	7.03 ND	ND	ND	560
	 	6/9/08	ND	ND ND	ND	524
		10/27/08	7.07	21.9	1374	489
		2/12/09	7.06	20.2	1023	412
		4/23/09	6.98	21.9	1129	466
		4/23/09 DUP	6.98	21.9	1129	460
		7/21/09	7.21	22.9	1194	458
NWC-03	203321	10/21/09	6.94	21.8	1224	444
	L	2/3/10	7.24	20.7	1214	444
	L	4/21/10	7.22	21.6	1178	433
		7/20/10	7.04	22.8	1229	477
		10/19/10 1/18/11	7.22 7.09	21.3 22.8	1172 1120	432 386
	-	4/6/11	7.19	21.7	1114	361
		7/15/11	6.91	21.8	1094	386
		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
	L	3/11/09	7.15	23.4	846	197
	<u> </u>	4/23/09	7.21	24.1	797	188
	-	5/28/09	7.01	24.1	933	210
		6/24/09 7/21/09	6.93 7.48	25.6 24.3	792 859	169 193
		8/19/09	7.40	24.5	906	183
	 	9/23/09	7.12	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
NWC-04	551849	4/21/10	7.34	22.8	913	218
	<u> </u>	5/18/10	7.68	25.8	901.3	210
		6/15/10	7.31	24.5	917.5	212
		7/20/10	7.28	28.3	873.2	188
		8/25/10 9/29/10	7.55	24.8	820.9 920.2	196 205
		10/19/10	7.38 7.34	24.5 23.6	920.2 870.2	195
		11/4/10	7.53	23.9	853.2	195
	 	12/14/10	7.41	23.6	856.8	182
	F	1/18/11	7.31	24.1	860	194
		2/17/11	7.46	22.3	848.6	169
	F	3/17/11	7.44	24.1	888.1	182
		4/5/11	7.32	23.4	878.7	196
		5/11/11	7.32	23.1	868.1	175
	[6/17/11	7.28	23.7	856.3	204
		7/15/11	7.06	23.5	875.1	202
	<u> </u>	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



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Toma CC Culfate diagolyse									
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	7.9			
		6/9/08	ND	ND	ND	7.2			
	l L	10/27/08	7.35	23.3	414	6.4			
	L	2/12/09	7.54	21.8	306	8			
		4/23/09	7.30	24.5	354	7.3			
		7/21/09	7.63	23.5	388	6.4			
	-	10/21/09	7.26	23.2	413	8			
NWC-06	575700	2/3/10 2/3/10 DUP	7.61 7.61	20.5 20.5	404 404	7.5 7.4			
		4/21/10	7.54	22.4	387	8.49			
		7/20/10	7.33	26.0	388.6	8.59			
		10/19/10	7.49	22.7	394.5	8.32			
		1/18/11	7.45	23.4	380	8.24			
		4/6/11	7.42	23.1	388.3	7.76			
		4/6/11 DUP	7.42	23.1	388.3	7.73			
		7/15/11	7.09	22.9	394.3	8.36			
	<u> </u>	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			
OSBORN	643436	1/20/09 4/7/09	7.33 7.25	22.4 24.0	469 542	16 17			
OSBORN	043430	8/18/09	7.25	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			
	l F	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			
		2/14/08	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			
	l L	10/16/08	7.61	17.0	527	15.9			
	L	1/20/09	7.33	19.4	441	14.3			
		4/8/09	7.65	19.1	475	15.4			
DALMED	570040	7/8/09	7.47	27.2	521	14.3			
PALMER	578819	10/5/09	7.81 7.72	22.2	538	16.2			
		1/20/10 4/22/10	7.72	11.9 13.6	510 520	13.8 16.7			
		7/12/10	7.62	30.2	518.8	15.7			
	 	10/18/10	8.13	22.1	511.9	16.5			
		1/18/11	7.24	17.1	517.0	15.7			
		4/5/11	8.04	19.0	499.2	15.8			
	i F	7/12/11	7.65	26.6	517.6	16.4			
		4/21/08	6.80	20.5	1228	410			
		7/21/08	6.95	21.9	1390	444			
		10/13/08	6.86	21.2	1386	480			
		10/13/08 DUP	6.86	21.2	1386	500			
		1/22/09	6.92	19.7	997	397			
	<u> </u>	4/9/09	6.81	21.7	1228	431			
DANACAKCO	05.70440	4/9/09 DUP	6.81	21.7	1228	426			
PANAGAKOS	35-76413	7/9/09	6.89	22.3	1469	490			
		10/6/09	6.83	21.1	1328	472			
		1/21/10	7.06	18.8	1291	318			
		4/20/10	7.25	21.0	1528	608 706			
		7/20/10 10/18/10	6.90 6.38	24.0 22.1	1560 1530	568			
Ì		7/14/11	6.93	23.3	1070	223			
	 	8/25/11	7.17	23.4	1170	222			



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

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
PARRA	E7644E	7/20/09	7.17	23.9	1174	375
PARKA	576415	10/20/09	6.80	22.5	1188	388
	l	2/1/10 4/22/10	7.07 6.91	21.5 20.3	1197 1219	353 417
	F	7/14/10	7.13	22.2	1201	403
	1 F	7/14/10 DUP	7.13	22.2	1201	391
	1 F	10/20/10	7.51	21.4	1270	411
		1/19/11	7.49	20.8	1130	391
	I	4/4/11	6.90	22.6	1207	382
	l F	7/12/11	6.76	23.7	1156	404
		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	7.03	20.8	1175	460
		1/29/09	7.13	19.9	847	385
	1 L	4/14/09	7.58	20.7	1053	411
	1 L	7/13/09	7.35	21.5	1165	472
PIONKE	613395	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
		7/15/10	7.32	22.3	1158	474
	I	10/18/10	7.33 7.33	21.3	1277	473 487
	I	10/18/10 DUP 1/19/11	7.32	21.3 19.9	1277 1222	471
		4/8/11	7.13	19.9	1232	467
	F	7/12/11	7.30	23.8	1226	500
		2/20/08	7.95	20.9	497	134
		5/19/08	7.40	22.2	585	122
	1	7/31/08	7.47	22.3	599	117
	l F	10/21/08	7.51	21.4	598	120
		2/13/09	7.62	20.8	473	141
	1 [4/21/09	7.73	22.6	470	124
	1 [7/20/09	7.76	22.9	579	122
POOL	509518	10/20/09	7.22	21.2	577	122
	1 <u>L</u>	2/24/10	7.56	22.4	577	110
	1 L	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	7.71	20.5	530	114
		4/6/11	7.37	21.6	567.4	114
POWER	624535	2/12/08 7/22/08	7.11 7.10	18.9 21.7	428 795	15.5 20.2
	+	2/4/08	7.10	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
	į į	4/16/09	7.49	22.4	344	7.6
		7/10/09	7.52	23.9	411	6.4
RAMIREZ	216425	10/6/09	7.30	23.8	388	8.4
		1/25/10	7.48	22.4	390	7.8
		4/21/10	7.45	22.6	397	9.04
		7/21/10	7.38	25.1	420	8.98
		10/19/10	7.91	23.7	450	10.8
		1/18/11	7.52	23.1	380	8.18
	<u> </u>	4/11/11	7.24	23.2	408.5	8.65
		7/18/11	7.27	25.4	402.6	8.44



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

		For Sulfate and		1		
Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		2/15/08	7.30	19.1	1540	159
		4/21/2008 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	M	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
RAY	803772	4/8/09	6.85	21.4	1759	178
NAT	803772	7/9/09	6.93	22.3	1434	126
		10/7/09	6.98	21.3	1288	127
		1/26/10	6.82	20.6	1352	125
		4/20/10	7.14	21.5	1318	134
		7/14/10	7.11	23.8	1313	137
		10/20/10	7.14	19.6	1368	127
		1/17/11	7.04	20.8	1451	132
		1/17/11 DUP	7.04	20.8	1451	125
	L	4/5/11	7.03	20.8	1387	132
		7/11/11	7.07	22.8	1345	126
	L	10/19/09	6.89	23.3	1360	590
ROGERS 596	573596	11/5/09	6.79	21.9	1418	540
	0.000	2/25/10	6.99	19.6	1603	520
		4/22/10	7.21	18.2	1641	710
	_	2/7/08	7.45	18.6	601	138
		4/21/2008 ¹	7.32	21.4	552	128
		5/8/20081	7.14	21.2	622	141
	- I	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	7.24	21.9 21.3	599	133 144
ROGERS 803	641803	10/22/08 2/10/09	7.36 7.42	17.9	650 475	141
NOOLNO 000	041803	4/29/09	7.52	21.9	506	211
	 	8/3/09	7.39	24.2	674	150
	H	7/16/10	7.46	23.9	643.4	169
	 	10/19/10	7.32	21.1	643.8	154
	ŀ	10/19/10 DUP	7.32	21.1	643.8	154
	l l	1/20/11	7.44	18.1	610	143
	l	4/8/11	7.30	20.2	658.2	160
	l F	7/14/11	7.12	23.5	653.5	166
	1	2/4/08	7.40	21.0	435	4.6
	F	5/7/08	7.18	22.2	415	5.9
	l F	7/17/08	7.28	23.0	446	7.1
	l F	10/27/08	7.38	21.4	434	15.7
	ı	2/10/09	7.51	20.7	322	5.4
	ı	4/16/09	7.48	22.0	361	4.9
	l l	7/13/09	7.34	22.6	420	3.8
ROGERS E	216018	10/6/09	7.31	22.3	407	5.8
		1/25/10	7.52	20.6	414	5.1
		4/21/10	7.44	21.1	421	6.04
	i l	7/21/10	7.37	23.8	430	6.47
	ı F	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	24.3	418.5	6.00



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

		For Sulfate and	рН	Temp	SC	Sulfate, dissolved
Well Name	ADWR 55 Registry No.	Sample Date	(SU)	(deg C)	(μS/cm)	(mg/L)
		2/5/08	7.73	18.2	445	263
		5/15/08	7.23	25.9	965	265
		7/30/08 10/20/08	6.99 7.04	22.1 22.0	999 995	243 238
		2/12/09	6.94	20.9	748	254
		4/21/09	7.18	22.3	759	227
		8/3/09	7.05	22.9	1029	221
RUIZ	531770	10/28/09	7.09	20.6	920	227
		2/1/10	7.08	20.9	934	236
		4/26/10	7.01	22.5	920.1	240
		7/20/10 10/20/10	7.08 7.52	22.5 20.7	880 970	240 231
		1/18/11	7.19	20.7	860	213
		4/8/11	7.09	19.8	923.3	236
		8/26/11	6.85	22.6	800	220
		2/8/08	7.52	21.5	506	158
		4/21/2008 ¹	7.23	21.7	563	122
		5/19/2008 ¹	7.38	22.4	629	130
		6/23/2008 ¹ 7/29/2008 ¹	7.02 7.25	22.1 22.4	674 955	129 245
		7/29/2008 ¹ 8/28/2008 ¹	7.25 M	22.4	955 669	131
	F	9/23/2008 ¹	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	6.78	21.6	472	144
0011111077		1/29/2009 ¹	7.08	22.0	475	124
SCHWARTZ	210865	2/23/2009 ¹	7.33	22.1	610	123
		4/17/09 7/10/09	7.46	22.2	520 651	120 116
		7/10/09 7/10/09 DUP	7.52 7.52	22.8 22.8	651	117
		10/6/09	7.27	22.5	613	120
	I F	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 23.7	656.9 612.4	128 116
		4/23/08	7.57	25.8	380	19
SRC	211345	8/5/08	7.40	27.2	452	15.4
		2/13/08	7.28	20.7	467	24.1
		5/14/08	7.24	21.2	479	23.7
		7/24/08	7.35	22.4	506	18
	NR	10/16/08	7.32	20.7	488	19
		1/20/09 4/7/09	7.05 7.21	20.4 21.5	391 447	19.8 19.9
SWAN		7/8/09	7.18	23.1	477	18.5
= ****		10/5/09	7.18	21.4	496	19.7
		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
		3/4/08 5/23/08	8.67 7.75	22.6 22.9	302 321	12.3 14.7
	522574	8/15/08	7.75	26.4	369	14.7
		10/30/08	8.07	23.9	375	21.9
		2/24/09	8.10	24.8	340	20.3
		5/6/09	8.06	26.7	320	18.7
TM-02A		8/12/09	8.34	26.9	398	20
i ivi-∪∠A		11/4/09	8.16	26.3	381	21.8
		3/10/10	8.13	25.2	351	21.4
		3/10/10 DUP 4/6/10	8.13 6.96	25.2 24.6	351 363	21.3 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



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved
		5/00/00			. ,	
		5/20/08 8/6/08	7.51 7.08	22.2 21.6	778 828	110 97
		11/12/08	7.47	20.5	590	128
		2/26/09	7.21	21.8	737	107
		2/26/09 DUP	7.21	21.8	737	102
TM-03	522575	5/13/09	7.47	22.2	695	109
		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
	1	2/27/08	7.44	19.6	457	13.9
		5/20/08	7.50	20.7	506	32.7
	L	8/4/08	7.41	20.7	529	31.3
		10/29/08	7.55	20.2	531	34.5
		2/26/09	7.18	20.4	574	32.7
TM-06 MILLER	522695	5/13/09	7.35	20.9	465	30.6
	-	8/18/09	7.50	20.9	560	30.9
		8/18/09 DUP 11/12/09	7.50 7.53	20.9 20.4	560 530	29.9 31.1
		4/14/10	7.53	19.4	461	29.0
		7/2/10	7.35	20.1	438	29.0
		7/21/11	7.24	20.1	516	31.7
		3/6/08	7.54	20.8	726	22.5
	1 F	5/22/08	6.96	20.1	385	22.9
	1	8/6/08	7.04	22.8	519	22.2
		11/4/08	7.76	20.6	347	31.2
		2/20/09	7.77	19.9	376	22.5
		5/13/09	7.30	22.9	559	130
TM-07	522576	8/17/09	7.60	22.6	442	134
		11/3/09	7.85	21.8	441	134
		3/2/10	7.67	21.6	422	124
		5/25/10	7.77	21.2	398	42.6
	1	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
TM 00 0\M/AN	500047	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 2/27/08	7.76 7.66	28.1 21.9	522 344	12.6 14
		5/23/08	7.54	22.1	371	14.4
		8/5/08	7.42	23.3	413	13.7
		10/28/08	7.63	22.6	387	10.7
	522699	10/28/08 DUP	7.63	22.6	387	18.8
		2/26/09	7.57	22.0	373	14.6
TM-15 MILLER		5/13/09	7.61	23.1	344	13.7
		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
	522578	3/5/08	7.17	20.6	1351	497
		5/22/08	7.05	20.5	1304	522
TM-16		8/6/08	6.67	20.9	1410	466
		11/5/08	7.14	19.8	1162	547
		2/20/09	6.90	21.1	1292	492
		5/13/09	6.93	21.1	1179	484
		8/19/09	7.08	21.2	1354	468
		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	484 474
		7/2/10 7/14/11	6.81	20.8	858	
		1/14/11	6.97	20.5	1285 1285	511 513



Table 3
Compilation of Analytical Results
For Sulfate and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		3/6/08	8.02	22.2	240	56.1
		5/22/08	7.36	24.0	501	64.5
		8/6/08	7.32	22.6	494	55.3
		11/18/08	7.79	24.3	365	66.3
	L	3/3/09	7.41	24.5	489	66.2
T11 (0)		4/22/09	7.44	24.3	494	62.5
TM-19A	522581	8/12/09	7.61	24.4	554	61.3
		11/4/09	7.47	24.2	522	63
		3/10/10	7.54	22.9	511	60.6
		4/9/10 7/7/10	6.49 6.93	23.0 23.8	435 428	66.5 63.2
		2/14/11	6.69	21.4	511	61.9
		7/15/11	7.11	24.1	499	62.1
		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
TM-42	562554	5/7/09 DUP	6.88	24.5	1155	445
		8/18/09	7.04	24.4	1336	428
	L	11/3/09	7.07	23.1	1266	430
	l L	2/24/10	7.13	22.7	1236	390
		4/19/10	6.87	21.5	985	444
		7/2/10	6.81	23.9	827	407
		7/12/11	6.83	22.0	1205	441
TM-43	564729	3/3/08	8.57	21.0	341	2.1
		8/4/08 3/3/08	8.14 6.17	25.7 19.9	436 2788	<5 1420
TM-43A	564726	8/4/08	6.03	21.6	3149	1320
		3/3/08	6.79	20.6	5149	0.7
TM-43B	565004	8/5/08	6.89	21.0	507	31.8
		8/5/08 DUP	6.89	21.0	507	32.5
		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
	Г	10/15/08	7.45	22.3	490	36.6
		2/11/09	7.32	20.1	391	27.6
		4/17/09	7.36	19.3	418	28.1
TVI 236	802236	4/17/09 DUP	7.36	19.3	418	28.3
		7/21/09	7.59	22.9	484	31.3
		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 2/21/08	6.80 7.28	22.4	499.6	42.9
				21.1	739	244
	568875	5/7/08 7/15/08	7.09 7.27	21.2 22.4	833 925	250 274
		10/15/08	7.26	22.4	925 878	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
TVI 875		10/19/09	7.23	21.9	822	247
		2/2/10	7.32	20.8	939	250
		4/23/10	7.34	20.2	930.4	294
		7/15/10	7.46	21.8	842.5	262
		10/20/10	7.79	21.9	890	242
		1/20/11	7.39	21.0	780	226
		4/11/11	7.20	21.1	820.6	235
		7/15/11	6.75	22.2	791.9	239
WALKER	200393	2/13/08	7.05	20.2	650	20
	20000	7/23/08	7.25	20.7	740	45.4



Table 3 **Compilation of Analytical Results** For Sulfate and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved (mg/L)
		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
WEED	544535	2/1/10	7.60	20.8	382	12.2
		4/26/10	7.69	22.1	366	13.4
		7/21/10	7.36	22.1	354.9	13.6
		7/21/10 DUP	7.36	22.1	354.9	13.5
		10/19/10	7.63	21.2	378.8	11.7
		1/19/11	7.62	21.1	383.6	12.2
		4/11/11	7.44	21.5	386.6	13
		7/18/11	7.56	22.0	379.3	12.7
		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
WEISKOPF	641802	10/15/09	6.89	21.4	1216	484
WEISKOPF	641802	2/2/10	7.22	20.4	1319	451
		4/22/10	7.30	19.3	1329	572
		7/19/10	7.06	23.1	1330	573
		10/20/10	7.64	21.6	1360	515
		10/20/10 DUP	7.64	21.6	1360	529
		1/17/11	7.16	22.0	1270	481
		4/11/11	6.88	22.4	1365	557
		8/26/11	6.83	23.5	1200	549
		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
ZANDER	205126	10/13/09	7.41	21.7	407	6.3
		1/26/10	7.49	20.3	411	5.7
	L	4/2/10	7.55	20.0	416	6.70
	L	7/21/10	7.38	22.7	388.2	6.78
	L	10/19/10	6.78	21.3	430	6.56
	L	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

ADWR = Arizona Department of Water Resources

deg C = degrees Celsius

M = pH Meter Malfunction

NA = Not Analyzed

NR = No Record ND = No Data

SC = Specific Conductance

SU = Standard Units

 μ S/cm = microsiemens per centimeter

¹ 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 ¹ (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
ANDERSON	613396	601134.729	3468816.065	4588.51	10/12/09	147.31	4441.20
					1/27/10	147.31	4441.20
					4/21/10	147.57	4440.94
					7/19/10	148.34	4440.17
					10/19/10	147.75	4440.76
					1/17/11	148.63	4439.88
					4/11/11	149.46	4439.05
					7/14/11	149.92	4438.59
					8/27/08	121.12	4426.52
					4/8/08 ²	116	4431.64
	616586	616586 598907.911	3468549.357	4547.64	10/23/08 ³	115	4432.64
AWC-02					4/22/09 ³	118	4429.64
					10/9/09 ³	117	4430.64
					4/23/10 ³	119	4428.64
					8/27/08	119.40	4420.12
					4/8/2008 ²	112	4427.52
				4500 50	10/23/08 ³	106	4433.52
AWC-03	616585	599090.322	3468681.898	4539.52	4/22/09 ³	114	4425.52
					10/9/09 ³	116	4423.52
					4/23/10 ³	116	4423.52
					8/18/08	112.56	4427.92
					4/8/2008 ²	108	4432.48
AVA/O 0.4	040504	500040.000	0.400747.004	4540.46	10/23/08 ³	111.31	4429.17
AWC-04	616584	598949.929	3468717.084	4540.48	4/22/09 ³	110	4430.48
					10/9/09 ³	110	4430.48
					4/23/10 ³	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
				4042.51	6/3/09	125	4417.51
					10/9/09 ³	289	4253.51
					4/23/10 ³	278	4264.51



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
BANKS 987	647987	606981.921	3469206.175	4648.18	10/7/09	236.71	4411.47
					2/25/10	216.98	4431.20
					4/20/10	219.35	4428.83
					7/20/10	235.60	4412.58
					10/20/10	230.24	4417.94
					1/17/11	215.28	4432.90
					4/5/11	221.68	4426.50
					7/11/11	237.39	4410.79
					5/12/08	113.71	4578.65
					7/23/08	113.56	4578.80
					10/16/08	113.20	4579.16
BARTON 919	644919	606243.850	3469076.689	4692.36	3/11/09	112.92	4579.44
					4/10/09	112.89	4579.47
					7/7/09	112.86	4579.50
					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
55.01				400=00	5/6/09	348.73	4486.50
BF-01	539783	604169.077	3472151.593	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
					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
DIMAA	F77007	606004 245	2474052.004	4902.05	7/8/09	365.44	4436.61
BIMA	577927	606001.245	3471852.804	4802.05	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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					8/27/08	62.05	4743.05
					11/11/08	60.95	4744.15
					2/25/09	61.43	4743.67
					4/28/09	62.01	4743.09
					8/4/09	62.96	4742.14
BMO-2008-1G	909474	606467.681	3471723.644	4805.10	10/27/09	63.61	4741.49
					2/17/10	64.51	4740.59
					4/15/10	65.05	4740.05
					7/7/10	65.83	4739.27
					2/10/11	67.74	4737.36
					7/12/11	69.37	4735.73
					7/18/08	138.05	4445.92
					11/4/08	137.95	4446.02
					2/19/09	138.19	4445.78
					5/11/09	138.46	4445.51
					8/6/09	139.02	4444.95
BMO-2008-3B	909147	602012.923	3467919.582	4583.97	10/26/09	139.60	4444.37
					3/3/10	140.03	4443.94
					4/8/10	140.07	4443.90
					7/1/10	140.70	4443.27
					2/14/11	141.41	4442.56
					7/12/11	142.21	4441.76
					12/11/08	130.77	4442.40
					2/18/09	130.58	4442.59
					4/30/09	131.24	4441.93
					8/6/09	131.96	4441.21
BMO-2008-4B	910096	601099.405	3468383.430	4573.17	10/27/09	132.04	4441.13
DIVIO-2000-46	910096	601099.405	3400303.430	4573.17	2/24/10	131.82	4441.35
					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
					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
PMO 2000 ED	909653	600429 450	3468994.715	4585.10	2/15/10	145.42	4439.68
BMO-2008-5B	a0a033	600438.159	3400334.7 13	4505.10	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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
DMO 0000 514	000550	000445.074	0.40000.4.000	4505.00	2/15/10	147.07	4437.95
BMO-2008-5M	909552	600445.071	3468994.282	4585.02	4/16/10	147.34	4437.68
					7/7/10	148.28	4436.74
					10/5/10	148.68	4436.34
					2/14/11	148.74	4436.28
					5/12/11	149.66	4435.36
					7/12/11	150.20	4434.82
					7/16/08	190.13	4437.31
					11/4/08	190.23	4437.21
					2/19/09	189.71	4437.73
					4/27/09	189.99	4437.45
					8/4/09	190.80	4436.64
					10/26/09	191.04	4436.40
BMO-2008-6B	909146	600366.523	3469820.644	4627.44	2/15/10	190.82	4436.62
		000300.323			4/15/10	190.75	4436.69
					7/1/10	191.43	4436.01
					10/5/10	192.50	4434.94
					2/14/11	192.19	4435.25
					5/12/11	192.70	4434.74
					7/12/11	193.30	4434.14
					7/10/08	191.63	4435.27
					11/4/08	190.25	4436.65
					2/20/09	190.70	4436.20
					4/28/09	190.98	4435.92
					8/4/09	191.77	4435.13
					10/26/09	192.14	4434.76
BMO-2008-6M	909019	600367.943	3469813.885	4626.90	2/15/10	191.78	4435.12
					4/15/10	191.64	4435.26
					7/1/10	192.53	4434.37
					10/5/10	192.96	4433.94
					2/14/11	193.14	4433.76
					5/12/11	193.68	4433.22
					7/12/11	194.47	4432.43
					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
BMO-2008-7M	908794	603099.165	3470029.283	4688.33	10/27/09	239.55	4448.78
5.110 2000 7 W	000704	555555.105	0110020.200	1000.00	2/17/10	239.98	4448.35
					4/15/10	240.13	4448.20
					7/6/10	240.13	4448.05
					1/0/10	270.20	 0.05
					2/14/11	241.26	4447.07



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
BMO-2008-8B	910097	604171.347	3471141.719	4753.25	3/3/10	298.37	4454.88
					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
					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
	909711				11/5/09	298.81	4453.64
BMO-2008-8M		604167.912	3471127.902	4752.45	3/3/10	299.18	4453.27
		004107.912		4752.45	4/16/10	299.42	4453.03
					7/1/10	299.70	4452.75
					1/24/11	300.46	4451.99
					5/13/11	301.00	4451.45
					7/15/11	300.96	4451.49
					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
BMO-2008-9M	909255	604668.669	3471121.675	4762.61	3/4/10	287.45	4475.16
					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	290.47	4471.66
					8/20/08	521.75	4270.46
					11/5/08	520.50	4271.71
					2/25/09	516.72	4271.71
					5/12/09	514.68	4275.49
					8/11/09	513.23	4277.98
BMO-2008-10GL	909435	605264.072	3471702.043	4792.21	11/2/09	509.43	4276.96
					3/4/10	510.88	4281.33
						t	4281.33
					4/8/10 7/2/10	506.31 511.80	4285.90
					7/2/10	511.80	4280.41



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					8/4/08	299.28	4494.17
					11/5/08	295.89	4497.56
					2/25/09	289.84	4503.61
					5/6/09	289.35	4504.10
DMO 0000 40011	000070	005007.554	0.474704.000	4700.45	8/11/09	289.09	4504.36
BMO-2008-10GU	909272	605267.551	3471731.866	4793.45	11/2/09	289.77	4503.68
					3/10/10	289.58	4503.87
					4/7/10	289.5	4503.95
					7/6/10	288.93	4504.52
					7/13/11	301.02	4492.43
					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
BMO-2008-11G	909434	603800.995	3472626.482	4844.67	11/9/09	573.41	4271.26
					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
					10/3/08	206.42	4442.79
			3470076.358	4649.21	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
BMO-2008-13B	909551	601657.612			2/16/10	207.26	4441.95
					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
					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
BMO-2008-13M	909760	601650.495	3470040.455	4647.15	2/16/10	209.16	4437.99
					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
					9/7/10	224.13	4494.42
					11/10/10	222.97	4495.58
BMO-2010-1M	219957	605581.263	3469935.750	4718.55	2/11/11	222.01	4496.54
					5/12/11	223.08	4495.47
	1				8/31/11	224.38	4494.17



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					9/7/10	264.13	4482.03
					11/11/10	263.94	4482.22
BMO-2010-2M	219958	605685.549	3470564.646	4746.16	2/10/11	264.13	4482.03
					5/13/11	266.97	4479.19
					7/14/11	268.05	4478.11
					7/28/10	115.38	4435.21
					11/10/10	115.80	4434.79
BMO-2010-3B	219970	599977.962	3468347.363	4550.59	1/20/11	115.46	4435.13
					4/7/11	116.11	4434.48
					7/13/11	117.30	4433.29
					7/30/10	118.63	4431.90
					11/10/10	118.75	4431.78
BMO-2010-3M	219969	599970.801	3468353.543	4550.53	1/20/11	118.32	4432.21
					4/7/11	119.09	4431.44
					8/25/11	120.74	4429.79
					4/22/08	606.55	4249.75
					8/5/08	605.86	4250.44
חוחויד	242260	600000 007	3473029.816	4056.20	10/28/08	604.88	4251.42
BURKE	212268 6	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
COB MW-1	903992	603153.259	3469889.889	4683.26	4/21/09	234.99	4448.27
COB IVIVV-1	903992	003133.239	3409009.009	4003.20	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
					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
COB MW-2	903984	600973.257	3468114.836	4566.21	7/22/09	124.91	4441.30
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
	1				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
				4733.72	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
					4/21/09	290.66	4443.06
COLLINS	565260	602551.286	3471341.335		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
COOPER C	637069	601349.987	3468913.011	4599.14	10/12/09	156.89	4442.25
					1/27/10	157.03	4442.11
					4/22/10	157.31	4441.83
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
DODSON	644927	605594.560	3469063.772	4686.34	10/6/09	87.27	4599.07
DODSON	044927	605594.560	3409003.772	4000.34	1/21/10	88.54	4597.80
					4/19/10	89.53	4596.81
					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
					2/13/08	22.11	4681.16
		607632.993	3470222.677	4703.27	5/13/08	24.60	4678.67
					7/22/08	27.00	4676.27
					10/16/08	23.60	4679.67
					1/19/09	26.51	4676.76
DOLLOL 400 704	500704				4/8/09	28.53	4674.74
DOUGLASS 791	592791				7/7/09	31.04	4672.23
					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
					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
DOUGLASS 792	592792	607607.541	3469829.115	4681.73	7/7/09	86.16	4595.57
					10/5/09	86.19	4595.54
					1/21/10	86.45	4595.28
					4/19/10	87.19	4594.54
					7/12/10	87.55	4594.18
					1/18/11	87.80	4593.93
					7/12/11	88.38	4593.35



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
EAST	599796	607076.365	3468712.215	4626.01	10/8/09	60.95	4565.06
					1/25/10	59.35	4566.66
					4/21/10	58.88	4567.13
					7/14/10	61.86	4564.15
					10/20/10	61.20	4564.81
					1/18/11	59.79	4566.22
					4/5/11	59.73	4566.28
					7/12/11	63.79	4562.22
					3/11/08	29.52	4613.34
					5/12/08	30.64	4612.22
					7/21/08	25.59	4617.27
		607165.354	3469229.942		10/14/08	24.53	4618.33
					1/21/09	27.35	4615.51
				4642.86	4/8/09	29.08	4613.78
EPPELE 641	805641				7/9/09	31.51	4611.35
					10/7/09	29.92	4612.94
					7/20/10	50.38	4592.48
					10/20/10	48.88	4593.98
					1/17/11	51.13	4591.73
					4/5/11	53.81	4589.05
					7/11/11	56.82	4586.04
					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
FLEMING	218386	605565.701	3469342.523	4693.68	1/21/10	311.73	4381.95
LLIVIIING	210300	000000.701	0409042.023	+0∂∂.00	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	364.72	4328.96
					10/22/08	40.59	4602.33
					1/21/09	40.66	4602.26
					4/9/09	42.88	4600.04
FULTZ	212447	607153.306	3469063.892	4642.92	7/13/09	54.94	4587.98
IULIZ	212771	007 100.000	0-00000.092	7072.32	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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
GARNER 557	558557	602659.240	3468962.415	4638.45	10/14/09	192.82	4445.63
					2/2/10	193.33	4445.12
					4/22/10	193.49	4444.96
					7/20/10	193.93	4444.52
					10/19/10	194.29	4444.16
					1/19/11	194.61	4443.84
					4/6/11	194.86	4443.59
					7/15/11	195.25	4443.20
					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
		602665.352			1/28/09	194.80	4445.94
					4/15/09	195.54	4445.20
					7/16/09	194.88	4445.86
GARNER 635	587635		3468967.902	4640.74	10/14/09	196.36	4444.38
					2/2/10	195.32	4445.42
					4/22/10	196.01	4444.73
					8/25/10	195.57	4445.17
					10/19/10	225.83	4414.91
					1/19/11	196.89	4443.85
					4/6/11	197.40	4443.34
					7/15/11	198.07	4442.67
					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
GG003L 347	020547	000230.037	3409020.200	47 17.11	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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/21/08	183.90	4447.23
					5/5/08	188.11	4443.02
					7/16/08	184.41	4446.72
					10/22/08	184.68	4446.45
					1/27/09	184.87	4446.26
					4/15/09	184.96	4446.17
GOAR RANCH	610695	602454.751	3468892.471	4631.13	7/7/09	185.36	4445.77
					10/12/09	185.72	4445.41
					2/2/10	186.25	4444.88
					4/22/10	186.44	4444.69
					7/13/10	186.76	4444.37
					1/19/11	187.52	4443.61
					7/12/11	188.24	4442.89
					2/27/08	163.05	4434.16
					5/7/08	163.28	4433.93
					7/14/08	163.87	4433.34
					10/16/08	163.95	4433.26
					1/28/09	163.82	4433.39
					4/15/09	164.16	4433.05
HOBAN	805290	601705.848	3468880.329	4597.21	7/14/09	164.59	4432.62
					10/15/09	165.00	4432.21
					3/2/10	165.32	4431.89
					5/18/10	165.71	4431.50
					7/20/10	166.17	4431.04
					10/19/10	166.45	4430.76
					8/31/11	167.76	4429.45
					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
HOWARD ⁴	NR	601281.159	3468770.377	4593.91	10/12/09	152.08	4441.83
					1/27/10	152.20	4441.71
					4/21/10	152.30	4441.61
					7/19/10	153.16	4440.75
					10/18/10	153.53	4440.38
					1/17/11	153.51	4440.40
					4/11/11	154.24	4439.67
					8/26/11	154.79	4439.12



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
KEEFER	209744	599879.175	3468119.015	4572.03	10/13/09	136.67	4435.36
					1/26/10	136.26	4435.77
					4/20/10	136.26	4435.77
					7/15/10	137.29	4434.74
					10/19/10	137.68	4434.35
					1/18/11	137.42	4434.61
					4/6/11	137.91	4434.12
					7/18/11	140.39	4431.64
					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
MCCONNELL 265	539265	601463.094	3468840.139	4600.70	10/12/09	158.13	4442.57
					1/26/10	158.35	4442.35
					4/22/10	158.68	4442.02
					7/21/10	159.37	4441.33
					10/18/10	159.63	4441.07
					1/19/11	159.69	4441.01
					4/8/11	159.10	4441.60
					7/12/11	160.77	4439.93
					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
METZLER	35-71891	602091.308	3471381.176	4728.53	10/14/09	287.99	4440.54
					2/1/10	288.38	4440.15
					5/18/10	288.65	4439.88
					7/16/10	288.88	4439.65
					10/19/10	289.09	4439.44
					1/19/11	289.54	4438.99
					4/4/11	289.87	4438.66
					7/12/11	289.98	4438.55



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					7/24/08	557.90	4203.33
					10/16/08	549.30	4211.93
					2/25/09	536.40	4224.83
					5/11/09	544.64	4216.59
					8/11/09	566.87	4194.36
NESS	509127	607866.391	3471419.494	4761.23	11/12/09	537.34	4223.89
					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
					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
					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
NSD-02	527587	598820.051	3468821.474	4531.38	8/25/10	102.38	4429.00
				3/17/11	102.68	4428.70	
					6/17/11	109.29	4422.09
					10/7/09	85.62	4432.66
			3468694.259	4518.28	3/16/10	83.51	4434.77
		598070.538			5/25/10	84.49	4433.79
NSD-03	527586				8/25/10	85.70	4432.58
					3/17/11	86.76	4431.52
					6/17/11	88.76	4429.52
					10/27/08	160.51	4439.93
				4600.44	4/29/09 ⁵	160.5	4439.94
NWC-02	562944	600177.435	3467474.673		9/10/09 ⁵	155	4445.44
					4/2010 ⁵	131	4469.44
					11/3/08	131.48	4443.51
					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
NWC-03 CAP ⁶	627684	601151.704	3468343.653	4572.82	2/3/10	131.34	4441.48
1400 00 0711	02.00.	0011011101	0.000.000	.0.2.02	4/21/10	131.86	4440.96
					7/20/10	131.50	4441.32
					1/18/11	132.91	4439.91
					7/15/11	134.42	4438.40
	+				12/2/08	352.11	4338.66
					4/29/09 ⁵	328	4362.77
NWC-04 551849 60582	605829.808	3469071.959	4690.77	9/10/09 ⁵	324	4366.77	
			ĺ		4/2010 ⁵	216	4474.77
	+				4/2010 4/29/09 ⁵	156	4436.50
					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
			<u> </u>	<u> </u>	4/2010	1-10	11 32.30



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
OSBORN	643436	607031.823	3470270.548	4711.95	7/8/09	96.61	4615.34
					10/5/09	75.09	4636.86
					1/21/10	75.37	4636.58
					4/19/10	81.59	4630.36
					7/12/10	83.00	4628.95
					7/12/11	74.60	4637.35
					1/22/09	155.28	4536.12
					4/9/09	156.15	4535.25
			3469323.140		7/9/09	161.61	4529.79
					10/6/09	167.20	4524.20
					1/21/10	166.92	4524.48
PANAGAKOS	35-76413	605304.234		4691.40	4/20/10	167.11	4524.29
					7/20/10	171.78	4519.62
					10/18/10	176.39	4515.01
					7/14/11	173.78	4517.62
					8/25/11	172.89	4518.51
					5/15/08	279.78	4447.43
			3471263.549	4727.21	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	150.47	4441.17
PIONKE	613395	601045.471	3468960.981	4592.13	3/8/10	151.11	4441.02
TIONICE	013393	001043.471	3400300.301	4392.13		151.11	4440.81
					4/26/10 7/15/10	151.32	
					10/18/10	152.38	4440.23 4439.75
					1/19/11	152.38	4439.75
					4/8/11	153.04	4439.09
					7/12/11		
						153.57	4438.56
					2/20/08	204.22	4434.87
					5/19/08	204.72	4434.37
					7/31/08	205.56	4433.53
					10/21/08	205.06	4434.03
					2/13/09	204.74	4434.35
POOL	509518	599683.603	3470013.823	4639.09	4/21/09	204.87	4434.22
					7/20/09	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
			Ī		10/20/10	206.74	4432.35



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
DAMIDEZ	246425	E00720 640	2467504 262	4500.04	1/25/10	160.10	4436.51
RAMIREZ	216425	599730.649	3467584.363	4596.61	4/21/10	159.96	4436.65
					7/21/10	161.05	4435.56
					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
					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
		607083.422			1/20/09	44.31	4603.60
			3469195.147	4647.91 4577.35	4/8/09	44.68	4603.23
					7/9/09	48.99	4598.92
RAY	803772				10/7/09	49.87	4598.04
					1/26/10	47.61	4600.30
					4/20/10	49.78	4598.13
					7/14/10	51.36	4596.55
					10/20/10	49.85	4598.06
					1/17/11	50.51	4597.40
					4/5/11	51.84	4596.07
					7/11/11	55.74	4592.17
					11/11/09	135.46	4441.89
					2/25/10	135.89	4441.46
					4/22/10	135.62	4441.73
ROGERS 596	573596	601001.503	3468491.639		7/16/10	136.63	4440.72
	0.000	00.00000	0.00.0		10/19/10	136.61	4440.74
					1/20/11	134.21	4443.14
					4/8/11	137.68	4439.67
					7/14/11	138.09	4439.26
					2/7/08	129.85	4449.17
					7/29/08	131.86	4447.16
ROGERS 750 ⁷	641750	600977.690	3468417.386	4579.02	10/22/08	132.08	4446.94
					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
ROGERS E	216018	600449.648	3467636.029	4590.66	7/13/09	150.31	4440.35
					10/6/09	150.76	4439.90
					1/25/10	150.64	4440.02
					4/21/10	150.97	4439.69
					8/25/10	151.15	4439.51
					10/19/10	151.57	4439.09



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
					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
		600811.014	3468269.622	4564.49	7/10/09	124.15	4440.34
SCHWARTZ ⁸	210865				10/6/09	124.55	4439.94
					1/22/10	124.32	4440.17
					4/21/10	124.65	4439.84
					7/21/10	125.80	4438.69
					10/19/10	126.30	4438.19
					1/17/11	125.35	4439.14
					4/11/11	127.50	4436.99
					7/18/11	127.67	4436.82
				4651.22	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
STEPHENS	808560	606981.766	3469072.799		7/7/09	49.41	4601.81
STEFFIENS	808300	000981.700	3409072.799	4031.22	10/7/09	50.33	4600.89
					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
					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
SUNBELT	201531	605998.250	3471735.149	4806.52	7/8/09	356.99	4449.53
					10/5/09	Dry	<4426
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (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
SWAN	NR	607378.547	3470648.298	4716.59	7/8/09	33.61	4682.98
					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
					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
		604152.059	59 3472008.794	4808.43	2/24/09	348.64	4459.79
TM-02A					5/6/09	349.38	4459.05
	522574				8/12/09	349.13	4459.30
					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
					3/12/08	127.14	4770.71
			1		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	113.86	4783.99
					8/18/09	128.80	4769.05
					11/10/09	125.38	4772.47
					3/2/10	128.02	4769.83
					4/14/10	130.56	4767.29
					7/7/10	131.25	4766.60
					2/26/08	158.78	4549.10
					5/20/08	158.76	4549.12
					8/4/08	158.80	4549.08
					10/29/08	158.85	4549.03
					2/16/09	159.28	4548.60
TM OC MULED	E00005	606055 075	2469270 050	4707.00	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
	1				7/21/11	159.88	4548.00



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					3/5/08	81.00	4636.71
					5/22/08	81.24	4636.47
					8/6/08	81.65	4636.06
					11/5/08	81.75	4635.96
					2/26/09	81.88	4635.83
					5/13/09	82.01	4635.70
TM-16	522578	605588.075	3469842.199	4717.71	8/19/09	82.37	4635.34
					11/10/09	82.83	4634.88
					3/2/10	83.09	4634.62
					4/14/10	83.22	4634.49
					7/2/10	83.51	4634.20
					7/14/11	80.41	4637.30
					3/6/08	199.85	4446.02
					5/22/08	199.50	4446.37
			3469197.426		8/6/08	199.19	4446.68
				4645.87	11/18/08	199.46	4446.41
					3/3/09	199.81	4446.06
		602458.710			4/22/09	200.57	4445.30
TM-19A	522581				8/12/09	201.46	4444.41
	322361				11/4/09		4444.71
						201.16	4444.71
					3/10/10 4/9/10	201.34 201.55	4444.32
					7/7/10	201.35	4443.52
					2/14/11	203.00	4442.87
					7/15/11	203.00	4442.57
					3/5/08	211.04	4455.63
					5/22/08 8/6/08	210.98	4455.69 4455.12
						211.55	4459.62
					11/6/08	207.05	4459.62
					2/18/09	212.31	
TM-42	562554	603698.271	3469104.903	4666.67	5/7/09	212.37	4454.30
					8/18/09	212.77	4453.90
					11/3/09 2/24/10	213.05 213.36	4453.62 4453.31
ı							
					4/19/10	213.51	4453.16
					7/2/10	213.52	4453.15
	+				7/12/11	214.62	4452.05
					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
T\/! 000	000000	600550 045	2467070 404	4504.00	4/17/09	122.73	4439.25
TVI 236	802236	600552.215	3467978.431	4561.98	7/21/09	123.96	4438.02
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					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
T\/ 712	TVI 713 567713 6	600729.095	3468412.946	4567.22	10/19/09	127.79	4439.43
TVI 713	56//13	600729.095	3400412.940	4567.22	2/2/10	126.71	4440.51
					4/23/10	127.53	4439.69
					7/15/10	129.14	4438.08
					10/20/10	130.84	4436.38
					1/20/11	134.36	4432.86
					4/11/11	135.72	4431.50
					7/15/11	131.61	4435.61
					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
WEISKOPF	641802	601154.951	3468658.855	4586.89	10/15/09	145.66	4441.23
					2/2/10	145.28	4441.61
					4/22/10	145.72	4441.17
					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



Well Name	ADWR 55 Registry No.	UTM East (meters)	UTM North (meters)	Measuring Point Elevation ¹ (ft amsl)	Date	Depth To Water (feet)	Groundwater Elevation (ft amsl)
					2/4/08	144.85	4436.09
					5/6/08	145.33	4435.61
					7/16/08	146.40	4434.54
					10/28/08	146.01	4434.93
					2/10/09	144.83	4436.11
					4/16/09	144.94	4436.00
					7/14/09	146.14	4434.80
ZANDER	205126	599678.880	3467998.486	4580.94	10/13/09	146.77	4434.17
					1/26/10	146.34	4434.60
					4/22/10	146.27	4434.67
					7/21/10	147.81	4433.13
					10/19/10	147.80	4433.14
					1/18/11	147.52	4433.42
					4/6/11	147.84	4433.10
				7/13/11	148.91	4432.03	

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 Survey Source: Survey conducted by Gilbert Technical Service, Inc and Arizona Land Sepcialists, Inc

² Measuring point elevation for third quarter 2008 changed to reflect well survey completed on September 18, 2008

³ Depth to Water measurement provided by Arizona Water Company

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

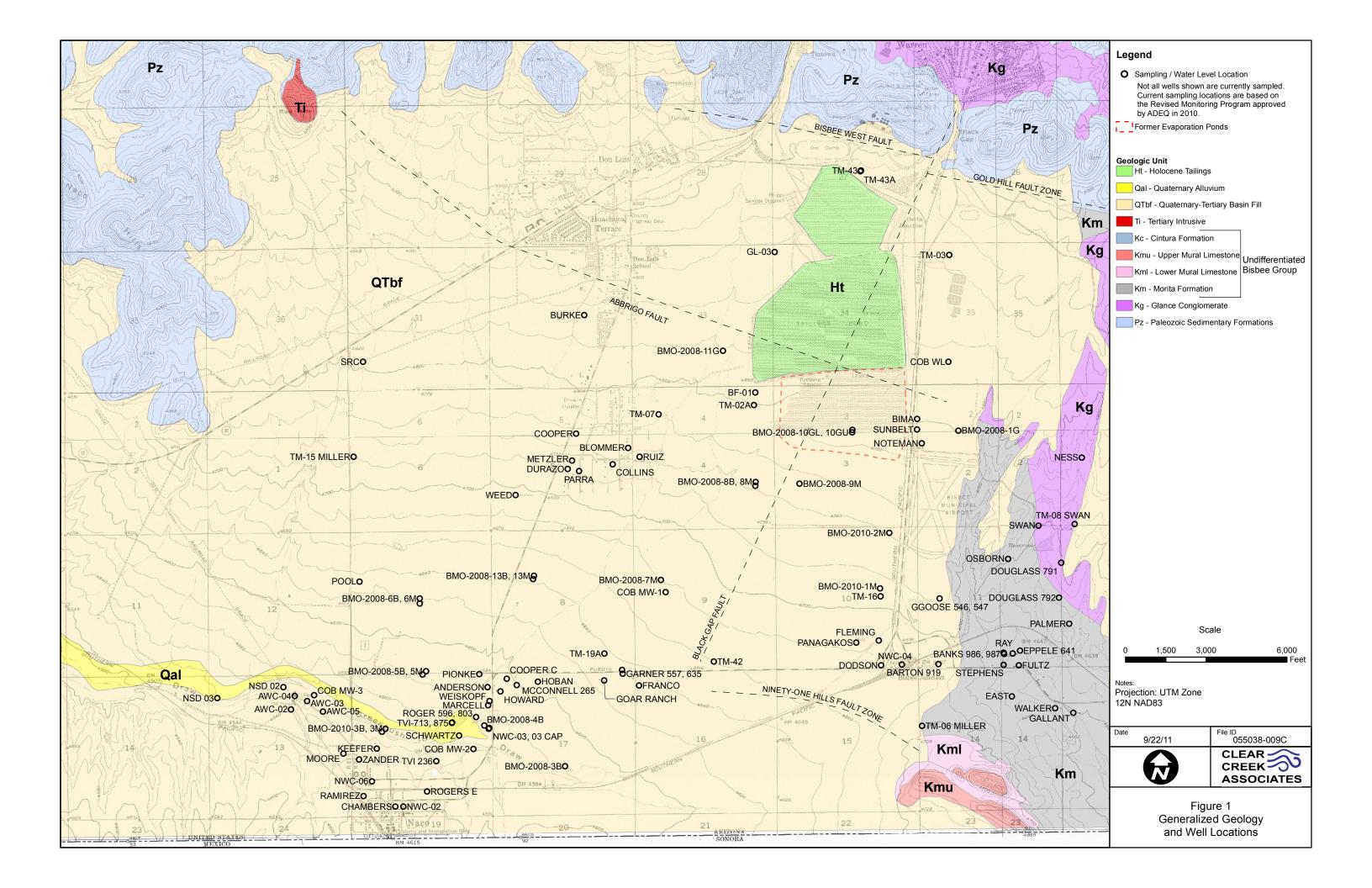
⁵ Depth to Water measurement provided by Naco Water Company

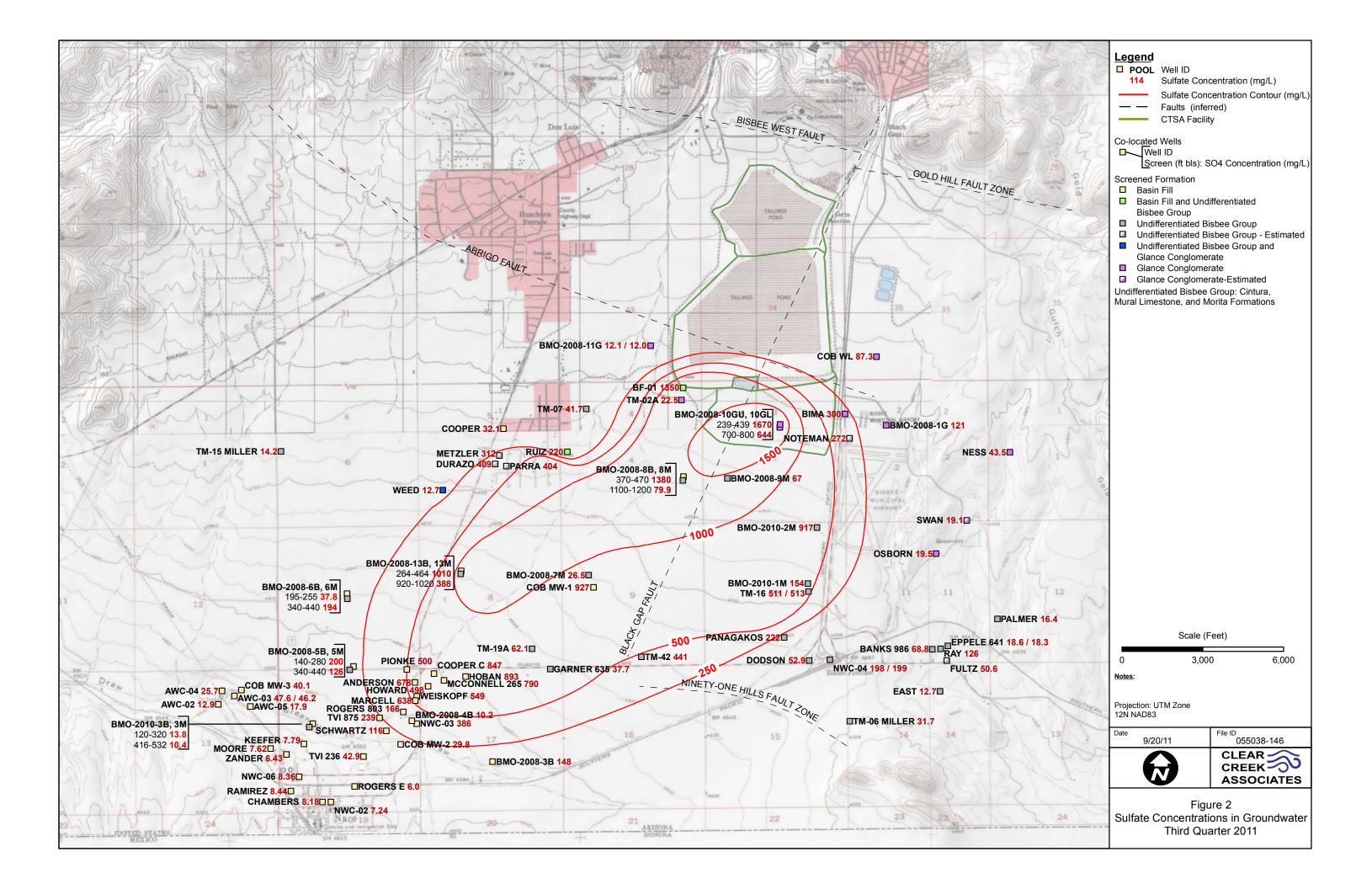
⁶ Measuring point elevation for second quarter 2009 changed to reflect well survey completed on April 27, 2009

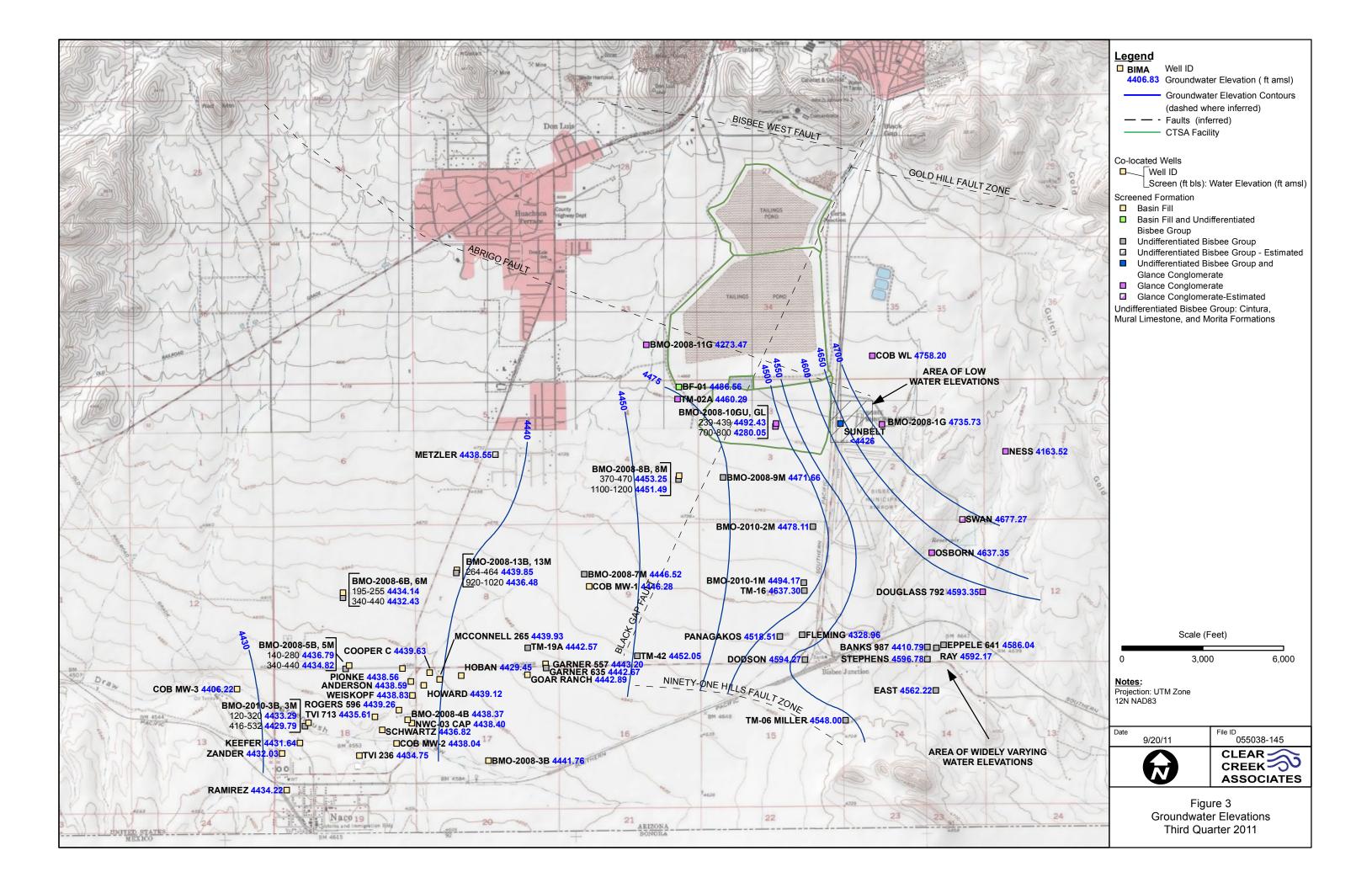
⁷ Well previously identified as ROGERS 803

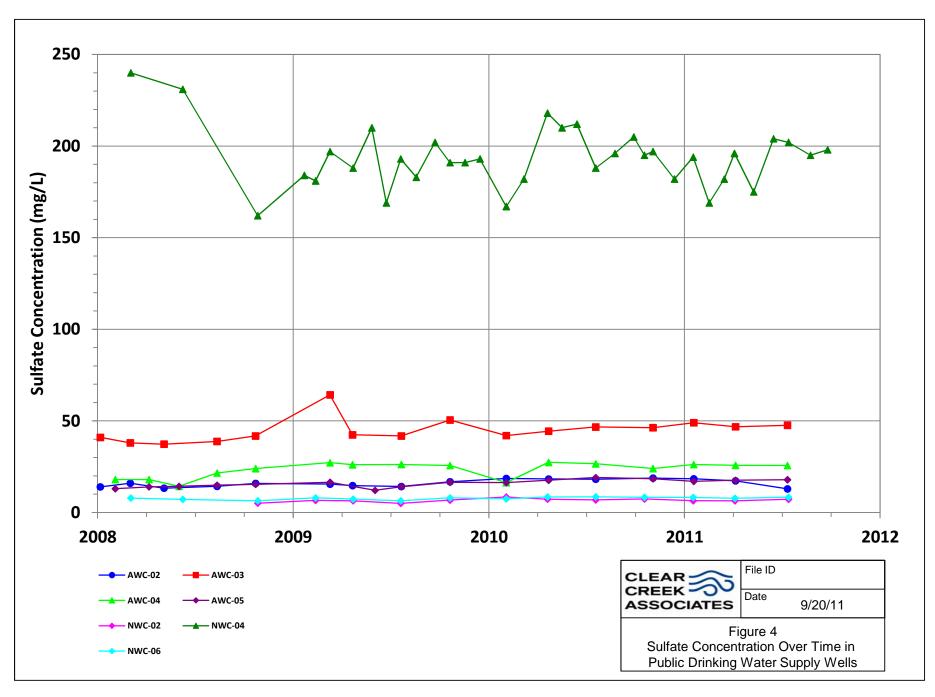
⁸ Measuring point elevation changed to reflect survey results September 10, 2010 and applied to all measurements collected

FIGURES

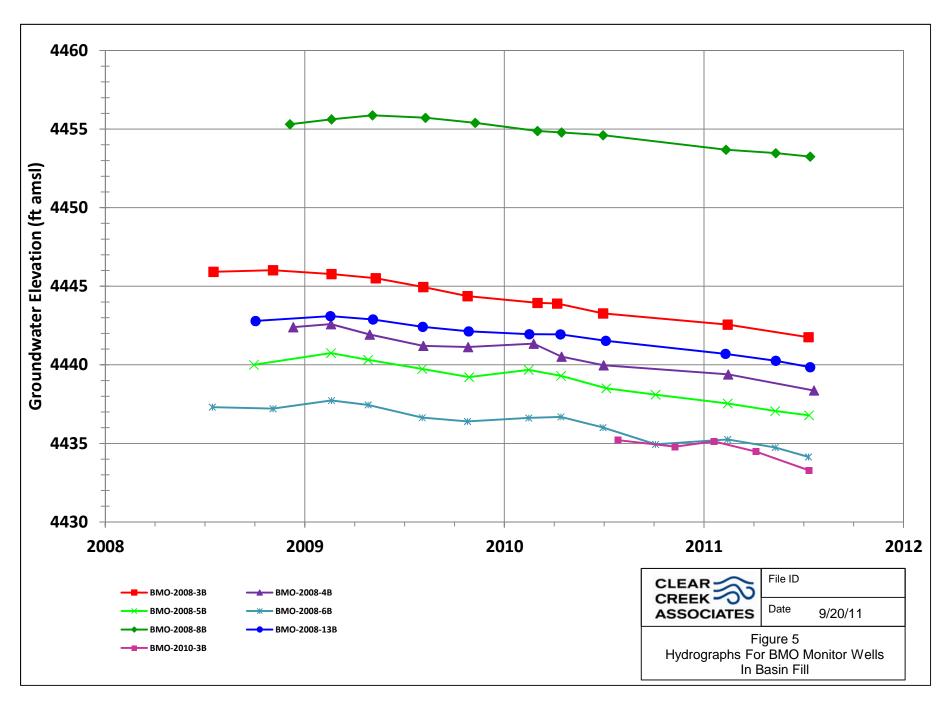




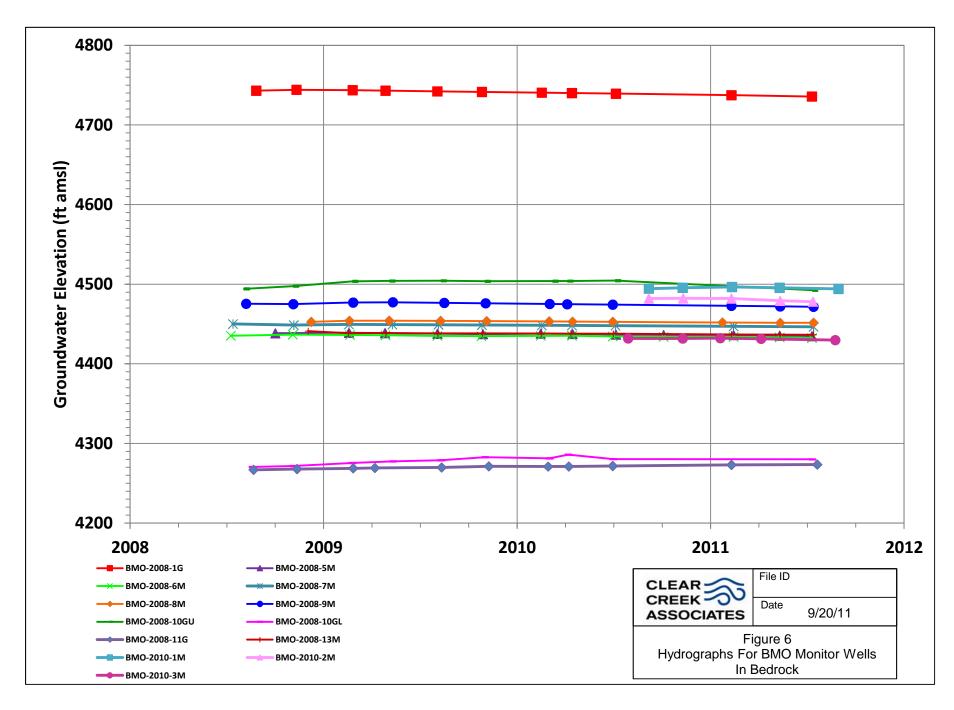




N:\Projects\G & K\055038_Copper Queen Branch Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2011 Q3 CQB Groundwater Monitoring Report\SO4 and GW elev Time Series for Select Q3 2011.xls



N:\Projects\G & K\055038_Copper Queen Branch Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2011 Q3 CQB Groundwater Monitoring Report\SO4 and GW elev Time Series for Select Q3 2011.xls



N:\Projects\G & K\055038_Copper Queen Branch Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Report\2011 Q3 CQB Groundwater Monitoring Report\5O4 and GW elev Time Series for Select Q3 2011.xls

APPENDIX A DATA VERIFICATION REPORT

APPENDIX A

DATA VERIFICATION REPORT

THIRD QUARTER 2011 GROUNDWATER MONITORING REPORT

Prepared for:

FREEPORT-MCMORAN COPPER QUEEN BRANCH

36 West Highway 92 Bisbee, Arizona 85603

Prepared by:

CLEAR CREEK ASSOCIATES, P.L.C.

221 North Court Avenue, Suite 101 Tucson, Arizona 85701

October 7, 2011

TABLE OF CONTENTS

1.	INTI	RODUCTION	1
2.	FIEL	D OPERATIONS	3
	2.1	Water Level Monitoring	
	2.2	Groundwater Sampling	
		2.2.1 Pre-Sampling Field Activities	
		2.2.2 Well Purging, Field Measurements, and Sample Collection	
		2.2.3 Post-Sampling Field Activities	
3.	SAM	IPLE HANDLING	6
4.	LAB	ORATORY QUALITY CONTROL	7
	4.1	Licensure	
	4.2	Analytical Method	7
	4.3	Method Detection Limit (MDL) and Reporting Limit (RL)	7
	4.4	Timeliness	
	4.5	Quality Control Measurements	8
		4.5.1 Calibration Blanks, and Calibration Verification Standards	8
		4.5.2 Analytical Spike	8
		4.5.3 Laboratory Duplicate Samples	8
		4.5.4 Sample Re-Analysis	9
		4.5.5 Field Blank Samples	9
5.	DAT	A QUALITY INDICATORS	10
	5.1	Precision	10
	5.2	Bias	11
	5.3	Accuracy	11
	5.4	Representativeness	11
	5.5	Comparability	11
	5.6	Completeness	12
	5.7	Sensitivity	12
6	REF	ERENCES	13

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the third quarter 2011 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 (ADEQ, 2010). Analytical results for groundwater samples collected for this project during the third quarter 2011 were provided to Clear Creek by SVL Analytical, Inc. (SVL) of Kellogg, Idaho for preparation of the third quarter 2011 Groundwater Monitoring Report.

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

The laboratory reports for the third quarter 2011 samples including COC forms, laboratory correspondence, QC summaries, data qualifiers, internal QA/QC tests performed by SVL and any case narratives are presented with the laboratory reports included in Appendix B. Based on the results of laboratory control samples, matrix spike/recovery and blank spikes, SVL did not advise of any modifications that should be made regarding the usability and data validation status of the laboratory test results. The analytical results for all 96 samples collected by Clear Creek and CQB are contained in 7 reports having the SVL Project numbers identified in the following table.

SVL ID	WELLS REPORTED					
Number of wells sampled: 78 Number of well samples collected: 81 Number of duplicate samples collected: 5 Number of field and equipment blanks collected: 10 Total number of samples collected: 96						
W1G0308	AWC-02, AWC-03, AWC-04, AWC-05, BANKS 986, BMO-2010-3B, COOPER, DODSON, DUP20110711, DUP20110713, EAST, EB20110712, EB20110713, EPPELE 641, FB20110712, FB20110713, MCCONNELL 265, METZLER, NESS, NOTEMAN, OSBORN, PALMER, PARRA, RAY, SWAN					
W10G0385	BMO-2008-6B, BMO-2008-6M, BMO-2008-3B, BMO-2008-5M, TM-42, TM-15 MILLER, BMO-2008-1G, BMO-2008-10GU, BMO-2008-10GL, BMO-2008-5B, TM-16, DUP071411, BMO-2010-2M, TM-2A, BF-01, BMO-2008-13B, BMO-2008-8B, BMO-2008-8M, BMO-2008-9M, BMO-2008-13M, BMO-2008-7M, TM-19A					
W1G0441	ANDERSON, COB MW-1, COB MW-2, COB MW-3, COB WL, CHAMBERS, DURAZO, GARNER 635, KEEFER, MOORE, NWC-02, NWC-03, NWC-04, NWC-06, PANAGAKOS, PIONKE, RAMIREZ, ROGERS 803, ROGERS E, SCHWARTZ, TVI 236, TVI 875, WEED, ZANDER					
W1G0604	TM-6, FB072111, TM-7, EQB-P-072211, EQB072211, BMO-2008-11G, DUP072111, BMO-2008-4B					
W1H0745	BMO-2010-3M, NWC-04, BIMA, FULTZ, PANAGAKOS COOPER C, HOWARD, MARCELL, WEISKOPF, RUIZ					
W1I0168	1385 PURDY LANE (HOBAN), BMO-2010-1M					
W1I0650	NWC-04, DUP20110926, FB20110926A, FB20110926B, EB20110926					

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 quality assurance and quality control 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 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. However, it was not always possible to ascertain from the well owners how long the pump had been off. 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 groundwater samples were collected from wells designated in the groundwater monitoring program approved by ADEQ (ADEQ, 2010). More detailed information regarding the wells sampled for water quality and water level measurements is listed in Tables 2, 3, and 4 of the main text.

2.2.1 Pre-Sampling Field Activities

On each day of sampling, the pH¹ and SC² multipurpose probe 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.

<u>2.2.2</u> 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 0.3 standard units for pH, 2 degrees Celsius for temperature and 100 microSiemen/centimeter for specific conductance as described in Section 4.2.1.2 of the OAPP.

During this monitoring period 81 groundwater samples were collected for analysis from 78 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 SVL and maintained in a clean and secure work area until used in the field.

² Field SC meter was calibrated using a standard stock solution of 3900 μS/cm



4

¹ Field pH meter was calibrated using a three point calibration and pH buffers 4, 7, and 10

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 individually bagged (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 for analysis. COC documentation accompanied all samples submitted and included the sample name, collection date and time. COCs contained in laboratory reports included the date and time the samples were received by SVL. As noted on the analytical data reports from SVL, all of the sample bottles were received intact, properly preserved, and in good condition. The samples were shipped within one to four days of sample collection and the time between sample collection and receipt of samples by SVL was one to five days. The samples were collected, shipped, and received by SVL within the established holding time for dissolved sulfate analysis in accordance with United States Environmental Protection Agency (EPA) Method 300.0.

4. LABORATORY QUALITY CONTROL

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

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

4.1 Licensure

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

4.2 Analytical Method

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

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

The MDL and RL of the analytical method used by SVL are shown in the following table. The MDL for analyses of samples 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

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. Spike recoveries for most analyses were between 90 and 110 percent. 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 the five cases where an M1 or M3 qualifier was used the laboratory control sample recovery was acceptable and no corrective action was required per the SVL Quality Manual and QAPP. The laboratory control samples were prepared by adding a sulfate spike to de-ionized water.

4.5.3 <u>Laboratory Duplicate Samples</u>

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, 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

During the third quarter 2011, two field samples were re-analyzed by SVL at the request of Clear Creek. Sample re-analysis was requested based on comparison to historical results. For the re-analysis SVL checked the dilution factor of the original sample and conducted additional analyses on the sample. The samples are shown in the table below. The results are confirmed if the RPD is within 20 percent.

SVL Project No.	Well ID	Original Result (mg/L)	Re-Run (mg/L)	RPD
W1G0441	PANAGAKOS	223	220	1.35%
W10G0385*	BMO-2008-10GL	644	716	10.59%
W10G0385*	BMO-2008-10GL	644	700	8.33%
W1I0168 [*]	1385 PURDY LANE	893	824	8.04%
W1I0168 [*]	1385 PURDY LANE	893	803	10.61%

mg/L = milligrams per liter

RPD = Relative percent difference

4.5.5 Field Blank Samples

During the third quarter 2011, 10 field blank samples were collected, including five field blanks (FB20110712, FB20110713, FB072111, FB20110926A, and FB20110926B) and five equipment blanks (EB20110712, EB20110713, EQB-P-072211, EQB072211, and EB20110926). Field blank samples were collected in accordance with procedures described in Section 4.2.1.5 of the QAPP. Field 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. Analytical results from field blank and equipment blank samples showed no detections.

^{*}Reanalysis was performed twice to confirm original result

5. DATA QUALITY INDICATORS

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

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

Each of these DQIs is discussed below in relation to the third quarter 2011 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 five field filtered duplicate samples (DUP20110712, DUP20110713, DUP071411, DUP072211, and DUP20110926) were collected by Clear Creek and CQB for analysis. The collection of five duplicate samples meets QA/QC method and quantity goal as stated in Section 4.2.1.5 of the QAPP.

Sulfate results for the five duplicate samples collected are provided in the table below. The range of RPD values was between 0.39 and 2.99 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
W1G0308	EPPELE641	DUP20110711	18.6	18.3	1.63%
W1G0308	AWC-03	DUP20110713	47.6	46.2	2.99%
W10G0385	TM-16	DUP071411	511	513	0.39%
W1G0604	BMO-2008-11G	DUP072211	12.0	12.1	0.83%
XXXXXXX	NWC-04	DUP20110926	XX	XX	#VAL UE!

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.

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. 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 Work Plan (HGC, 2008) 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 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 and are deemed usable for aquifer characterization. Thus, the completeness of analytical results is 100 percent.

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.
- Hydro Geo Chem, Inc. 2008. Revision 1, Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

APPENDIX B ANALYTICAL REPORTS



One Government Gulch - PO Box 929

36 West Hwy 92

Bisbee, AZ 85603

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

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

Work Order: **W1G0308**Reported: 29-Jul-11 15:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
AWC-02	W1G0308-01	Ground Water	13-Jul-11 09:28	BD	14-Jul-2011
AWC-03	W1G0308-02	Ground Water	13-Jul-11 09:07	BD	14-Jul-2011
AWC-04	W1G0308-03	Ground Water	13-Jul-11 09:38	BD	14-Jul-2011
AWC-05	W1G0308-04	Ground Water	13-Jul-11 08:54	BD	14-Jul-2011
BANKS 986	W1G0308-05	Ground Water	11-Jul-11 13:34	BD	14-Jul-2011
BMO-2010-3B	W1G0308-06	Ground Water	13-Jul-11 11:25	BD	14-Jul-2011
COOPER	W1G0308-07	Ground Water	11-Jul-11 11:08	BD	14-Jul-2011
DODSON	W1G0308-08	Ground Water	12-Jul-11 13:15	BD	14-Jul-2011
DUP20110711	W1G0308-09	Ground Water	11-Jul-11 10:30	BD	14-Jul-2011
DUP20110713	W1G0308-10	Ground Water	13-Jul-11 11:40	BD	14-Jul-2011
EAST	W1G0308-11	Ground Water	12-Jul-11 11:28	BD	14-Jul-2011
EB20110712	W1G0308-12	Ground Water	12-Jul-11 09:04	BD	14-Jul-2011
EB20110713	W1G0308-13	Ground Water	13-Jul-11 12:50	BD	14-Jul-2011
EPPELE 641	W1G0308-14	Ground Water	11-Jul-11 14:55	BD	14-Jul-2011
FB20110712	W1G0308-15	Ground Water	12-Jul-11 09:02	BD	14-Jul-2011
FB20110713	W1G0308-16	Ground Water	13-Jul-11 13:02	BD	14-Jul-2011
MCCONNELL 265	W1G0308-17	Ground Water	12-Jul-11 14:50	BD	14-Jul-2011
METZLER	W1G0308-18	Ground Water	12-Jul-11 17:00	BD	14-Jul-2011
NESS	W1G0308-19	Ground Water	12-Jul-11 09:18	BD	14-Jul-2011
NOTEMAN	W1G0308-20	Ground Water	11-Jul-11 16:53	BD	14-Jul-2011
OSBORN	W1G0308-21	Ground Water	12-Jul-11 12:03	BD	14-Jul-2011
PALMER	W1G0308-22	Ground Water	12-Jul-11 09:47	BD	14-Jul-2011
PARRA	W1G0308-23	Ground Water	12-Jul-11 15:50	BD	14-Jul-2011
RAY	W1G0308-24	Ground Water	11-Jul-11 15:43	BD	14-Jul-2011
SWAN	W1G0308-25	Ground Water	12-Jul-11 10:32	BD	14-Jul-2011

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

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: W1G0308

Reported: 29-Jul-11 15:40

Client Sample ID: AWC-02

SVI_Sample ID: W1G0308-01 (Ground Water)

Sample Percet Page 1 of 1

Sample ID: W1G0308-01 (Ground Water)

	SVL Sample ID: W1G0308-01 (Ground Water)				ample Report	Page 1 of 1	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	12.9	mg/L	0.30	0.07		W129318	FEH	07/27/11 15:37	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: AWC-03

SVI, Sample ID: W1G0308-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VL Sample 1D. W 130300-02 (Ground Water)					Sample Report Page 1 01 1 Sampled By: BD				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	47.6	mg/L	0.30	0.07		W129318	FEH	07/27/11 16:30	

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

Kirby Gray



Birly Dray

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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: AWC-04

SVI_Sample ID: W1G0308-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

SVL Sample ID. WIGOSO6-03 (Ground Water)				S	Page I of I	Sampled By: BD				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	25.7	mg/L	0.30	0.07		W129318	FEH	07/27/11 16:40	

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

Kirby Gray



Birly Dray

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: W1G0308
Reported: 29-Jul-11 15:40

Client Sample ID: AWC-05

SVI. Sample ID: W1G0308-04 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID: W1G0308-04 (Ground water)				Sample Report Page 1 of 1 Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	17.9	mg/L	0.30	0.07		W129318	FEH	07/27/11 16:50	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: BANKS 986

SVI Sample ID: W1G0308-05 (Ground Water)

Sample Penert Page 1 of 1

	SVL Sample ID: W1G0308-05 (Ground Water)				Sample Report Page 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatograp	ohy										
EPA 300.0	Sulfate as SO4	68.8	mg/L	1.50	0.37	5	W129318	FEH	07/27/11 17:01	D2		

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: BMO-2010-3B

SVI_Sample ID: W1G0308-06 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample ID. W1G0306-06 (Ground Water)					Sample Report Page 1 of 1 Sampled By: I				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	13.8	mg/L	0.30	0.07		W129318	FEH	07/27/11 17:11	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: COOPER

SVI_Sample ID: W1G0308-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1D. W160300-07 (Ground Water)				Sample Report Fage 1 of 1				Sampled By: BD		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	ns by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	32.1	mg/L	0.30	0.07		W129318	FEH	07/27/11 17:22		

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

Kirby Gray



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: W1G0308

Reported: 29-Jul-11 15:40

Client Sample ID: DODSON

SVI, Sample ID: W1G0308-08 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample 1D. W1G0306-06 (Ground Water)				ample Report	Page I of I	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ıs by Ion Chromatograj	ohy								
EPA 300.0	Sulfate as SO4	52.9	mg/L	1.50	0.37	5	W129318	FEH	07/27/11 17:32	D2

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

Kirby Gray



Birly Dray

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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: **DUP20110711**SVI_Sample ID: **W1G0308-09 (Ground Water)**Sample Report Page 1 of 1

Sample ID: **W1G0308-09 (Ground Water)**Sample Report Page 1 of 1

	3 VL Sample 1D. WIG	water)	Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	18.3	mg/L	0.30	0.07		W129318	FEH	07/27/11 17:42	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: DUP20110713 Sample ID: W1G0308-10 (Ground Water) Sample Report Page 1 of 1

	SVE Sample ID. VVIG	0300-10 (Ground	water)	Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	46.2	mg/L	1.50	0.37	5	W129318	FEH	07/27/11 17:53	D2

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: EAST

SVI_Sample ID: W1G0308-11 (Ground Water)

Sample Penert Page 1 of 1

Sample ID: W1G0308-11 (Ground Water)

	SVL Sample ID: WIG	vvater)	Sample Report Page 1 of 1 Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	12.7	mg/L	0.30	0.07		W129318	FEH	07/27/11 18:24	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: EB20110712 Sample ID: W1G0308-12 (Ground Water) Sample Report Page 1 of 1 Sample ID: W1G0308-12 (Ground Water) Sample Report Page 1 of 1

	SVL Sample ID. WIGO	vvater)	Sample Report Page 1 of 1 Sampled By:							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W129318	FEH	07/26/11 01:32	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: **EB20110713**SVI. Sample ID: **W1G0308-13 (Ground Water)**Semple Penert Page 1 of 1

	SVL Sample ID: W1G	water)	Sample Report Page 1 of 1 Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W129318	FEH	07/26/11 01:42	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

 Client Sample ID:
 EPPELE 641
 Sample Report Page 1 of 1
 Sample ID:
 Sample II:
 11-Jul-11 14:55

 SVL Sample ID:
 W1G0308-14 (Ground Water)
 Sample Report Page 1 of 1
 Sample By: BD
 BD

	S / E Sumpre 12: 11:0	occo ii (Giodiid	···ato.,	54	ampic report	i age i oi i		Sample	ea By: BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	18.6	mg/L	0.30	0.07		W129318	FEH	07/26/11 01:53	

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: FB20110712 Sample ID: W1G0308-15 (Ground Water) Sample Report Page 1 of 1

	SVL Sample 1D. W1G0300-13 (Ground Water)					Sample Report Page 1 of 1 Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatograp	phy										
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W129318	FEH	07/26/11 02:03			

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: **FB20110713**SVI_Sample ID: **W1G0308-16 (Ground Water)**Sample Report Page 1 of 1

Sample ID: W1G0308-16 (Ground Water)

	SVL Sample 1D. WIGOSOG-16 (Ground Water)					Sample Report Page 1 of 1 Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatograp	phy										
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W129318	FEH	07/26/11 21:40			

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: MCCONNELL 265

SVI. Sample ID: W1G0308-17 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sumple 1B: W16	oooo-17 (Ground	water,		ampie Keport	1 age 1 of 1		Sampl	ed By: BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	790	mg/L	7.50	1.85	25	W129318	FEH	07/26/11 21:50	D2

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: METZLER

SVI. Sample ID: W1G0308-18 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1B. VVIO	0300-10 (Ground	water)	Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	312	mg/L	3.00	0.74	10	W129318	FEH	07/26/11 22:01	D2

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: NESS

Sample: 12-Jul-11 09:18
Received: 14-Jul-11

	SVL Sample ID: W1G	G0308-19 (Ground Water) Sample Report Page 1 of 1						Sampl		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	43.5	mg/L	1.50	0.37	5	W129318	FEH	07/26/11 22:11	D2

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

Kirby Gray



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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: NOTEMAN

SVI. Sample ID: W1G0308-20 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. VVIG	0306-20 (Ground	vvalei)	Sample Report Page 1 01 1 Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	272	mg/L	3.00	0.74	10	W129318	FEH	07/26/11 22:22	D2

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

Kirby Gray



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: W1G0308

Reported: 29-Jul-11 15:40

Client Sample ID: OSBORN

SVI_Sample ID: W1G0308-21 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

0.07

W129319

TBB/F 07/26/11 16:53

	SVE Sumple 1D. W100000-21 (Ground Water)				ampie Keport	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	phy									

0.30

mg/L

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

19.5

Kirby Gray

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 Work Order: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: PALMER

SVL Sample ID: W1G0308-22 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample By: BD.

W129319

TBB/F 07/26/11 17:04

	SVE Sumple IB: WIC		ampic Keport	1 age 1 of 1	Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatogra									

EPA 300.0 **Sulfate as SO4** 16.4 mg/L 0.30 0.07

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

. . //



Birly Dray

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: **W1G0308**Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: PARRA

SVI. Sample ID: W1G0308-23 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1D. WIGOSOO-25 (Ground Water)				ашріе Керогі	rage 1 of 1	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	404	mg/L	3.00	0.74	10	W129319	TBB/F	07/26/11 17:35	D2

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

Kirby Gray



Birly Dray

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: W1G0308
Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: RAY

SVI, Sample ID: W1G0308-24 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

SVL Sample ID. WTG0306-24 (Ground water)				S	ample Report	Page I of I	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	126	mg/L	1.50	0.37	5	W129319	FEH	07/26/11 02:34	D2

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

Kirby Gray



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: W1G0308
Bisbee, AZ 85603 Reported: 29-Jul-11 15:40

Client Sample ID: SWAN

SVI_Sample ID: W1G0308-25 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIG0300-23 (Glound Water)				Sample Report Page 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ns by Ion Chromatograp	hy										
EPA 300.0	Sulfate as SO4	19.1	mg/L	0.30	0.07		W129319	FEH	07/26/11 02:45			

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

Kirby Gray



Freeport McMoRan - Bisbee

36 West Hwy 92 Bisbee, AZ 85603 Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W1G0308

Reported: 29-Jul-11 15:40

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0 EPA 300.0	Sulfate as SO4 Sulfate as SO4	raphy mg/L mg/L	<0.30 <0.30	0.07 0.07	0.30 0.30	W129318 W129319	27-Jul-11 26-Jul-11	

Quality Con	trol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatog	raphy							
EPA 300.0	Sulfate as SO4	mg/L	9.86	10.0	98.6	90 - 110	W129319	26-Jul-11	

Quality Cont	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	12.9	12.9	0.1	20	W129318	27-Jul-11	
EPA 300.0	Sulfate as SO4	mg/L	60.7	60.5	0.3	20	W129319	26-Jul-11	D2

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	ma/I	70.8	CO 5	10.0	100	00 110	11/120210	26 7 1 11			
EPA 300.0	Sulfate as 504	mg/L	70.8	60.5	10.0	102	90 - 110	W129319	26-Jul-11	D2		
EPA 300.0 EPA 300.0	Sulfate as SO4	mg/L	23.5	12.9	10.0	102 106	90 - 110 90 - 110	W129319 W129318	26-Jul-11 27-Jul-11	D2		

Notes and Definitions

D2	Sample required	dilution due to high conce	ntration of target analyte.
----	-----------------	----------------------------	-----------------------------

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: W1G0385

Reported: 04-Aug-11 10:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2008-6B	W1G0385-01	Ground Water	12-Jul-11 06:55	CS	19-Jul-2011
BMO-2008-6M	W1G0385-02	Ground Water	12-Jul-11 07:50	CS	19-Jul-2011
BMO-2008-3B	W1G0385-03	Ground Water	12-Jul-11 08:50	CS	19-Jul-2011
BMO-2008-5M	W1G0385-04	Ground Water	12-Jul-11 10:15	CS	19-Jul-2011
TM-42	W1G0385-05	Ground Water	12-Jul-11 12:45	CS	19-Jul-2011
TM-15 MILLER	W1G0385-06	Ground Water	12-Jul-11 13:45	CS	19-Jul-2011
BMO-2008-1G	W1G0385-07	Ground Water	12-Jul-11 16:20	CS	19-Jul-2011
BMO-2008-10GU	W1G0385-08	Ground Water	13-Jul-11 10:45	CS	19-Jul-2011
BMO-2008-10GL	W1G0385-09	Ground Water	13-Jul-11 15:25	CS	19-Jul-2011
BMO-2008-5B	W1G0385-10	Ground Water	13-Jul-11 17:00	CS	19-Jul-2011
TM-16	W1G0385-11	Ground Water	14-Jul-11 08:35	CS	19-Jul-2011
DUP971411	W1G0385-12	Ground Water	14-Jul-11 08:35	CS	19-Jul-2011
BMO-2010-2M	W1G0385-13	Ground Water	14-Jul-11 09:50	CS	19-Jul-2011
TM-2A	W1G0385-14	Ground Water	14-Jul-11 10:50	CS	19-Jul-2011
BF-1	W1G0385-15	Ground Water	14-Jul-11 11:32	CS	19-Jul-2011
BMO-2008-13B	W1G0385-16	Ground Water	15-Jul-11 06:55	CS	19-Jul-2011
BMO-2008-8B	W1G0385-17	Ground Water	15-Jul-11 09:05	CS	19-Jul-2011
BMO-2008-8M	W1G0385-18	Ground Water	15-Jul-11 12:10	CS	19-Jul-2011
BMO-2008-9M	W1G0385-19	Ground Water	15-Jul-11 14:20	CS	19-Jul-2011
BMO-2008-13M	W1G0385-20	Ground Water	15-Jul-11 15:30	CS	19-Jul-2011
BMO-2008-7M	W1G0385-21	Ground Water	15-Jul-11 17:05	CS	19-Jul-2011
TM-19A	W1G0385-22	Ground Water	15-Jul-11 17:55	CS	19-Jul-2011

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

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

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

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-6B

SVI. Sample ID: W1G0385-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample ID. WIGO	1303-01 (Glouliu	water)	Sampled By: CS						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	37.8	mg/L	0.30	0.07		W130221	FEH	07/29/11 19:21	

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-6M

SVI. Sample ID: W1G0385-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1B. WTO	0303-02 (Ground	vvaler)	Sample Report 1 age 1 of 1					Sampled By: CS		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anio	ons by Ion Chromatogra	phy									
EPA 300.0	Sulfate as SO4	194	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 19:52	D2	

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-3B

SVI. Sample ID: W1G0385-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VL Sample ID. WIG	0303-03 (Ground	water)	3	ашріе керогі	rage 1 01 1		Sampled By: CS		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	148	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 20:03	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-5M

SVI. Sample ID: W1G0385-04 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VL Sample 1D. WIGO	1303-04 (Ground	vvalei)	Sample Report Page 1 01 1 Sampled By: CS						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	126	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 20:13	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: TM-42

SVI. Sample ID: W1G0385-05 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID: W1G0	385-05 (Ground	vvater)	Sample Report Page 1 of 1 Sampled By: CS						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	441	mg/L	3.00	0.74	10	W130221	FEH	07/29/11 20:24	D2

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



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: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: TM-15 MILLER

SVL Sample ID: W1G0385-06 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 12 Sample 13. 11 100000 00 (Ground Trator)			5	ampic report	I age I of I	Sampled By: CS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatogra	phy								

0.30

0.07

W130221

FEH

07/29/11 20:55

mg/L

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

14.2

Brandan Borgias Systems Manager

Sulfate as SO4



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-1G

SVI. Sample ID: W1G0385-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. VVIG	0303-07 (Ground	water)	3:	ampie Kepori	Sampled By: CS				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	121	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 21:16	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-10GU

SVI. Sample ID: W1G0385-08 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	BVE Bample ID. WIG	Sample Report 1 age 1 of 1 Sampled By: CS								
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	1670	mg/L	15.0	3.70	50	W130221	FEH	07/29/11 21:26	D2

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



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

36 West Hwy 92 Work Order: **W1G0385**Bisbee, AZ 85603 Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-10GL
SVL Sample ID: W1G0385-09 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample Report Page 1 of 1

	S + E Sumpre 1B : 1110	0000 00 (0104114	1141017	5.	ampie report	i age i oi i		Sample	ea By: CS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved An	ions by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	644	mg/L	7.50	1.85	25	W130221	FEH	07/29/11 21:37	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-5B

SVI. Sample ID: W1G0385-10 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIGO	J365-10 (Ground	vvalei)	58	ampie Kepori	rage I of I		Sampl	ed By: CS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	200	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 21:47	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: TM-16

Sumple ID: W1G0385-11 (Ground Water)

Sumple Report Page 1 of 1

Sumple Report Page 1 of 1

	SVL Sample ID: W1G0	1385-11 (Ground	vvater)	Sa	ample Report	Page I of I		Sampl	ed By: CS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	511	mg/L	7.50	1.85	25	W130221	FEH	08/01/11 16:38	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: DUP971411 Sample ID: W1G0385-12 (Ground Water) Sample Report Page 1 of 1 Sample Report Page 1 of 1

	SVE Sample ID. VVIG	0303-12 (Ground	water)	3	ашріе керогі	Sampled By: CS				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	513	mg/L	7.50	1.85	25	W130221	FEH	08/01/11 16:49	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2010-2M

SVL Sample ID: W1G0385-13 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Revort Page 1 of 1

	5 v E sumpre 15: 1116	occo io (Grouna	114101,	56	impic report	rage rorr		Sample	ea By: CS	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved An	ions by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	917	mg/L	7.50	1.85	25	W130221	FEH	07/29/11 22:18	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: TM-2A

SVI_Sample ID: W1G0385-14 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIGO	1305-14 (Ground	water)	58	ımpie Keport	rage 1 of 1		Sample		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	22.5	mg/L	0.30	0.07		W130221	FEH	07/29/11 22:29	

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BF-1

Suppled: 14-Jul-11 11:32

Received: 19-Jul-11

Suppled: 14-Jul-11 11:32

Received: 19-Jul-11

	SVL Sample ID. WIGO	Joos-15 (Ground	water)	5	ampie Kepori	rage 1 of 1		Sampl	Sampled By: CS		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	ns by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	1350	mg/L	15.0	3.70	50	W130221	FEH	07/29/11 23:00	D2	

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-13B

SVL Sample ID: W1G0385-16 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	S VE Sumple 18: 1116	Sample By: CS								
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ions by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	1010	mg/L	15.0	3.70	50	W130221	FEH	07/29/11 23:10	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-8B

SVI. Sample ID: W1G0385-17 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1B. W16	10303-17 (Ground	Sample Report Lage 1					Sampled By: CS					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes			
Dissolved Anio	ns by Ion Chromatogra	phy											
EPA 300.0	Sulfate as SO4	1380	mg/L	15.0	3.70	50	W130221	FEH	07/29/11 23:21	D2			

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



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

36 West Hwy 92 Work Order: **W1G0385**Bisbee, AZ 85603 Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-8M

SVI. Sample ID: W1G0385-18 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1B. VVIO	W 100303-10 (Ground Water)			ашріе Керогі	pie Report 1 age 1 of 1 Sampled By: CS				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	79.9	mg/L	1.50	0.37	5	W130221	FEH	07/29/11 23:31	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-9M

SVI. Sample ID: W1G0385-19 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E sumple 15. VV 100000-13 (Ground vvater)				Sample Report Lage 1 of 1				Sampled By: CS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	67.0	mg/L	1.50	0.37	5	W130221	FEH	08/01/11 16:59	D2		

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-13M

SVL Sample ID: W1G0385-20 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sumple 15. VV 150000 25 (Ground Valor)				ampic report	1 age 1 of 1	Sampled By: CS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	388	mg/L	3.00	0.74	10	W130221	FEH	07/29/11 23:52	D2

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: BMO-2008-7M

SVL Sample ID: W1G0385-21 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sampled: 15-Jul-11 17:05
Received: 19-Jul-11
Sampled By CS

					ampie recport	1 450 1 01 1	Sampled By: CS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

Dissolved Anions by Ion Chromatography

EPA 300.0 **Sulfate as SO4** 26.5 mg/L 0.30 0.07 W130223 FEH 07/29/11 22:40

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Client Sample ID: TM-19A

SVI. Sample ID: W1G0385-22 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample 1D. W1G0303-22 (Ground Water)				Sample Report Page 1 01 1				Sampled By: CS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	62.1	mg/L	1.50	0.37	5	W130223	FEH	07/29/11 22:51	D2		

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



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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0385

Reported: 04-Aug-11 10:17

Quality Con	trol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Ani EPA 300.0 EPA 300.0	ions by Ion Chromatog Sulfate as SO4 Sulfate as SO4	raphy mg/L mg/L	<0.30 <0.30	0.07 0.07	0.30 0.30	W130221 W130223	29-Jul-11 29-Jul-11	

Quality Con	trol - LABORATORY	CONTROL SAN	MPLE Data						
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatog	raphy							

EPA 300.0	Sulfate as SO4	mg/L	9.80	10.0	98.0	90 - 110	W130221	29-Jul-11	

Quality Cont	trol - 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	37.8	37.8	0.0	20	W130221	29-Jul-11	
EPA 300.0	Sulfate as SO4	mg/L	41.8	42.9	2.6	20	W130223	01-Aug-11	D2

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										
Dissolved Anie EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	51.3	42.9	10.0	R > 4S	90 - 110	W130223	01-Aug-11	D2,M3		

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



One Government Gulch - PO Box 929

36 West Hwy 92

Bisbee, AZ 85603

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

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

Work Order: **W1G0441**Reported: 08-Aug-11 13:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
ANDERSON	W1G0441-01	Ground Water	14-Jul-11 14:42	BD	20-Jul-2011
COB MW-1	W1G0441-02	Ground Water	14-Jul-11 13:35	BD	20-Jul-2011
COB MW-2	W1G0441-03	Ground Water	14-Jul-11 09:27	BD	20-Jul-2011
COB MW-3	W1G0441-04	Ground Water	14-Jul-11 10:17	BD	20-Jul-2011
COB WL	W1G0441-05	Ground Water	14-Jul-11 08:47	BD	20-Jul-2011
CHAMBERS	W1G0441-06	Ground Water	18-Jul-11 11:28	BD	20-Jul-2011
DURAZO	W1G0441-07	Ground Water	14-Jul-11 15:48	BD	20-Jul-2011
GARNER 635	W1G0441-08	Ground Water	15-Jul-11 13:05	BD	20-Jul-2011
KEEFER	W1G0441-09	Ground Water	18-Jul-11 12:18	BD	20-Jul-2011
MOORE	W1G0441-10	Ground Water	13-Jul-11 14:24	BD	20-Jul-2011
NWC-02	W1G0441-11	Ground Water	15-Jul-11 09:17	BD	20-Jul-2011
NWC-03	W1G0441-12	Ground Water	15-Jul-11 08:32	BD	20-Jul-2011
NWC-04	W1G0441-13	Ground Water	15-Jul-11 08:06	BD	20-Jul-2011
NWC-06	W1G0441-14	Ground Water	15-Jul-11 08:57	BD	20-Jul-2011
PANAGAKOS	W1G0441-15	Ground Water	14-Jul-11 14:23	BD	20-Jul-2011
PIONKE	W1G0441-16	Ground Water	12-Jul-11 18:10	BD	20-Jul-2011
RAMIREZ	W1G0441-17	Ground Water	18-Jul-11 11:08	BD	20-Jul-2011
ROGERS 803	W1G0441-18	Ground Water	14-Jul-11 15:14	BD	20-Jul-2011
ROGERS E	W1G0441-19	Ground Water	18-Jul-11 10:05	BD	20-Jul-2011
SCHWARTZ	W1G0441-20	Ground Water	18-Jul-11 13:55	BD	20-Jul-2011
TVI 236	W1G0441-21	Ground Water	15-Jul-11 10:48	BD	20-Jul-2011
TVI 875	W1G0441-22	Ground Water	15-Jul-11 10:13	BD	20-Jul-2011
WEED	W1G0441-23	Ground Water	18-Jul-11 14:50	BD	20-Jul-2011
ZANDER	W1G0441-24	Ground Water	13-Jul-11 15:44	BD	20-Jul-2011

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

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.

Case Narrative

08/08/2011 BAB: The value for sample W1G0441-15 (PANAGAKOS) was markedly lower than in the past. The dilutions were confirmed and a reanalysis check confirmed the result of ~220 mg/L.



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: ANDERSON

SVI, Sample ID: W1G0441-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample 1D. W130441-01 (Ground Water)				Sample Report Page 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	678	mg/L	7.50	1.85	25	W130222	FEH	08/02/11 11:25	D2		

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: COB MW-1

Syll, Sample ID: W1G0441-02 (Ground Water)

Syll, Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v L Sample 1D. W 16044 1-02 (Ground Water)				Sample Report Page 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anior	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	927	mg/L	7.50	1.85	25	W130222	FEH	08/01/11 19:55	D2		

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: COB MW-2

SVI, Sample ID: W1G0441-03 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

SVL Sample ID. WIG0441-03 (Ground Water)					Sample Report Page 1 of 1				Sampled By: BD		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	ns by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	29.8	mg/L	0.30	0.07		W130222	FEH	08/01/11 20:26		

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: COB MW-3

SVL Sample ID: W1G0441-04 (Ground Water)

Sample Report Page 1 of 1

	S v E sumpre 15: 11:0	Sample Report 1 age 1 of 1			Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatogra	phy								

0.30

0.07

W130222

FEH

08/01/11 20:37

mg/L

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

40.1

Nan Wilson

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 Work Order: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: COB WL

Sample ID: WASONAM OF (Consumed Winter)

Sample ID: WASONAM OF (Consumed Winter)

Sample ID: WASONAM OF (Consumed Winter)

SVL Sample ID: W1G0441-05 (Ground Water)				S	ample Report	Page 1 of 1	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	87.3	mg/L	1.50	0.37	5	W130222	FEH	08/02/11 11:36	D2

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: CHAMBERS

SVI, Sample ID: W1G0441-06 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	BVE Bumple 1B. W160	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	hy								
EPA 300.0	Sulfate as SO4	8.18	mg/L	0.30	0.07		W130222	FEH	08/01/11 20:58	

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: DURAZO

Sampled: 14-Jul-11 15:48
Received: 20-Jul-11

Sample ID: W1G0444 07 (Ground Water)

Sample ID: W1G0444 07 (Ground Water)

SVL Sample ID: W1G0441-07 (Ground Water)				Sa	Page 1 of 1	Sampled By: BD				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions by Ion Chromatography										
EPA 300.0	Sulfate as SO4	409	mg/L	3.00	0.74	10	W130222	FEH	08/01/11 21:29	D2

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: GARNER 635

SVI. Sample ID: W1G0441-08 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1D. WIGO	Sample Report 1 age 1 of 1			Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	Dissolved Anions by Ion Chromatography									
EPA 300.0	Sulfate as SO4	37.7	mg/L	0.30	0.07		W130222	FEH	08/01/11 21:39	

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: KEEFER

SVI, Sample ID: W1G0441-09 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

SVL Sample ID. W1G0441-09 (Ground Water)					ampie Keport	Page 1 of 1	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	7.79	mg/L	0.30	0.07	•	W130222	FEH	08/01/11 22:00	

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: MOORE

Sampled: 13-Jul-11 14:24
Received: 20-Jul-11

SVL Sample ID: W1G0441-10 (Ground Water)					Sample Report Page 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ons by Ion Chromatograp	hy										
EPA 300.0	Sulfate as SO4	7.62	mg/L	0.30	0.07		W130222	FEH	08/01/11 22:31			

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: NWC-02

SVI, Sample ID: W1G0441-11 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	vvater)	Sample Report Page 1 of 1 Sampled By: BD								
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	7.24	mg/L	0.30	0.07		W130222	FEH	08/01/11 22:42	

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: NWC-03

SVI, Sample ID: W1G0441-12 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	vvalei)	Sample Report Page 1 01 1 Sampled By: BD								
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	386	mg/L	3.00	0.74	10	W130222	FEH	08/01/11 22:52	D2

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: NWC-04

Sumple ID: W1G0441-13 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIG	vvaler)	5:	ed By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	202	mg/L	1.50	0.37	5	W130222	FEH	08/01/11 23:03	D2

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: NWC-06

SVI_Sample ID: W1G0441-14 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIG	0441-14 (Ground V	valer)	5	ampie Keport	rage 1 of 1		Sample	d By: BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogra	phy								

0.30

0.07

W130222

FEH

08/01/11 23:13

mg/L

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

8.36

Nan Wilson

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 Work Order: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: PANAGAKOS

SVI. Sample ID: W1G0441-15 (Ground Water)

Sample Percet Page 1 of 1

Sample ID: W1G0441-15 (Ground Water)

SVL Sample ID: W1G0441-15 (Ground water)					Sample Report Page 1 of 1 Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	223	mg/L	1.50	0.37	5	W130222	FEH	08/01/11 23:24	D2

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

Nan Wilson



Wellin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: PIONKE

Sampled: 12-Jul-11 18:10
Received: 20-Jul-11

	SVL Sample ID: W1G0441-16 (Ground Water)					Sample Report Page 1 of 1 Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ons by Ion Chromatograp	ohy										
EPA 300.0	Sulfate as SO4	500	mg/L	7.50	1.85	25	W130222	FEH	08/02/11 11:46	D2		

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: RAMIREZ

SVI, Sample ID: W1G0441-17 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 VE Sample 1D. W100441-17 (Ground Water)				ampie Kepori	1 age 1 of 1		Sample	ed By: BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	8.44	mg/L	0.30	0.07		W130222	FEH	08/01/11 23:44	

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: ROGERS 803

SVI. Sample ID: W1G0441-18 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIG	vvaler)	Sample Report Page 1 of 1 Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	166	mg/L	1.50	0.37	5	W130222	FEH	08/01/11 23:55	D2

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

Nan Wilson



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: W1G0441
Reported: 08-Aug-11 13:51

Client Sample ID: ROGERS E

SVI, Sample ID: W1G0441-19 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. W1G0441-19 (Ground Water)					Sample Report Page 1 of 1 Sampled By: BD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anion	ns by Ion Chromatograp	hy									
EPA 300.0	Sulfate as SO4	6.00	mg/L	0.30	0.07		W130222	FEH	08/02/11 11:56		

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: SCHWARTZ

SVI. Sample ID: W1G0441-20 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VL Sample 1D. W 160441-20 (Ground Water)					Sample Report Page 1 01 1 Sampled By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatogra	phy										
EPA 300.0	Sulfate as SO4	116	mg/L	1.50	0.37	5	W130222	FEH	08/02/11 12:07	D2		

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: TVI 236

Sampled: 15-Jul-11 10:48
Received: 20-Jul-11

	SVL Sample ID: W1G	(Vater)	Sa	ed By: BD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	42.9	mg/L	1.50	0.37	5	W130223	FEH	08/01/11 14:11	D2

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

Nan Wilson



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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: TVI 875

SVI, Sample ID: W1G0441-22 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VE Sample 1D. W 13044 1-22 (Ground Water)					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	239	mg/L	3.00	0.74	10	W130223	FEH	07/29/11 23:33	D2		

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: WEED

SVL Sample ID: W1G0441-23 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sample 1B. WIG	water)	38	апріе Керогі	1 age 1 of 1	Sampled By: BD				
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ıs by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	12.7	mg/L	0.30	0.07		W130223	FEH	07/29/11 23:43	

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

Nan Wilson



NEllin

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: **W1G0441**Bisbee, AZ 85603 Reported: 08-Aug-11 13:51

Client Sample ID: ZANDER

SVI. Sample ID: W1G0441-24 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. W 160441-24 (Ground Water)					r Page 1 of 1	Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	6.43	mg/L	0.30	0.07		W130223	FEH	07/29/11 23:53	

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

Nan Wilson



Bisbee, AZ 85603

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Bisbee

36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W1G0441

Work Order: **W1G0441**Reported: 08-Aug-11 13:51

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio EPA 300.0 EPA 300.0	ons by Ion Chromatog Sulfate as SO4 Sulfate as SO4	raphy mg/L mg/L	<0.30 <0.30	0.07 0.07	0.30 0.30	W130222 W130223	01-Aug-11 29-Jul-11	

Quality Control - LABORATORY CONTROL SAMPLE Data											
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes		
Dissolved Ani	ons by Ion Chromatog	raphy									
EPA 300.0	Sulfate as SO4	mg/L	10.2	10.0	102	90 - 110	W130222	01-Aug-11			
EPA 300.0	Sulfate as SO4	mg/L	9.94	10.0	99.4	90 - 110	W130223	29-Jul-11			

Quality Control - DUPLICATE Data											
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	41.8	42.9	2.6	20	W130223	01-Aug-11	D2		
EPA 300.0	Sulfate as SO4	mg/L	8.17	8.18	0.1	20	W130222	01-Aug-11			

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								
Dissolved Ani EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	51.3	42.9	10.0	R > 4S	90 - 110	W130223	01-Aug-11	D2,M3
	·		51.3 18.8	42.9 8.18	10.0 10.0	R > 4S 106	90 - 110 90 - 110	W130223 W130222	01-Aug-11 01-Aug-11	D2,M3



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:W1G0441Bisbee, AZ 85603Reported:08-Aug-11 13:51

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



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: **W1G0604**Bisbee, AZ 85603 Reported: 11-Aug-11 09:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
WMD-2011-3M	W1G0604-01	Ground Water	20-Jul-11 12:45	CLS	27-Jul-2011
TM-6	W1G0604-02	Ground Water	21-Jul-11 09:20	CLS	27-Jul-2011
FB072111	W1G0604-03	Water	21-Jul-11 09:25	CLS	27-Jul-2011
TM-7	W1G0604-04	Ground Water	21-Jul-11 10:38	CLS	27-Jul-2011
EQB-P-072211	W1G0604-05	Water	22-Jul-11 07:15	CLS	27-Jul-2011
EQB-072211	W1G0604-06	Water	22-Jul-11 07:17	CLS	27-Jul-2011
BMO-2008-11G	W1G0604-07	Ground Water	22-Jul-11 07:30	CLS	27-Jul-2011
DUP 072211	W1G0604-08	Ground Water	22-Jul-11 07:30	CLS	27-Jul-2011
BMO-2008-4B	W1G0604-09	Ground Water	22-Jul-11 14:30	CLS	27-Jul-2011

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: WMD-2011-3M

SVI_Sample ID: W1G0604-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

5 V L Sample 1D. VV 100004-01 (Ground Vvaler)					ашріе Керогі	rage 1 01 1	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	363	mg/L	3.00	0.74	10	W132087	FEH	08/04/11 18:56	D2

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

John Kern



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

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

36 West Hwy 92

Bisbee, AZ 85603

Work Order: W1G0604

Reported: 11-Aug-11 09:43

Client Sample ID: TM-6

SVI_Sample ID: W1G0604-02 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. W 10004-02 (Ground Water)				Sample Report 1 age 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ns by Ion Chromatograp	hy										
EPA 300.0	Sulfate as SO4	31.7	mg/L	0.30	0.07		W132087	FEH	08/04/11 19:05			

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: **FB072111**SVI_Sample ID: **W1G0604-03 (Water)**Sample Report Page 1 of 1

Sample 321-Jul-11 09:25

Received: 27-Jul-11

	5 vir sumple ib. W10004-00 (Water)					Sample Report 1 age 1 of 1				
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	0.07		W132077	FEH	08/04/11 19:32	

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: W1G0604 Bisbee, AZ 85603 Reported: 11-Aug-11 09:43

Sampled: 21-Jul-11 10:38 Client Sample ID: TM-7 Received: 27-Jul-11

	SVL Sample ID: W1G0604-04 (Ground Water)				ample Report	Page 1 of 1	Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	phy								
EPA 300.0	Sulfate as SO4	41.7	mg/L	1.50	0.37	5	W132087	FEH	08/04/11 19:41	D1

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

John Ken John Kern



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

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

36 West Hwy 92
Bisbee, AZ 85603
Work Order: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: **EQB-P-072211**SVL Sample ID: **W1G0604-05 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	3 VL Sample 1D. VV 130004-03 (VValet)					Sample Report Fage 1 01 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	0.07		W132077	FEH	08/04/11 19:50	

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: **EQB-072211**SVI, Sample ID: **W1G0604-06 (Water)**Sample Report Page 1 of 1

Sample Report Page 1 of 1

	5 v E Sample 1D. 11 100004-00 (Water)				Sample Report 1 age 1 of 1				Sampled By: CLS		
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	0.07		W132077	FEH	08/04/11 19:59		

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: BMO-2008-11G

SVI_Sample ID: W1G0604-07 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVE Sumple ID. WYGGGG-07 (Ground Water)				Sample Report Lage 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anion	ns by Ion Chromatograp											
EPA 300.0	Sulfate as SO4	12.1	mg/L	0.30	0.07		W132087	FEH	08/04/11 20:08			

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: DUP 072211 Sample ID: W1G0604-08 (Ground Water) Sample Report Page 1 of 1 Sample Report Page 1 of 1

	3 VL Sample 1D. W 130004-00 (Glound Water)				Sample Report Fage 1 of 1				Sampled By: CLS		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes	
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	12.0	mg/L	0.30	0.07		W132087	FEH	08/04/11 20:17		

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: W1G0604
Reported: 11-Aug-11 09:43

Client Sample ID: BMO-2008-4B

SVL Sample ID: W1G0604-09 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	STE Sumple IB: 1116	···ator,	Sample Report 1 age 1 of 1				Sampled By: CLS			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp									
EPA 300.0	Sulfate as SO4	10.2	mg/L	0.30	0.07		W132087	FEH	08/04/11 20:26	

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

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Bisbee

36 West Hwy 92

Project Name: Copper Queen Branch Sulfate Mitigation Order
Work Order: W1G0604

Reported: 11-Aug-11 09:43

Quality Cont	Quality Control - BLANK Data											
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes				
Anions by Ion EPA 300.0	Chromatography Sulfate as SO4	mg/L	<0.30	0.07	0.30	W132077	05-Aug-11					
Dissolved Anio EPA 300.0	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W132087	04-Aug-11					

Quality Control - LABORATORY CONTROL SAMPLE Data											
Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes		
Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	9.61	10.0	96.1	90 - 110	W132077	05-Aug-11			
Dissolved Anio EPA 300.0	ons by Ion Chromatogr Sulfate as SO4	raphy mg/L	10.0	10.0	100	90 - 110	W132087	04-Aug-11			

Quality Control - DUPLICATE Data											
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes		
Anions by Ion (Chromatography										
EPA 300.0	Sulfate as SO4	mg/L	59.0	59.5	0.9	20	W132077	05-Aug-11	D2		
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	< 0.30	<rl< td=""><td>20</td><td>W132087</td><td>04-Aug-11</td><td></td></rl<>	20	W132087	04-Aug-11			

Quality Cont	Quality Control - MATRIX SPIKE Data												
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes			
Anions by Ion	Chromatography												
EPA 300.0	Sulfate as SO4	mg/L	74.2	59.5	10.0	R > 4S	90 - 110	W132077	05-Aug-11	D2,M3			
EPA 300.0	Sulfate as SO4	mg/L	89.2	70.5	10.0	R > 4S	90 - 110	W132077	05-Aug-11	D2,M3			
Dissolved Anio	ons by Ion Chromatog	raphy											
EPA 300.0	Sulfate as SO4	mg/L	10.9	< 0.30	10.0	108	90 - 110	W132087	04-Aug-11				
EPA 300.0	Sulfate as SO4	mg/L	10.9	< 0.30	10.0	108	90 - 110	W132087	04-Aug-11				



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: W1G0604Bisbee, AZ 85603Reported: 11-Aug-11 09:43

Notes and Definitions

D1 Sample required dilution 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

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



36 West Highway 92

Bisbee, AZ 85603

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W1H0745**Reported: 12-Sep-11 13:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2010-3M	W1H0745-01	Ground Water	25-Aug-11 11:05	BJD	30-Aug-2011
NWC-04	W1H0745-02	Ground Water	25-Aug-11 12:15	BJD	30-Aug-2011
BIMA	W1H0745-03	Ground Water	25-Aug-11 13:25	BJD	30-Aug-2011
FULTZ	W1H0745-04	Ground Water	25-Aug-11 16:35	BJD	30-Aug-2011
PANAGAKOS	W1H0745-05	Ground Water	25-Aug-11 17:25	BJD	30-Aug-2011
COOPER C	W1H0745-06	Ground Water	26-Aug-11 07:55	BJD	30-Aug-2011
HOWARD	W1H0745-07	Ground Water	26-Aug-11 08:35	BJD	30-Aug-2011
MARCELL	W1H0745-08	Ground Water	26-Aug-11 09:25	BJD	30-Aug-2011
WEISKOPF	W1H0745-09	Ground Water	26-Aug-11 10:10	BJD	30-Aug-2011
RUIZ	W1H0745-10	Ground Water	26-Aug-11 10:38	BJD	30-Aug-2011

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

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: BMO-2010-3M

Sampled: 25-Aug-11 11:05 Received: 30-Aug-11

Sampled By:	BJD	

	SVL Sample ID: W1H0745-01 (Ground Water)				Sample Report Page 1 of 1				Sampled By: BJD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Anio	ns by Ion Chromatograp											
EPA 300.0	Sulfate as SO4	10.4	mg/L	0.30	0.07		W136170	DT	09/08/11 11:10			

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: NWC-04

Sampled: 25-Aug-11 12:15 Received: 30-Aug-11

	SVL Sample ID: W1H0745-02 (Ground Water)				ample Report	Page 1 of 1	Sampled By: BJD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	195	mg/L	1.50	0.37	5	W136170	DT	09/07/11 16:38	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

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

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: BIMA

SVL Sample ID: W1H0745-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 25-Aug-11 13:25 Received: 30-Aug-11

	5 v B sumple 1B. Willow 40-00 (Ground Water)				ampie Kepori	i i age i oi i	Sampled By: BJD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ns by Ion Chromatograp	hy								
FPA 300 0	Sulfate as SO4	300	mg/L	3.00	0.74	10	W136170	DT	09/08/11 11:39	D2

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

John Kern



Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

John Ken

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: FULTZ

Sampled: 25-Aug-11 16:35 Received: 30-Aug-11

	SVL Sample ID: W1H0/45-04 (Ground Water)				Sample Report Page 1 of 1 Sampled By: BJD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anio	ns by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	50.6	mg/L	1.50	0.37	5	W136170	DT	09/07/11 16:57	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: PANAGAKOS

Sampled: 25-Aug-11 17:25 Received: 30-Aug-11

SVL Sample ID: W1H0745-05 (Ground Water)				Sample Report Page 1 of 1 Sampled By:					ed By: BJD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	222	mg/L	1.50	0.37	5	W136170	DT	09/07/11 17:07	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: COOPER C

SVI. Sample ID: W1H0745-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Aug-11 07:55 Received: 30-Aug-11

Received.	JU-Aug-11
Sampled By:	BJD

	SVE Sample 1D. Willor 45-00 (Ground Water)				Sampled By: BJD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anie	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	847	mg/L	15.0	3.70	50	W136170	DT	09/08/11 11:49	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: HOWARD

SVI. Sample ID: W1H0745-07 (Ground Water)

Sampled: 26-Aug-11 08:35 Received: 30-Aug-11

Sampled By:	BJD

SVL Sample ID: W1H0/45-07 (Ground water)				S	Sample Report Page 1 of 1 Sampled By: BJD					
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	498	mg/L	15.0	3.70	50	W136170	DT	09/08/11 11:59	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: MARCELL

SVL Sample ID: W1H0745-08 (Ground Water)

Sampled: 26-Aug-11 09:25 Received: 30-Aug-11

recourred.	30 11 45 11
Sampled By:	BJD

	SVL Sample ID. WIRC	S	ample Report	Page 1 of 1		Sample	ed By: BJD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anions	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	669	mg/L	15.0	3.70	50	W136170	DT	09/08/11 12:09	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: WEISKOPF

Sampled: 26-Aug-11 10:10 Received: 30-Aug-11

	SVL Sample ID: W1H	0745-09 (Ground \	Water)	Sa	ample Report	Page 1 of 1		Sampled By: BJD		
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	549	mg/L	15.0	3.70	50	W136170	DT	09/08/11 12:19	D2

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

John Kern



John Ken

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W1H0745

Reported: 12-Sep-11 13:02

Client Sample ID: RUIZ

SVI. Sample ID: W1H0745-10 (Ground Water)

Sampled: 26-Aug-11 10:38 Received: 30-Aug-11

		_	
Sampled By:	$_{\mathrm{BJD}}$		

	SVL Sample ID: W1H	0/45-10 (Ground)	water)	Sample Report Page 1 of 1 Sampled By: BJD						
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	220	mg/L	1.50	0.37	5	W136170	DT	09/07/11 18:17	D2

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

John Kern



Freeport McMoRan - Copper Queen Branch

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92 Work Order: W1H0745 Bisbee, AZ 85603 Reported: 12-Sep-11 13:02 Quality Control - BLANK Data Method Analyte Units MDL MRL Batch ID Result Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 mg/L< 0.30 0.07 0.30 W136170 07-Sep-11 Quality Control - LABORATORY CONTROL SAMPLE Data Acceptance Limits LCS LCS Units Method Analyte True Rec. Batch ID Analyzed Notes Dissolved Anions by Ion Chromatography EPA 300.0 Sulfate as SO4 9.70 10.0 97.0 90 - 110 W136170 07-Sep-11

Quality Control	- DUPLICATE Data								
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Dissolved Anions EPA 300.0	by Ion Chromatography Sulfate as SO4	mg/L	10.4	10.4	0.4	20	W136170	08-Sep-11	

Quality Contro	I - MATRIX SPIKE	Data								
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Dissolved Anion	s by Ion Chromatogr	aphy								
EPA 300.0	Sulfate as SO4	mg/L	20.9	10.4	10.0	104	90 - 110	W136170	08-Sep-11	

Notes and Definitions

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

Sample required dilution due to high concentration of target analyte.

Not Applicable

D2

N/A



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

Freeport McMoRan - Bisbee 36 West Hwy 92

Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: **W110168**Reported: 23-Sep-11 14:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
BMO-2010-1M	W1I0168-01	Ground Water	31-Aug-11 09:40	CLS	08-Sep-2011
1385 PURDY LANE	W1I0168-02	Ground Water	31-Aug-11 11:30	CLS	08-Sep-2011

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.

Case Narrative

09/23/2011mab: Report reissued. Client requested reanalysis for SO4 on sample -02. Reanalyzed in duplicate; original result confirmed. Orginal and reanalysis results reported.



John Ken

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: W110168

Reported: 23-Sep-11 14:44

Client Sample ID: BMO-2010-1M

SVI_Sample ID: W110168-01 (Ground Water)

Sample Report Page 1 of 1

Sample Report Page 1 of 1

	SVL Sample ID. WIII	Sample Report Page 1 01 1 Sampled By: CLS								
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	ns by Ion Chromatogra	phy								
EPA 300.0	Sulfate as SO4	154	mg/L	1.50	0.37	5	W139097	DT	09/20/11 18:02	D2

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

John Kern



John Ken

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: **W110168**Bisbee, AZ 85603 Reported: 23-Sep-11 14:44

Client Sample ID: 1385 PURDY LANE
SVL Sample ID: W110168-02 (Ground Water)
Sample Report Page 1 of 1
Sample Report Page 1 of 1
Sample By: CLS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anior	ıs by Ion Chromatograp	hy								
EPA 300.0	Sulfate as SO4	893	mg/L	15.0	3.70	50	W139097	DT	09/21/11 14:33	D2
EPA 300.0	Sulfate as SO4	824	mg/L	15.0	3.70	50	W139097	DT	09/22/11 23:24	D2,N4
EPA 300.0	Sulfate as SO4	803	mg/L	15.0	3.70	50	W139097	DT	09/22/11 23:34	D2,N4

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: **W110168**Reported: 23-Sep-11 14:44

Quality Cont	rol - BLANK Data							
Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Dissolved Anio	ons by Ion Chromatog Sulfate as SO4	raphy mg/L	<0.30	0.07	0.30	W139097	20-Sep-11	

Quality Cont	trol - 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 Sulfate as SO4	raphy mg/L	10.8	10.0	108	90 - 110	W139097	20-Sep-11	

Quality Cont	Quality Control - DUPLICATE Data											
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes			
Dissolved Anio	ons by Ion Chromatogi	ranhv										
EPA 300.0	Sulfate as SO4	mg/L	8.59	8.48	1.2	20	W139097	20-Sep-11				

Quality Control - MATRIX SPIKE Data											
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes	
Dissolved Anio	ons by Ion Chromatog	raphy									
	0.10 . 004		10.0	0.40	10.0	111	00 110	111120007	20.0 11		
EPA 300.0	Sulfate as SO4	mg/L	19.9	8.48	10.0	114	90 - 110	W139097	20-Sep-11	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.
N4	After re-analysis original results are confirmed.
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



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

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: W110650

Reported: 29-Sep-11 10:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
FB20110926	W1I0650-01	Ground Water	26-Sep-11 10:42	BD	27-Sep-2011
EB 20110926 A	W1I0650-02	Ground Water	26-Sep-11 10:45	BD	27-Sep-2011
EB20110926 B	W1I0650-03	Ground Water	26-Sep-11 10:47	BD	27-Sep-2011
NWC-04	W1I0650-04	Ground Water	26-Sep-11 11:05	BD	27-Sep-2011
MARCELL	W1I0650-05	Ground Water	26-Sep-11 12:10	BD	27-Sep-2011
DUP20110926	W1I0650-06	Ground Water	26-Sep-11 13:00	BD	27-Sep-2011

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

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

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



Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

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

Work Order: W1I0650

Reported: 29-Sep-11 10:29

Client Sample ID: FB20110926

SVL Sample ID: W110650-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 10:42 Received: 27-Sep-11

	SVL Sample ID. WITO	valer)	S	ımpie Keport	Page 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	0.07		W140099	DT	09/28/11 13:55	

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

Kirby Gray



Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92 Bisbee, AZ 85603

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W110650

Reported: 29-Sep-11 10:29

Client Sample ID: EB 20110926 A

SVL Sample ID: W110650-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 10:45 Received: 27-Sep-11

	5 v 2 sumple 13. Willows 02 (Ground Water)				Sample Report 1 age 1 of 1				Sampled By: BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes		
Dissolved Ani	ons by Ion Chromatogra	phy										

Birly Gray

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.07 W140098 09/27/11 12:14

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

Kirby Gray



Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

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

Work Order: W110650

Reported: 29-Sep-11 10:29

Client Sample ID: EB20110926 B

SVL Sample ID: W110650-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 10:47 Received: 27-Sep-11 Sampled By: BD

	1				р-ср с с		Sampled By. BD			
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes

Anions by Ion Chromatography

Birly Dray

EPA 300.0 Sulfate as SO4 < 0.30 mg/L 0.30 0.07 W140099 DT 09/28/11 14:23

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

Kirby Gray



Birby Gray

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

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

Work Order: W110650

Reported: 29-Sep-11 10:29

Client Sample ID: NWC-04

SVL Sample ID: W110650-04 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 11:05 Received: 27-Sep-11

	SVL Sample 1D. WITO	valer)	Sample Report Page 1 01 1 Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	198	mg/L	3.00	0.74	10	W140098	DT	09/27/11 13:39	D2

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

Kirby Gray



Bisbee, AZ 85603

One Government Gulch - PO Box 929

Birby Gray

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

36 West Highway 92

Project Name: Copper Queen Branch Sulfate Mitigation Order

Work Order: W110650

Reported: 29-Sep-11 10:29

Client Sample ID: MARCELL

SVL Sample ID: W110650-05 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 12:10 Received: 27-Sep-11

Sampled By:	BD

	S . E Sumpre 12: 11 116		· uto. /	5	ampie recport	1 450 1 01 1		Sample	ea By: BD	
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Ani	ons by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	638	mg/L	15.0	3.70	50	W140098	DT	09/27/11 13:57	D2

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

Kirby Gray



Birby Gray

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Freeport McMoRan - Copper Queen Branch

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

Work Order: W1I0650

Reported: 29-Sep-11 10:29

Client Sample ID: **DUP20110926**

SVL Sample ID: W110650-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 26-Sep-11 13:00 Received: 27-Sep-11

	SVL Sample 1D. WITO	rater)	Sample Report Page 1 01 1 Sampled By: BD							
Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Dissolved Anion	s by Ion Chromatograp	ohy								
EPA 300.0	Sulfate as SO4	199	mg/L	3.00	0.74	10	W140098	DT	09/27/11 14:16	D2

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

Kirby Gray



Sulfate as SO4

EPA 300.0

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

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: W110650
Reported: 29-Sep-11 10:29

5.0000, 112 000								.cu. 2> 3cp 1	
Quality Cont	rol - BLANK Data								
Method	Analyte	Units	Result	MDL		MRL	Batch ID	Analyzed	Notes
Anions by Ion	Chromatography								
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	0.07		0.30	W140099	28-Sep-11	
Dissolved Anio	ons by Ion Chromatog	raphy							
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	0.07		0.30	W140098	27-Sep-11	
Quality Cont	rol - LABORATORY	CONTROL SAN	MPLE 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	9.76	10.0	97.6	90 - 110	W140099	28-Sep-11	
Dissolved Anio	ons by Ion Chromatog	raphy							

Quality Control - DUPLICATE Data											
Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes		
Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	< 0.30	UDL	20	W140099	28-Sep-11			
Dissolved Anions by Ion Chromatography											
EPA 300.0	Sulfate as SO4	mg/L	< 0.30	< 0.30	UDL	20	W140098	27-Sep-11			

9.69

10.0

96.9

90 - 110

W140098

27-Sep-11

Quality Control - MATRIX SPIKE Data											
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes	
Anions by Ion	Chromatography										
EPA 300.0	Sulfate as SO4	mg/L	10.4	< 0.30	10.0	104	90 - 110	W140099	28-Sep-11		
Dissolved Anio	ns by Ion Chromatogi	raphy									
EPA 300.0	Sulfate as SO4	mg/L	10.1	< 0.30	10.0	101	90 - 110	W140098	27-Sep-11		



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

Freeport McMoRan - Copper Queen Branch Sulfate Mitigation Order

Project Name: Copper Queen Branch Sulfate Mitigation Order

36 West Highway 92 Work Order: **W110650**Bisbee, AZ 85603 Reported: 29-Sep-11 10:29

Notes and Definitions

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

LCS Laboratory Control Sample (Blank Spike)

RPD Relative Percent Difference

UDL A result is less than the detection limit

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

<RL A result is less than the reporting limit

MRL Method Reporting Limit
MDL Method Detection Limit

N/A Not Applicable

APPENDIX C GROUNDWATER SAMPLING FORMS

Project No:	055038				Client: Freeport Copper Queen Branch					
Task No:	1.0				Date:	7-14-11				
Well ID:	AND	ERSO.	\sim		Weather:	50Nny 90) ś			
ADWR No:					Sampler:	BJD				
				WELLDA						
Wall De	epth (ft bls):				Nomina	Casing Il Size (inches)	Capacity Gallons per L	inear Foot		
	•					2	0.10	6		
Casing D	iameter (in):	1119	G -1			4 5	0.69 1.03			
Static Water	r Level (ft bmp):	171	.92			6 8	1.4 ⁻ 2.6			
Casing V	/olume (gal):		x3 =			10	4.0	1		
Total Volum	o Durnad (nal):				Casi	ng Volume = gallons	s/foot * water colur	nn (feet)		
Total Volum	ne Purged (gal):		FIEL	D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
	Pump On	ansaria (j. 1811). Antipopologija (j. 1811).								
14:40				7-23	24.4	1451				
7-7-10				,						
					!					
							Pump Off			
I	 FIELD PARAMET	ER STABILIZA	ATION: Three co	nsecutive rea	dings within	0.2 su pH, 2 degree	es C, and 200 μS/c	m)		
			III III SAN	IPLE INFOR	MATION					
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
AN	DERSON	14:47	Poly	ZSOML]	300-0	(a)	7/2/50		
, , , , , , , , , , , , , , , , , , ,			7					1/		
			ATEN ISSUE	MENORIE) VIENEROOM	H-CHION				
			ATER LEVEL	EMIE ASSURIE	VIENTEUE					
1 /	evel measurement er level measurem		No connec to u	allhead						
	r level measurem r level measurem									
	r level measurem									
☐ Other:										
			WELL	PURGING IN	FORMATION					
_	3 well volumes ar									
i ~	3 well volumes ba			nd field parem	eters stabiliz	red.				
U Purged Other:	well until field par <u>ハッ Pッィ</u>	ameters stabili	de fran	TONK						
<u> </u>	Comments:	- John Dy	VAC 1 1 COVE							
Muulioligi	COMMENTS.	****								
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						

Project No:	055038				Client: Freeport Copper Queen Branch						
Task No:	1.0				Date:	Pate: 7~13~1/					
Well ID:	AWC	-07,			Weather:	Clear 70	<u>) '3</u>				
ADWR No:					Sampler: BJD						
				WELL DAT	A de la						
VA/oil D	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot			
VVCII D	eptii (it bis).					2	0.16	3			
Casing	Diameter (in):					5	0.65 1.02				
Static Wate	er Level (ft bmp):					6	1.47				
Casing	Volume (gal):		x3 =			8 10	2.61 4.08				
					Casir	ng Volume = gallons	/foot * water colun	nn (feet)			
Total Volui	me Purged (gal):			D SAMPLIN	G DATA						
		Discharge	Total		The state of the s	Specific					
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents			
	Pump On #										
				5.93	23.9	431.5					
							Pump Off				
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	dings within	0.2 su pH, 2 degree	s C, and 200 µS/c	m)			
			SAN	IPLE INFOR	MATION						
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
00	10-02	7:78	Pa1	250ml	1	300.0	4	418			
- AC	<u> </u>	1	107	2			4	1			
		n en et eller y	VATER EEVEL	MEASUKE	VIENT CUL						
	level measuremen		N								
	ter level measuren ter level measuren										
	ter level measuren										
☐ Other:											
			WELL	PURGING IN	ORMATION						
1 -	3 well volumes a										
1	d 3 well volumes b			nd field parem	eters stabiliz	ed.					
I	well until field par	/	_	2014	ما	Flore					
Other:		as bec	_ /	ping	- 100 f	exinge_		***************************************			
Additiona	l Comments:	(D//c	ct sang	ole, flor	171a)(
1 64,											

Project No:	055038				Client:	Freeport Coppe	er Queen Bran	ch
Task No:	1.0				Date:	7-13-11		
Well ID:	AWC-	03			Weather.	7-13-11 (1ear)	70's	
ADWR No:					Sampler:	BJD		
				WELL DAT	A	Cacina	Capacity	
Well∙De	epth (ft bls):				Nomina	Size (inches)	Gallons per L	
Casing D	Diameter (in):					2 4	0.1 0.6	5
Static Wate	r Level (ft bmp):					5 6	1.0 1.4	i i
	/olume (gal):		x3 =			8 10	2.6 4.0	
_					Casin	g Volume = gallons	/foot * water colur	nn (feet)
Total Volun	ne Purged (gal):			D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	ខ្មែរក្រៀញ 🗐 🗀 🕏							
			esse diversities de la complete de l	6.33	23-1	458.B	2915500192022910312311313113	
							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
							Pump Off	
	FIELD PARAMET	ER STABILIZA	de literatura de la constitución para la constitución de la constituci	onsecutive rea	organización de la composición de la c	0.2 su pH, 2 degree	s C, and 200 μS/c	:m)
					No. of			Filtered
Sa	mple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)
AC	16-03	9:07	Poly	ZSOML	1	300-0	Ø	y lke
	· Z01/07/3	11:40	Poh	250mL	/	300.0	Ø	1/2
		i i i i i i	ATER LEVEL	MEASURE	MENT COLL	ECTION		
□ Water le	evel measuremen	t collected.	11111111111111111111111111111111111111	parat Int. Style 11 December 21				
☐ No wate	er level measurem	ent collected.	No access to we	ellhead.				
	er level measurem							
· ·	r level measurem	ent collected. \	Well is pumping	ļ.				
□ Other:	as marka and an ang kalengang	ener et duichet						
		Fida fili filiadada.	dadiskidum mususu	PURGING INF	ORWATION			
1	3 well volumes ar							
1 7	3 well volumes ba			nd field parem	eters stabilize	ed.		
☐ Purged ☑ Other:	well until field par			000.01				
	Comments:	(all o	t san	/ 1_	or Ha	10 -		
						/ > _ C 		

Project No:	055038				Client: Freeport Copper Queen Branch					
Task No:	1.0				Date:	7-13-11				
Well ID:	AWC-0	9			Weather:	Clear 70	25			
ADWR No:					Sampler:	BJD				
di libotogia ili				WELL DA						
WellD	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
						2	0.1	6		
Casing I	Diameter (in):					4 5	0.6 1.0			
Static Water	er Level (ft bmp):			<u></u>		6	1.4			
Casing	Volume (gal):		x3 =			8 10	2.6 4.0			
					Casir	ng Volume = gallons	/foot * water colur	nn (feet)		
i otal Volur	ne Purged (gal):			D SAMPLIN	I IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
	Pump On									
9:35				€.08	20.4	60.1				
						/				
				<u> </u>	<u> </u>		Pump Off			
	FIELD PARAMET	ER STABILIZA	operation and restrict and a finite substitution	Signification is an arrange of the	proteorentolischerberge	0.2 su pH, 2 degree	is C, and 200 μS/c	:m) Transassassassassassas		
			SAN	/IPLE/INFOR	MATION					
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
AL	16-04	9:38	Pol	250 m	1	300-0	Ø	Y/k		
			7					7		
		l Tarahan da ka	ATTER LEVEL	MEASUREI	MENT COL	ECTION				
	evel measuremen									
	er level measurem									
	er level measurem							•		
Other:	er level measurem	ieni conecieu.	wen is puniping	 -						
			Well	PURGING IN	ORMATION					
☐ Purged	3 well volumes ar	nd field parame	eters stabilized.	A statutation talenti il periode l'esse				in the position of the establishment of the trade of the pro-		
3	3 well volumes ba			nd field parem	eters stabiliz	ed.				
Purged	well until field par	ameters stabili	zed.	1	A 3					
Other:	Well h	as bec	N por	40/2 y	<u>, 100 p</u>	USGe -				
Additional	Comments:	Collec	-t spi	it do	ydi-	tor AWC				

			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							

Project No:	055038				Client:	Freeport Copper Queen Branch				
Task No:	1.0				Date:	7-13-11				
Well ID:	AGIC.	·05			Weather:	Clear 7	<u>0'5</u>			
ADWR No:					Sampler:	BJD				
				WELL DA	i A					
Well D	epth (ft bis):				Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot		
						2	0.1	6		
Casing	Diameter (in):			······································		4 5	0.6 1.0			
Static Wate	er Level (ft bmp):					6 8	1.4 2.6			
Casing '	Volume (gal):		x3 =			10	4.0			
Total Volum	ne Purged (gal):				Casir	ng Volume = gallons	s/foot * water colur	mn (feet)		
Total Void	ne Forgeo (gar).		HIELEN FIEL	D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents		
	Pump On			6.52						
				642	22.9 .	4/9.8				
				<u> </u>						
							Pump Off			
	FIELD PARAMET	ER STABILIZA	Sept Genominis Control (1951) MAII (ei Gratis Francis Francis († 1821)	AKAMEN LAMBIT DI BUTTER	0.2 su pH, 2 degree	es C, and 200 μS/c	om) September 1985		
			SAN	IPLE INFOR	MATION					
Se	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Awa	2-05	8:54	Poly	250m2		300-0	<i>I</i>	y ex		
		l a la	ATER LEVEL	 MEASURE	MENT COL	 Eemon				
□ Water	level measurement				na nakatan 19 au					
1	er level measurem		No access to we	ellhead.						
☐ No wat	er level measurem	ent collected.	Obstruction in w	vell.						
I .	er level measurem	ent collected. \	Well is pumping	1.						
☐ Other:			Kingapor - Fi	BUBANAN	-ODWIEWAN					
				PURGING IN						
1	l 3 well volumes an l 3 well volumes ba			nd field narem	eters stabiliz	ed.				
1	l well until field par			one purell		-				
□ Other.	Well has	been ,	-UNIVINA	,No 20)19e-					
Additiona	Comments:	Collert	split	· For	ACUC					
			•							

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>h</u>	
Task No:	1.0				Date:	7-11-11			
Well ID:	BANKS	5 986			Weather:	cloud, 80	, ک		
ADWR No:	3				Sampler:	BJD			
				WELL DA	A				
Well De	epth (ft bis):	43	5'		Casing Capacity Nominal Size (inches) Gallons per Linear Foo				
		(η			2	0.16 0.65	3	
Casing D	Diameter (in):	<u> </u>				4 5	1.02	1	
Static Wate	r Level (ft bmp):					6 8	1,47 2,61	i i	
Casing \	/olume (gal):		x3 = 兴	OG 870		10	4.08		
Total Volun	ne Purged (gal):		884		Casir	ng Volume = gallons	s/foot * water colun	nn (feet)	
				D SAMPLIN	G DATA			upung laktabah	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
11:50	Pump On								
12:10	20	8.5	170	7.37	24.2	884.3			
12:30	40	8.5	340	7.57	24.0	899.1			
12:50	60	8.5	510	7.67	24.4	864.9		·	
13-00	70	8.5	595	7.56	24,2	866.3			
13:40	80	8.5	680	7.66	24.3	885.0			
13:30	100	8.5	850	7.72	25.4	890.0			
							Pump Off		
act () all 104. Manuscriptor	FIELD PARAMET	ER STABILIZ	o ionide (Internepont) operatifylgiga (djarta)	elestration tempo de contrato de la	i Seriangia Metenausyi sultan	0.2 su pH, 2 degree	s C, and 200 μS/c	m) ::::::::::::::::::::::::::::::::::::	
			SAN	APLE INFOR	MATION				
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BAN	K 5 986	13:39	Poly	250mL	1	300,0	\bigcirc	Yz	
			ATER LEVEL	MEASUREI	MENT COLI	ECTION			
D Water I	evel measuremen								
	er level measurem		No access to we	ellhead.					
/	er level measurem								
l	er level measurem	ent collected.	Well is pumping	I.					
U Other:			a domey and	PURGING INI	OPMATION				
	3 well volumes ar								
	3 well volumes ba			nd field parem	eters stabiliz	ed.			
\$ T	well until field par	ameters stabil	ized.						
☑ Other:	Purged 3	<u> well</u>	voluncs	busca	on 50	vc			
Additional	Comments:	237.	<u>39 = 560</u>	<u>. at</u>	KAN,	KS 48/=			
							```		
			, , , , , , , , , , , , , , , , , , ,				· · · · · · · · · · · · · · · · · · ·		
	, , , , , , , , , , , , , , , , , , ,							····	

Project No:	055038				Client:	Freeport Copp	er Queen Bran	ch
Task No:	1.0				Date:	7/4/n		
Well ID:	BAN	K5 9	87		Weather:			
ADWR No:					Sampler:	BJD		
				yvell da	***************************************			
Welin	epth (ft bls):		\ /		Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot
			$\overline{}$		TTOTTITIE	2	0.1	6
Casing I	Diameter (in):		/`			<b>4</b> 5	0.6 1.0	1
Static Wate	er Level (ft bmp):	237.37				6	1.4	
Casing '	Volume (gal):	\	√ x3 =			8 10	2.6 4.0	
Total Value	ne Purged (gal):				Casir	ng Volume = gallon	s/foot * water colur	nn (feet)
Total Volum	ne ruigeu (gai).			D SAMPLIN	G DATA			
Time	Elapsed Time (mig)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
	Pump On							
		Thirties and Arthresis and						
							<u> </u>	
							Pump Off	
econica de la consessión	FIELD PARAMET	ER STABILIZA	garantan papaking lampacan	ditaka ida wasani katik	ratografista (zaprada tez anteare	0.2 su pH, 2 degree	es C, and 200 μS/c	am) Programmentomistics
			SAN	MPLE INFOR	MATION			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
								k
<del></del>								
			ATER LEVEL	MEAGLIDE	AENT COLI	 		
	evel measurement							
l	er level measurem er level measurem							
	er level measurem							
☐ Other:								
			WELL	PURGING INI	ORMATION			
☐ Purged	3 well volumes an	d field paramet	ers stabilized.	оды, қандардардаға (MASSAURA)		omestament ones process construction expression by	THE RESERVE OF THE PERSON OF T	
B.	3 well volumes ba			nd field parem	eters stabilize	ed.		
☐ Purged	well until field par	ameters stabiliz	red.					
☐ Other:								
Additional	Comments:	WLC	<u>)                                    </u>					
								· · · · · · · · · · · · · · · · · · ·
			······································					
н								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

ask No:	Project No:	055038		•		Client:	Freeport Coppe	r Queen Branc	h
DWR No:  Well Depth (if bis):  Well Depth (if bis):  Casing Capacity  Normanal Size (inches)  Galions per Linear Foot  0.16 0.85 5 1.02 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47 6 1.47	ask No:					Date:	7-13	- 1/	
Well Depth (it bis):  Well Depth (it bis):  Gasing Capacity  Well Depth (it bis):  Casing Diameter (ii):  ###	Vell ID:	BF-1			1	Weather:	Supay	70	
Well Darth (ft bis):	DWR No:					Sampler:	oxistable	L Shymas	
Nominal Size (Inches)   Gallons per Linear Foot   O.16   O.16   O.55   O.56   O.55					WELL DAT	Α	Capina	`anaciiv	
Casing Diameter (in):    1	Well De	enth (ft bls):	40	0		Nominal	Size (inches)	Gallons per L	
Static Water Level (fi bmp):  Zatic Water Level weasurement collected.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Scandard field paremeters stabilized.  Purged 3 well volumes and field parameters stabilized.  Purged well well well field parameters stabilized.  Other: fund yellow field parameters stabilized.  Cassing volumes and field parameters stabilized.		•	1/1	· · · · · · · · · · · · · · · · · · ·		-	i i		
State Valer Level (in thirp):  Casing Volume (gal):  Total Volume Purged (gal):  Total Volume Purged (gal):  Time Elapsed Time (min)  Elapsed Time (min)  (gent)  Discharge Rate Discharge (gal)  Rate Discharge (gal)  FIELD SAMPLING DATA  Time Pump On Octobro (gent)  O ( O 4 Pump On Octobro (gent)  O ( O 4 Pump On Octobro (gent)  O ( O 5 Pump On Octobro (gent)  O ( O 6 Pump On Octobro (gent)  O ( O 6 Pump On Octobro (gent)  O ( O 6 Pump On Octobro (gent)  O ( O 7 Pump On Octobro (gent)  O ( O 8 Pump On Octobro (gent)  O ( O 8 Pump On Octobro (gent)  O ( O 9 Pump On Octo	_	•	$ \tau$ .	711817			5		
Total Volume Purged (gal):  Total Volume Purged (gal):  Time Elapsed Time (min) Discharge Rate Discharge (gallons)  Time Purged (gallons)  Time Elapsed Time (min) Discharge Rate Discharge (gallons)  Discharge (gallons)  Discharge Rate Discharge (gallons)  Discharge (	Static Wate	r Level (ft bmp):	·	370.6/			8	2.61	l
Total (gpm)  FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gpm)  O(OH Pump On  O(OH Pump O)  O(OH Pump On  O(OH Pump O)  O(OH Pump O)  O(OH Pump O)  O(OH P	Casing \	/olume (gal):		x3 =		***************************************		<del></del>	
Time Elapsed Time (min) Discharge Rate (gpm) Total Discharge (gpm) (SU) Temp Conductance (LaS/cm) Conductance (gpm) Temp On U.O.C. 2 July 2970 Bloke Section 128 Parp On 1330 July 2970 Bloke Section 128 Parp On 1330 July 2970 Samples 128 Parp On 1330 July 2970 Samples 12970 Samples	Total Volum	ne Purged (gal):					g Volume = gallons	/toot * water colun	in (reet)
Time Elapsed Time (min) Rate (gpm) Discharge (gallons) (SU) PIMP Conductance (uS/cm) Comments  O ( O 4 Pump On					D SAMPLIN	G DATA	Casifia		
OLOV 2  OLOV 2  OLOV 2  OLOV 2  OLOV 3  OLOV 4  OLOV 4	Time		Rate	Discharge	,		Conductance	Comm	ents
OLO	0604	Pump On							
128   funp on   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.0   351.		2					~ //		
1/30					6.29	21.0	2970	Broke S	nction
1/32   1/36   21/3   2960   Samplera	1128	Pump on							<del></del>
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume Containers No. of Containers Analysis Method Preservative Filtered (y/n)  BF-1  ### Water level measurement collected. No water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:  Wether water level measurement collected. Samples  Well purged well until field parameters stabilized. Other:  Well purged well until field parameters stabilized. Other:  Well purged well until field parameters stabilized. Other:  Well and Samples  Samples  Samples  Samples  Samples	1130					0.4.		35/.6	}
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  BF-	1132				426	213	2960	Sampled	
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  BF-								/	
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  BF-								<u> </u>	
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  BF-								Pump Off	
Sample ID Time Container Type Volume Containers Analysis Method Preservative (y/n)  BF-	<u></u>	EIEI D DARAMET	ER STABILIZA	ATION: Three co	nsecutive rea	dings within C	.2 su pH, 2 degree		:m)
Sample ID  Time Type Volume Containers Analysis Method Preservative (y/n)  BF-1  1/32  Plastic  Sambl  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION  Purged 3 well volumes based on previous water level and field paremeters stabilized. Purged well until field parameters stabilized. Other:  Purged well until field parameters stabilized.		(JEED   ASCHARE)	List O 17 to the time	~					
Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other: funded well and dry, warted 28 hrs, Sanidad well and 5 amplied.	Si	ample ID	Time	•	Volume	£	Analysis Method	Preservative	1
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other: fundational action of the parameters and field parameters stabilized.  Other: fundational action of the parameters and field parameters action of the parameters and field parameters and field parameters action of the parameters and field parameters action of the parameters action of the parameters and field parameters action of the parame			1122		2000		TPA-300.	Too	<del> </del>
Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other: fundate well are level and field parameters with any families.	Bri		11.26	197/16	63/19F	1			1
Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other: fundate well are level and field parameters with any families.			<u> </u>	VATED LEVEL	MEASURE	MENT COLL	ECTION	<u> </u>	<u> </u>
□ No water level measurement collected. No access to wellhead. □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Purged well until field parameters stabilized. □ Other: fundate well are level and field parameters with any 5 amption				AVIEW PEAFF	. METOOTIE	TILITI O'CL			
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Purged well until field parameters stabilized. □ Other: fundate well are also for water 128 hrs. Sounded well and 5 amption	>€ Water	level measuremen ter level measuren	nt collected. nent collected.	No access to we	ellhead.				
Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other: funda well off, Warted 28 hrs, Sonidad well and Samplian	□ Nowa	ter level measuren	nent collected.	Obstruction in w	rell.				
WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other: funda well of water 28 hrs Sonidar well and Samplin.		ter level measuren	nent collected.	Well is pumping	<b>,</b>			•	
□ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Purged well until field parameters stabilized. □ Other: funds well of water 18 hrs Somider well and Samplin.	☐ Other:			WFI!	PURGING IN	FORMATION			
Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other: funded well of water 18 hrs Somided well and Samplin.	[] Duran	d 3 wall valumae a	nd field naram				······································		
Purged well until field parameters stabilized.  Description of the parameters stabilized.	☐ Purge	d 3 well volumes b	ased on previo	ous water level a	nd field paren	neters stabilize	ed.	}	
	1	_ 11	rameters stabi	lized.	hrs Com	Sel 6	ell and	Samples	
Auditoria: Comments.	7	1	CH 417/	V COLTER LD		myzy W	413		
	Auditoria	a Committies							

CLEAR ST CREEK ST ASSOCIATES

Project No:	055038			,	Client:	Freeport Coppe	er Queen Bran	ch
Task No:	1.0				Date:	8-25-1		
Well ID:	BIM	A			Weather:	SUNN 91	) ś	
ADWR No:					Sampler:	/		
				WELL DAT	A. iii di di di		Capacity	
Well De	pth (ft bls):	46.	5		Nominal	Size (inches)	Gallons per L	
Casing D	iameter (in):					2 4	0.1 0.6	
	•	7				5 6	1.0 1.4	1
	Level (ft bmp):					8	2.6	1
Casing V	olume (gal):	<u> 50</u>	) x3 = / 2		Capia	10	4.0	
Total Volum	e Purged (gal):		elevorani karallinga karanga k	e de la composition		ig Volume = gallons	s/look water colur	ini (reet)
		Discharge	Total	D SAMPLIN	G DATA	Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°2) _ °	Conductance (µS/cm)	Comm	ents
13:50	Pump On							
14:00	10	5	<u>50</u>	6.37	803	1440		
14:10	20	5	100	6.51	76 6	1430		
1420	30	J	150	6.27	78.6	1460		
							Pump Off	
	I FIELD PARAMET	 ER STABILIZA	ATION: Three c	I onsecutive rea	dings within (	l 0.2 su pH, 2 degree		cm)
				IPLE INFOR	physical accordance to the second			
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
R	MA	13:25	Pol	250ml	1	300.0	0	VD
797								
		rii e e ii y	ATER LEVEL	MEASURE	MENT COLL	ECTION		
□ Water le	vel measuremen	t collected.	ADMOGRADEJEN ER SELAMESEM			Antoninen in die 1866 in 1964 in 1966	a prove na vojavnje od kredita po drava i slika	
1 h a	r level measurem							
	r level measurem							
☐ Other:	r level measurem	ient collected.	vven is bambing	<b>j</b> .				
			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	zed.					
<u> </u>	Comments:							
radibolial	voiminento.							
								<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>

oject No:	055038				llient: <u>F</u>	reeport Copper	Queen Branch	1
sk No:					Date: 7-/2-//			
sk IVO. ell ID:	BMO-	2008-	12	V	Veather:	Porth 1	udy - 9	<u> </u>
		- <del>/~</del> (/		5	Sampler:	hvistopher	L Gura	//
WR No:			,	WELL DATA	\	· /		
		27	$\alpha$		Nominal S	Casing C Size (inches)	Gallons per Lii	near Foot
Well De	pth (ft bis):					2	0.16 0.65	
Casing D	iameter (in):		<del>}</del>			5	1.02	
Static Water Level (ft bmp):		69.37				6 8	1.47 2.61	
Cosine	/olume (gal):	245.5 x3 = 734.5		34,5		10	4.08	
-	•		7		Casing	Volume = gallons/	foot * water colum	n (feet)
Total Volum	ne Purged (gal):		FIELD	SAMPLING	3 DATA			
		Discharge	Total		Temp	Specific	0	. min
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	(°C)	Conductance (µS/cm)	Comme	, mes
450	Pump On							
1500	10	8.3	83	7.2/	218	1023		
1520	30	y 3	249	7.19	265	10//		
1540	150		415	7.20	21.5	10/7		
1/00	120	9.3 9.3	581	5.19	21.7	1012		
1600	100	\$3	547	7.20	766	1015		
1624	<del>                                     </del>	<i>H</i> -1		, ,		· ·		
·····								
							Pump Off	
	FIELD PARAMET	ER STABILIZA	ATION: Three co	nsecutive rea	dings within C	).2 su pH, 2 degree	s C, and 200 μS/c	:m)
			SAM	IPLE INFOR	MATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Rma-	2008-16	1620	Plostre	250 ml	1	ElA.3920	Ica	Jegk .
UI'IU	_4/0.0 [12]	1	<del></del>		T (			<u> </u>
		<u> </u>	VATER LEVEL	MEASURE	MENT COL	ECTION		
X□ Water	level measuremer	nt collected.		······································				
☐ No wat	ter level measurer	nent collected.	No access to we	ellhead.			. Net f	
,			Obstruction in w				•	
□ No wat			well is pumping	•				
□ No wa	ter level measurer	nent collected.						
□ No wat	ter level measurer	ment collected.		PURGING IN	FORMATION			
☐ No wat ☐ No wat ☐ Other:	ter level measurer		WELL	PURGING IN	FORMATION			
☐ No war ☐ No war ☐ Other:	ter level measurer	and field param	WELL eters stabilized.					
□ No wat □ No wat □ Other: □ Purget □ Purget	ter level measurer	and field param	WELL eters stabilized. ous water level a					
□ No wat □ No wat □ Other: □ Purget □ Purget	d 3 well volumes a d 3 well volumes a d 3 well volumes b	and field param	WELL eters stabilized. ous water level a					
No wat No wat Other: Purget Purget Purget Other:	d 3 well volumes a d 3 well volumes a d 3 well volumes b	and field param	WELL eters stabilized. ous water level a					
No wat No wat Other: Purget Purget Purget Other:	d 3 well volumes a d 3 well volumes a d 3 well volumes b d well until field pa	and field param	WELL eters stabilized. ous water level a					

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	<u>h</u>
Task No:					Date:	7-12-11		·····
Well (D:	BMO	-2008	2-3B		Weather:	SUNDY 85	-	
ADWR No:					Sampler:	MC5tacher	L. Shurna	42
				WELL DAT	TA	Casino	Capacity	
Well De	epth (ft bls):	260			Nominal	Size (inches)	Gallons per Lí	
Casing Diameter (in):		511				2 4	0.16 0.65	
Static Water Level (ft bmp):		142.21				5	1.02 1.47	
						8	2.61 4.08	
Casing \	/olume (gal):	$\frac{120.1 \times 3}{50.0} = \frac{360.3}{50.0}$			Casin	g Volume = gallons		
Total Volun	ne Purged (gal):		590) FIEL	D SAMPLIN				
	1	Discharge	Total		<u> </u>	Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (galions)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
0830	Pump On							
0835		27	135	7202	21.4	(80)		
0840	10	27	270	7.04	21,3	6.75		
0845	15	27	405	7.05	2/3	67.5		······································
0850	20	27	540	7.04	21.4	622		
					<u> </u>			
							Pump Off	
	CIELD DARAMET	CD STADILIZA	TION: Three co	ncecutive res	dinas within (	).2 su pH, 2 degree:	,	m)
	FIELU FARANICII	ERSTABILIZA		PLE INFOR				
Sa	imple ID	Time	Container	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
1	12008-20	-0-0	Plastc	7550	1	EPH-300.0	NOWE	<b>√</b> ςk
1710	~2008-3B	QXSU_	14/4/16/16	500	+	211 744.0	1.01.0	<del>-                                    </del>
				A PER A CHIEF	LACAT COLL	ECTION		<u> </u>
			ATER LEVEL	MEASURE	MEMI COLL	ECHON		
1 /	evel measurement er level measurem		No scope to use	Mhead				
1	er level measurem er level measurem							
1	er level measurem							
□ Other:								
				PURGING IN	FORMATION			
Purged	3 well volumes an	id field parame	eters stabilized. ue water level a:	nd field naren	neters stabiliza	ed.		
(	well until field par			puroli		"		
☐ Other:								
Additional	Comments:			·				
					······································			
***************************************	117 .8							

Project No:	055038				Client: _l	Freeport Coppe	Queen Branc	h
Task No:					Date:	7-22-1/		
Well ID:	BMO	- 2008	7-413	1	Weather:	Pady L	pudy-	75
ADWR No:		•			Sampler: /	historia 1	Sugar	
				WELL DAT	A 0	Casino	`anacity	
Well Do	epth (ft bis):	61	0		Casing Capacity  Nominal Size (inches) Gallons per Linear F			near Foot
	Diameter (in):		511			2 4	0.16 0.65	;
_	•	134	. 8			5	1.02 1.47	
Static Water Level (ft bmp):		137	2 0 1	11		8	2.61 4.08	
Casing \	/olume (gal):	<u> 487.</u>	$7 \times 3 = /4$	137	Cacin	10   g Voiume = gallons/		
Total Volun	ne Purged (gal):			D SAMPLIN		g voluno – ganono		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		Discharge	Total		1	Specific	······································	
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Commi	ents
1325	Pump On							
7335	10	23	) <i>3Q</i>	7.40	23,3	371		
1350	25	23	575	7.35	23.5	375		
1415	50	23	1150	7. 33	300	323		
1430	65	23	1495	7,33	13,7	37/		
						<u> </u>	<u></u>	
							Pump Off	
	CIELO DADAMET	ED STABILIZA	ATION: Three or	onsecutive rea	dinas within C	).2 su pH, 2 degreet		m)
<b></b>	LIETO LVIAME			APLE INFOR				
<u></u>		<u> </u>	Container	1	No. of	Analysis Method	Preservative	Filtered
Sa Sa	imple ID	Time	Туре	Volume	Containers			(y/n)
BM0-20	198-4B	1430	Plaster	250 mL		EPA 300.0	tr	18Sk
			,					<u> </u>
		٧	VATER LEVEL	MEASURE	MENT COLL	ECTION		
Water	evel measuremen	t collected.	-					
	er level measuren							
	er level measuren							
□ No wat	er level measuren	nent conecied.	wen is bambing	<b>,</b>				
47511471			WELL	PURGING IN	ORMATION			
	3 well volumes a							
1	i 3 well volumes b			ind field parem	eters stabilize	ed.		
1	i well until field pa	rameters stabi	lized.					
☐ Other:	1 Commonto:	475 2						
Additiona	l Comments:	1//						

Project No:	055038				Client: Freeport Copper Queen Branch			
Task No:					Date:	7-13-11		
Well ID:	RM	0-2008	7-5R	V	Veather: _	Sunny -	89	
	4/				Sampler:	Mustodar	1- Shurm	<u> </u>
ADWR No:			<u> </u>	WELL DATA			·	
144-1175-		280			Nominal	Casing C Size (inches)	apacity  Gallons per Lii	near Foot
Well De	epth (ft bls):		<u>)                                    </u>			2	0,16 0,65	
Casing D	Diameter (in):		\			5	1.02	
Static Wate	r Level (ft bmp):	<u> 14</u>	8.31			6 8	1.47 2.61	
Casing \	/olume (gal):	139	4 x3 = 4	18,2		10	4.08	
_	•		400 1.	75	Casing	g Volume = gallons/	foot * water colum	n (feet)
lotal volun	ne Purged (gal):		FIEL	D SAMPLING	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
1636	Pump On							
1140	5	27	136	7.01	221	713		
1750	15	27	405	10.98	220	715	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
1700	25	177	1.75	1.99	22.0	712		
7	, in the second					,		
							D 05	
				<u> </u>	70. / 6	S L O dogroo	Pump Off	m)
	FIELD PARAMET	TER STABILIZA				).2 su pH, 2 degree	s C, and 200 μο/ο	111/
				IPLE INFOR				Filtered
	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
RMO-	2008-5B	1700	Moster	250 pl	1	FMA 3000	116	jesk
1	73/ V . U				,			
		<u>1</u>	/ATER LEVEL	MEASURE	MENT COLI	LECTION		
Ø Water	level measuremen							
	ter level measuren		No access to we	ellhead.				
□ No wa	ter level measuren	nent collected.	Obstruction in w	rell.				
	ter level measurer	nent collected.	Well is pumping	,				
☐ Other:			WFI.L	PURGING IN	FORMATION			
<b>\$</b> 0 0	d 3 well volumes a	nd field natame						
Purge	d 3 well volumes a d 3 well volumes b	ased on previo	ous water level a	nd field paren	neters stabiliz	ed.		
	d well until field pa							
☐ Other:								
Additiona	al Comments:							<del></del>
			··········					
		136.7						CLEAR ~

Project No:	055038				Client: Freeport Copper Queen Branch				
rask No:					Date:	7-12-11			
Vell ID:	BMI	7-2008	-5M		Weather:	Vartly C	Touday - 89°		
ADWR No:					Sampler:	hustopher &	<u> [5 herm.</u>	.7	
10.000				WELL DAT	A	Coning	`anacity		
Mell De	pth (ft bis):	4	150,000		Nominal	Casing Capacity nal Size (inches) Gallons per Linear Foot			
	•					2	0.16 0.65		
Casing D	Casing Diameter (in):					5	1.02		
Static Water	Level (ft bmp):		<u>50.20</u>			6 8	1.47 2.61		
Casing V	/olume (gal):	<u> 305,</u>	7 x3 =	917		10 L	4.08		
Total Volum	e Purged (gal):	6	190			y Volume = gallons/	foot * water colum	nn (feet)	
, 0 (2), 1 0 (4)		l	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	
0920	Pump On								
0925	5	18	90	7.21	22.8	591			
1945	25	12	450	7.24	22/	385			
1005	45	18	810	72/	22.8	588		<del></del>	
1015	55	1	990	7.22	22.7	590			
<del>/~-   &gt;</del>		10	,	ì					
								······································	
							D 0#		
				<u> </u>	12	2 ou nil 2 dogree	Pump Off		
	FIELD PARAMET	ER STABILIZA				.2 su pH, 2 degree	5 O, and 200 por	,,,,	
			*	APLE INFOR		I .		Filtered	
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
BMO-Z	108-5M	1015	Plasse	250ml	1_/_	ESH.300	NONE	Yesk	
		[							
	·	٧	VATER LEVEL	. MEASURE	MENT COLL	ECTION			
	evel measurement								
	er level measurem								
	er level measurem er level measurem								
☐ No wat ☐ Other:	er ievei measurem	ient collected.	Men is bambing	<b>,</b> .					
			WELL	PURGING IN	FORMATION				
9 Purgeo	3 well volumes ar	nd field param	eters stabilized.						
D Purgeo	i 3 well volumes ba	ased on previo	ous water level a	and field paren	neters stabiliz	ed.			
	i well until field par	rameters stabi	lized.						
Other:	1.0								
Additiona	1 Comments:	· · · · · · · · · · · · · · · · · · ·							
			<del></del>						
	Z# #0								

Project No:	055038				Client: <u>F</u>	-геероп Сорре	. Queen branc	11	
Task No:					Date: _	7-12-11			
Well ID:	BMD-2	008-6	ß		Neather:	Partly 1	Cloudy	20"	
ADWR No:					Sampler: (	Christophe	L Shumay	<b>4</b>	
				WELL DAT	Α	Casing (	Canacity		
Well Da	epth (ft bls):	2.	151	}	Nominal	Size (inches)	Gallons per Li		
	,		<u>~11</u>			2	0.16 0.65		
Casing E	Diameter (in):		<u> </u>			5	1.02		
Static Water	r Level (ft bmp):		<u> 3, 3                                   </u>			6 8	1.47 2.61		
Casing \	using Volume (gal): $73.1 \times 3 = 2/9.3 = 10$ 4.0			4.08					
_	ne Purged (gal):	2 2	5	,	Casing	Volume = gallons/	foot * water colum	n (feet)	
10tal voicin	ic r argua (gar).		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	
9610	Pump On	<u> </u>							
01.15	5	5.1	75	7.03	21.1	410			
0/25	15	()	35	7.22	21.3	377			
01.40	30	67	160	7.25	2/.2	386			
0155	UL	61	725	527	21.7	390			
	1	171							
			۷						
							Pump Off		
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	dings within 0	.2 su pH, 2 degree:	s C, and 200 μS/c	m)	
			SA	MPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BM0-20	108-6B	0655	olastic	250 mL	/	FP4.300	None	yt5k	
			•		ļ				
		V	VATER LEVEL	MEASURE	MENT COLL	ECTION			
₩ Water in	evel measuremen	t collected.							
/	er level measuren		No access to w	ellhead.					
	er level measuren								
	er level measuren	nent collected.	Well is pumping	<b>3</b> .			~ *		
☐ Other:			\AÆI I	PURGING IN	ORMATION				
<b>W</b> D	3 well volumes a	nd field norm			_,,				
Purged	3 well volumes a	nd neid paraili esed on previd	eters stabilized. ous water level a	and field parem	neters stabilize	∍d.			
	well until field par			•					
□ Other:	<u> </u>								
Additional	Comments:								
			<u></u>						
					<del></del>				
71.7									

oject No:	055038				Client: <u>F</u>	reeport Copper	Queen Branch	
isk No:				[	Date:	7-12-11	/ 584	9
eil ID:	BM0-2	008-6	M		Weather:	Partly Close	dy - 14	
OWR No:					Sampler:	(forestopler	Sherryon.	
				WELL DAT	Α	Casing C	anacity	
tatell De	math (@ blo):	44	501	<b> </b>	Nominal :	Size (inches)	Gallons per Lir	near Foot
yveli De	epth (ft bls):		<u> </u>			2	0.16 0.65	
Casing D	Diameter (in):	5	* 1			5	1.02	
Static Wate	r Level (ft bmp):	19	7.47			6	1.47 2.61	
	•	2/1	<b>√</b> x3 =	781.8		8	4.08	
Casing \	/olume (gal):		,	10110	Casino	Volume = gallons/	oot * water colum	n (feet)
Total Volun	ne Purged (gal):		10	D SAMPLIN				
~		T		D SAMPLIN	G DATA	Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (ºC)	Conductance (µS/cm)	Comme	nts
0710	Pump On							
V 24 V	1 10	21	710	6.99	721	721		
777V	1 1/4	21	420	7.04	21.9	710		
4131	120	21	730	7.05	2/8	ブル		
<u>) 1711</u>	30	<del>                                     </del>	040	7.01	21.8	709		
9 150	190-	174-1	<del>- 8 [4]</del>	7.4	PAIL O	-		
					<b> </b>			
							Pump Off	
						1 1		m ł
	FIELD PARAMET	TER STABILIZA	ATION: Three or	onsecutive rea	adings within t	).2 su pH, 2 degrees	C, and 200 porc	1117
			SAM	VPLE INFOR	RMATION			
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
BMO-	2008-6M	9750	Plaste	250 mL	14	EPA-300	WONE	XX
•						<u> </u>		
			VATER LEVE	_ MEASURE	MENT COL	LECTION		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
A Mater	level measuremen	nt collected.						
	ter level measurer		No access to w	ellhead.				
☐ No wa	iter level measure	ment collected.	Obstruction in v	well.				
□ No wa	iter level measure	ment collected.	Well is pumping	g.				
☐ Other					ICODAACTION			
				PURGING IN	ALOKINA HOV	·		
Purge	d 3 well volumes	and field param	eters stabilized		t etabili	rod		
	d 3 well volumes l			and neid parei	meters stadiliz	. <del></del>		
-	d well until field pa	arameters stabi	iizea.					
□ Other								
Addition	al Comments:							
······································	······································							
		235.5	····					

Project No:	055038				Client: <u>F</u>	reeport Copper	Queen Brancl	1	
Task No:					Date:	7-15-11			
Well ID:	BMO	2008-	7 M		Veather:	Sun	95		
ADWR No:					Sampler:	husthale	L Sturma		
ADVVICAGE.				WELL DATA	4 , 0	Casing C	anacliv		
Well De	pth (ft bis):	6	20	,a.	Nominal	Size (inches)	Gallons per Li		
	•					4	0.16 0.65		
Casing D	iameter (in):	0 11	101			5	1.02 1.47		
Static Water	Level (ft bmp):	77	486	12.0		8	2.61		
Casing V	olume (gal):	436	7x3 = 7	1310		10	4.08		
Total Volum	Total Volume Purged (gal):		1365			g Volume = gallons/	toot " water colum	ii (ieet)	
				D SAMPLING	G DATA	Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents	
1100	Pump On	<u></u>					<u> </u>		
11.00		21	195	7.08	230	468			
11.25	21	21	525	7.10	22.9	Holy			
11.45	45	2/	945	7011	22.0	416			
1205	185	2/	1325	7.10	72.8	766			
			,,,,						
							Pump Off		
		CD OT A DB 17/	TION: Three co	nsecutive rea	dinas within (	).2 su pH, 2 degree		m)	
	FIELU PARAVIE	ENSTABILIE		APLE INFOR					
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMD-71	108-7M	1705	Plastic	250 ml	1	ElH-301.0	Ici	X9.	
P11/2	777	1/25	1 10-71 12					/	
		<u> </u>	L VATER LEVEL	MEASURE	MENT COLI	LECTION			
Water	evel measuremer	nt collected.							
	er level measurer								
	er level measurer ter level measurer								
☐ Other:									
				PURGING IN	FORMATION				
A Purger	3 well volumes a	and field param	eters stabilized.	and field acce	natare atahilis	red			
Purge	d 3 well volumes b	iased on previo	jus water level a lized.	and held baren	ietera atoome				
☐ Purge		Harriottis stabl	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				·····		
<u> </u>	I Comments:								
	77.7				<u></u>				
	728,	<u></u>							

Project No:	055038			(	Client: Freeport Copper Queen Branch				
Task No:					Date:	7-15-11			
Well ID:	BM0-2	008-8	B	1	Neather:	Lunn 94	/		
ADWR No:	17110	<u> </u>			Sampler:	1,15th du	L Shame	1	
ADVILLIAO.				WELL DAT		7	N		
Mall Da	epth (ft bis):	45	20		Nominal	Casing C Size (inches)	Gallons per Li	near Foot	
	•	<del></del>	) <u>V</u>			2	0.16 0.65		
Casing I	Diameter (in):	5_				5	1.02	1	
Static Wate	r Level (ft bmp):	30	0.0			6 1.47 8 2.61			
Casing \	/olume (gal):	183.	( x3 =			10	10 4.08		
	ne Purged (gal):	550	.8		Casin	g Volume = gallons/	foot * water colum	n (feet)	
TOTAL VOIGI	ne ruiged (gai).		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	
9820	Pump On					,			
025	5	14.2	フィ	6.20	21.1	2920			
0835	15	14,2	2/3	6.18	21.1	2930			
0845	25	14.7	355	1.21	21.2	2940			
0835	35	14.7	497	619	211	2950			
19905	45	14.2	139	10.11	2/12	2940			
			~ /	0 0 1					
							D 06		
					alla ana sadahin f		Pump Off	m)	
	FIELD PARAMET	ER STABILIZA				).2 su pH, 2 degree	S C, and 200 por	,	
				IPLE INFOR	T	1		Filtered	
1	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
Bmn-	2008-813	0905	Plastic	250ml	_/	EPH-3000	Ice	JES.	
		N	ATER LEVEL	MEASURE	MENT COL	LECTION			
™ Water	level measuremen	t collected.							
No wat	ter level measuren	ent collected.							
5	ter level measuren								
1	ter level measuren	nent collected.	Well is pumping	<b>J.</b>					
Other:			WELL	PURGING IN	FORMATION				
<b>√</b> ⊒ Purged	d 3 well volumes a	nd field parame							
□ Purged	i 3 well volumes b	ased on previo	us water level a	ind field paren	neters stabiliz	ed.			
	d well until field pa								
□ Other:	······································								
Additiona	l Comments:	<del></del>							
	18	,						اد. خور مون چو	

oject No: sk No:	055038				Client:	· oop · · · · · · · · · · · · · · · · ·	Queen Branch	
SK NU.			[			7-15-1	/	
ell ID:	amo-	2008-	8M		Weather:	Sunny	91	
WR No:		<u>= 4 57 67</u>	011		Sampler: /	bristophe	L 5 bc.	1001
WIN MU.				WELL DAT	Α	Casing C	`anacitv	
Minsi Fam	oth (ft bis):	/21	$\Omega$		Nominal	Size (inches)	Gallons per Lit	
	_		<u> </u>			2	0.16 0.65	
Casing D	iameter (in):		00 41			5	1. <b>0</b> 2 1.47	
Static Water	Level (ft bmp):	3(	00.76			6 8	2.61	٠
Casing V	olume (gal):	92	7,2x3 = 2	781.6		10	4.08	
Total Volum	e Purged (gal):	d	1816			g Volume = gallons/	foot * water colum	n (reer)
TOTAL VOICE			FIEL	D SAMPLIN	G DATA	G15-		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents
0920	Pump On	<u> </u>						
092	1 5	17.6	88	6.92	21.7	585		
<u> </u>	10	17.6	1056	1.90	21.8	587		
113/	120	17.6	21/2	6.91	21.9	591		
1200	150	17.1	2640	690	2210	588		
1910	140	17.6	28/	6.89	22.1	590		
tHH				· ·				
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>								
					<u> </u>		Pump Off	
						0.2 av pH 2 degree		em)
	FIELD PARAME	ER STABILIZ	ATION: Three o	MPLE INFO	BOINGS WILLIAM	0.2 su pH, 2 degree	3 4,	
			7	VIPLE INFO				Filtered
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
amo-	2003-8M	1210	Plast.	250 mL	1	F14-300.0	Ice	10g
- Carrier								
		V	VATER LEVE	L MEASURE	MENT COL	LECTION		
l No wa	level measurementer level measurementer level measurementer	ment collected. ment collected.	Obstruction in	well.				
☐ No wa	iter level measure	тепі сонестесі.	. wents panipin	<del>9</del> .				
- Otter			WELL	PURGING II	VFORMATIO	V		<u> </u>
Purge	d 3 well volumes	and field paran	yeters stabilized					
☐ Purge	ed 3 well volumes ed well until field p	pased on previ	ous water level	and field pare	meters stabili	zed.		
☐ Other					<u> </u>			
Addition	al Comments:							
<del></del>								
				C3 = 3				
				709.	7			CLEAF

roject No:	055038				Client: Freeport Copper Queen Branch				
ask No:					Date: 7-15-1/				
lell ID:	BM0-2	208-9×	n	1	Veather:	Sugar	98		
DWR No:		<u> </u>			Sampler:	rustloby L	Slyma		
748K 190.				WELL DATA					
		777	7		Nominal	Casing C Size (inches)	Capacity  Gallons per Li	near Foot	
Well De	epth (ft bis):		<u>/5</u>		Morring	2	0.16		
Casing [	Diameter (in):	5				4 5	0.65 1.02		
Static Wate	r Level (ft bmp):	$\mathcal{L}$	90.95			6	1,47		
	_	Lias	3./x3 = /	4180		8	2.61 4.08		
Casing \	/olume (gal):		1 (A) - /	709	Casino	g Volume = gallons/	foot * water colum	nn (feet)	
Total Volur	ne Purged (gal):		<u> 1587</u>	D SAMPLING		3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7			
	т Т	7:h		U SAMPLING	JUAIA	Specific			
Time	Etapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents	
1250	Pump On				_				
1200		197	934	7.50	24.6	515			
1220	75	10.7	467	5 8/	24.2	516			
1200	UC	1807	84/	36/	24.3	514			
1400	17/	100	1215	754	94.3	5//			
1400	1 2	185	1679	2.51	24.7	511			
1710	<del>  32  </del>	<del>- 10'1-</del>	770	7.2 4	- C ( · 7 ·	<u></u>			
<del></del>									
							Pump Off		
	FIFI D PARAMET	ER STABILIZA	ATION: Three co	nsecutive read	dings within C	).2 su pH, 2 degree:	s C, and 200 μS/c	m)	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			IPLE INFOR					
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Bma-	408-9M	1420	Plastic	250mL		EP11-300,0	Zci	XCS	
		V	VATER LEVEL	MEASUREN	MENT COLL	ECTION			
SV Water	level measuremen	t collected.			***************************************				
	ter level measurem		No access to we	ellhead.					
□ No wa	ter level measurem	nent collected.	Obstruction in w	rell.					
□ No wa	ter level measurem	ent collected.	Well is pumping	<b>j</b> .					
Other:			\ARTTI	PURGING INF	ORMATION				
				· ONGHAO HAL	J) WW. 11011				
Purge	d 3 well volumes at d 3 well volumes b	nd field parami	eters stabilized.	nd field narem	eters stabiliz	ed.			
	d 3 well volumes bi d well until field par			and trails better		•			
Other:			· · · · · · · · · · · · · · · · · · ·				····	<u> </u>	
	al Comments:				_	٠.			
- MANUALIC	a Committee								
				<del></del>					
		PS4. 0					<u></u>	<u></u>	
	7	D1. ₹							

Project No:	055038				lient: Freeport Copper Queen Branch				
Task No:					Date:	7-13-11			
Well ID:	BMO	2008-	106L		Weather: _	Sunny	89°		
ADWR No:					Sampler: /	Christony	1 Shrown		
7107711110.				WELL DAT	A C				
W-# D		810			Nominal	Casing ( Size (inches)	Gallons per Li	near Foot	
Wen D	epth (ft bis):		1		2 0.16				
Casing I	Diameter (in):				5 1.02				
Static Wate	r Level (ft bmp):	5	12,16		6 1.47				
Casina '	√olume (gal):	303.	$7 \times 3 = 9$	23./	8 2.61 10 4.08				
	•		938		Casing	g Volume = galions	foot * water colum	n (feet)	
i otai voiur	ne Purged (gal):			D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	ents	
1115	Pump On								
1112	10	4.6	46	6.32	25.0	1727			
1215	1/0	3,8	776	430	24.9	1719			
1300	110	3,8	466	7.37	241/2	1727			
1336	130	3.3	542	435	24.7	1721	·········		
1455	220	3.3	939	1.3%	24.7	1730			
1525	150	27	938	7.32	24.7	177/			
<i>-1./-</i>		<b>K</b>	- /	(0,0)					
							Pump Off		
	FIELD PARAMET	ER STABILIZA	ATION: Three co	insecutive rea	dings within 0	).2 su pH, 2 degree	s C, and 200 μS/c	m)	
			SAM	IPLE INFOR	MATION				
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMO-	2008-10 GL	1525	Plastic	250 ml	/	EPA-30-0	Ta	Jok	
							-		
<b></b>		N N	ATER LEVEL	MEASURE	MENT COLL	ECTION			
<b>№</b> Water	level measuremen	t collected.			<u></u>				
	ter level measurem		No access to we	ellhead.					
í	ter level measurem								
1	ter level measurem	ent collected.	Weli is pumping						
Other:			WFII	PURGING IN	FORMATION	<del>,</del>			
Sk Dures	d 3 well volumes a	nd field parame			······································			························	
Purge	d 3 well volumes at d 3 well volumes b	ased on previo	us water level a	nd field paren	neters stabiliz	ed.			
	d well until field par								
☐ Other:									
Additiona	al Comments:						<b></b>		
	297.8		······································						
		······································		<del></del>					
					<u> </u>				

Project No:	055038			;	Client: Freeport Copper Queen Branch			
Task No:					Date:	7-13-11		
Well ID:	BMO-	200810	ZU.		Weather:	Sunay	78	
ADWR No:			( <del>)                                    </del>	<del></del>	Sampler:	Christophy	2 Slage	goo
ALDIVIC IVO.				WELL DAT	Ά	Casing C	\	<del></del>
Miell De	pth (ft bls):		449		Nominal Size (Inches)		Gallons per Linear Foot	
	_		· /			2 4	0.16 0.65	
Casing D	iameter (in):		20101	7		5	1.02	<u> </u>
Static Water	Level (ft bmp):		301.02		6 1.47 8 2.61			
Casing V	olume (gal):	15	$7 \times 3 = 4$	53		10	4.08	
Total Volum	e Purged (gal):	4	194			ing Volume = gallons	foot * water colum	in (feet)
			7 FIEL	D SAMPLIN	G DATA	T		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
0935	Pump On							
0845	10	5.5	35	109	22.6	3860		
0855	20	5.5	110	1.10	22.2	3840		<u> </u>
0935	60	5.5	330	1.12	22.3	3890		
0940	65	3,5	357	1.14	22.3	3870		
1000	85	3.3	V27	1.6.11	22.3	3876		
1005	90	1.5	434	1,10	22.2	3880		
1045	130	1.5	494	612	122.3	3890	<u></u>	
							Pump Off	
		<u> </u>				0.2 au nH 2 degree		·mì
	FIELD PARAMET	ER STABILIZA				0.2 su pH, 2 degree	5 O, and 200 port	,
				MPLE INFOF				Filtered
Sa	mple ID	Time	Container Type	Volume	No. of Container	Analysis Method	Preservative	(y/n)
BM0-20	08-106U	1045	Plostic	250ml	1	EPA 300.0	Ica	ya k
		٧	VATER LEVEL	MEASURE	MENT CO	LLECTION		
12' Water I	evel measuremen	t collected.						
No wate	er level measuren	nent collected.						
	er level measuren							
1	er level measuren	nent collected.	Well is pumping	<b>)</b> .				
□ Other:			WELL	PURGING IN	FORMATIO	N		
10 Purger	3 well volumes a	nd field param					·····	
	3 well volumes b				neters stabil	ized.		
	i well until field pa							
☐ Other:								
Additiona	Comments:							
400-000-000-000-000-000-000-000-000-000						-		
<del></del>	<u> </u>	142						

Project No:	055038			<del></del>	Client:	nt: Freeport Copper Queen Branch			
Task No:					Date:	7-22-	11-		
Well ID:	_BM	0-2008	?- [16		_Weather:	Partly Co	udy-72	1	
ADWR No:			• •		Sampler:	/loss stoplan	- 1 Sheets	taa	
			·	WELL DA	TA				
Well Dr	epth (ft bis):	7/	(0		Nomina	Casing Il Şize (inches)	Capacity Gallons per	Linear Foot	
Casina I	Diameter (in):	•		***************************************	<u> </u>	2	0.	16	
		7-2	<del>)</del>	***		4 5	0.65 1.02		
Static Wate	r Level (ft bmp):		<u>1.20                                    </u>		6 1.47 8 2.61				
Casing \	/olume (gal):	192	1,5 x3 = t	77.3	8 2.61 10 4.08				
Total Volum	ne Purged (gai):	66	O		Casi	ng Volume = gallon	s/foot * water colu	ımn (feet)	
			FIE	LD SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comr	nents	
0615	Pump On					_	· · · · · · · · · · · · · · · · · · ·	······································	
0625	10	8	ĺО	7.27	24.8	235			
01.45	30	8	240	7.29	14.7	337			
0715	10	9	430	7,27	545	223			
0730	75	2	100	7.26	24.1	331			
	l J		( ) / · · · · · · · · · · · · · · · · · ·			7/			
							Pump Off		
F	IELD PARAMET	ER STABILIZA	TION: Three co	nsecutive rea	dings within 0	i.2 su pH, 2 degree	s C, and 200 μS/c	cm)	
			SAM	IPLE INFOR	MATION				
	npie ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BM0-21	008-116	0730	Plaste	250 ml	1	FPA.3000	Ica	XESK	
· ^ ^	122 11	0730	Ploster	200d	1	FP#300.0	<b>7</b>		
		<del>- 11 </del>	ATER LEVEL	MEASUREN	IENT COLL		4-Er\	1762	
Water lev	rel measurement								
	level measureme		lo access to we	llhead.					
☐ No water	level measureme	ent collected. C	bstruction in we	<b>)</b> II.					
	level measureme	ent collected. V	Vell is pumping.						
Other:		<del></del>	142001 4 70		A. Maria a a maria ana a s				
D. Durnad 2	woll waluman and	d 6 -   d		PURGING INF	URNATION				
Purged 3 well volumes and field parameters stabilized.  □ Purged 3 well volumes based on previous water level and field paremeters stabilized.									
	·····								
☐ Other:									
Additional C	omments:	Duple	Cati						
	· · · · · · · · · · · · · · · · · · ·	7							
		*		<del></del>					
		188.2				<del></del>			

Project No:	055038			(	Slient: <u>F</u>	Freeport Copper Queen Branch			
rask No:				(	Date: _	7-15-11			
Vell ID:	BMO	2008	- 13B	1	Veather:	Sunny	72		
ADWR No:					Sampler: 🖊	Instable	L Sham	242	
Brittino.				WELL DAT	Α				
1.82 - E T'\.			1100		Nominal	Casing ( Size (inches)	Capacity  Gallons per Li	near Foot	
Well De	epth (ft bls):	*******	7-1		74011771104	2	0.16		
Casing [	Diameter (in):					5	0.65 1.02		
Static Wate	r Level (ft bmp):	4	09.36		6 1.47				
Casina \	Volume (gal):	220.	$\mathcal{X} = \overline{\mathcal{X}}$	13	8 2.61 10 4.08				
	•	<u> </u>	2150	100	Casing	g Volume = gallons/	foot * water colum	n (feet)	
Total Volun	ne Purged (gal):		FIEL	D SAMPLING	3 DATA				
Time	Elapsed Time	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Specific Conductance	Commi	ents	
	(min)	(gpm)	(gallons)			(μS/cm)			
0610	Pump On				<u> </u>	7 /			
0615	15	20	100	6.42	4-0	4160			
0625	15	20	300	6343	211	2170			
0/35	75	20	500	(,4)	20.9	2170			
OUT	36	20	200	1,42	20.9	7180		·	
7017	146	20	900	(044	208	5160			
0000			7 "						
***************************************					,				
						i	Pump Off		
	FIELD PARAMET	ER STABILIZA	ATION: Three co	nsecutive rea	dings within 0	.2 su pH, 2 degree:	s C, and 200 μS/c	m)	
			SAM	IPLE INFOR	MATION				
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMA-	2002-13B	9653	Plastice	250 ml	1	EPA-3000	Ica	Jacks	
					<b>'</b>				
			VATER LEVEL	MEASURE	MENT COLL	ECTION			
10 Water	level measuremen							····	
	ter level measuren		No access to we	ellhead.					
	ter level measuren								
□ No wa	ter level measuren	nent collected.	Well is pumping	,					
☐ Other:				m, , , , , , , , , , , , , , , , , , ,	- ODNA TION				
				PURGING IN	-URWATION				
	d 3 well volumes a			nd field noram	atore etabiliza	ad.			
	d 3 well volumes b d well until field pa			in tien parett	DANIMADE ETODO	<del>~~</del> ,			
☐ Other:		, with the stabil	····						
	l Comments:		***************************************						
, wand									
		***************************************							
	265-6								

Method   December	Project No:	055038				Client;	Freeport Copper Queen Branch			
Well Depth (it bis):  Casing Diameter (in):  Casing Capacity  Well Depth (it bis):  Casing Capacity  Nominel Size (inches)  Gallons per Undar Foot  1.02  Casing Capacity  Onto  Gallons per Undar Foot  1.02  Casing Volume (in):  Static Water Level (it bmp):  Casing Volume (gal):  7.1	Task No:					Date:	7-15-11			
Well Depth (it bis):  Casing Diameter (in):  Casing Capacity  Well Depth (it bis):  Casing Capacity  Nominel Size (inches)  Gallons per Undar Foot  1.02  Casing Capacity  Onto  Gallons per Undar Foot  1.02  Casing Volume (in):  Static Water Level (it bmp):  Casing Volume (gal):  7.1	Well ID:	BMO-200	B-131	1		Weather:	Supp /	.9		
Well Depth (it bie):  Casing Diameter (in):  Static Water Level (it bmp):  Casing Volume (gal):  Casing Volume (gal):  Total Volume Purged (gal):  Total Volume Purged (gal):  Total Volume Purged (gal):  Time  Elapsed Time (gpm):  (gpm)  Discharge (gal):  Time (gpm)  Casing Volume (gal):  Time (min)  Discharge (gal):  Time (gpm)  Discharge (gal):  FIELD SAMPLING DATA  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu):  Casing Volume = gallons/floot * water column (feet)  Field Discharge (gu):  Field Discharge (gu	ADWR No:					Sampler: /	Wristoder 1	Shormon		
New   Depth (R bie):   1030			, ,		WELL DAT	A	Cosios	Conocibe		
Casing Diameter (in):  Static Water Level (it bmp):  Casing Volume (gal):  Total Volume Purged (gal):  Total Volume Purged (gal):  Time  Elapsed Time  Elaps	Well D	epth (ft bis):	1030	,		Nominal		Galions per L		
Static Water Level (ft bmp):	Caeina I	Diameter (in):	1							
Casing Volume (gal):  Casing Volume (gal):  Total Volume Purged (gal):  Time Elapsed Time (min)  Blackarge Rate (gpm)  Conductance (gal):  Total Rate (min)  Discharge Rate (gpm)  Rate (gpm)  FIELD SAMPLING DATA  Specific Conductance (us/Scm)  Speci		•	2.0	17			5			
Total Volume Purged (gal):  Time Elapsed Time (min) Discharge (gam) Rate (min) Discharge (gam) PH Temp Specific Conductance (gam) PH Temp Specific	Static Wate	r Level (ft bmp):	<u> </u>	<i>6</i> /		8 2.61			1	
Time Elapsed Time Discharge Rate Discharge Rate Discharge (SU) Total PH Temp Conductance (JuS/cm) Comments    File Pump On	Casing \	√olume (gal):	<del>835.</del> 7	$7 \times 3 = 20$	207.1					
Time Elapsed Time (min) Discharge Rate Discharge (SU) Temp Conductance (Justern) Comments    1	Total Volun	ne Purged (gal):	<i></i>	1604			g Volume = gallons	/foot * water colun	nn (feet)	
Time Elapsed Time (min) Rate (min		1		,	D SAMPLIN	G DATA	Ci6-			
No water level measurement collected. No access to wellhead.	Time		Rate	Discharge	,		Conductance	Comm	ents	
## Sample ID Time Container Type Yolume No. of Containers Type Yolume No. of Containers Sample ID Time Container Type Yolume No. of Containers Sample ID Time Container Type Yolume No. of Containers Sample ID Time Container Type Yolume No. of Containers Sample ID Time Container Type Yolume No. of Containers Sample ID Time Container Type Yolume No. of Containers Sample ID WATER LEVEL MEASUREMENT COLLECTION  ### Water level measurement collected. No access to wellhead.    No water level measurement collected. No access to wellhead.   No water level measurement collected. Well is pumping.   Other: WELL PURGING INFORMATION  ### WELL PURGING INFORMATION  ### WELL PURGING INFORMATION    Purged 3 well volumes based on previous water level and field paremeters stabilized.   Purged vell until field parameters stabilized.   Other: WELL Other: Well in the purping of the purged well until field parameters stabilized.   Other: Well volumes based on previous water level and field paremeters stabilized.   Other: Additional Comments:	0515	Pump On								
135 380 7.3 1372 8.40 23.0 1328   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1330   1	0525	20	5.7	114	8.43	22.4	1331			
1375   380   7,3   1372   8.40   23.0   1328     1335   440   2.0   2.00   8.49   23.2   7.33.0     1530   220   2.8   2604   8.49   23.2   7.33.0     1530   1530   1530   1530   1530   1530   1530	0735	140	5.7	748	8.55	22:2	1317			
1330   1470   2.0   2100   8.44   23.2   1330   1530   1530   220   2.8   2604   3.40   23.4   1331	0835	200	41	1140						
1330   1470   2.0   2100   8.44   23.2   1330   1530   1530   220   2.8   2604   3.40   23.4   1331	0935	7/0	3/8	1416		<u> </u>				
Pump Off	1/35	380	7.0	1372		22.0	1328			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Yolume No. of Containers Analysis Method Preservative Filtered (y/n)  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Viall is pumping. Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged well until field parameters stabilized. Other:  Additional Comments:	1235	440	_ <u> </u>			23.2	1330		***************************************	
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Yolume No. of Containers  Analysis Method Preservative Filtered (y/n)  Filtered	1530	620	2.8	2604	8.40	23,4	[ ] 3 3 /			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Yolume No. of Containers  Analysis Method Preservative Filtered (y/n)  Filtered				(			<i>'</i>	Dump Off		
Sample ID Time Container Type Yolume No. of Containers Analysis Method Preservative Filtered (y/n)    Sample ID Time Container Type Yolume Containers Analysis Method Preservative (y/n)    Sample ID Time Containers		EICI D BARAMET	ED STARUIZA	TION: Three co	ngerutive res	dings within (	2 su pH 2 degree	<u> </u>	em)	
Sample ID Time Container Type Yolume No. of Containers Analysis Method Preservative Filtered (y/n)    Sample ID Time Container Type Yolume Containers Analysis Method Preservative Filtered (y/n)   Sample ID Time Containers Analysis Method Preservative Filtered Containers Analysis Me		LICED LUIMBET	LICO (ADILIC		***************************************	·····				
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Other:  Additional Comments:	Sa	ample ID	Time	1	Yolume	i .	Analysis Method	Preservative		
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:	BM1-	2008-13M	1530	Plastic	250ml	1	AM 3000	Icc	Xeq.	
Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:						`	į			
No water level measurement collected. No access to wellhead.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:			V	ATER LEVEL	MEASURE	MENT COLL	ECTION			
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Other:  Additional Comments:	Water I	evel measurement	collected.					<u> </u>		
Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:	1									
□ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  □ Purged 3 well volumes based on previous water level and field paremeters stabilized.  □ Purged well until field parameters stabilized.  □ Other:  Additional Comments:	1									
WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:	1	er ievei measulem	en conecieo.	and is boulding.	•					
Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.  Other:  Additional Comments:				WELL	PURGING INF	ORMATION				
Purged well until field parameters stabilized.  Other:  Additional Comments:	17 "									
Other: Additional Comments:	· •				nd field parem	eters stabilize	ed.			
Additional Comments:		ı weli until field par	ameters stabili	izea.						
	<u> </u>	Comments:							······································	
Olan	Auditiona	, comments.								
OIAN								······································		
	<del></del>	Q19,4		······································				<u></u>		

,,	Groundwa	ater Samp	ing Form					
Project No:		energy (and the second of			Client:	Freeport Copp	er Queen Bra	nch
					Date:	8-31-1	/	
Task No:	0000	7010-	1.00		Weather:	Sunn		
Well ID:	131110	-2010-	1111		1	Christopher	1 Stower	1
ADWR No:				WELL D	Sampler: ( ATA	-01235 Highan		
						Casing	Capacity	
Well Depth (ft b	ls):	55	Q		Nominal Size (inches)		Gallons per Linear Foot 0.16	
, ,		5-11				4	0.	.65
Casing Dlamete		5011 25				5		.02 .47
Static Water Le	vel (ft bmp):	224,				.61		
Casing Volume	(gals):	<u> 332</u>	,2			10 1		.08
3 Casing Volum	es (gals):	996.0			Casin	g Volume ≈ gallon	S/ICOL - Water Co.	mint frest.
	<u> </u>		FIE	LD SAMPL	ING DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (8U)	Temp (°C)	Specific Conductance (µS/cm)	Comments	
0635		100						
0645	10	1080	100	7.78	228	523		
0650	15	10	150	281	22.6	522		
6735	60	5	$-\frac{3.25}{3.25}$	7.83	72.8 23.0	22		
0 835	120	Spirit	4000	437	53.2	5/2		
0940	185	<del></del>	1000	11				
	,							
							<del></del>	
			er A	MPLE INFO	PHATION			
		<u> </u>		MILTE HALO	No. of			Comments
Sam	ple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	<b>V</b> 01011111
BM0-21	010-1M	0940	plastic	250 ml	1	EPA 300.0	nqne	filtered
						7.		·
		<u> </u>						
Additional Con	rments:							
	- mining and the second						·	

.2

. . . .

. ...

Project No:	055038				Client:	Freeport Copp	er Queen Bran	ch
Task No:					Date:	J-15	1-11	
Well ID:	BMO-	- 2010 -	2 M		Weather:	Sunn	1	
ADWR No:					Sampler:	hristop	lor 15hi	imov?
				WELL DA				
Well De	pth (ft bis):	38	0		Nomina	Casing I Size (inches)	Capacity Gallons per l	inear Foot
Casing D	iameter (in):					2 0.16 4 0.65		
	- '	2/1	8.05			5 1.02		
	Level (ft bmp):			un /	6 1.47 8 2.61			
Casing V	olume (gal):	114.2	x3 = 37	12.6		10	4.0	
Total Volum	e Purged (gal):		360			ng Volume = gallons	s/foot * water colur	nn (feet)
	I	I 54	***************************************	LD SAMPLIN	IG DATA	I		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
0920	Pump On							
0925	5	/2	60	4.60	21.3	2.17		
0930	10	12	120	1.64	21.5	2.17		
0940	20	/2	240	6.65	205	2.15		
0950	30	1)	360	6162	21.5	2.16		
***************************************			***************************************					
							****	
	E D DADANET	ED CTABILIZA	TiON: Theorem		مانية المانية	).2 su pH, 2 degree:	Pump Off	
r .	IELU FARANIE I	ER STABILIZA		PLE INFOR		.2 su pm, 2 degree	s C, and 200 µS/G	m)
		ł		IFLE INFOR				
L	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
131111-7	010-2M	(1950)	Mastic	250 ml	1	EPH-300,0	100	k
		W	ATER LEVEL	MEASUREN	MENT COLL	ECTION		
Water lev	el measurement	collected.				<del></del>		
l	level measurem							
l _	level measurem							
Other:	level measurem	ent conected, v	чен із рапірніў.					
			WELL F	PURGING INF	ORMATION		****	
Purged 3	well volumes an	d field paramet	ers stabilized.					
l	well volumes ba			nd field pareme	eters stabilize	d,		
☐ Purged w ☐ Other:	ell until field para	ameters stabiliz	ed.					
Additional C	`ommonte:			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
Additional	voiminging.				<b>*</b>	<u> </u>		
	11.7					**************************************		

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-13-11			
Well ID:	BM0-	2010-	38		Weather:	SUNNY 80	) Ś		
ADWR No:					Sampler:	BJD			
				WELL DAT	A			n de l'obel de mes i accupé Right dest secure l'étable	
Well De	epth (ft bls):	23	$\bigcirc$		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
1	,	<u>ر ر</u>	1		2		0.16 0.6	6	
Casing L	Diameter (in):					4 5	1.0	i i	
Static Wate	r Level (ft bmp):		6			6 8	1.4 2.6		
Casing \	/olume (gal):	218	x3 = 6	54		10	4.0		
Total Volum	ne Purged (gal):				Casir	ng Volume = gallons	s/foot * water colur	nn (feet)	
			ere pre FEI	D SAMPLIN	G DATA				
Time	Elapsed Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
10:05	Rump On			7.47					
10:25	20	8	160	9.UZ	22.7	405.7	425		
10:45	40	8	320	7.62	22.3	404.8			
11:05	60	Š	480	7.89	22.1	405 8			
11:15	70	8	560	241	22.9	403.3	7.76 = pH		
11.25	80	8	640	7.68	22.3	404.5	·		
		).							
	ę.								
	,s\			·					
	,	·					Pump Off		
	FIELD PARAMET	ER STABILIZA	er and depth fragmet worth and a large	Appagation participate (magazina ber-	opopetracjejrajanjujejrajakju	0.2 su pH, 2 degree	s C, and 200 μS/c	:m) sieselenikiseisenen	
			S I II III III SAN	IPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMO.	-2610-38	11:25	Pola	250ml	. /	300-0	ġ	V de	
							, , , , , , , , , , , , , , , , , , , ,	/	
		N	I VATER LEVEL	MEASUREN	MENT COL	LECTION			
, ,	evel measuremen								
l .	er level measurem er level measurem								
i i	er level measurem er level measurem								
□ Other:					1				
			WELL	PURGING INF	ORMATION				
	3 well volumes ar								
1	3 well volumes be			nd field parem	eters stabiliz	ed.			
☐ Other:	well until field par	ameters stabil	izea.						
L	Comments:								
Additional	JUINING.	· · · · · · · · · · · · · · · · · · ·			Y				
				,	1				

Project No:	055038				Client:	Freeport Copp	er Queen Brand	<u> </u>	
Task No:	1.0				Date:				
Well ID:	BMO-	2010-3	,v _v		Weather:				
ADWR No:					Sampler:	BJD			
				WELL DA					
Well De	epth (ft bis):				Casing Capacity Nominal Size (inches) Gallons per Linear			inear Foot	
			<u> </u>			2	0.16	3	
Casing D	Diameter (in):		~ ~		-	<b>4</b> 5	0.65 1.02	1	
Static Wate	r Level (ft bmp):	120	<u> </u>			6	1.47		
Casing \	/olume (gal):		x3 =			8 10	2.6 ² 4.08		
	ne Purged (gal):				Casir	nn (feet)			
TOTAL VOIDI	ie ruigeu (gai).			D SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On								
			,						
•							Pump Off		
	FIELD PARAMET	ER STABILIZA	TION: Three co	onsecutive rea	dings within (	0.2 su pH, 2 degree	s C, and 200 μS/c	m)	
			SAN	IPLE INFOR	MATION				
			Container		No. of			Filtered	
Sa	mple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)	
								k	
	esta estalest mesistales (medel de jaid)				i Kulisis i Kirik melki kirak bira				
		) y	ATER LEVEL	MEASURE	MENT COLL	ECTION			
□ Water le	evel measurement	collected.							
☐ No wate	er level measurem	ent collected. I	No access to we	ellhead.					
☐ No wate	er level measurem	ent collected. (	Obstruction in w	ell.					
1	er level measurem	ent collected. \	Nell is pumping	,					
Other:				es parimete poneis de la				inak dan denakan kerasan dan	
				Purging ini	ORMATION				
i -	3 well volumes an								
	3 well volumes ba	•		nd field parem	eters stabilize	ed.			
	well until field par	ameters stabili	zed.						
Other:								<u> </u>	
Additional	Comments:								
				,,.					
			······						
					***************************************				



Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.6				Date:	8-25-	1)		
Well ID:	BMO	-201	0 -3M	<u> </u>	Weather:	SUNNY 1	Humid Bo's		
ADWR No:					Sampler:	BOD .			
				WELL DA	A		Capacity		
Well De	epth (ft bis):	<u> </u>			Nomina	l Size (inches)	Gallons per L		
Casing D	liameter (in):	5"			2 4		0.16 0.65	1	
_	r Level (ft bmp):	120.	.74		5		1,02 1,47	1	
		420		2 (1)	6 8		2.61	1	
Casing \	/olume (gal):	***************************************		C 0 Q	Carda	10	4.08		
Total Volum	ne Purged (gal):		260	ENIONI VINIEN		ig volume = gallon	s/foot * water colun	in (feet)	
		Discharge	Total	D SAMPLIN	GIDANA	Specific			
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp F_(90)	Conductance (µS/cm)	Comments		
8:45	Pump On		270						
9:15	30	9	180	7.15	74.7	310	Brown		
9:45	60	9	540	7.16	77.2	330	Brown		
10:15	90	9	810	7-18	76.4	340	Cleve		
10:45	120_	9 -	1080	7.18	77.3	340			
11:00	/35	12+5	1215	7.17	75.7	340	<u> </u>		
		:				· · · · · · · · · · · · · · · · · · ·			
					`		[ 		
							Pump Off		
	I FIELD PARAMET	L ER STABILIZ <i>A</i>	\TION: Three co	l onsecutive rea	l dings within (	l 0.2 su pH, 2 degree	es C, and 200 μS/cr	m)	
			SAN	IPLE INFOR	MATION				
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
BMO-	2010-3M	11:05	Poly	ZSOM		300.0	Ø	14	
***************************************			***************************************						
		W	ATER LEVEL	MEASUREN	MENT COLL	ECTION			
Water le	vel measurement	collected.	· · · · · · · · · · · · · · · · · · ·						
I	r level measurem								
	r level measurem r level measurem								
☐ Other:	, , , , , , , , , , , , , , , , , , , ,		, , - , <u>-</u> <u>-</u>	-					
			WELL	PURGING INF	ORMATION				
,	3 well volumes an	· ·							
_	3 well volumes ba	-		nd field pareme	eters stabilize	ed.			
☐ Other:	well until field para	ameters Stabili	ccu.						
	Comments:				······································	······			
***************************************	······································			·					



Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>:h</u>
Task No:	1.0				Date:	7-18-1		
Well ID:	(H)	4MBE	RS		Weather:	SUNN	208	·
ADWR No:					Sampler:	BJD		
				WELL DAT	A			
Mail D	onth (ff blc):	7	.45		Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot
vvei D	epth (ft bis):		./.>		Homma	2	0.16	3
Casing I	Diameter (in):					4 5	0.65 1,02	
Static Wate	er Level (ft bmp):					6	1.47	7
Cooine \	Volume (gal):		x3 =			8 10	2.6° 4.08	
					Casin	g Volume = gallons		
Total Volur	ne Purged (gal):	Englengserietingdarfak		D SAMPLIN				
		Disabaras	Total	U SAWITLIN		Specific		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents
1197	Pump On							
11:20	3	8	24	フとソ	25.1	422.4		
1123	6	ð	48	7.18	24.4	418.1		
1/26	প	8	72	7.18	Z3.8	420.2		
,, <u> </u>	1							
							Pump Off	
	FIFI D PARAMET	ER STABILIZA	TION: Three c	I onsecutive rea	l idinas within (	l 0.2 su pH, 2 degree	<u> </u>	m)
			zedadopara ratificados hadas en	IPLE INFOR	anangahan katan batan an			
			Container		No. of			Filtered
Sa	ample ID	Time	Type	Volume	Containers	Analysis Method	Preservative	(y/n)
	AMBERS	11.28						k
	TIPES.	11.00		<u> </u>				
escencial (AE College of A					Maskaujerolej niejdzaisk			sscomologica
		W	ATER LEVEL	MEASURE	MENT COLL	ECTION		
□ Water I	evel measuremen	t collected.						
<i>V</i> \	er level measurem							
	er level measurem						t en	
☐ No wat	er level measurem	ient collected. 1	vveli is pumping	<b>).</b>				
			WELL	PURGING INF	ORMATION			
☐ Puraed	3 well volumes a	nd field narame	ters stahilized					
i .	3 well volumes at			nd field parem	eters stabilize	ed.		
" حا	well until field par	-		•				
Other:								
Additional	Comments:	Collect	sample	as fa	st as	poss, He	to avo	id Hodin
- Va	d		7			/		
	:							
					***************************************			

Project No:	055038				Client:	Freeport Coppe	er Queen Bran	ch
Task No:	1.0				Date:	7-14-11		
Well ID:	COR	3mW-1	/		Weather:	SUNVY	30's	
ADWR No:	***************************************				Sampler:	BJD		
			englessinger dellers vær Eggerelande him har like	WELL DA				
Well D	epth (ft bis):	4	Z.O		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
		· · ·	3			2	0.16 0.6	6
_	Diameter (in):	- 7(	89.6			5	1.0	2
Static Wate	er Level (ft bmp):					6 8	1.4 ⁻ 2.6	
Casing	Volume (gal):	<u> 48</u>		440		10	4.0	
Total Volui	me Purged (gal):	<u> 153</u>	50			ig Volume = gallons	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
11:00	Pump On							
11:30	30	10	300	6:82	2.4.0	1822		
1200	60	10	600	6.86	22.	18-18	1878	
12:30	90	10	900	6.78	21.6	1880		
13.00	120	10	1200	6-83	21.5	1905		
13:30	150	10	1500	6.78	21.4	1974		
							<u> </u>	
							Pump Off	
	EIEI D DARAMET	ER STABILIZA	ATION: Three co	nsecutive rea	dinas within (	l 0.2 su pH, 2 degree	·	em)
			aptomatorotterenetistatulusisti kaisisto	IPLE INFOR	idelia a lidaurati irunatsia			
Se	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
C03	mu"	13:35	Pal	250 ml	,	300.0	Ø	VM
			/	- V. L.				7
			L /ATER LEVEL	I MEACHIDE	L MENTERALI			
X Water								
/\	level measuremen er level measuren		No access to we	ellhead.				
	er level measuren							
	er level measuren	ent collected.	Well is pumping	l.				
☐ Other:			sasanasanas (A) (= 102)	PURGING INI	OPMATION			
Burnar	i 3 well volumes a	nd field parame						
<i>V</i> \	i 3 well volumes a			nd field parem	eters stabilize	ed.		
☐ Purged	i well until field par	ameters stabili	ized.	•				
☐ Other:		····						
Additional	Comments:							
								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1.0				Date:	7-14-11		
Well ID:	COB,	MW-Z	7		Weather:	Parth (1	aud 703	
ADWR No:					Sampler:	BJD	(	
				WELLDAT	A E			
Well De	pth (ft bls):	170	7		Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot
	•	40				2	0.16 0.65	3
Casing D	liameter (in):	1~2 ~				<b>4</b> 5	1.02	i i
Static Wate	r Level (ft bmp):	128.1				6 8	1,47 2.61	1
Casing V	olume (gal):	30	x3 = 9(	<u>'</u>		10	4.08	*
Total Volum	ne Purged (gal):				Casin	g Volume = gallons	s/foot * water colun	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)	Commo	∍nts
9:12	Pump On							
09:15	3	7	721	6.94	21.3	467.1		
09:18		7	4Z	6.99	20.9	470.7		
09:21	9	7	63	7.04	21.0	471.5		
09:25	13	7	91	7.11	71.1	472.6		
			4					
							Pump Off	
	FIELD PARAMET	ER STABILIZA	laggigustaustatissasista (laikusta laik		i gidologia kompresida (den	0.2 su pH, 2 degree	es C, and 200 µS/c	m) Wantanana
			SAN	/IPLE INFOR	MAHUN			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
COB	MW-3	9:27	Poli	25041	_ /	300		k
	papies-Supe		ATER LEVEL	MEASURE	MENT COLL	ECTION		
ÌX Water le	evel measurement	collected.					en e	
<i>Y</i> \	r level measurem		No access to we	ellhead.				
1	er level measurem							
☐ No wate	er level measurem	ent collected.	Well is pumping	<b>}</b> .				
			weil	PURGING INF	ORMATION			
⊠ Purged	3 well volumes ar	id field parame	eters stabilized.	<u>Adin Parkinaniasi ir Siriki Si</u>				
/ \	3 well volumes ba			nd field parem	eters stabilize	ed.		
☐ Purged	well until field par	ameters stabili	ized.					
☐ Other:								
Additional	Comments:		W				.:	
				·····				

Task No: 1.0   Date:	Well ID: COB MW 3 Weather.  ADWR No: Sampler: BJD  Well DaTA: Casing Capacity  Well Depth (ft bis): 269 Nominal Size (incles) Gallons per Linear Foot  Casing Diameter (in): 9	Project No:	055038				Client:	Freeport Coppe	r Queen Brand	ch
ADWR No:   Sampler: BJD	ADWR No:	Task No:	1.0				Date:	7-14-11		
ADWR No:   Sampler: BJD	ADWR No:			3 MW	- 3		. Weather:	502× BC	) (	
Well Depth (ft bis):   269   Nominal Size (inches)   Gallons per Linear Foot	Well Depth (ft bis):   Z 6 9   Nominal Size (inches)   Galions per Linear Foot							, -		
Well Depth (ft bils):   26 9   Nominal Size (inches)   Gallons per Linear Foot	Well Depth (ft bis):   26 9   Nominal Size (inches)   Gallons per Linear Foot					WELL DA				
Casing Diameter (in):	Casing Diameter (in):    132	7 IIaW	enth (ft bls):	7.69			Nominal			inear Foot
Static Water Level (ft bmp):   13 2 4	Static Water Level (ft bmp):   13 2 .4    5 6									
Casing Volume (gal):  Total Volume Purged (gal):    Total Volume Purged (gal):   Total Volume   FIELD SAMPLING DATA	Casing Volume (gal):  Total Volume Purged (gal):    Total Volume Purged (gal):   Total Volume   FIELD SAMPLING DATA			······································	(1)			5	1.02	2
Total Volume Purged (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gpm) (gallons) (SU) Temp (Su) Conductance (μS/cm) Comments  (0:00 Pump On 7.1% ZZ.0 437.9  10:10 15 ZU 300 7.19 Z1.8 L46.0  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  Sample ID Time Container Type Volume Type Volume Type Volume Type Volume Type Tileted (yfn)  WATER LEVEL MEASUREMENT COLLECTION	Total Volume Purged (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min)   Discharge Rate (gpm)   Discharge (gallons)   PH   Temp (Specific Conductance (µs/cm)   PH   Temp (µs/cm)   PH	Static Wat	er Level (ft bmp):			~ A		1		
Total Volume Purged (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) PH (SU) Temp (°C) Conductance (uS/cm) Comments  (O:OO Pump On	Total Volume Purged (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) PH Temp (SU) Temp (Conductance (µS/cm))  (D:OO Pump On	Casing	Volume (gal):	90	x3 = 2	_ 10			······································	
Time Elapsed Time (rim) Discharge Rate (rim) Elapsed Time El	FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) PH (SU) Temp Conductance (µS/cm) Comments  [O:OO Pump On	Total Volu	me Purged (gal):					g Volume = gallons	/foot * water colum	nn (feet)
Time Elapsed Time (min) Rate (gpm) Discharge (gallons) (SU) (eC) Conductance (uS/cm) Comments    O O Pump On	Time Elapsed Time (min) Rate (gpm) Discharge (gallons) (SU) (C) Conductance (µS/cm) Comments  [O:OO Pump On					LD SAMPLII	IG DATA			
1:05   10   10   10   10   10   10   10	105   10	Time		Rate	Discharge			Conductance	Comm	ents
10:15   15   20   300   7.19   21.8   446.0   10:15   1.5   20   300   7.19   21.8   446.0   10:15   1.5   20   300   7.19   21.8   446.0   10:15   1.5   20   300   7.19   21.8   446.0   10:15   1.5   20   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   300   30	10:10   10   10   10   10   10   10	(0:00	Pump On							
10:17   15   20   300   7.19   71.8   440.0	10: U 15 20 300 7.19 71.8 446.0  Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  COB MW-3 10:17 PO/y 250 1 300.0	05 10 .00	5	20	100	7.18	22.0	435.2		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume Type  Volume Type  Volume Type  Volume Type  Volume Type Type Type Type Type Type Type Typ	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Containers Type Volume Type Volume No. of Containers No. of Contai	10:10	/0	7.6	200	7.70	<u> </u>	-437,4		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 /0:17 Poly 250 / 300.0 / 9 102  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17 POLY 250 1 300.01 Y 100  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.	10:15	- 15	w	300	7.19	71.8	440.0		
Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume Containers Ontainers Analysis Method Preservative (y/n)  COB MW-3 10:17 PO/y 250 1 300.01 9 1 102  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17  POLY 250  ANALYSIS METHOD  WATER LEVEL MEASUREMENT COLLECTION									
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume  Containers  Type  Volume  Containers  Analysis Method  Preservative  Filtered  (y/n)  COB MW-3 /0:17  PO/y  250  // 300.01  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17 Poly 250 1 300.0 9 9 102  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.	,								
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume  Containers  Type  Volume  Containers  Analysis Method  Preservative  Filtered  (y/n)  COB MW-3 /0:17  PO/y  250  // 300.01  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17 Poly 250 1 300.0 9 9 102  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.									
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume  Containers  Type  Volume  Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 /0:17  PO/y  250  // 300.01  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17 Poly 250 1 300.0 9 9 102  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.			<u> </u>		<u> </u>				
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume  Containers  Type  Volume  Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 /0:17  PO/y  250  // 300.01  WATER LEVEL MEASUREMENT COLLECTION	FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  COB MW-3 10:17 Poly 250 1 300.0 9 9 102  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.								Dump Off	
Sample ID  Time  Container Type  Volume  No. of Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 /0:17  Poly 250  WATER LEVEL MEASUREMENT COLLECTION	Sample ID  Time  Container Type  Volume Containers  No. of Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 10:17  Paly  250  1 300.01  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.		EIEI D DADAMET	TER STABILIZ	ATION: Three c	onsecutive re	adings within (	).2 su pH. 2 degree		:m)
Sample ID  Time  Container Type  Volume  No. of Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 10:17  Poly  250  1 300.01  Y 102  WATER LEVEL MEASUREMENT COLLECTION	Sample ID  Time  Container Type  Volume Containers  No. of Containers  Analysis Method  Preservative  Filtered (y/n)  COB MW-3 10:17  Poly 250  1 300.01  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.				derdanggargeredt.vicenjaspg:		unicii (alemanta areatza (alemanistra)			
COB MW-3 10:17 POLY 250 1 300.01 9 Y tou	WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.							Analysis Method	Preservative	1
WATER LEVEL MEASUREMENT COLLECTION	WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.	9	ample ID	I ime	Туре	ļ	Containers	Analysis Method		(y/n)
是一直是有限。但是我们的是我们的现在分词,我们也没有一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	Water level measurement collected.	C07	s mw-3	10:17	Paly	250	7	300.0	× 9'	y 102
是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	Water level measurement collected.				,					
Water level measurement collected.				i di di y	VATER LEVE	MEASURE	MENT COLI	ECTION		
No water level measurement collected. Obstruction in well.		☐ No wa	iter level measuren	nent collected.						
		☐ No wa	iter level measuren iter level measuren	nent collected. nent collected.	Obstruction in v	well.	÷		-	
<ul> <li>□ No water level measurement collected. Obstruction in well.</li> <li>□ No water level measurement collected. Well is pumping.</li> <li>□ Other:</li> </ul>	□ No water level measurement collected. Well is pumping. □ Other:	☐ No wa☐ No wa☐ No wa	nter level measuren nter level measuren nter level measuren	nent collected. nent collected.	Obstruction in v	well. g.				
□ No water level measurement collected. Obstruction in well.     □ No water level measurement collected. Well is pumping.     □ Other:      WELL PURGING INFORMATION	□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION	☐ No wa☐ No wa☐ No wa☐ Other.	iter level measuren iter level measuren iter level measuren	nent collected. nent collected. nent collected.	Obstruction in v Well is pumping	well. g. PURGING IN	IFORMATION			
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.	□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.	☐ No wa☐ No wa☐ No wa☐ Other.	iter level measuren iter level measuren iter level measuren :	nent collected. nent collected. nent collected.	Obstruction in v Well is pumping WELL eters stabilized.	well. g. PURGING IN		airealmann Mainteannal airse Maiain Ghailleag		
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field paremeters stabilized.	No water level measurement collected. Well is pumping.  Other:  WELL PURGING:INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.	☐ No wa ☐ No wa ☐ No wa ☐ Other: ☐ Purge ☐ Purge	ater level measuren ater level measuren ater level measuren ater level measuren at 3 well volumes a at 3 well volumes b	nent collected. nent collected. nent collected. and field parameters on previous	Obstruction in vivel is pumping WELL eters stabilized.	well. g. PURGING IN		airealmann Mainteannal airse Maiain Ghailleag		
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.	□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized.	☐ No wa ☐ No wa ☐ No wa ☐ Other: ☐ Purge ☐ Purge ☐ Purge	ater level measuren ater level measuren ater level measuren d 3 well volumes a d 3 well volumes b d well until field pa	nent collected. nent collected. nent collected. and field parameters on previous	Obstruction in vivel is pumping WELL eters stabilized.	well. g. PURGING IN		airealmann Mainteannal airse Maiain Ghailleag		
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Other:	□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	☐ No wa ☐ No wa ☐ No wa ☐ Other ☐ Purge ☐ Purge ☐ Purge ☐ Other	ater level measuren ater level measuren ater level measuren ater level measuren ater ater level measuren ater ater level measuren ater ater level measuren ater level	nent collected. nent collected. nent collected. and field parameters on previous	Obstruction in vivel is pumping WELL eters stabilized.	well. g. PURGING IN		airealmann Mainteannal airse Maiain Ghailleag		
□ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other:  ■ WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	☐ No wa ☐ No wa ☐ No wa ☐ Other ☐ Purge ☐ Purge ☐ Purge ☐ Other	ater level measuren ater level measuren ater level measuren ater level measuren ater ater level measuren ater ater level measuren ater ater level measuren ater level	nent collected. nent collected. nent collected. and field parameters on previous	Obstruction in vivel is pumping WELL eters stabilized.	well. g. PURGING IN		airealmann Mainteannal airse Maiain Ghailleag		



Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>sh</u>
Task No:	1.0				Date:	7-14-11		***************************************
Well ID:	COB	626			Weather:	Soww	y 80s	
ADWR No:					Sampler:	BJD /		
dra dra di				WELL DAT	A			
Well De	epth (ft bls):	150	)		Nominal	Size (inches)	Capacity Gallons per L	
Casing [	Diameter (in):	4 '	()			2 4	0.16 0.65	
	r Level (ft bmp):	73	26			5 6	1.02 1.43	L L
		50	x3 = /	50		8 10	2.6 ² 4.01	
	/olume (gal):			, ,	Casin	g Volume = gallons		
Total Volun	ne Purged (gal):			D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
08:25	Pump On							
08:30	5	7.5	3.8	6.83	22.]	942.4		
08:35		7.5	75	6.88	21.7	1015		
08:45	1	7.5	150	6.91	21.6	1019		
				<u> </u>			Pump Off	
	FIELD PARAMET	ER STABILIZA		onsecutive rea MPLE INFOR	orazoldusa laterakisaria astro	).2 su pH, 2 degree	is C, and 200 μ5/0	
Section Sectio	mple ID	Time	Container	Volume	No. of	Analysis Method	Preservative	Filtered
			Туре		Containers		<u></u>	(y/n)
(OB	· WC	8:47	16/2	250ml	/	300.0	9	y 7x
			/					
		Ŋ	/ATER LEVEL	MEASURE	MENT COLL	ECTION		
Water l	evel measuremen	t collected.						
1	er level measurem						•	
1	er level measurem er level measurem							•
☐ Other:	i lovel moderan	on conociou.	Tron to partiput	,				
			WELL	PURGING INF	ORMATION			
Purged	3 well volumes ar	nd field parame	eters stabilized.					
1 -	3 well volumes ba			nd field parem	eters stabilize	ed.		
☐ Other:	well until field par	ameters stabili	izea.					
	Comments:							
/ www.roilal	www.iijswilks.							



38 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				oate: Veather: Sampler:	<u>BSO /</u>	1 70's	illikastateko (sastioisi
DIS):	2-7	<u> </u>	S	Sampler:	<u>BSO /</u>	<u>70's</u>	en manager expressed in the
bls):	2-7	<u>'</u> 0			BSO /		er inschandlere not Gastelleren
-		**************************************	WELLIDAT/ L				
-		20				Chetty spinish remarkable to provide the control of	
-		· · · · · · · · · · · · · · · · · · ·	1	Nominal S	Casing C Size (inches)	Gallons per Lin	ear Foot
er (in):	6	- A			2	0.16 0.65	
					5	1.02	
(ft bmp):	159	5]			6 8	1.47 2.61	
(nal):	9	) x3 = 2)	70		10	4.08	
				Casing	Volume = gallons/	foot * water colum	n (feet)
ged (gal):			D SAMPLIN	G DATA			
osed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comme	nts
ne On		gradica di					
	17	Ina	6.81	71-7	1840		
				70.9	1830		
				70.8	1820		
		کے	6.84	71.3	[800		
				Į.		•	
D PARAMET	ER STABILIZ	ATION: Three	consecutive rea	adings within (	).2 su pH, 2 degree	es C, and 200 μο/ο	
		-SA	MPLEINFO				Filtered
	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
RC	07:55	Poly	Zsomi		<u> </u>	<del>  //                                  </del>	YX
		\				/ ####################################	
rei IX-tan iyeni zing Alisali (pala disan		NATER LEVE	LMEASURE	MENT COL	LECTION		
	ID  PARAMET  D PARAMET	ged (gal):  Discharge Rate (gpm)  The Color of C	ged (gal):    Seed Time	ged (gal):    Sample   Sample	Seed Time   Discharge   Rate (gpm)   Discharge (gallons)   Casing (PC)    Total   Discharge (gallons)   PH   Temp (PC)    Total   Discharge (gallons)   Casing (PC)    Total   Discharge (gallons)   Casing (PC)    Total   Discharge (gallons)   Casing (PC)    Temp (PC)   Casing (PC)    Temp (PC)   Casing (PC)    Temp (PC)   Casing (PC)    Total   Discharge (gallons)   PH   Temp (PC)    Temp (PC)   Casing (PC)    Total   Discharge (Gul)   PH   Temp (PC)    Temp (PC)   Casing (PC)    Total   Discharge (Gul)   PH   Temp (PC)    Temp (PC)   Casing (PC)    Temp (	Total Discharge Rate (gallons)  Property of the control of the con	Total Discharge (gallons)  Specific Conductance (u.S/cm)  Fig. 18 CO  Fig. 18 CO  Specific Conductance (u.S/cm)  Fig. 18 CO  Specific Conductance (u.S/cm)  Fig. 18 CO  Fig. 18 CO

Project No:	055038				Client:	Freeport Coppe	er Queen Branc	:h
Task No:	1.0				Date:	7-11-11		
Well ID:	C00PE	4			Weather:	Drizzlu.	20's	
ADWR No:					Sampler:	BJĎ		
				WELL DA	TA Establish			
Well D	epth (ft bis):	37	25		Nomina	Size (inches)	Capacity Gallons per Li	
Casing I	Diameter (in):	6				2 4	0.16 0.65	1
	er Level (ft bmp):		A			5 6	1.02 1.47	
		NF				8 10	2.61 4.08	
_	Volume (gal):	17			Casin	g Volume = gallons		
Total Volur	ne Purged (gal):			D SAMPLIN	<u> </u>			
Maunalius amaun 184		Discharge	Total	12000 1000 1000 1000 1000		Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
10:50	Pump On							
10:55	5	7	35	7.31	23.4	427.1		
11:00	10	7	76	7.39	23.2	425.1		
11:05	15-	7	105	255	24.2	426.5	PH= 7.95	
							D Off	
	EIEI D DADAMET	ED STADILIZA	ATION: Three o	neecutive res	dinge within (	 0.2 su pH, 2 degree	Pump Off	m)
	FIELD PAKAMET			IPLE INFOR				
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
CO0	PER	11:08	Poly	25 0m2	1	300.0	Ø	Уĸ
		<u> </u>						
		I.	I /ATER LEVEL	MEASUREI	MENT COLL	ECTION		
□ Water I	evel measuremen	t collected.			innskrigerunger			
1	er level measurem		No access to we	ellhead.				
1	er level measurem							
☐ No wate	er level measurem	ent collected.	Well is pumping	<b>J.</b>				
D Ollei.			THE WENT	PURGING INI	ORMATION			
□ Puraed	3 well volumes ar	nd field parame	eters stabilized.			HORTHURUNSPLAININ SISSUMSSAIRCHUS	ed leten Heerl order Families and Heerlers	
	3 well volumes ba			nd field parem	eters stabilize	ed.		
r` -	well until field par	ameters stabil	ized.					
Other:								
Additional	Comments:							<del>/////////////////////////////////////</del>



Project No:	055038				Client:	Freeport Copp	er Queen Bran	ch
Task No:	1.0				Date:	7-12-11		
Well ID:	DOD	SON			Weather:	Cloud, 8	icis Humid	
ADWR No:					Sampler:	BJD		
				WELL DA	TA HILL			
Well D	epth (ft bls):	7	<u> </u>		Nomina	Casing Il Size (inches)	Capacity Gallons per l	Linear Foot
			64			2 4	0.1 0.6	
	Diameter (in):		0 ~ ~			5	1.0	
Static Water	er Level (ft bmp):	97	07	10 >		6 8	1.4 2.6	
Casing \	Volume (gal):	160		<u> </u>		10	4.0	
Total Volun	me Purged (gal):	4	90		Casir	ng Volume = gallon	s/foot * water colur	mn (feet)
				LD SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents
12:40	Pump On							
12:50	10	14	140	6.89	22.9	1385		
13:00	20	14	280	6.92	23.4	1375		
13:10	30	14	<b>4</b> 20	6.86	23.7	1352		
			1					
							Pump Off	
tologi (glasti plotog) i Marin	FIELD PARAMET	ER STABILIZA	gangga da sa Israna sa kindaga (Kasid).		nigarist Hiterotycania dila	0.2 su pH, 2 degree	s C, and 200 μS/c	am) Secure angelepun valangs
			III a la III SAN	APLE INFOR	MATION			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
DOI	50N	13:15	Po/2	ZSOMZ	1	300.0	Ø .	y 4x
		nest in de Co	IATER LEVEL	MEASUREI	MENT COLL	ECHON		
Ø Water i	evel measuremen							
1/\	er level measurem		No access to we	ellhead.				
□ No wate	er level measurem	ent collected.	Obstruction in w	vell.				
1 .	er level measurem	ent collected.	Well is pumping	<b>J.</b>				
□ Other:								
				Purging ini	UKWATIUN			
r \	3 well volumes ar 3 well volumes ba			nd field narem	eters stahilize	əd		
I	well until field par			na nota parotri	otoro otorome.			
□ Other:								
Additional	Comments:							
				······································				



Project No:	055038				Client:	Freeport Copp	er Queen Brand	ch
Task No:	1.0				Date:	7-12-11		
Well ID:	DOUGH	955 79	2_		Weather:	Cloudy 8	O's Humid	
ADWR No:					Sampler:	BJD		
diğ dinedi				WELL DA				
Well D	epth (ft bls):				Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot
			<del>/</del>		1,000,000	2	0.16	6
Casing	Diameter (in):		~ 0			4 5	0.69 1.02	
Static Wate	er Level (ft bmp):	<u> </u>	, - 38			6	1.47	7
Casing	Volume (gal):	,	x3 =			8 10	2.6 ⁻ 4.0	
					Casir	ng Volume = gallon	s/foot * water colum	nn (feet)
Total Volu	ne Purged (gal):			D SAMPLIN	<u> </u>			50510040212180065555
		Discharge	Total		Tiple of the state	Specific	daleanasunetara (miaerinasunet	
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Cemm	ents
	Rump On			15, 130, 154, 154, 15, 15 15, 130, 154, 154, 15				
	<u> </u>							
							Pump Off	
	FIELD PARAMET	ER STABILIZA	TION: Three o	onsecutive rea	dings within	0.2 su pH, 2 degree	es C, and 200 μS/c	m)
45 J. 41 E. 45		/	SAN	IPLE INFOR	MATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
								k
			ATER LEVEL	MEASURE	MENT COL			
	evel measuremen			Dt t				
1	er level measuren er level measuren							
	er level measuren er level measuren							
☐ Other:			. , .					
			WELL	PURGING INF	ORMATION			
☐ Purged	3 well volumes ar	nd field parame	ters stabilized.					
_	3 well volumes ba			nd field parem	eters stabilize	ed.		
·	well until field par	ameters stabili	zed.					
Other:		, , , , , , , , , , , , , , , , , , ,	1					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Additional	Comments:	<u> </u>	/	t				
	<u></u>					***************************************		

Project No:	055038				Client:	Freeport Coppe	Queen Branc	h
Task No:	1.0				Date:	7-14-11	3	
Well ID:	DORF	120			Weather:	5xmy 80	) (	
ADWR No:				·	Sampler:	BJD		overtor recoveration and retend to the
				WELL DAT	A			
Well D	epth (ft bls):				Nomina	Casing ( I Size (inches)	Gallons per L	
	•		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			2 4	0.16 0.65	- 1
Casing	Diameter (in):					5	1.02	2
Static Water	er Level (ft bmp):					6 8	1.47 2.61	
Casing	Volume (gal):		x3 =			10	4.08	
Total Volu	me Purged (gal):				Casir	ng Volume = gallons	foot * water colun	nn (feet)
			nergial/District interpretation	D SAMPLIN	IG DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp / (°C) /	Specific Conductance (µS/cm)	Comm	ents
15:30	Pump On							
15:35		7.5	<u> </u>	7.02	23.9	1089		
15310	/8	7.5	75	7.01	2-3-6	1098		
15:45	45	7.5	112	7.01	7-3-6	1101		
						-	Pump Off	
		CD CTABILIZ	ATION: Three o	onsecutive re	adings within	0.2 su pH, 2 degree	•	:m)
	FIELD PARAME	IER STABILIZ	. a are continued and and or benefits a property of	MPLE INFOR	Contract professional Section (Co.			
			Container		No. of			Filtered
s	ample ID	Time	Type	Volume	Containers	Analysis Method	Preservative	(y/n)
DUR	A70	15:48	Pal	750,m2	. 1	300.0	0/	Mx
		10					7	7
		ug in dean iv	L VATER LEVEI	MEASURE	MENT COL	LECTION		
				Mada Makildagi ul				
	level measuremer iter level measurer		No access to w	ellhead.				
	iter level measurer							
□ No wa	iter level measurer	nent collected.	Well is pumping	g.				
Other	: Nggikinaki piri mari makang merany			PURGING IN	IFORMATION			Sapsti var sa vijetej
				MENTERNATURA MENTERNATURA			vuelnessueburelusbusieure	
☐ Purge	d 3 well volumes and 3 well volumes b	ased on previo	ous water level a	and field parer	neters stabili:	zed.		
	d well until field pa							
Other	*							:
Additiona	al Comments:							
			<u></u>					-



Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>sh</u>
Task No:	1.0				Date:	7-12-11		
Well ID:	EAST				Weather:	Cloudy 80	3's Homid	
ADWR No:					Sampler:	BJD		
				WELL DAT	A			
Well D	epth (ft bis):	12	.5'		Nominal	Size (inches)	Capacity Gallons per L	
Caeina I	Diameter (in):		4			2	0.16 0.69	
		/2	79			5	1.02	2
Static Wate	er Level (ft bmp):	<u>60.</u>	<u> </u>	つノ		6 8	1.4° 2.6°	1
Casing \	Volume (gal):	92	x3 = 2	_16		10	4.00	
Total Volur	ne Purged (gal):	<u> 36'</u>				g Volume = gallons	/foot * water colun	nn (feet)
			Sangan alikan spagnimir ini.	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
11:00	Pump On							
11:10	10	13	Bo	7.33	Z(.8	588,7		
11:15	15	13	195	230	21.8	390-)	pH=7.30	
11:20	Z0	13	260	7.32	21.4	597.4	,	
11:25	25	13	22.5	7.23	21.7	595.1		
, and the second								
							***************************************	
							Pump Off	
	FIELD PARAMET	   ER STABILIZA	ATION: Three co	l onsecutive rea	dinas within (	D.2 su pH, 2 degree	,	m)
			nas pakinakaskinkintas	IPLE INFOR	distración di distribui			
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
EA-	<b>Т</b>	11.78	POLY	250ml	1	306.0	Ø	Y 4x
			L ATER LEVEL	MEASUREN	MENT COLL	ECTION		
Water I	evel measuremen							
1 - 1	er level measurem		No access to we	ellhead.				
□ No wate	er level measurem	ent collected. (	Obstruction in w	æll.				
1	er level measurem	nent collected. \	Well is pumping	ļ.				
□ Other:			Well	PURGING INF	ORMATION			
D Purged	3 well volumes a	nd field parame	ters stabilized.		(DESMETHER DERIVER		nosaasiustuuspininuseerin	ni Airigu i kacamata di melilek daga siya 222 n.S
	3 well volumes ba			nd field parem	eters stabilize	∍d.		
T	well until field par	ameters stabili	zed.					
☐ Other:							<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	
Additional	Comments:						- <del></del>	

Project No:	055038				Client:	Freeport Coppe	r Queen Branc	h
Task No:	1.0				Date:	7-11-11		
Well ID:	EPPELE	: 641			Weather.	Cloudy 80	3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
ADWR No:						BJD		
		Dig Grenig w		WELL DAT	A			
Mall De	epth (ft bls):	26	5		Nominal	Casing (Size (inches)	Capacity Gallons per L	inear Foot
		8				2	0.16 0.65	1
Casing D	Diameter (in):					4 5	1.02	
Static Wate	r Level (ft bmp):	56.8	50			6	1.47 2.61	
Casing \	/olume (gal):		x3 =			10	4.08	
Total Volum	ne Purged (gal):	60	o5			g Volume = gallons	/foot * water colun	nn (feet)
eesar sineess Seesar sineess			TE FE	D SAMPLIN	G DATA			
Tìme	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
13:45	Pump On 🖖							
14:00	1/5	<i>ll</i>	165	7.44	24-5	576. <b>9</b>		
14.15	30	11	330	7.20	23./	560-3		
14:30	45	11	495	7-30	23.0	565.6		
14:40	.55	11	505	7.27	23.5	563.1		
14:48		- DRY						
		-					Pump Off	
	TITL D DADAMET	TO CTABILIZ	ATION: Throng	oncocutive rea	dinge within	0.2 su pH, 2 degree	,	m)
	FIELD PARAME	ERSTABILIZ	e estado de como de como los como de c	APLE INFOR	Laurence bereit (Carlotte)			
								Filtered
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
EPPA	ELE (41 20110711	14:55	POLY	ZSani	/	300-0	0	Y ¥ €
Due	70// 47//	10:30	Poly	25020	_ /	300.0	8	Y
		i Berinda	VATER LEVEL	MEASURE	VENT COL	ECTION		
FV Maior I		ijaifarija kaj kaj ige						
	evel measuremer er level measuren		No access to w	ellhead.				
1	er level measuren							
☐ No wate	er level measuren	nent collected.	Well is pumping	<b>]</b> .				
☐ Other:				PURGING INI	-ORMATION			
			January (					
	3 well volumes a 3 well volumes b			nd field parem	eters stabiliz	ed.		
	well until field pa				ſ			
☐ Other:	Purged	til dr	z . thes	5 ample	<u> </u>			
Additional	Comments:			1				
<u></u>								

Project No:	055038				Client:	ent: Freeport Copper Queen Branch				
Task No:	1.0				Date:	7-12-11				
Well ID:	FLE	MING			Weather:	Cloudy 80's Humid				
ADWR No:					Sampler:	- ·- ·				
				WELL DA	IA					
Well D	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
	,		***************************************			2 0.16 4 0.65				
	Diameter (in):	7 //	71.7.7			5	1.02	2		
Static Water	er Level (ft bmp):	369	7714			6 8	1.47 2.61	1		
Casing	Volume (gal):		x3 =			10	4.08			
Total Volu	me Purged (gal):					ng Volume = gallons	s/foot * water colun	nn (feet)		
			FIE	D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Commo	ents		
	Pump On									
							D Off			
			71011 71		atiman suithin	0.2 su pH, 2 degree	Pump Off	m)		
	FIELD PARAMET	ERSIABILIZ		MPLE INFOR		u.z su pri, z degree	:3 O, and 200 дого			
			Container		No. of			Filtered		
s	ample ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)		
								k		
		l III II	I /ATIER LIEVEL	MEASURE	L MENT COI	ECTION				
IX Motor	level measuremen									
V .	ter level measuremen		No access to we	ellhead.						
1	ter level measurem									
□ No wa	ter level measuren	nent collected.	Well is pumping	<b>J</b> .						
☐ Other:				PURGING IN	-ODMATION					
	d 3 well volumes a d 3 well volumes b			nd field parem	neters stabiliz	ed.				
	d well until field par			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
☐ Other.										
Additiona	l Comments:	WLC	)					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
***************************************										
								······································		

Weather: Suny 90's	Project No:	055038				Client:	Freeport Coppe	er Queen Bran	ch	
Nominal Size (Inches)	Task No:	10				Date:				
Well Depth (ft bis):   300   Normal Size (inches)   Gallons per Linear Foot   0.16   0.65   0.16   0.65   0.16   0.65   0.15   0.65   0.16   0.65   0.16   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10	Well ID:	FULT	- <del>-</del>			Weather:	5,22	90's		
Well Depth (ft bis):   300   Normal Size (inches)   Gallons per Linear Foot   0.16   0.65   0.16   0.65   0.16   0.65   0.15   0.65   0.16   0.65   0.16   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.65   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10   0.10	ADWR No:					Sampler:	35D			
Normana   Size (Inches)   Gallons per Linear Foot   O.16										
Casing Diameter (in):	Well De	pth (ft bis):	30	Ó				Gallons per l		
Static Water Level (ft bmp):   7	Casing D	iameter (in):	6	(4			1	* *		
Casing Volume (gal):   3	Static Water	l evel (ff hmn)	?	···········			· · · · · · · · · · · · · · · · · · ·		E	
Total Volume Purged (gal):    Time   Elapsed Time   Discharge   Rate (gam)   Discharge   Conductance (gam)   Discharge   Conductance (gam)   Discharge   Conductance (gam)   Discharge   Conductance (gam)   Discharge   Discharge (gam)   Discharge			350	> v3 = /(	) 5th		8		i i	
Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) PH Temp (SU) Temp Conductance (µS/cm) Conductance (µS/cm) Discharge (gallons) PH Temp (SU) Temp Conductance (µS/cm) Discharge (gallons) PH Temp (SU) Temp Conductance (µS/cm) Discharge (µS/cm) Dischar			12)	~~	, , , , ,					
Time Elapsed Time Rate (gm) Discharge Rate (gmlons) Discharge (gmlons)	l otal Volum	e Purgeo (gai):		ノ 〜 FEI	D SAMPLIN	G DATA				
Time lapsed line (min) Rate (gpm) lischarge (gallons) (SU) (°C) Conductance (uS/cm) Comments  (4:50 Pump On   15:10 ZD			Discharge	remanda (et al a colla refrancia de marco en		teativesistentiseatelaan alate	Specific	siolista ista sain ist in para liga sainis an mai		
S:   U	Time		Rate	Discharge	, ,		00.100010.700		ents	
Sample ID   Time   Container   Type   Volume   No. of   Containers   Sample ID   Time   Container   Type   Volume   Sample ID   Solution   So	14:50	Pump On 🕕								
Sample ID   Time   Container   Type   Volume   No. of   Containers   Sample ID   Time   Container   Type   Volume   No. of   Containers   Sample ID   Time   Container   Type   Volume   Sample ID   Sob	15:10	70	10	200	6.95	78.9	970			
15:50   60   10   800   6:77   78:4   910     16:30   100   100   100   6:45   79.0   940     16:30   100   100   100   6:45   79.0   940     FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)    SAMPLE INFORMATION     Sample ID   Time   Container   Type   Volume   No. of   Containers   Analysis Method   Preservative   Filtered   (y/n)     FULT	<del></del>	- <del></del>	10	400	_					
Water level measurement collected.   No water level measurement collected.   No water level measurement collected.   No water level measurement collected.   Well. Purging information.   We				600						
Mater level measurement collected. No water level measurement collected. No water level measurement collected. Well is pumping.    Mater level measurement collected. Well is pumping.   Well. PURGING INFORMATION						54.1				
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  FULTI- 16:35 POY ZSOM 360 V VW  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:	<del></del>	1		-	<del>                                     </del>	740	940			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume No. of Containers Analysis Method Preservative Filtered (y/n)  FULTY  I6:35  POL  ZSOM  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION	10 00	(2/2)	1 132	1125 2 62	<u> </u>	, , ,				
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume No. of Containers Analysis Method Preservative Filtered (y/n)  FULTY  I6:35  POL  ZSOM  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION										
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume  No. of Containers  Analysis Method  Preservative  Filtered (y/n)  FULTY  I6:35  POU ZSOM I SOBO V  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION										
Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  FULTY 16:35 Poly ZSon4 1 3060 V  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping.  Other:								Pump Off		
Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  FULTY 16:35 Pou ZSOMU	F	IELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within (	).2 su pH, 2 degree	s C, and 200 μS/c	:m)	
Sample ID  Time Type Volume Containers Analysis Method Preservative (y/n)  FULTY 16:35 POU ZSOMU 3000  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION				SAN	IPLE INFOR	MATION				
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION	Sar	nple ID	Time		Volume		Analysis Method	Preservative	1 1	
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION	FUL	<u> </u>	16:35	Dala	750.4	1	3000	Ø	V 182	
Usater level measurement collected.  □ No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  □ No water level measurement collected. Well is pumping.  □ Other:  WELL PURGING INFORMATION				/ //	7,111			7	7	
Usater level measurement collected.  □ No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  □ No water level measurement collected. Well is pumping.  □ Other:  WELL PURGING INFORMATION				/ /ATTER DEVEL	MEASUREN	MENT COLL	ECTION III			
□ No water level measurement collected. No access to wellhead.  ✓ No water level measurement collected. Obstruction in well.  □ No water level measurement collected. Well is pumping.  □ Other:  WELL PURGING INFORMATION			inijasti pakuli							
No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  WELL PURGING INFORMATION				No access to we	headile					
□ No water level measurement collected. Well is pumping. □ Other:  WELL PURGING INFORMATION										
WELL PURGING INFORMATION	r									
	☐ Other:									
☐ Purged 3 well volumes and field parameters stabilized.				WELL	PURGING INF	ORMATION				
, I	_		=							
,	<i>y</i> , –				nd field paremo	eters stabilize	∍d.			
☐ Purged well until field parameters stabilized. ☐ Other:	i	well until field par	ameters stabili	zed.						
	<u> </u>	Comments				<u> </u>				
Additional Comments:	Auditional	Comments:								

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-15-11			
Well ID:	CAR	NER	557		Weather:	Sunny	703		
ADWR No:			<u> </u>		Sampler:	BJD			
				WELL DA					
Well D	epth (ft bls):				Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot	
	•				, , , , , , , , , , , , , , , , , , , ,	2	0.16		
Casing	Diameter (in):	. ~ < ~	<i></i>			4 5	0.65 1.02		
Static Wate	er Level (ft bmp):	195.Z	<u> </u>			6 8	1.47 2.61		
Casing '	Volume (gal):		x3 =			10	4.08		
Total Volum	ne Purged (gal):				Casir	ig Volume = gallons	s/foot * water colum	nn (feet)	
			i ili ili ili ili ili ili ili ili ili i	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance Comments (µS/cm)			
	Pump On	(9Pm)							
							***************************************		
·									
					<u> </u>		Pump Off		
	FIELD PARAMET	ER STABILIZA	TION: Three co	I onsecutive rea	l dings within (	0.2 su pH, 2 degree	L	m)	
si ngali amak Si Si Alasi ana			SAN	MPLE INFOR	MATION			et de de toras da Coganta da da ce	
Sa	ımple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
								k	
		.,,,,,,	······································						
				 		ESTION I			
			ATER LEVEL	IVIEASUREI	MENIBECIE				
4 ~	evel measurement er level measurem		la acces to we	headille					
1	er level measurem								
□ No wat	er level measurem	ent collected. V	Well is pumping						
☐ Other:				TOURIS BUSINESSES MISSENSES					
				PURGING INF	ORMATION				
-	3 well volumes an			& _ !	-tt-bili				
_	3 well volumes ba well until field para			10 нею рагет	eters stadilize	<b>3</b> 0.			
☐ Other:	won and note part	2.7.0.07.0 01007.1							
Additional	Comments:	WI	-0						
							***************************************		

Project No:	055038				Client:	ient: Freeport Copper Queen Branch				
Task No:	1.0				Date:	7-15-11				
Well ID:	GAR	NER	635		Weather:	5000 SOS				
ADWR No:					Sampler: BJD					
				WELL DAT	Α					
Well D	epth (ft bis):	6°	<b>か</b> <i>O</i>		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
	,	<i>C.</i>	<u> </u>		2 0.16 4 0.65			i i		
Casing I	Diameter (in):	100	)			5	1.0	i i		
Static Wate	er Level (ft bmp):	170-	. 0 /			6 8	1.4 2.6			
Casing \	Volume (gal):	44	Z_ x3 = /	476		10	4.0			
Total Volum	ne Purged (gal):				Casir	ng Volume = gailons	s/foot * water colur	nn (feet)		
450,493,495,1486.				D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
17:15	Pump On									
11:45	30	19	420	7.05	25.3	455.7				
12:15	60	14	8 40	7.34	26.2	461.6				
12:45	<b>9</b> 0	14	1260	7.24	25, 3	456-4				
12:55	100	14	1400	7.19	25.0	457.4				
						-				
							Pump Off			
	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within (	0.2 su pH, 2 degree	s C, and 200 μS/c	em)		
			SAN	IPLE INFOR	MATION					
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
GAR	NER-635	13:05	Poly	250ml	/	300	Ø	)-w		
		1.1.1.6	7				7	/		
			/ATER LEVEL	MEASURE	MENT COLL	ECTION				
Water I	evel measurement									
Y \	ever measuremen er level measurem		No access to we	ellhead.						
l	er level measurem		•							
	er level measurem	ent collected.	Well is pumping	ļ.						
□ Other:				PURGING INF	APMATIAN					
8 5										
1 ^r \	3 well volumes ar 3 well volumes ba			nd field parem	eters stabilize	ed.				
1	well until field par									
☐ Other:										
Additional	Comments:									
***************************************										
<u> </u>							<del>, , , , , , , , , , , , , , , , , , , </del>			
	**************************************				······································					



Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-12-11			
Well ID:	GOAR	RANC	<u>:</u> H		Weather:	Partly C	10d, 80's	Humid	
ADWR No:					Sampler: BJD				
				WELL DA	ABBBBB				
Well D	epth (ft bis):		/		Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot	
	Diameter (in):		<u> </u>		2 0.16 4 0.65				
		188-	7.4			5	1.02	2	
Static Wate	r Level (ft bmp):	100				6 8	1.4° 2.6°		
Casing \	/olume (gal):		x3 =			10	4.08		
Total Volun	ne Purged (gal):					ng Volume = gallon	s/foot * water colun	nn (feet)	
				D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On								
							Pump Off		
	FIELD PARAMET	ER STABILIZA	a de comingracio de planto de la comingracio	magakanan Zibarahan	minuline in Array (Virgities Re	0.2 su pH, 2 degree	es C, and 200 μS/c	<b>m)</b> Japanshilasaskaskaniss	
			SAN	IPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
								k	
	rrialista	W	ATER LEVEL	MEASURE	MENT COLL	ECTION			
☑ Water I	evel measuremen	t collected							
/ \	er level measurem		No access to we	ellhead.					
☐ No wate	er level measurem	ent collected.	Obstruction in w	ell.					
l	er level measurem	ent collected. \	Well is pumping						
□ Other:			wei i	PURGING INI	ORMATION			ioj išnigije, ili iz 2	
☐ Puraed	3 well volumes ar	nd field parame			122.04210(29.4424) AN			Medinas (1961, 1961, 1961).	
	3 well volumes ba			nd field parem	eters stabilize	ed.			
_	well until field par								
□ Other:					***************************************				
Additional	Comments:	6)6	<u> </u>						
***************************************									
***************************************									

Project No:	٠.				client: Freeport Copper Queen Branch				
Task No:	HOB	(AL)			Date:	8-31-11			
Well ID:	/3	\$	Purdy	lane	Weather:	Synny	- 95		
	1		<u> </u>	444-6-	Sampler: Christophy L Sherm				
ADWR No:			11)	WELL D					
			_				g Capacity		
Wall Depth (ft b	ls):	30	2 <i>0</i>	,	Nominal	Size (inches) 2		Linear Foot .16	
Casing Diamete	or (in):					4	C.	.85	
		1/	7 7/			<u>(6)</u>		.02 .47	
Static Water Le	vei (ft bmp):	-16	10/6			8	2.	.61	
Casing Volume	(gais):		135		10 4.88  Casing Volume = gallons/foot * water column (feet)				
3 Casing Volum	es (dals):	4	105		Casii	ng Volume = gallor	ns/foot * water col	umn (feet)	
o onemig voice:	,	<del></del>		ELD SAMPL	ING DATA				
	Elapsed Time	Discharge	Total	pH	Temp	Specific Conductance	Com	ments	
Time	(min)	Rate (gpm)	Discharge (gallons)	(SU)	(°C)	(µS/cm)			
1010		18							
1015		17.1	78	Coldo	12.0	1769			
1025	15	17./	264	Till.	22.2	17.89			
1040	10030	17.1	528	7.64	52.2	1789	7,	1 01 -	
1130	80	126	1408	6.64	22.3	1772	lot val	Class-up	
		, , ,							
···						*		<del>                                      </del>	
			'						
			SA	MPLE INFO	RNATION				
Samı	ole (D	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments	
	·		plastic	250 mi	1	EPA 300.0	none,	filtered	
		1130					,		
130C- 6	urdy lane	<del></del>				',			
1783.1	uray lane								
		L/)	<b>L</b>	1 10.					
Additional Com	ments:	Dump	Sot G	7 221			<u> </u>		
<del></del>	11		) 1	7		(-)			
Hoba	n House	e - V	MM/	ghe				######################################	
•								·····	

Project No:	055038				Client: Freeport Copper Queen Branch				
Task No:	1.0				Date:	8-26-11			
Well ID:	How	ird			Weather:	Sunny 80%			
ADWR No:	,				Sampler:	BON			
				WELL DAT	A				
Well Da	epth (ft bls):	2(	90		Nominal	Casing Size (inches)	Capacity Gallons per L	inear Foot	
	,		71			2	0.16 0.65		
Casing D	Diameter (in):		6			<b>4</b> 5	1.0	,	
Static Wate	r Level (ft bmp):	15	479			6 8	1.4 ⁷ 2.6	1	
Casing \	/olume (gal):	70	x3 = 7	-10		10	4.0	E .	
Total Volun	ne Purged (gal):	•			Casin	g Volume = galions	s/foot * water colur	nn (feet)	
			ii ji j	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp	Specific Conductance (µS/cm)	Comm	ents	
ð:10	Pump On								
8:15	5	15	75	7.20	73./	950			
8:20	10	15	150	7.20	フムフ	1150			
8:25	/<	15	225	7.15	71.8	1150			
8:30	20	15	300	7.//	73.8	1160			
						-			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	telescock filosofistad a teleficial para		negoviace glesse, Josefa	0.2 su pH, 2 degree	es C, and 200 μS/c	em)	
			SAN	IPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
HOU	JARD	8.35	Pala	ZEOMZ	- /	300.0	Ø	7 30	
		hillian w	I IATER LEVEL	MEASUREN	MENT COLL	ECTION			
□ Water I	evel measuremen	collected	######################################						
	er level measurem		No access to we	ellhead.					
☐ No wate	er level measurem	ent collected.	Obstruction in w	æll.					
I	er level measurem	ent collected.	Well is pumping	ļ.					
☐ Other:		angsyllasi Silasi		PURGING INF	-ORMATION				
N Course	3 well volumes ar								
1/	3 well volumes as			nd field parem	eters stabilize	<b>∋d</b> .			
1	well until field par			•					
☐ Other:									
Additional	Comments:								
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				

P	Project No:	055038				Client:	Freeport Coppe	r Queen Brand	ch			
	ask No:	1.0				Date:	7-18-11					
ν	Vell ID:	KE	PFFE	2		Weather:	SUNNY	807				
	ADWR No:					Sampler:	BJD /					
					WELL DAT	A						
	Well De	pth (ft bls):	7.43	5		Nominal	Size (inches)	Gallons per L	Capacity  Gallons per Linear Foot			
		iameter (in):	( l	1			2	0.1 0.6				
	_			JN 791		5 1.02 6 1.47						
	Static Water	Level (ft bmp):		10.51	/7	8 2.61						
	Casing V	/olume (gal):	<u>159</u>	x3 = 7	66	10 4.08  Casing Volume = gallons/foot * water column (feet)						
	Total Volum	e Purged (gal):					g Volume = gallons	/100t - water colur	m (ieet)			
200			Discharge Total		DSAMPLIN	NG DATA Specific						
	Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ients			
	N:35	Pump On										
	11:45	10	n	120	7.14	24.8	487.7					
_	11.55	20	12	240	7.67	22.1	786.7					
	12-100	30	12_	360	7.15	23.3	493.2					
	12:18	40	12	480	7.19	73.7	4925					
-												
-												
ŀ		-						Pump Off				
ŀ		L FIELD PARAMET	I ER STABILIZ	ATION: Three o	I onsecutive rea	l idings within (	I 0.2 su pH, 2 degree	*	cm)			
10.75			Sing of Elektor		IPLE INFOR	metalolis den de del Pietro de la						
	Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
ľ	KEI	EFER	12:18	Pol	Zsoml		300-0	Ø	Y 1x			
ľ				1 7					/			
			i Prima de la ligita	I VATER LEVEL	MEASURE	MENT COLI	ECTION					
ŀ	Water I	wel mescuremen		eldinging din 1900 dia 1900 di	Haden kinds all de							
∤	Water level measurement collected.  No water level measurement collected. No access to wellhead.											
	☐ No wate	er level measuren	nent collected.	Obstruction in v	vell.							
		er level measuren	nent collected.	Well is pumping	<b>}</b> .							
	Other:			I West	PURGING IN	FORMATION						
	Purged 3 well volumes and field parameters stabilized.											
1	Purged 3 well volumes based on previous water level and field paremeters stabilized.											
			☐ Purged well until field parameters stabilized.									
	□ Purgea											
	☐ Purged☐ Other:						/					
	□ Other:	Comments:										
The state of the s	□ Other:											



Project No:	055038				Client:	Freeport Coppe	er Queen Brand	<u>:h</u>
Task No:	1.0				Date:	8-76-11		
Well ID:	MARC	CELL		1	Weather:	Suna 8	208	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
ADWR No:					Sampler:	RSB		
				WELL DAT				
Well De	epth (ft bls):	つ つ	20		Nominal	Casing Size (inches)	Capacity Gallons per L	inear Foot
	•	?			2 0.16			1
Casing L	Diameter (in):	.,	<u></u>			4 5	1.02	2
Static Wate	r Level (ft bmp):	7.00	<u> </u>	~		6 8	1.47 2.61	
Casing \	/olume (gal):		<u>x3 = /(</u>	<u>509</u>		10	4.08	
Total Volun	ne Purged (gal):		2	407	Casin	g Volume = gallons	/foot * water colur	nn (feet)
			FEL	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
850	Pump On							
9:00	16	8.5	8<-	6-97	75.6	1440		
9:05	<del></del>	8.4	125 858	7.03	75.6	1440		·
9:10	~2.0	8.5	170	7.07	75.5	1420		
9:15	25	8.5	210	7.25	77.3	1400		
7:20	30	8.5	265	7.12	77.1	1390		
								·
							Pump Off	
	FIELD PARAMET	ER STABILIZ		grgustam gejrandessum står vijdtett	Adampada Manda et Idu.	0.2 su pH, 2 degree	es C, and 200 μS/c	m)
			SAN	IPLE INFOR	MATION			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
MAI	RCELL	9:15	Poly	250m	/	300.0	<u> </u>	Y VR
		9:25	7					
			VATER LEVEL	MEASURE	MENT COLI	ECTION		
□ Water I	evel measuremen		in in circle in	elinai väljaskoolinad	450/Rijijansiisisisesi			
1 1	er level measurem		No access to we	ellhead.				
☐ No wate	er level measurem	ent collected.	Obstruction in w	vell.				reconstruction of the second
1 _	er level measurem	nent collected.	Well is pumping	].				
☐ Other:		anas escento en est		PURGING INF	ODMATION			
	3 well volumes as 3 well volumes ba			nd field parem	eters stabilize	ed.		
	well until field par							
□ Other:								***************************************
Additional	Comments:	Mrs	M.	\$hisk	x line	gr has	at 200	<u> </u>
0	1d well =	140 54	deep.	Assuny!	ry than	+ as yok	- depth.	
	and 5" E	well £	20 gall 6	V OT	(A) (D)	weiskapt	= 196	
····			- /					

Project No:	055038				Client:	Freeport Copp	er Queen Bran	ch
Task No:	1.0				Date:	9-26-11		
Well ID:	Marc	اا			Weather:	SUNUY !	303	
ADWR No:	<u>Marc</u>	p_			Sampler:	350		
				WELL DA	ΓA			
Weil De	epth (ft bis):	~ 22	0		Nomina	Casing I Size (inches)	Capacity Gallons per l	inear Foot
Casina F	Nomotor (in)	~ i.e.	5 64			2	0.1 0.6	
Casing L	iameter (in):	-100				5	1.0	
Static Water	r Level (ft bmp):	<u>-180</u>				6 8	1.4 2.6	
Casing V	olume (gal):	<u>          6 8                         </u>	x3 = 2	05		10	4.0	1
Total Volum	ne Purged (gal):	2.5	50		Casir	ng Volume = gallon:	s/foot * water colui	mn (feet)
			THE	D SAMPLIN	G DATA		ander et en en en ekker	
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents
1145	Pump On							
11:50	5	10	50	6.56	24.0	1558		
11:55	10	10	100	6.53	22.9	1511	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
12:00	15	10	/50		23.7	1503		
12.05	20	10	700	6.63	27.1	1502		
	·							
							·	
							D . 0"	
12:12	TELD DADAMET	ED CTABILIZA	TION! Throng		dinas within (	D.2 su pH, 2 degree	Pump Off	\
		ER STABILIZA	come interessoration account activ	IPLE INFOR		7.2 Su pri, 2 deglee	is C, and 200 µs/c	411) Anna 112   122   123   124   125   125   125   125   125   125   125   125   125   125   125   125   125   125
				IEEEINEUR I	r i de la composition della co		Smeistšie Osimil sšetšilo I	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Mar	<u>-cell</u>	12:10	Poly	250nc	1	300:0	Ø	y W
			,		****			
			ATER LEVEL	MEASURE	MENT COLL	ECTION		
□ Water le	vel measuremen	t collected.	directoj sul yekst Arelianda sesjo.	satis se piaja sa kultarina				
☐ No wate	r level measurem	ent collected. I	No access to we	ilhead.				
	r level measurem							
	r level measurem		weii is pumping へ。へ		. 17 hen	<u>,</u> )		
			:. : '-1,74,21;. ,: .: , , , , , ,	PURGING INF	realistics; no production on gatherestons			
☐ Purged :	3 well volumes an	ıd field parame	ters stabilized.		enerpreenation	yar-kansandaken nyaki kitan deramatuk	enterne internació de Maria de Al	e tres e calindes and periode s
☐ Purged :	3 well volumes ba	sed on previou	us water level ar	nd field paremo	eters stabilize	ed.		
	well until field par			, .11.	,	1 ,		
Other:	Purged 3	voi 6.	asec on	00,1170	y vate	~ level		
Additional	Comments:							

Project No:	055038				Client: Freeport Copper Queen Branch				
Task No:	1.0				Date:	7-12-11			
Well ID:	MCCON	NELL	265		Weather:	Partly C	lovel, 803	Himid	
ADWR No:					Sampler:	BJD	7		
				WELL DAT	A grande		indriji ji ji dala		
Well D	epth (ft bls):	216			Nomina	Casing Capacity  Nominal Size (inches) Gallons per Li			
		/				2	0.1 0.6	)	
Casing L	Diameter (in):	<u> </u>	~~			5	1.0		
Static Wate	er Level (ft bmp):	160	.77			6 8	1.4 2.6		
Casing \	Volume (gal):	85	x3 =	155		10	4.0	1	
Total Volur	ne Purged (gal):	Ž	\$ 30	0	Casir	ng Volume = gallon	s/foot * water colur	nn (feet)	
varione in presidentiale Car var vicio de circo			FIEL	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (℃)	Specific Conductance (µS/cm)	Comm	ents	
14:25	Pump On								
14:35	10	12	120	6.60	24.3	1687			
14:40	15	12	180	6.59	23.9	1689			
14:45	7.0	12	240	6.60	23.7	1702			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	TION: Three or	I onsecutive rea	dinas within	l 0.2 su pH, 2 degree	<u> </u>	;m)	
			contratorita na Nebel de Segúl de Caste	APLE INFOR	diaelectore de tropico de				
Sa	ımple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
MCCON	un ELL 265	14:50	Poly	250m2	)	300.00	\$	y *	
V ~	evel measuremen	t collected.	ATER LEVEL		MENT COLL	ECTION			
☐ No wate	er level measurem er level measurem er level measurem	ent collected.	Obstruction in w	vell.				The state of the s	
□ Other:			gerige gewaalaklanen	PURGINGIN	ORMATION				
	3 well volumes ar				atan statiii	ad			
	3 well volumes ba			na neia parem	eters stadilizi	eu.			
☐ Other:	wer una nea par	arrotoro otabili						`~- <u>~</u> .	
	Comments:								
			<u> i</u>						
			\$7.						
								<del></del>	

Project No:	055038				Client:	Freeport Coppe	r Queen Brand	ch	
Task No:	1.0				Date:	7-12-11			
Well ID:	MET	LER			Weather:	partly clou	dy 90's Hu	)~~\ <u>\</u>	
ADWR No:					Sampler:	BJD	1		
				WELL DAT	A				
Well De	epth (ft bis):	3	51		Nominal	Size (inches)	Capacity Gallons per L		
	Diameter (in):	6				2	0.16 0.6	1	
_	,	79.9	7 99)			5	1.0 1.4		
Static Wate	r Level (ft bmp):	<u> 40 ر</u>	- 10	7		6 8	2.6	1	
Casing \	/olume (gal):	<u>90</u>	x3 = 2	/		10	4.0		
Total Volun	ne Purged (gal):					g Volume = gallons	/toot * water colur	nn (feet)	
			resolvente polepitalikalikalikalika	D SAMPLIN	G DATA	0			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
16:10	Pump On 🕕								
16:20	10	6	60	6.90	24.7	973.2			
16 30	2.0	6	170	6.97	22,7	983.5			
16:40	<b>3</b> _0	€	180	7.01	22:3	990.3			
16:50	40	6	240	7.07	22.3	993.0			
				,					
						*	Pump Off		
	FIELD PARAMET	  ER STABILIZ/	ATION: Three co	nsecutive rea	l Idinas within (	l 0.2 su pH, 2 degree	, , , , , , , , , , , , , , , , , , ,	m)	
			esal dag betatatatat gapinga (MAS)	MPLE INFOR					
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
n T	ZLER	17:00	Poly	250ML	7	300. O	C/	y up	
MEI			7					/	
		l Harris de la vo	I /ATER LEVEL	I MEASUREI	MENT COLL	ECTION			
( Notes )	evel measuremen								
y	evel measuremen er level measurem		No access to we	ellhead.					
	er level measurem								
}	er level measuren	nent collected.	Well is pumping	<b>J.</b>					
□ Other:			well	PURGING INI	ORMATION				
(FZ Burned	3 well volumes a	nd field parame		(Birsignal washedan Bo				angshishsidishidishishidakinsi	
	3 well volumes a			nd field parem	eters stabilize	ed.			
	well until field par				÷.				
☐ Other:									
Additional	Comments:	<u></u>						<u></u>	
		, å,							
								<u> </u>	

Project No:	055038				Client:	Freeport Coppe	<del></del>	3- <i>1</i> /			
Task No:	1.0				Date:	Clear 9	13-11				
Well ID:	MOORE	, 3			Weather:	Clear 9	03				
ADWR No:		<del>•••••••••••••••••••••••••••••••••••••</del>			Sampler:	BJD					
				WELL DA							
Well D	epth (ft bls):	7	20'		Nomina	Casing Size (inches)	Capacity Gallons per	Linear Foot			
			11			2	0.1	6			
Casing	Diameter (in):		<u> </u>			4 5					
Static Water	er Level (ft bmp):					6 8					
Casing	Volume (gal):		x3 =			10					
Total Volu	me Purged (gal):	~	209		Casir	ng Volume = gallons	s/foot * water colu	mn (feet)			
			FE	D SAMPLIN	IG DATA						
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents			
14:10	Pump On										
14:15	5	11	55	V24.9	6.821	4/9.5					
14:20	10	U	110	23.6	6.79	420.3					
14:23	15	ĺ	165	23,2	K-91	423.4					
			\								
							Pump Off				
naniatorika kalanizi	FIELD PARAMET	ER STABILIZ	n enland stampeter) ette utstatiste statiste	adicio attorno depito patemano	haaasia Kalsiisis kassi kist	0.2 su pH, 2 degree	s C, and 200 μS/o	:m)			
			SAN	IPLE INFOR	MATION :						
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
mo	DRE	14:29	20/2	250ml	1	300-0	<i>S</i>	Ky ye V			
			, , ,					/			
			VATER LEVEL	MEASURE	MENT COL	ECTION					
□ Water	evel measuremen	t collected.			n in the second						
	er level measurem		No access to we	ellhead.							
I	er level measurem										
☐ No wat	er level measurem	ent collected.	Well is pumping	ļ.							
			WELL	PURGING IN	FORMATION						
	3 well volumes ar	nd field parame	eters stabilized.	MCMARKATARANIA		eg pietro de la propositioni de la cieria d					
1	3 well volumes ba			nd field parem	eters stabiliz	ed.					
1 -	well until field par	ameters stabili	ized.								
Other:											
Additional	Comments:										

Project No:	055038				Client:	Freeport Coppe	er Queen Branch			
Task No:	1.0				Date:	7-12-11				
Well ID:	100	JC 55			Weather:	SUNNZ	<u>70 ŝ</u>			
ADWR No:					Sampler:	BJD	,			
				WELLDAT	A		and a particular and additional of the configuration for the first			
Well Do	epth (ft bis):	81	2		Nominal	Size (inches)	Capacity Gallons per L	inear Foot		
Cacinn I	Diameter (in):	< "				2 4	0.16 0.65			
_		<u> </u>	2 7			5	1.02 1.47	i i		
Static wate	r Level (ft bmp):			$\sim$		8	2.61	1		
Casing \	/olume (gal):	<u> 226</u>	x3 = 66	) (	_	10	4.08			
Total Volun	ne Purged (gal):	630				g Volume = gallons	s/toot ~ water colum	in (reet)		
			Align Million Proportisia Balta, printedi:	D SAMPLIN	G DATA	Specific				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Commi	ents		
8:15	Pump On									
8:30	15	10	150	7.38	25.9	528.5				
8:45	30	(0	300	7.46	25.6	.526.7				
9:00.	45	10	450	7.58	25.9	521.3				
9:15	60	10	600	7.48	76-3	570-0				
							n 0#			
						0.0 av mtt 2 damen	Pump Off	m)		
	FIELD PAKAME I	ER STABILIZ	attanton terrete erasi beren bater	ONSECUTIVE TEA MPLE INFOR		0.2 su pH, 2 degree	s C, and 200 μο/C			
					No. of			Filtered		
Sa	mple ID	Time	Container Type	Volume	Containers	Analysis Method	Preservative	(y/n)		
NE	55	9:18	Poly	250ML	1	300.0	Ø	Y *		
				:			,	P		
			I VATER LEVEL	MEASURE	MENT COLL	ECTION III				
₩ Water I	evel measuremen		ogsvágnatt semásekett	Siddaruaa daa ka aa caa						
1	er level measurem		No access to we	ellhead.	Production	Accountage was				
□ No wate	er level measurem	nent collected.	Obstruction in w	vell.						
☐ No wate	er level measurem	ent collected.	Well is pumping	J.						
☐ Other:		ena mendierakskom sederata	Ania serbisakang pesaggan		olania alda Nationali aldali		ananisyarahendasenda			
				PURGING INF	CKMAIIUN					
	3 well volumes as 3 well volumes ba			nd field narem	atars stahiliza	ed.		í		
_	well until field par			na neia parem	CICIO GIODIILI					
☐ Other:										
Additional	Comments:	( )c/1	i's Du	MPS	isca	got on	site	***************************************		
			T	1 7	-	J				
**************************************										
								***************************************		

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	ch		
Task No:	1.0				Date:	7-11-11		's Humid		
Well ID:	NOTE	EMAN			Weather:	SUNNY 8	O's Humio			
ADWR No:					Sampler:	BJD				
			i i i i i i i i i i i i i i i i i i i	WELL DA	TA					
Well D	epth (ft bls):	4-	70		Nomina	Casing   Casing	Capacity Gallons per L	inear Foot		
		<	· /)			2		1		
_	Diameter (in):		1 /0		1	5	1.02	2		
Static Wate	er Level (ft bmp):	16 N	// <del>//</del>	/35		6 8				
Casing	Volume (gal):		x3 =	725		10				
Total Volu	me Purged (gal):				<u> </u>	ng Volume = gallons	/foot * water colun	nn (feet)		
			(-1112)1-(-53.03.112)1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	D SAMPLIN	IG DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
16:10	Pump On									
16:20	10	12.5	125	6.78	24.6	1396				
16:30	7_0	12.5	250	6.78	24.1	1405				
14:35										
16:40	30	12.5	375	6.88	24.1	1396				
16:30	40	12.5	500	6.78	23.7	1406				
							Dumn Off			
	FIELD DADAMET	ED CTABILIZA	TION: Throng	ancocutivo ro	adinge within	0.2 cu nH .2 degree	,	·m)		
	FIELD PARVANE I	ER STABILIZA		MPLE INFOR	gendikidanialasidik					
s	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative			
A 1	T = 00000	1/1072		250	)	200 0				
No.	TEMAN	16: <b>5</b> 3	Po(y_	100	/	300 -0		7		
Halaicanalar (1982)										
		e herek	ATER LEVEL	MEASURE	MENIEGOL	EEONON III				
1	level measuremen		N)							
	ter level measuren ter level measuren									
	ter level measuren									
☐ Other:			`							
			WELL	PURGING IN	IFORMATION					
_	d 3 well volumes a									
1 4	d 3 well volumes b			nd field paren	neters stabiliz	ed.				
☐ Other:	d well until field par	arreters stabil	izeu.			•				
	l Comments:	( m < t	availa6	k wa	Ter leu	relo 327.	54'			
		<u> </u>								

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	Queen Branch			
Task No:	1.0				Date:	7-15-11					
Well ID:	NWC	7-02			Weather:	SINUS	90s				
ADWR No:					Sampler:	BJD					
		New order $\lambda$		WELL DAT	<b>A</b>			pipe Partite Her Parties			
Well D	epth (ft bls):	\		; <u>.</u>	Nomina	Casing I Size (inches)		inear Foot			
				· · · · · · · · · · · · · · · · · · ·		2 4		1			
	Diameter (in):					5	1.0	2			
Static Wate	er Level (ft bmp):					6 8					
Casing	Volume (gal):		x3 = /			10					
Total Volu	ne Purged (gal):		Encoming regularity and the second	\		ng Volume = gallons	s/foot * water colur	nn (feet)			
			A CONTRACTOR OF STREET	D SAMPLIN	G DATA	l cs-					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents			
	Pump On										
905				7.15	23.9	414.2					
7:10				7.08	2.2.7	4/6.2					
9:15				7.03	22.5	4/6.3					
· · · · · · · · · · · · · · · · · · ·		······································	4.11.11.11.11.11.11.11.11.11.11.11.11.11								
							D Off				
	EIELD DADAMET	ED STADILIZA	TION: Three o	neecutive rea	dinge within	 0.2 su pH, 2 degree	Pump Off	·m)			
	FIELD PARAMET	ER STABILIZA	annymiciscopy w 64 Magaziya U.A	MPLE INFOR	eneneerdenaandele	o.z su pri, z degree	es O, and 200 μO/C				
								Filtered			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)			
1/1/2	として	9:17	Pola	250m2	1	300-0	Ø	y be			
							/	7			
			ATER LEVEL	MEASURE	MENTICOLI	ECTION					
□ Water	evel measurement										
	er level measurem		No access to w	ellhead.							
,□ No wat	er level measurem	ent collected.	Obstruction in w	æll.							
/ \	er level measurem	ent collected.	Well is pumping	ļ.				•			
Other.		endicija istričasti		PURGING INF	ZODI MITION			Jihan ana			
				EUKGINGINI							
	i 3 well volumes ar i 3 well volumes ba			nd field parem	eters stabilize	ed.					
1 -	well until field par			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	, ,						
☑ Other:	Liell ho	s been	o rous	ing of	1 and	01					
Additiona	Comments:			J				······································			
				***************************************	·····						

Project No:	055038				Client:	Freeport Coppe	r Queen Brand	<u>:h</u>
Task No:	1.0				Date:	7-15-11		
Well ID:	NW	16-03			Weather:	Sunuy	80's	·
ADWR No:					Sampler:	BJD /		
				WELL DA	Α			
Mell D	epth (ft bls):				Nomina	Casing (Size (inches)	Capacity Gallons per L	inear Foot
						2	0.16	6
Casing I	Diameter (in):					4 5	0.69 1.02	
Static Wate	er Level (ft bmp):					6 8	1,47 2.6	:
Casing '	Volume (gal):		x3 =			10	4.08	
Total Volum	ne Purged (gal):				Casir	ig Volume = gallons	/foot * water colun	nn (feet)
TOTAL VOICE	ne ruigeo (gai).		TO THE	D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	I CONGUEGABLE COMMISS		ents
	Pump On							
08.20				6.93	22.5	1121		
08.25				6.91	22.0	1113		
08:30				6.91	4.8	1094		
							Pump Off	
	FIELD PARAMET	ER STABILIZ	ATION: Three c	onsecutive rea	dings within	0.2 su pH, 2 degree	s C, and 200 μS/o	m) 
			SAN	IPLE INFOR	MATION			
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
PW	L-03	08:32	Pols	250 mL	1	300.00	<i>D</i>	645
			7				r , ,	/
			VATER LEVEL	MEASURE	MENT COL	ECTION		
□ Water	level measuremen							
	er level measurem		No access to w	ellhead.				
I	er level measuren							
r `	er level measuren	ent collected.	Well is pumping	3.				
□ Other:			Walle Varera	PURGING IN	-ORMATION			
	l 3 well volumes a l 3 well volumes b			nd field parem	eters stabiliz	ed.		
	i well until field par		ized.					
N Other:	Well 1	nas bre	n puny	NR 7	30 min	3		
Additiona	Comments:			<u> </u>				
								,
	W. W							

Project No:	055038				Client:	Freeport Coppe	er Queen Branch			
Task No:	1.0				Date:	7-15-11				
Well ID:	$\sim$	C-03 C	-AP		Weather:	50NN7 8	30 ś			
ADWR No:					Sampler:	BJD	-			
				WELL DAT						
1.0 11 12	B 20 L1 \				Momino		Capacity Gallons per L	inear Foot		
Well D	epth (ft bis):				Nomina	Size (inches)	0.16			
Casing I	Diameter (in):					4	0.65	li li		
Static Wate	er Level (ft bmp):	134.4	12			5 6	1.02 1.47	1		
			x3 =			8 10	2.6° 4.08			
Casing	Volume (gal):		X3		0					
Total Volur	ne Purged (gal):					g Volume = gallon:	s/100t water coluir	in (leet)		
				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									
			maktu (1950) i makesi (1866) i maktu (1866)							
							.:			
	<u> </u>									
							Pump Off			
	FIELD PARAMET	ER STABILIZA	ATIØN: Three co	onsecutive rea	dings within	0.2 su pH, 2 degree	es C, and 200 μS/c	m)		
			SAN	IPLE INFOR	MATION					
Sa	ımple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
								k		
		V	ATER LEVEL	MEASURE	VENT COLL	ECTION				
Water	evel measuremen	t collected.								
•	er level measurem									
ı	er level measurem									
ì	er level measurem	ent collected.	Well is pumping	ļ <b>.</b>						
☐ Other:				PURGING INI	-apvinav					
			ammundigendularikan							
_	3 well volumes at			ad fiold noram	atom etabiliz	nd				
1	3 well volumes ba			no nelo parem	eters stabiliza	sa.				
Other:	well until lielo pai	ameters stabili	Zeu.							
	Commonto	()(()		<del>,</del>						
Auditional	Comments:	$\omega \omega$								
***************************************										



Project No:	055038				Client:	Freeport Coppe	er Queen Brand				
Task No:	1.0				Date:	7-15-11					
Well ID:	NW	-507	04		Weather:	50NNy ?	<u> </u>				
ADWR No:					Sampler:	BJD '					
				WELL DA	IA						
Weil D	epth (ft bls):				Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot			
	• • •					2 4	0.16	6			
	Diameter (in):					5	1.0	2			
Static Wate	er Level (ft bmp):					6 8					
Casing '	Volume (gal):		x3 =			10					
Total Volur	ne Purged (gal):		,		Casin	g Volume = gallons	/foot * water colur	nn (feet)			
			FIE	D SAMPLIN	IG DATA						
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments				
	Bump@n		e i i i e e e e e e e e e e e e e e e e								
7:55				6.93	23.1	880.4					
Ø:00				6.93	23.4	876.Z					
8:05				7.06	23.5	875.]					
								,,,,,,			
			÷ -								
		14.					Pump Off				
-technology (Repressibilities)	FIELD PARAMETI	ER STABILIZ	organistik papartor partor trada problem (papart)	ampresentation in 1930 metrors	androi (Standers Africa)	0.2 su pH, 2 degree	s C, and 200 μS/o	m)			
			SAN	IPLE INFOR	MATION						
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)			
NUC	-07 NWC-04	8:06	Pal	256mL	ı	300-0	Ø	y the			
			1				,				
		V	/ATER LEVEL	MEASURE	MENT COLL	ECTION					
□ Water	evel measurement										
	er level measureme		No access to w	ellhead.							
□ No wat	er level measurem	ent collected.	Obstruction in v	vell.							
I	er level measurem	ent collected.	Well is pumping	<b>]</b> .							
☐ Other:	US VIDOVIŠINSKO NAJELUJENA	enes seureumenes	e e wen	PURGING IN	ORMATION						
☐ Purged	3 well volumes an	displantiksbis d Sold nosom									
i ·	3 well volumes an			nd field parem	eters stabilize	ed.					
1	well until field para										
义 Other:	well be	as bee,	<u>~ (004</u>	129	- 0 :						
Additional	Comments:	Flown	eter is	5/11/0	P11/2-						
								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
						· · · · · · · · · · · · · · · · · · ·					

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	8-25-1			
Well ID:	NW C-0	4			Weather:	Suna.	903		
ADWR No:					Sampler:	RSI			
				WELLDA					
Well D	epth (ft bis):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot	
						2	0.1 0.6	E	
Casing I	Diameter (in):					4 5	1.0	i i	
Static Wate	er Level (ft bmp):					6 8	1.4 2.6	i i	
Casing \	Volume (gal):		x3 =			10	4.0	1	
Total Volum	ne Purged (gal):				Casin	ng Volume = gallon	s/foot * water colur	nn (feet)	
			FIE	D SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (9C)	Specific Conductance (µS/cm)	Comm	ents	
	Pump On 🕒								
JX.									
12:00				7.11	79.4	810			
12:05				7.14	78.7	810			
12:10				7.32	77.1	780			
							Pump Off		
	FIELD DADAMET	ED STARILIZA	ATION: Three C	onsecutive re:	adings within (	) 2 su nH 2 degre	gruinp On es C, and 200 μS/o	nn)	
			alentastija ja kaika karinta ja karinta ja ja ja	IPLE INFOR	Kilisin impermistratore				
			Container		No. of			Filtered	
Sa	imple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)	
NWC	:-04	12:15	Pols	ZSONA	.   /	300.0	Ø	Y X	
	<u> </u>							7	
			L /ATER LEVEL	MEASURE	MENT COLL	ECTION			
□ Materi	evel measuremen								
	er level measurem		No access to we	ellhead.					
No wate	er level measurem	ent collected.	Obstruction in w	vell.					
1	er level measurem	ent collected.	Well is pumping	<b>J.</b>					
☐ Other:				PURGING IN	CRMATION				
□ Pumed	3 well volumes ar	rd field narame	REPORTUGUE POPULISAT (RUSK)				Alberta bistolen solvente		
1 -	3 well volumes ba			nd field parem	eters stabilize	∍d.			
1 % / -	well until field par								
☐ Other:				h	w				
Additional	Comments:	Well	has b	een s	عدد	1 off al	1 day	,	
Additional	Comments:	<u> </u>	has b	een s	2~ and	off al	100		





Project No:	055038				Client:		opper Queen Branch			
Task No:					Date:	9-26-11				
Well ID:	Nω	C-04			Weather:	5000				
ADWR No:	***************************************				Sampler:	1350				
	e navienima Pro Předista Proprojivská Cabalasticků			WELL DAT	TA .					
Well De	epth (ft bis):		_ /		Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot		
	,					2 4	0.16 0.65			
_	liameter (in):					5	1.0	2		
Static Wate	r Level (ft bmp):		<u>/</u> :			6 8	1.4 2.6			
Casing V	/olume (gal):		x3 =			10	4.0			
Total Volum	ne Purged (gal):				Casir	ng Volume = gallons	s/foot * water colur	nn (feet)		
			ALE MICHIELE	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									
10:30	Well on			7.07	28.9	1001				
10.40				6.74	27.5	882.5				
10:50				6.50	25-9	869.7				
10:35				6.56	26.2	8 75.4				
	/									
			······································							
								······································		
							D Off			
	IEI D DADANET	ED CTADILIZA	TION: Thron or		dinas viithis (	0.2 su pH, 2 degree	Pump Off	\		
	TELD PARAMET	ER STABILIZA	tržadržečija jeda kladebo pom Kalifo	IPLE INFOR	,copposition in particular	J.Z Su pri, Z degree	s C, and 200 µS/C	ary		
				IFEE INFOR	1					
	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
$\mathcal{N}^{\ell}$	W6-04 2011/1926	11:05	Poly	250.2	1,	300.0	B	y %		
DUPZ	COLLABOLE	13:00	Pay	250ML	/	300,0	$\mathscr{E}$	У		
		W	ATER LEVEL	MEASUREN	MENT COLL	ECTION				
□ Water le	vel measuremen	t collected.								
	r level measurem	ent collected. N	No access to we	ellhead.						
1	r level measurem									
	r level measurem	ent collected. V	Nell is pumping	•						
☐ Other:	- roce rajet tras i dagage i caril		WELL	PURGING INF	ORMATION					
☐ Purged :	3 well volumes ar	nd field narame	da Guaranta da esta							
	3 well volumes as			nd field pareme	eters stabilize	ed.				
	well until field par			·						
☐ Other:						h.				
Additional	Comments:	Flow M	reter.	is bra	ken 4	ron win	Her.			
	No WC		كصيبطو	. 15 stu	CKIN	4re/1				
Lich	1 is not	ハレルルバ	y on	arriva	ibut h	as bean or	vand off	today		



Project No:	055038				Client:	reeport Copper Queen Branch			
Task No:	1.0				Date:	7-15-11			
Well ID:	20	) (-0(	<u></u>		Weather:	Sunny	80's		
ADWR No:					Sampler:	BJD			
				WELL DA	America				
Well D	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per I	inear Foot	
		**************************************				2 4	0.1 0.6		
Casing	Diameter (in):					5	1.0	2	
Static Water	er Level (ft bmp):					6 8	1.4 2.6		
Casing	Volume (gal):		x3 =			10	4.0	8	
Total Volu	ne Purged (gal):				Casir	ng Volume = gallons	s/foot * water colu	mn (feet)	
			The Committee of the State of the State of State	LD SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents	
	Pump On a								
8:45				7.22	Z3./	387. O			
6:50				7.13	22-8	392.3			
8:55	-			7.09	22.9	394.3			
							***************************************		
				-					
				<u> </u>			Pump Off	>	
	FIELD PARAME I	ER STABILIZA	Coccidental agricum Rente	igarisha kangua gaya	and and other states	0.2 su pH, 2 degree	s C, and 200 μ5/0	sm)	
				APLE INFOR					
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Fittered (y/n)	
NW	C-06	68.57	Poly	ZSOML	Ì	300.0	Ø	\/ 1k	
	, , , , , , , , , , , , , , , , , , ,						7	7	
		a e é e e v	/ATER LEVEL	MEASURE	MENT COLI	ECTION			
□ Water	evel measuremen			ii in in the search and a search					
	er level measurem		No access to w	ellhead.					
	er level measurem								
No wat  ☐ Other:	er level measurem	ent collected.	Well is pumping	<b>]</b> .					
			e wei	PURGING INF	ORMATION				
□ Purged	3 well volumes ar	nd field parame	Girle in dien de la communication de la commun	spirsitusindensfiusi	gválajpáhus þóðissississa	erietzakoa kuntilarroa kuntilarea 1946 eta			
1 -	3 well volumes ba			nd field parem	eters stabilize	ed.			
1	well until field par	4		,	***3 -	,			
□ other:	well b	ras bec	- Pu	MOINA	<u>730 1</u>	Mil			
Additional	Comments:			<u> </u>					
<u> </u>									

Project No:	055038				Client:	Freeport Coppe	r Queen Branch			
Task No:	1.0				Date:	7-12-11				
Well ID:	<u>(1</u> 530)	20			Weather:	Cloudy 80	s Humid			
ADWR No:					Sampler:	BJD				
		oriz Standik		WELLDAT	A distribution					
Well D	epth (ft bls):	7_5	8		Nomina	Casing   Size (inches)	Gallons per L			
	Diameter (in):	(	. 0			2 4				
		74	60			5	1.0	2		
Static Wate	er Level (ft bmp):	//,				6 8	2.6	1		
Casing '	Volume (gal):		x3 =			. 10				
Total Volur	ne Purged (gal):					ng Volume = gallons	s/foot * water colur	nn (feet)		
				D SAMPLIN	GIDATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents		
	Pump On									
				7.87	29.8	575.9				
······································								<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>		
							D Off			
	FIELD DADAMET	TD CTABILIZA	TION: Throng		dings within	0.2 cu nH .2 degree	,	·m)		
	FIELD PARAWEI	ER 3 JABILIZA		IPLE INFOR	adytaitisendeid: <del>XejQulgi</del> a					
			Container		No. of			Filtered		
Sa	ample ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	1		
05B	ORN	/z:03	Pol>	ZSOMZ	/	300.0	P	V TR		
								7		
			I /ATER LEVEL	MEASURE	MENT COL	ECTION				
□ Woter	level measuremen									
l .	er level measurem		No access to we	ellhead.						
1	er level measurem									
	er level measurem	ent collected. 1	Well is pumping	<b>J.</b>						
☐ Other:										
				PURGING INI	-UKWATIUN					
1 "	l 3 well volumes ar l 3 well volumes ba			nd field narem	eters stabiliz	ed				
	l well until field par			na noia paroni		<b></b>				
□ Other.										
Additiona	Comments:	View 1	Tank ,	712-51t	$\mathcal{L}(\mathcal{N})$	ell pupap	Mo Ta.	J/K		
7	ank fee	oly hores	bib. 3	emple-	From To	muk! '				
						,				
·····										

Project No:	055038				Client:	Freeport Coppe	Copper Queen Branch			
Task No:	1.0				Date:	7-12-11				
Well ID:	PALM	ER			Weather:	Cloudy 80'	s Humrd			
ADWR No:					Sampler:	BJD				
				- WELL DA	A					
Well De	epth (ft bls):				Nomina	l Size (inches)	Capacity Gallons per I	inear Foot		
Casino I	Diameter (in):					2 4	0.1 0.6			
_	r Level (ft bmp):			·····		5 6	1.0 1.4			
			<del>/_</del>			8	2.6	11		
Casing \	/olume (gal):		<u>/ x3 = </u>		0	10	4.0			
Total Volum	ne Purged (gal):	251310014112101414450021A	associalists keedig — ; — ;	ESWARE VISION		ng Volume = gallons	i/toot * water colui	nn (reet)		
		Discharge	TJEL Total	D SAMPLIN	GIDATA	Specific				
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents		
	Pump On									
•				7.65	26.6	517.6				
					<del></del>					
					·····					
							Pump Off			
	 FIELD PARAMET	L	ATION: Three co	I onsecutive rea	l dings within (	U.2 su pH, 2 degree		m)		
			SAN	IPLE INFOR	MATION			organisa osa osa osa osa organisa organisa osa osa		
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
Dal	Mc/	9:47	Poly	ZSOML	1	300.0	Ø	Va		
	V V (							1		
		is en	ATER LEVEL	I MEASUREN	MENT COLU	ECTION				
□ Water le	evel measurement	Gir Seb Kirin najalas da s			MSTALSKERO (1925)					
11212712	r level measurem		No access to we	ellhead.						
☐ No wate	r level measurem	ent collected. (	Obstruction in w	ell.						
i	r level measurem	ent collected. \	Well is pumping	,						
□ Other:			HIII WENT	PURGING INF	ORMATION					
☐ Purged	3 well volumes an	d field parame		ioneral besilvarioni	a sedución del cica del d	enaeuseusaavelaeldanaeidsjava				
-	3 well volumes ba			nd field paremo	eters stabilize	∍d.				
· · ·	well until field para									
Other:	Sample	Trom t	ank. N	Pung	<u>e</u>	, <u>, , , , , , , , , , , , , , , , , , </u>				
Additional	Comments:					***************************************		***************************************		



Project No:	055038				Client:	Freeport Coppe	per Queen Branch			
Task No:	1.0				Date:	7-14-11				
Well ID:	PANA	AGAK	05		Weather:	5000 9	<u> 2</u> 色			
ADWR No:		<u> </u>			Sampler:	BJD				
	iredday ila	i i de and 4		WELL DAT	A Line					
M(all D	epth (ft bls):	7 c	)()		Nomina	Casing	Capacity Gallons per L	inear Foot		
			• 9			2	0.16	3		
Casing	Diameter (in):	<u> </u>				4 5	0.65 1.02	1		
Static Wate	er Level (ft bmp):	<u> 173.</u>	78			6 8	1.47 2.61	E .		
Casing	Volume (gal):	35	<b>x</b> 3 = /()	)5		10	4.08			
Total Volum	ne Purged (gal):		7		Casir	ng Volume = gallons	s/foot * water colun	nn (feet)		
iotal void	ne ruiged (gai):		FIE	LD SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	' i Conductance i Comi		ents		
14 cx	Pump On									
14:05	5	l ·7	35	6.94	25.6	1007				
141:10	10	7	70	6.79	22.9	10732				
14:15	15	7	105	6.87	22.9	1065				
14.70	20		140	6.93	23.3	1070				
th:		<u> </u>								
							Pump Off			
	FIELD PARAMET	ER STABILIZ	ar ar trepetor terrescator otrociatorio (Cittari)	activitation and acceptance to be	aughanger, eigeageleichein	0.2 su pH, 2 degree	es C, and 200 μS/o	:m)		
			SAM	WPLE INFOR	MATION					
Si	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
PAN	AGAKOS	14:23	Poly	ZSOML	( .	300.0	9	VK		
								7		
			L VATER LEVEI	MEASURE	MENTICOL	ECTION				
× \	level measuremen er level measuren		No access to w	ellhead.						
	ter level measuren									
□ No wat	ter level measuren	nent collected.	Well is pumping	g.						
☐ Other:		espisokovaja pistopaji maye.		AMONTO EN USUS SISTEMAS	spilipinanjajanistasio	emaros vistorios de San Jean de Me				
				PURGING IN	ORMATION					
1	3 well volumes a				atam atabilis	nd				
1	d 3 well volumes b d well until field par			ind tield parent	eters stabiliz	eu.				
☐ Other:	wen dran new par									
<del>L.,</del>	l`Comments:									
				***************************************		<u> </u>				

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	ch
Task No:	1.0				Date:	8-25-1	Ï	
Well ID:	PANA	GAKO	5		Weather:	SUNN	Aumid	
ADWR No:		,			Sampler:	BOD		
				WELL DAT	A III III III III			
Well De	pth (ft bls):	20	oO		Nominal	Casing Size (inches)	Capacity Gallons per L	inear Foot
	iameter (in):	6	19			2 4	0.10 0.6	·
			1-89			5	1.0	2
Static Water	Level (ft bmp):			> ,		6 8	1.4 ⁻ 2.6	j
Casing V	olume (gal):	40	<u>x3 = /</u>	20		10	4.0	
Total Volum	e 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
17:00	Pump On	nang gua s						
17:15	1-	5	75	6.93	77.5	1290		
17:20	20	Ś	100	7.13	74.7	1170		
17:75	25	5	1 255	7.17	74.2	1170		
							, , , , , , , , , , , , , , , , , , , ,	
							Pump Off	
	IEI D DADAMET	ED STARILIZ	ATION: Three co	onsecutive rea	dinas within (	L D.2 su pH, 2 degree	<u> </u>	:m)
			sateria populario programa por la constanta de la	IPLE INFOR				
			Container		No. of			Filtered
Sar	nple ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)
PAN	MGAKOS	17:25	Poly	250 m	_ /	300,0		VK
								/
			I /ATER LEVEL	MEASURE	MENT COLL	ECTION		
Mater le	vel measuremen			dinaguuseriaskebulasii				
	r level measurem		No access to w	ellhead.				
☐ No wate	r level measurem	ent collected.	Obstruction in v	vell.				:
☐ No wate	r level measurem	ent collected.	Well is pumping	<b>J</b> .				
☐ Other:		oo oo aa a	verser (video (1975) Viospo (1975) (desta (1		sissings rich (GM)			
			arkellisija jaratus	PURGING INF	ORMATION			
	3 well volumes ar					<del>)</del>		
Purged 3 well volumes based on previous water level and field paremeters stabilized.     Purged well until field parameters stabilized.								
D Other:	нов анаглага раг	umotera atauli						
1	Comments:	RE,	SAMP	16/1/16	Luc	to 100	o value	*
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					· · · · · · · · · · · · · · · · · · ·
		****						

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-12-11			
Well ID:	PARR	- A			Weather:	Partly Clou	d. 903 f	Humid 1	
ADWR No:					Sampler:	BJD /			
				WELL DA	Allenin				
Well De	epth (ft bis):	3	55		Nomina	Size (inches)	Capacity Gallons per L	inear Foot	
			(1			2	0.1 0.6		
Casing L	Diameter (in):	<u> </u>	9			5	1.0		
Static Wate	r Level (ft bmp):		<del>/</del>			6 8	1.4 2.6		
Casing \	/olume (gal):		/_,x3 =			10	4.0		
Total Volun	ne Purged (gal):	/	/ 20	0	Casir	ng Volume = gallons	s/foot * water colur	mn (feet)	
Cinematrican estración Cistaga del majorida	Sogi direk en ini 177 sek Buring sakal sebagain		크로 기타	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	L CONDUCTABLE L LOUIS		ents	
15:30	Pump On								
15:35	5	10	56	6.73	ZS.7	1143			
15:40	10	10	(00)	6.73	23.6	1157	24./		
15:45	15	10	130	6.76	23.7	1156	•		
							D 0#		
	I D DADAMET	TO CTABILIZA	TION: These o		dingo within	 0.2 su pH, 2 degree	Pump Off	·m/	
	FIELD PARAWET	ER STABILIZA	haagemandendelejereepjaleetsi	APLE INFOR		v.z su pri, z degree	s O, and 200 po/.		
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
PAR	2RA	15:50	Pol	250nL	1	300.0	Ø	y 4g	
No wate	evel measuremen er level measurem er level measurem	t collected. ent collected. I		ellhead.	MENT COLL	ECHON			
li .	er level measurem	ent collected. \	Well is pumping	<b>J</b> .					
☐ Other:	iadkoranagida aliodoj			PURGING INF	OPMATION				
☐ Purged	3 well volumes at 3 well volumes ba well until field par	ased on previou	ıs water level a	nd field parem	eters stabilize	ed.		:	
Additional	Comments:								
					. 2.44				
				······································	1				

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-12-17			
Well ID:	Plon	IKE			Weather:	Partly c	lovel 80.	s Humid	
ADWR No:					Sampler:	BJD		•	
				WELL DA	A				
Well De	pth (ft bls):	30	0		Nomina	Casing Size (inches)	Capacity Gallons per L	inear Foot	
	iameter (in):	6	7)			2 4	0.16 0.69	1	
_		163	<u></u>			5	1.02	2	
Static Water	Level (ft bmp):	<u> 153.</u>		< 1		6 8	2.6	1	
Casing V	olume (gal):	211	<b>x3</b> = 6	<u> </u>		10	4.0		
Total Volum	e Purged (gal):	6.	50			ig Volume = gallons	s/foot * water colur	nn (teet)	
				D SAMPLIN	G DATA	Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents	
16.00	Pump On								
16:20	20	5	100	7,20	26.2	1232			
16:40	40	S	700	7.17	25.4	1239			
17:00	60	5	<u> 300                                   </u>	7.25	25.3	1228			
17:20	80	5	400	7.29	24.4	1225			
17:40	100	5	500	7.35	24.0	1226			
18:00	120	5	600	7.30	23.8	1226			
				·					
							Duma Off		
	HELD DADAMET	ED STADUIZ	ATION: Three or	neecutive res	dinge within	L 0.2 su pH, 2 degree	Pump Off	m)	
		ENGIADILIA		IPLE INFOR	lo) for a software, they are a few logarity				
			Container		No. of			Filtered	
Sar	mple ID	Time	Type	Volume	Containers	Analysis Method	Preservative	(y/n)	
PION	KE	18:10	Pds	2592	1	300.0	$\mathscr{D}$	y de	
			/					7	
		,	/ATER LEVEL	MEASURE	MENT COL	ЕСПОИ			
☑ Water le	vel measuremen	t collected.					<u>Marketting militari dalah kabupa</u>	# #22000   12   12   12   12   12   12   12	
<i>'</i>	r level measurem		No access to we	ellhead.					
1	r level measurem								
]	r level measurem	ent collected.	Well is pumping	<b>i.</b>					
☐ Other:			salt wed	PURGING IN	ORMATION				
Purged :	3 well volumes ar	nd field parame							
	3 well volumes ba			nd field parem	eters stabilize	ed.			
1_	well until field par	ameters stabil	ized.						
Other:		. , ,		7 1	1 /	1		2 //	
	Comments:	Valve		Juck c	ould 1	I sample	J - 7-13	5-11	
50	mpling	35000	5p1907	~ 74	1000st	1			
	J								

Project No:	055038				Client:	Freeport Coppe	er Queen Bran	ch
Task No:	1.0				Date:	7-18-11		
Well ID:	RAMIA	7EZ			Weather:	Sunn	<u>ଟିଠରି</u>	
ADWR No:					Sampler:	BJD /		
				WELL DA	TA Para de la			
Well De	pth (ft bls):		300		Nomina	Casing l Size (inches)	Capacity Gallons per I	inear Foot
Cooing D	iameter (in):		, a			2 4	0.1 0.6	
_	, ,	16.7	. 39			5	1.0	2
Static Water	Level (ft bmp):	70 2		1 -		6 8	1.4 2.6	
Casing V	olume (gai):	200	x3 = 6	<u> 00</u>		10	4.0	- 3
Total Volum	e Purged (gal):				Casir	ng Volume = gallons	s/foot * water colur	mn (feet)
			FE	D SAMPLIN	IG DATA			
Time /6:15	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ients
10:10	Pump On							
10:25	18	12	120	1.03	24.0	392.0		
10:35	20	12	240	7.17	24.0	400-8		
10:45	30	1.2	36 <i>0</i>	7.24	74.2	402.5		
10.55	40	ر ک	480	7.7-1	24.9	401.0		
11:05	50	12	600	7.27	7.5.4	402-6		
			71011 W	4		00	Pump Off	
	TELD PARAMET	ERSTABILIZA	cadantajing minapitalijing dis	ONSECUTIVE TEA MPLE INFOR		0.2 su pH, 2 degree	is C, and 200 µ5/0	
Sar	nple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
RAI	MIKEZ	11:08	Poly	250m	/	300-0		7.7%
		// × V						
		i Hairinininin v	ATER LEVEL	MEASURE	MENT COLL	ECTION		
D∕ Water le	vel measurement		ilik sijavišin išen selijssin					
1 1	r level measurem		No access to we	ellhead.				
☐ No wate	r level measurem	ent collected. (	Obstruction in w	ell.				
1	r level measurem	ent collected. \	Well is pumping	i <u>.</u>				
□ Other:			wei	PURGING INI	ORMATION			
TEX Purged 3	3 well volumes an	d field parame	ÆSISISISISISISISISSANGERNESIN					
1 '	3 well volumes ba			nd field parem	eters stabilize	ed.		
1	well until field para	ameters stabili	zed.		,	1		
☐ Other.				······································			·····	
Additional (	Comments:							

Project No:	055038				Client:	Freeport Coppe	er Queen Brand	>h
Task No:	1.0				Date:	7-11-11		
Well ID:	RAY				Weather:	50NW-80	I, burn.d	
ADWR No:					Sampler:	BJD /		
				WELL DAT	Airini			
Well De	epth (ft bis):	10	0		Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
	iameter (in):	6	И			2 4	0.16 0.69	
	, .	<u></u>	74			5	1.02	2
Static Wate	r Level (ft bmp):	<u> </u>	· / /	G .		6 8	1.47 2.6	
Casing V	olume (gal):	<u>65</u>	x3 = /	/5		10	4.00	
Total Volum	ne Purged (gal):					ng Volume = gallons	s/foot * water colur	nn (feet)
				D SAMPLIN	G DATA			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents
15:10	Pump On							
15:20	10	フ	70	6.98	22.0	1355		
15:30	20	7	140	7.00	22.9	1360		
<u> 15:35</u>	2.5	7	178	7.06	22.7	1355		
15:40	30	7	210	).07	7.2.8	1345		
***************************************							Pump Off	
	FIELD DARAMET	ER STARU 17/	ATION: Three co	nsecutive rea	dinas within	 0.2 su pH, 2 degree	•	em)
			dagathan (Spiralestadispesses)	MPLE INFOR				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
RF	7 7	15:43	Poly	750 ml	)	300.0	0	YR
			/					
		di Bulanan W	L /ATER LEVEL	MEASURE	MENT COLL	ECTION		
D Water Is	evel measuremen							
1/1	r level measurem		No access to we	ellhead.				
☐ No wate	er level measurem	ent collected.	Obstruction in w	æll.				
	r level measuren	ent collected.	Well is pumping	<b>j.</b>				
□ Other:				PURGING INF	ORMATION			
	3 well volumes a	nd field narame		dingi pigadan pilawed				
17 \	3 well volumes b			nd field parem	eters stabilize	ed.		
☐ Purged	well until field par	rameters stabili	ized.					
□ Other:	,							
Additional	Comments:							

Project No:	ct No: 055038					Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-14-11			
Well ID:	ROG	CRS 5	596		Weather:	SUNNY 9	05		
ADWR No:					Sampler:	BJD			
			au in de la composición dela composición de la composición de la composición dela composición de la composición de la composición dela composición dela composición de la composición dela composición de la composición dela composición de	WELL DA					
							Capacity	inner Engl	
yveli D	epth (ft bis):				Nomina	il Size (inches) 2	Gallons per L 0.1		
Casing	Diameter (in):	:		······		<b>4</b> =	0.6 1.0		
Static Wate	er Level (ft bmp):	138	PO.			5 6	1.4		
Casina	Mahama (mah)		x3 =		1	8 10	2.6 4.0		
Casing	Volume (gal):		<u> </u>		Caci	ng Volume = gallon	<u> </u>	······································	
Total Volui	me Purged (gal):	onenes de la compansión		S AN VEISI	L	ng volume – gallon	snook water cold	mi (ieet)	
di Sidi Sid		ni de Villaine en la		LD SAMPLIN	IGIDATA I	Specific			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents	
	Pump On 🦃	Ng it lists it							
								<del></del>	
							, , , , , , , , , , , , , , , , , , , ,		
		***************************************						<u></u>	
				+				·····	
								······	
						J	Pump Off		
	 FIELD PARAMET	ER STABILIZA	ATION: Three c	onsecutive rea	I Idings within	0.2 sų pH, 2 degree	<u> </u>	em)	
		ados es		MPLE INFOR					
igariaeriaeriaeria			Container		No. of			Filtered	
Sa	ample ID	Time	Type	Volume	Containers	Analysis Method	Preservative	(y/n)	
								k	
		19 (19 (19 (19 <b>(</b> ) )	ATER LEVEL	MEASURE	MENI CUL				
	level measuremen	·							
	er level measuren er level measuren								
	er level measuren er level measuren								
☐ Other:		,		*					
			WELL	PURGING INI	FORMATION		de los des les régules de la lite. Al l'élé en subsenient en la lite		
☐ Purged	l 3 well volumes ai	nd field parame	ters stabilized.						
☐ Purged	3 well volumes ba	ased on previou	ıs water level a	nd field parem	eters stabiliz	ed.			
1	l well until field par	ameters stabili	zed.						
☐ Other:		<del>- / </del>						<del></del>	
Additional	Comments:	<u> NC</u>	<u>U</u>						
***************************************			· · · · · · · · · · · · · · · · · · ·						

Project No:	055038					mig i Oilli				
Task No:	1.0	·			Client:		Freeport Copper Queen Branch			
Well ID:		JERS	803		Date:	7-14-11				
ADWR No:	1-06	1 FIC 2	005		Weather:	SUNNY	90s .			
			regerigo komen penyer	Ministra e e e e e e e e e e e e e e e e e e e	Sampler:	BJD ⁽				
		1/1/		WELLE	AIA					
vveii Di	epth (ft bis):		/		Nom	Casi inal Size (inches)	ng Capacity Gallons n	er Linear Foot		
Casing [	Diameter (in):					2 4		0.16		
Static Wate	r Level (ft bmp):		9 (d) R.C	OGERS S	96	5 6	<b> </b>	0.65 1.02 1.47		
Casing V	/olume (gal):		x3 =			8 10		2.61		
Total Volum	e Purged (gal):				Ca			4.08		
				LD SAMPLI	NG DATA	sing Volume = gallo	ins/100t water co	iumn (feet)		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance	Con	nments		
14:55	Pump On					μS/cm)	is al asia pies serves nerves	NOSEKTERKERISKERISKER		
15:00	5	7	_35	2 7.27	124.6	T ///2 8				
15:05	5	5	60	7.13	24.1	643.9				
15:50	_5	5	85	7.12	23.5	650.8		***		
				1.16	12.5	653.5				
							Dum Off			
FIE	ELD PARAMETE	R STABILIZA	TION: Three co	nsecutive read	tings within	L 0.2 su pH, 2 degree	Pump Off			
			SAM	PLE INFORI	MATION		oo, and 200 μολ	an) Nii ayaatiina		
Samp	le ID	Time	Container	\/-\	No. of					
			Туре	Volume	Containers	Analysis Method	Preservative	Filtered (y/n)		
ROGER	5 807	15:14	Pol	ZSONL	1	300.0	O/			
			1				<u> </u>	y blac		
		WA	TER LEVEL N	/FASUREM	-NT COLL		alanda Espesia nos materias restoras			
J _Water level	measurement o	ollected.								
No water lev	vel measuremer	it collected. No	access to well	nead.						
IAO MSTGL 16/	vel measuremen	it collected. Ob	struction in well	<b>l.</b>						
□ No water lev □ Other:	vel measuremen	t collected. We	ll is pumping.							
								-		
Purged 3 we	il volumes and f			IRGING INFO	RMATION					
Purged 3 we	Il volumes base	d on previous v	s stabilized.	C-1.4 .						
Purged well	until field param	eters stabilized	, alei ievei and i	neid paremete	rs stabilized	•				
Other:										
iditional Con	nments:									
****							**************************************			

Project No:	055038		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-18-11			
Well ID:	ROGE	es E			Weather:	500mg 80	Ú		
ADWR No:	<b></b>				Sampler:	BJD			
				WELL DA	A				
Well D	epth (ft bls):	2	90		Nomina	Casing I Size (inches)	Capacity Gallons per l	Linear Foot	
			, 11			2			
Casing i	Diameter (in):		<b></b>			5	1.0	)2	
Static Wate	r Level (ft bmp):					6 8		Comments  Comments  Comments  Comments  Comments  Comments  Comments  Comments	
Casing \	/olume (gal):		x3 = ✓	-610		10		Į.	
Total Volun	ne Purged (gal):				Casir	ng Volume = gallons	s/foot * water colu	mn (feet)	
				D SAMPLIN	G DATA		premerinistra		
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	nents	
09:15	Pump On								
09:25	10	13	130	7.19	23.3	423.1			
07.35	20	13	260	7.24	Z3.4	418,9			
07:45	30	13	390	7.19	23.4	418.0			
09.55	40	13	<i>5</i> 20	27.12	24.3	418.5			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	inga panda perakaraan perakaran	rina (1814) (1853) (1844) (1814) (1814)	inidaistatararagaansukaa	0.2 su pH, 2 degree	s C, and 200 μS/c	cm)	
			III SAM	IPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
ROGE	es e	1005	Poly	ZsomL	1	300-0	Ø		
			ATER LEVEL	MEASUREN	MENT COLL	ECTION			
□ Water le	evel measuremen	collected.	liiliikkeeksajaikkeeliii. 144 keelii						
	er level measurem		No access to we	ellhead.					
<b>レ</b> `	er level measurem								
	er level measurem	ent collected. \	Well is pumping	ļ.					
□ Other:			ija di dananizi	PURGING INF	ORMATION				
☐ Purged	3 well volumes ar	id field parame						ir natinės rūspidėje depinasi	
	3 well volumes at 3 well volumes ba	· <del>-</del> '		nd field parem	eters stabilize	ed.			
V ~	well until field par								
☐ Other:									
Additional	Comments:	15/.5	7 260	ist ava	:103 k	- WC	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		
***************************************				<del>, , , , , , , , , , , , , , , , , , , </del>					
			A.W. W.		······································				

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	8-26-1			
Well ID:	P-1013	7			Weather:	SUMA	Humid B	<u>.00</u>	
ADWR No:		<u> </u>			Sampler:	BSW	/ -		
		in die de		WELL DAT	<b>A</b>				
Well De	epth (ft bis):	31	2		Nominal	Size (inches)	Capacity  Gallons per Linear Foot		
	Diameter (in):		/ ¹ 1			2 4	0.16 0.69		
-			6			5	1.03	2	
Static Wate	r Level (ft bmp):					6 8	1.4 ² 2.6		
Casing \	/olume (gal):		x3 = -			10	4.0		
Total Volun	ne Purged (gal):		b,			g Volume = gallons	/foot * water colur	nn (feet)	
			And the state of t	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp	Specific Conductance (µS/cm)	Comm	ents	
10:22	Pump On	aren en gruff de							
10:26	4	6	24	6.82	879.4	820			
10:30	Ø	6	48	6.80	76.7	800			
10:34	12	6	72	6.85	72.7	<i>300</i>			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	gashurdandaring-Kig Spi-laiki	ert metrolieringestrilerselleis	ArianianaphQupasaittaca	0.2 su pH, 2 degree	s C, and 200 μS/c	m)	
			SAN	IPLE INFOR	MATION ::				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
RU	17	10:38	Pol	ZSOM	- /	300-0		V 18	
			J				/	/	
		and a w	ATER LEVEL	MEASUREN	MENT COLL	ECTION			
□ Water k	evel measuremen	t collected							
1 4	er level measurem		No access to we	ellhead.					
	er level measurem								
Į	er level measurem	ent collected. \	Well is pumping	<b>ļ.</b>					
☐ Other:			weil	PURGING INF	ORMATION				
☐ Purged	3 well volumes ar	nd field parame			lanistoreisuuseistasja keell			Anglardounistraaliis sēkirīlējā	
	3 well volumes ba			nd field parem	eters stabilize	ed.			
Purged	Purged well until field parameters stabilized.								
☐ Other:									
Additional	Comments:								

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	7-18-11			
Well ID:	ScHW	ARTT			Weather:	50~~ E	305		
ADWR No:	***************************************				Sampler:	BJD			
				WELL DA	Aarasa				
Well De	epth (ft bls):		3GS		Nomina	Size (inches)	Capacity Gallons per L	inear Foot	
Casing [	Diameter (in):		Zu			2 4	0.10 0.6	1	
_	r Level (ft bmp):	17.7.	()	, ₁₁ ,, ₁ ,		5 6	1.0 1.4	ı	
		2.65		00		8	2.6	1	
Casing \	/olume (gal):	6 Ja V	x3 = ℃	Kr ()	Caeir	10 ng Volume = gallons	4.0		
Total Volun	ne Purged (gal):	ersenerneeneen		D SAMPLIN					
		Discharge	Total			Specific			
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents	
12:30	Pump On								
1250	20	70	700	7.15	24.2	605.Z			
13:10	40	10	700	7.32	22.7	611.6			
13:30	00	<u> </u>	600	7.39	27.8	615.4		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
<u> 13 :50 </u>	<u> 180                                   </u>	10	800	7.36	23.7	6/2 4			
				İ					
			***************************************						
			***************************************						
							Pump Off		
	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	dings within t	0.2 su pH, 2 degree	s C, and 200 μS/c	m)	
			SAN	IPLE INFOR	MATION				
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
SCHO	UMRTZ	13:55	Por	ZSOMI	1	300.0	Ø	1/4	
			ŀ					1	
	girigi sersindi airodor	Liningananiny	ATER LEVEL	MEASURE	MENT COLL	ECTION			
₩ater is	evel measurement	collected.							
	er level measurem		No access to we	ellhead.					
	er level measurem								
☐ No wate	er level measurem	ent collected.	well is pumping	-					
			Welle	PURGING INF	ORMATION				
Purged	3 well volumes an	d field parame	ters stabilized.			11.531-11.3319.103.11.3311.11.3311.11.3311.11.3311.11.3311.11.	14(13311) XIII SHIII MARANI (1811) 11531	ST 15-51 - AGNI MODELLA STORAGE AND	
1 -	3 well volumes ba			nd field parem	eters stabilize	∍d.			
☐ Purged ☐ Other:	well until field para	ameters stabili	zed.						
<del></del>	Comments:								
. 144:101141									

Project No:	055038		· · · · · · · · · · · · · · · · · · ·		Client:	Freeport Copp	er Queen Bran	ch
Task No:	1.0				Date:	7-11-11		
Well ID:	STE	PHEN.	5		Weather:	5/1/2	Hemid &	
ADWR No:		<u> </u>		,	- Sampler:	BJD		<del></del>
			darlar dalası gələri Günlər üğrüğü üzədə	WELLDA				
Wall D	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot
					NOMINIA	2	0.1	
Casing I	Diameter (in):		() (		4 5		0.6 1.0	
Static Water	er Level (ft bmp):	<u>54.</u>	44			6	1.4	7
Casing \	Volume (gal):		x3 =			8 10	2.6 4.0	
					Casir	ng Volume = gallon	s/foot * water colur	nn (feet)
i otal Volum	ne Purged (gal):			D SAMPLIN	IG DATA			
		Discharge	Total			Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents
	Pump On _							
<u> </u>								
* · · · · · · · · · · · · · · · · · · ·								
							Pump Off	
	FIELD PARAMET	ER STABILIZA	TION: Three co	onsecutive rea	idings within (	0.2 su pH, 2 degree	s C, and 200 μS/c	m)
			SAN	IPLE INFOR	MATION			
Sa	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Rreservative	Filtered (y/n)
								k
	<del>, , , , , , , , , , , , , , , , , , , </del>				÷			N.
			ATER LEVEL	MEASUKE	MENIEGOLL	ECTION		
1`	evel measurement							
_	er level measurem er level measurem							
	er level measurem							
□ Other:								· · · · · · · · · · · · · · · · · · ·
			WELL	PURGING INF	ORMATION			
☐ Purged	3 well volumes an	d field parame	ters stabilized.					
	3 well volumes ba			nd field parem	eters stabilize	ed.		
☐ Other:	well until field para	ameters stabiliz	zed.				,	
I	Comments:							<del></del>
AGUILIONAL	COMMISSING.	*			<u> </u>			
···								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Project No:	055038				Client: Freeport Copper Queen Branch				
Task No:	1.0				Date:	8-23-11			
Well ID:		BEL	<del></del>		Weather:	5000 11 5000 y BJD			
ADWR No:					Sampler:	BJD			
				WELL DAT	A HILLER				
141-11 5					Mornina	Casing Size (inches)	Capacity Gallons per I	inear Foot	
Well D	epth (ft bls):				Normia	2	Gallons per Linear Foot 0.16		
Casing	Diameter (in):		<del></del>			4 5	0.65 1,02		
Static Water	er Level (ft bmp):					6	1.47	7	
Casina	Maluma (mal)		x3 =			8 10	2.6° 4.08		
Casing	Volume (gal):				Casin	g Volume = gallons			
Total Volu	me Purged (gal):	SINGERANGEN KANDANGAN		D SAMPLIN			cualus de servants da la compa		
		Discharge	Total	P SAIVIELIN		Specific			
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (℃)	Conductance (µS/cm)	Comm	ents	
	Pump On								
								***************************************	
							<u>,</u>		
		<del></del>					Pump Off		
	FIFI D PARAMET	I ER STABILIZA	ATION: Three c	I onsecutive rea	l dings within (	L 0.2 su pH, 2 degree	· ·	m)	
			A4-Jumpula publika pilonga katal	IPLE INFOR	rdensus-neaphogistanging				
			Container		No. of			Filtered	
Sa	ample ID	Time	Туре	Volume	Containers	Analysis Method	Preservative	(y/n)	
								k	
					danstron as eg				
			ATER LEVEL	MEASURE	MENICOLI	EGHON			
1	level measuremen								
1	er level measuren								
	ter level measuren ter level measuren								
☐ Other:	er jever measuren	iciii Collected.	Men is bambing	)-					
			WEIL	PURGING INF	ORMATION		医眼膜 化水水素的的		
☐ Purgeo	3 well volumes a	nd field parame	eters stabilized.	i i compressione de la			(eini) (ESIA) een (heen (heen (heen (heen (heen (hee		
1 "	1 3 well volumes b			nd field parem	eters stabilize	ed.			
1	well until field par								
☐ Other:								***************************************	
Additiona	l Comments:	11							
·····									

Project No:	055038				Client:	Freeport Coppe	port Copper Queen Branch			
Task No:	1.0				Date:	7-12-11	803 Ho	wid		
Well ID:	5(D)	16)			Weather:	803 Hun	٣,٦			
ADWR No:					Sampler:	BJD				
				WELL DAT						
Well De	epth (ft bis):	9	8		Casing Capacity Nominal Size (inches) Gallons per Linear Foot					
		(	-1			2	0.1	6		
Casing E	Diameter (in):		) -> (			4 5	0.6 1.0	i		
Static Wate	r Level (ft bmp):	***************************************	1.32			6 8	1.4 2.6	ž.		
Casing \	/olume (gal):	39	x3 = \	17		10	4.0	1		
Total Volum	ne Purged (gal):				Casin	g Volume = gallons	s/foot * water colu	mn (feet)		
			er er rei ex FIEI	D SAMPLIN	G DATA					
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (ºC)	Specific Conductance (µS/cm)	Comm	ents		
10:20	Pump On									
10:23	3	13	39	7.04	24.7	472.3				
10.25	5	13	65	7.01	23.9	474.3				
10.28	8	13	104	7.01	22.7	477.2				
10:30	10	13	130	7.05	22-9	478.2				
	FIELD PARAMET	ER STABILIZ/	tapa, kwezing dia kwake ini sisilika si	onsecutive rea	Jorionalistatanas Juliusi	0.2 su pH, 2 degree	Pump Off s C, and 200 μS/c	em)		
				ipue infor I						
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
50	JAN	10:32	Po/7	Zsomi	*	300-0	300-0	Y 4s		
			L VATER LEVEL	MEAQUIDEA	AENT COLL					
No wate No wate No wate Purged Purged	evel measurementer level m	collected. ent collected. ent collected. ent collected. diffield parametesed on previous	No access to we Obstruction in well is pumping WELL sters stabilized.	ellhead. vell. PURGING INF	ORMATION					
	Comments: }	zig in	icrease i	in qiz	charge	rath (	Isually an	ound 6-1gp		

ject No:      {	055038			c	lient: F	reeport Copper	Queen Branch	
sk No:				D	ate:	7-13	<u>-11                                   </u>	······································
all ID:	71	M-2A		V	Veather:	Sunny	- 75 -	<b></b>
				s	Sampler:	Macistonly L Shemor		
WR No:				WELL DATA	4			
	41. 76 b.l	92	5		Nominal S	Casing C Size (inches)	Gallons per Lin	ear Foot
·	th (ft bls):					2	0.16 0.65	
Casing Dia	ameter (in):	4				5	1.02	
Static Water	Level (ft bmp):	348,	19			6	1.47 2.61	
Caeina VI	olume (gal):	375	x3 = 17	125		10	4.08	
_	•				Casing	Volume = gallons/	foot * water column	ı (feet)
Fotal Volume	Purged (gal):		FIELI	O SAMPLING	3 DATA			
		Discharge	Total	рН	Temp	Specific	^	
Time	Elapsed Time (min)	Rate	Discharge	(SU)	(°C)	Conductance (µS/cm)	Comme	iiis
		(gpm)	(gallons)			(Jacobs)		
)[20]	Pump On		7- 1	~ a. I	14 1	302	<u></u>	
2625	_ 5	75	<u> </u>	1086	<u> </u>	$\frac{30}{30}$		
9720	60	3.5	450	7.20	-2,4-21	$-\frac{27}{211}$		
0820_	120	55	180	7.7/	3117	348		
0850	150	3.3	745	1071	<del>7717</del>	349		
4915	175	3.3	1027	1.72	) 4.8		A 12 C	action_
2918	/						Broko Si	ACI IDM
· ·							13/00	<del></del>
1040	Pump on			201	- 1/16	350	9 31, 03 Pump Off 5am	19
1050				1.411	24.8			
f	FIELD PARAMET	ER STABILIZA				.2 su pH, 2 degree		
			SAN	IPLE INFOR	г -			Filtered
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)
TM 2	lA	1050	Plasty	250 ml	1	EPH 300.0	Ice	<u> </u>
					<u> </u>		<u> </u>	
		٧	VATER LEVEL	MEASURE	MENT COLL	ECTION		
Water k	evel measuremer	t collected.		-				
☐ No water	er level measurer	nent collected.	No access to we	elihead.				
	er level measurer							
☐ No wate	er level measurer	nant conected.	wei is pumping	, ·				
- Outer.			WELL	PURGING IN	FORMATION			
☐ Purged	3 well volumes a	ind field param	eters stabilized.					
☐ Purged	3 well volumes b	ased on previo	ous water level a	ind field parem	neters stabiliz	ed.		
							120% CA.	11. 2014
V Other:	from part in	rell for	- Waited	<u> </u>	Soun all	med/withou	<u> </u>	ye uni
Additional	Comments:							
· WOILIOTES								
, wantona								

CREEK STA

Project No:	055038				Client: Freeport Copper Queen Branch				
ask No:					Date:	<u> </u>	1-11		
Well ID:	$\overline{a}$	m-6			Weather:	Partly (	loudy -	78°	
ADWR No:					Sampler: /	bristopher	L Glurma	1	
				WELL DAT	Α	Casing C	Canacity		
Weli De	epth (ft bis):	200	? [/]		Nominal Size (inches) Gallons po				
			411			2	0.16 0.65		
Casing L	Diameter (in):		100 08			5	1.02 1.47		
Static Wate	r Level (ft bmp):		15/110			6	2.61	i	
Casing \	/olume (gai):	4/_	<u>x3 = /</u>	23		10	4.08		
Total Volun	ne Purged (gal):					g Volume = gallons	foot * water colun	nn (feet)	
				D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
0905	Pump On								
DOIL	5	165	57	7.08	200	520			
1915	10	11.5	115	7.10	721	514		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
0920	15	1/5	172	7.10	201	576			
<i></i>		, , ,							
		ļ							
							Disease Off		
					l	2 ou pH 2 degree	Pump Off	sus)	
·	FIELD PARAMET	ER STABILIZA		PLE INFOR	<del></del>	).2 su pH, 2 degree	5 O, AND 200 POI	,	
		1	T	THE INFOR	<del></del>	I		Filtered	
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	(y/n)	
TM	1-6	0920	Plastic	250m	1	1514-300.0	Ice	Kask	
		W	VATER LEVEL	MEASURE	MENT COLL	ECTION			
<b>S</b> Water I	evel measuremen	t collected.			<del>(</del>				
☐ No wat	er level measuren	nent collected.							
	er level measuren								
☐ No wat ☐ Other:	er level measurer	nent collected.	Well is pumping	-					
Coner.		***************************************	WELL	PURGING IN	FORMATION				
> Purgeo	i 3 well volumes a	nd field parame	eters stabilized.						
☐ Purgeo	i 3 well volumes b	ased on previo	us water level a	nd field paren	neters stabilize	ed.			
	i well until field pa	rameters stabil	ized.						
☐ Other:			····						
Additiona	Comments:								
***************************************									
		ko.l							

Sell ID:  TM 7  Weather:  Weather:  Well Dath  Well Dath  Well Daph (ft bis):  Casing Diameter (in):  Ly (1	Project No:	055038				Client:	h		
Well Depth (ft bis):  Casing Capacity  Nominal Size (inches)  Galions per Linear Foot  1.02  1.03  1.02  1.02  1.03  1.02  1.03  1.04  1.04  1.05  Static Water Level (ft brmp):  Casing Volume (gal):  Water level measurement collected. Nel in pumping.  Well Depth (ft bis):  Casing Volume = galions/foot * water column (feet)  FIELD SAMPLING DATA  Specific Conductance (µS/cm)  Comments  (gpm)  SAMPLE INFORMATION  SAMPLE INFORMATION  Sample ID  Time  Container  Type  Volume  Con	ask No:					Date:	7-21	-4	
Well Data  Nominal Size (inches)  Galions per Linear Foot  1.6  0.56  1.02  1.6  0.55  1.02  5.1.02  5.1.02  5.1.02  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.47  6.1.	Vell ID:		TIM-7			Weather:	Postly 1	andy 9	
Well DaTA  Casing Capacity  Well Depth (ft bis):  Casing Diameter (in):  Ut'  A Discharge (inches)  Casing Volume (gal):  Casing Volume (gal):  Casing Volume (gal):  Total Volume Purged (gal):  FIELD SAMPLING DATA  FIELD SAMPLING DATA  Time Elapsed Time (gm) (gal) Discharge (gal) Discharge (gal) (inches)  FIELD SAMPLING DATA  Time Part (in):  Casing Volume = gallons/foot * water column (feet)  FIELD SAMPLING DATA  FIELD SAMPLING DATA  Total Pump On  QQ1 2 10 20 (Gal) (in):  QQ2 4 40 Comments  Comments  QQ3 2.14 40 Comments  QQ4			<del></del>			- - Sampler: /	Most dar	1/ Show	ian
Well Depth (ft bis):   350   Nominal Size (inches)   Gallons per Linear Foot   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16   0.16	DVIK NO.		·····				activity mix		
Casing Diameter (in):  Casing Volume (pai):  Casing Volume (pai):  Casing Volume (pai):  Casing Volume Purged (gal):  FIELD SAMPLING DATA  Time  Elapsed Time (pin):  Casing Volume (pai):  FIELD SAMPLING DATA  Total (pin):  FIELD SAMPLING DATA  Total (pin):  Total (pin):  Casing Volume = galions/foot * water column (feet):  FIELD SAMPLING DATA  Total (pin):  Total (pin):  Casing Volume = galions/foot * water column (feet):  FIELD SAMPLING DATA  Total (pin):  Total (pin):  Casing Volume = galions/foot * water column (feet):  FIELD SAMPLING DATA  Total (pin):  Conductance (pis/cm):  Conductanc	1A2 II F3		21	$\sim$		Momina		Capacity  Gallons per L	near Foot
Static Water Level (ft bmp):  Casing Volume (gal):  Casing Volume (gal):  FIELD SAMPLING DATA  Time  Elapsed Time (min)  Pump On  Only  Only  FIELD SAMPLING DATA  Time  Casing Volume Purged (gal):  FIELD SAMPLING DATA  Time  Elapsed Time (min)  Pump On  Only  Only  Only  FIELD SAMPLING DATA  Total (gallons)  (SU)  Conductance (ISS'cm)  Conductance (ISS'cm)  Conductance (ISS'cm)  FIELD SAMPLING DATA  Total (Gallons)  Conductance (ISS'cm)  Conductance (ISS'cm)  FIELD SAMPLING DATA  Total (Gallons)  Conductance (ISS'cm)  Conductance (ISS'cm)  FIELD SAMPLE (ISS'cm)  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH; 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container  Type  Volume  No. of Containers  No. of Containers  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. Well is pumpling.  Well Purged 3 well volumes and field parameters stabilized.  Purged well until field parameters stabilized.  Purged well until field parameters stabilized.	Well De	epin (π bis):		· 1		1403331303		0.16	
Casing Volume (gal):  With X3 = 10 4.08  Casing Volume Purged (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min) Purped (gal):  FIELD SAMPLING DATA  Time Elapsed Time (min) Purped (gal):  FIELD SAMPLING DATA  Total (gallons) FIELD SAMPLING DATA  Total (gallons) Purped (gallons) Conductance (gallons) Conductance (gallons) Conductance (gallons) Conductance (gallons) FIELD SAMPLING DATA  Time Elapsed Time (min) Purped Conductance (gallons) Conductance (gallons) Conductance (gallons) Conductance (gallons) Conductance (gallons) FIELD SAMPLE (gallons) Conductance (gallons) FIELD SAMPLE (gallons	Casing D	Diameter (in):	i	/!'			4 5		
Casing Volume (gal):  Total Volume Purged (gal):  Time Elapsed Time (min) Discharge Rate (gpm) Uscharge (gallons)  Rate (gpm) Uscharge (gallons)  Time Elapsed Time (min) Discharge Rate (gpm) Uscharge (gallons)  Rate (gpm) Uscharge (gpm) Usch	Static Water	r Level (ft bmp):	V	1			6		
Total Volume Purged (gal):  Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gallons) (SU) Temp Conductance (µS/cm) Confunctance (µS/cm) Confunctance (µS/cm) Purped 3 well volumes and field parameters stabilized.  Time Elapsed Time (min) Discharge Rate (gpm) Discharge (gsll) PH Temp Conductance (µS/cm) Confunctance (µS/cm) Purped 3 well volumes and field parameters stabilized.  PIELD SAMPLE INFORMATION  Casing Volume - gallons/floot * water column (feet)  FIELD SAMPLE INFORMATION  Container - Volume - No. of Containers - No. of Conta	Caeina \	(olume (gal):	W	x3 =					
Time Elapsed Time (min) Discharge Rate (gallons) FIELD SAMPLING DATA  Time Elapsed Time (min) Discharge Rate (gallons) PH Temp (Specific Conductance (µS/cm) Pump On (pd ) 2	-	•	10/			Casin	g Volume = gallons	foot * water colum	ın (feet)
Time Elapsed Time (min) Discharge Rate (gallons) Total Discharge (gallons) Temp (PC) Conductance (µS/m) Comments    1000   Pump On	Total Volun	ne Purged (gal):	VVP		D SAMPLIN				
Time Elapsed Time (min) Rate (gpm) Discharge (SU) (C) Conductance (us/cm)  Pump On  10 1 2 1 1 20 1 1 20 1 21 1 3977  10 1 2 1 1 20 2 2 2 2 2 2 2 2 2 2 2 2 2			Discharge				Specific		
Cold	Time		Rate	Discharge				Commi	ents
10   20   2.60   2.65   543     10   40   40   40   40   40   40     10   40   40   40   40   40     10   40   40   40   40     10   40   40   40     10   40   40   40     10   40   40     10   40   40     10   40   40     10   40   40     10   40   40     10   40   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   40     10   4	1000	Pump On							
TW - 7	1007	2	10	20	6.60	215	543		
TW - 7	1012								
Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume No. of Containers Containers Type  Volume  No. of Containers Containers Type  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other:  Sur before Sunding Type  Well PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.	1014	14	10	40	6.91	21.1	391		
Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume Containers Analysis Method Preservative Filtered (y/n)  T/m - 7  10.38  VATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Well is pumping. No water level measurement collected. Well is pumping. Other:  Sur below Sunapling WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized.	1024		10			,			····
Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume Containers Analysis Method Preservative Filtered (y/n)  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Cother:  Well Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized.	101/	7.	10	20	1,89	2,14	400		
Pump Off  FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 μS/cm)  SAMPLE INFORMATION  Sample ID  Time  Container Type  Volume Containers Analysis Method Preservative Filtered (y/n)  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Cother:  Well Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized. Purged well until field parameters stabilized.	1031		V		4,01	0, 1			
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  TM - 7	1038	13	10	\$0	1,90	21.4	402		
FIELD PARAMETER STABILIZATION: Three consecutive readings within 0.2 su pH, 2 degrees C, and 200 µS/cm)  SAMPLE INFORMATION  Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative (y/n)  TM - 7	<del>( ()                                  </del>			0 7					
Sample ID Time Container Type Volume No. of Containers Analysis Method Preservative Filtered (y/n)  TM-7 1038 Plast 25omb 1 Ellasse To XX  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other: SWI below Standard type  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field paremeters stabilized.  Purged well until field parameters stabilized. Other:							ŧ		***************************************
Sample ID  Time Container Type Volume Containers Analysis Method Preservative Filtered (y/n)  TM 7  In 3 R  Ilast 1 25 or L  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:		FIELD PARAMET	ER STABILIZA	ATION: Three or	onsecutive rea	dings within 0	).2 su pH, 2 degree	s C, and 200 μS/c	m)
Sample ID  Time Type Volume Containers Analysis Method Preservative (y/n)  TWT-7  IO 3R  IO 45t; 25 or t  WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected. No water level measurement collected. No access to wellhead. No water level measurement collected. Obstruction in well. No water level measurement collected. Well is pumping. Other:  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized. Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized. Other:				SAN	IPLE INFOR	MATION			
WATER LEVEL MEASUREMENT COLLECTION  Water level measurement collected.  No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other: Swh below Seundlan type WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged well until field parameters stabilized.  Other:	Sa	imple ID	Time	i i	Volume	1	Analysis Method	Preservative	
□ Water level measurement collected. □ No water level measurement collected. No access to wellhead. □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: SWI- below Seure of WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:	TV	n-7	1038	Plaste	250mL		EM.300	Zce	<del>2</del> σκ
□ Water level measurement collected. □ No water level measurement collected. No access to wellhead. □ No water level measurement collected. Obstruction in well. □ No water level measurement collected. Well is pumping. □ Other: SWI- below Seure of WELL PURGING INFORMATION □ Purged 3 well volumes and field parameters stabilized. □ Purged 3 well volumes based on previous water level and field parameters stabilized. □ Purged well until field parameters stabilized. □ Purged well until field parameters stabilized. □ Other:		· ·							
No water level measurement collected. No access to wellhead.  No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other: SWL below Seurchan TWDE  WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:			M	VATER LEVEL	. MEASURE	MENT COLL	ECTION		
No water level measurement collected. Obstruction in well.  No water level measurement collected. Well is pumping.  Other: SWI- below Seure of WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:	□ Water I	evel measuremen	t collected.						
No water level measurement collected. Well is pumping.  Other: SWL below Secretary type WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:									
Other: SWL below Seurch type WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:									
WELL PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.  Purged 3 well volumes based on previous water level and field parameters stabilized.  Purged well until field parameters stabilized.  Other:					).				
□ Purged 3 well volumes based on previous water level and field paremeters stabilized. □ Purged well until field parameters stabilized. □ Other:	A Umer:	JWH below	e Second		PURGING IN	ORMATION			
□ Purged well until field parameters stabilized.  Other:									
Ø Other:					ind field parem	neters stabilize	ed.		
		l well until field par	rameters stabil	ized.					
Additional Comments:									
	Additiona	i Comments:			······································				

Project No:	055038			(	Olient: F	reeport Coppe	r Queen Brancl	1
Task No:				(	Date:	7	-12-11	· · · · · · · · · · · · · · · · · · ·
Well ID:	TM-	-15	miller		— Veather: _	Partly	(loudy)	950
ADWR No:		-3-4	<b>*</b>		Sampler: /	Mostoder	2 Sherm	9 <i>W</i>
ADVIC NO.				WELL DATA				
		つ ′	7 (		Nomina	Casing ( Size (inches)	Capacity  Gallons per Li	near Foot
Well De	epth (ft bis):		<u>^)</u>		14OHIHIA.	2	0.16	
Casing E	Diameter (in):					4 5	0.65 1.02	
Static Wate	r Levei (ft bmp):	n	( <b> </b>			6	1.47	
	•	10/	// x3 =			8	2.61 4.08	
	/olume (gal):		k .		Casing	g Volume = gallons	/foot * water colum	n (feet)
Total Volun	ne Purged (gal):	1//		D SAMPLIN				
		Discharge	Total			Specific		
Time	Elapsed Time (min)	Rate (gpm)	Discharge (gallons)	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comme	ents
1215	Pump On							
1376	10	フー	70	7.31	23,2	383		
1335	20	7	140	7.34	23.2	380		
341	30		210	7.3/	23.2	380		
1773	-30	/	-616/	1.76	21	709		
				******				_
		·						
ļ							Pump Off	
	FIELD PARAMET	ER STABILIZA	TION: Three co	nsecutive rea	dings within (	).2 su pH, 2 degree	s C, and 200 μS/c	m)
				IPLE INFOR				
S	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)
Ton 15	- 1/ac	1245	Plastic	250ml	,	FAA.3000	TIC	XC\$
111113-	millor	1///	/ (2x)/1L	~ /.//-	/			1
		<u> </u>			J	L		
		N	ATER LEVEL	MEASURE	VIEN! COL	LECTION		
	level measuremer			. 465d				
	ter level measuren							
	ter level measurer ter level measurer							
☐ Other:		igant opineotou.	e ton to promise ma					
		············	WELL	PURGING IN	FORMATION			
☐ Purge	d 3 well volumes a	nd field parame	eters stabilized.					
X Purge	d 3 well volumes b	ased on previo	us water level a	nd field paren	neters stabiliz	ed.		
	d well until field pa							
☐ Other:				<u> </u>				<del>_</del>
Additiona	al Comments:							
			······································		·····			
		***************************************						

Project No:	055038			(	Client: <u>l</u>	Freeport Copper Queen Branch			
Task No:					Date:	7-14-11			
Well ID:		TM-	16	V	Veather:	Partly	Mand y	75	
ADWR No:					Sampler: /	Paci Stapler	1. 51.6 w	7-7	
1071110				WELL DATA	۷				
Moll Do	pth (ft bls):		115		Nominal	Casing C Size (inches)	араслу Gallons per L	near Foot	
	•		<u> </u>		2 0.16 4 0.65				
Casing D	riameter (in):		7			4 5	1.02		
Static Water	Level (ft bmp):		10,41			6	1.47 2.61		
Casing V	/olume (gal):	າ·	$3 \times 3 = 6$	4		10	4.08		
_	•		71		Casin	g Volume = gallons/	foot * water colum	n (feet)	
i otal volun	ne Purged (gal):		H) FIEL	D SAMPLING	ATAG 6				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (ºC)	Specific Conductance (µS/cm)	Comm	ents	
0820	Pump On						-		
08.25	57	21	105	6.99	21.5	1287			
0830	10	21	210	1,98	20.4	1280			
0835	15	21	315	7.97	20.5	1285			
			·			1,7,00			
							<del></del>		
				-					
··········									
						·	Pump Off		
	FIELD PARAMET	ER STABILIZA				).2 su pH, 2 degrees	s C, and 200 μS/c	:m)	
			SAM	IPLE INFOR	MATION			<b>.</b>	
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
Ton	-16	0835	Plostic	250 m		EPH.30.0	Tre	YCK	
DU	2-21411	0835	Plaste	25ml	7	EPH-30.	Tec	V15	
1700	QIII.	1 2	ATER LEVEL	MEASURE	MENT COLL	ECTION		,	
Par sares s			** ** *** * ***** * ****						
	evel measuremen er level measuren		No access to we	ellhead.			٠		
	er level measuren								
I	er level measuren	nent collected.	Well is pumping	l.					
☐ Other:		·····	1A17-1 h	PURGING INF	ORMATION				
				I WI DING IN	ALMENTS ION				
Purged	l 3 well volumes a i 3 well volumes b	nd field parami	eters stabilized. Ius water level a	nd field parem	eters stabiliz	ed.			
	i 3 well volunies o i well until field pa			1					
☐ Other:			<u></u>				<u>,</u>	······································	
Additiona	l Comments:		Dul	Dient.		<u> </u>		······································	
					****				
·									
	34.6								

Project No:	055038				Client:	Freeport Copper Queen Branch			
Task No:					Date:	7-15	<u> </u>		
Well ID:	T	M - 19	A		Weather:	Portly	Soud	92	
ADWR No:					Sampler: /	We1stoplar	L' Sterne	7]	
				WELL DAT	Α	0	0		
Well De	pth (ft bis):	***	700		Nominal	Size (inches)	Capacity Gallons per l	inear Foot	
	iameter (in):	$\overline{t}$	44			2	0.1 0.6	- 1	
		7 /	12 7	***************************************		5	1.0	2	
Static Water	Level (ft bmp):		<u>/                                    </u>			6 8	1.4 2.6		
Casing V	olume (gal):	322	x3 =			10	4.0		
Total Volum	e Purged (gal):	90	8.4			g Volume = gallons	/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	
7720	Pump On								
19725	5	73	11.5	740	23,8	511			
1735	15	33	495	7.11	240	496			
1745	76	33	825	7.13	24.0	301			
1755	36	73	1155	7.11	941	499			
1 / / .				,	0 1 1	, (			
						<u></u>	Pump Off		
F	IELD PARAMET	ER STABILIZA			<del></del>	1.2 su pH, 2 degrees	s C, and 200 μS/c	im)	
····		r		IPLE INFOR	ı			T	
Sar	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
TM	-19A	1755	Plastic	250 int	1	ES14-300	ICC	χ65 k	
			'		1			ľ	
		V	ATER LEVEL	MEASUREN	MENT COLL	ECTION			
₩ Water le	vel measurement	collected.					······		
1/\	r level measurem	ent collected. I	No access to we	llhead.					
1	r level measurem								
□ No wate □ Other:	r level measurem	ent collected. 1	Well is pumping.	•					
G Office.		·	WELL I	PURGING INF	ORMATION	<del></del>			
VI Purged :	3 well volumes ar	nd field parame							
1 & "	3 well volumes be			nd field paremi	eters stabilize	ed.			
1	well until field par	ameters stabili	zed.						
Other:									
Additional	Comments: 49しこ								
-	716.1					H			

Project No:	055038			(	Client: Freeport Copper Queen Branch				
ľask No:					Date:	_ 7-12-11			
Well ID:	TM	-42		· ·	Weather:	Party (	Tady -	72	
ADWR No:					Sampler:	16/15 topher	- L Hur	noj	
				WELL DAT	A	Casina	Canacity		
\A/all \De	epth (ft bis):	251	0	-	Nominal	Casing Capacity  Nominal Size (inches) Gallons per Linear Foo			
	•	<i>A</i>	(			2	0.16 0.69		
Casing D	Diameter (in):		<u>)</u> 1/1 ( <b>/</b> 1			5	1.02	2	
Static Wate	r Level (ft bmp):	<u>~</u>	14,62			6	1.47 2.6°		
Casing \	Volume (gal):	34	/ x3 = _/	1083		10	4.01		
	ne Purged (gal):		120		Casin	g Volume = galions	/foot * water colun	nn (feet)	
i Ola: Voius	ne ruigeu (gar).			D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
1045	Pump On								
1000	10	1	10	6.80	269	1200			
1116	30		30	1.81	222	1210		,,,,	
1143	10	,	1.0	1.82	222	17.13			
1215	190	1	90	681	220	1215			
12 45	12/2	1	120	4.83	72.0	1205			
						1.			
							Pump Off		
	FIELD PARAMET	ER STABILIZA				).2 su pH, 2 degree	s C, and 200 μS/c	om)	
			SAN	IPLE INFOR	MATION				
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
TV	m-42	1245	Plastic	250 ml		EPH.3000	Ici	V/Sk	
<del>/</del>			,					<u> </u>	
		V	ATER LEVEL	MEASURE	VENT COLL	ECTION			
Water I	level measuremen	t collected.	· · · · · · · · · · · · · · · · · · ·				***************************************		
	er level measurem		No access to we	ellhead.					
	er level measurem								
	ter level measurem	ent collected.	Well is pumping	,					
D Other:			WELL	PURGING IN	ORMATION				
Purner	1 3 well volumes a	nd field barame							
	3 well volumes b			nd field parem	eters stabiliz	ed.			
	d well until field par								
☐ Other:									
Additiona	Comments:					···			
			<u> </u>	<u>-</u>					
	35.4								

Project No:	055038				Client: Freeport Copper Queen Branch				
Task No:	1.0				Date:	m7:15-1			
Well ID:	TUI"	236			Weather:	SUNNY	90s	***************************************	
ADWR No:					Sampler:	BJD			
				WELL DA	Amaria				
Well De	pth (ft bls):	77	22		Nominal Size (inches)		Capacity  Gallons per Linear Foot		
Casina F	iameter (in):	-	24		-	2 4	0.10 0.6	" i	
_		127.			5 1.			2	
	Level (ft bmp):			000	8 2.61				
Casing V	olume (gal):	600	> x3 = /	800		10	4.0		
Total Volum	e Purged (gal):		nove o og si novejstog glasgigade s			g volume = gallon	s/foot * water colur	nn (teet)	
				D SAMPLIN	GDATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (galions)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comm	ents	
10:30	Pump On								
10:35	5	100	500	6.93	24.5	505.8			
10 190	10	100	1000	6.74	22.5	498,1			
10:45	15	(00)	1500	(80	22.4	499 (			
	`					×			
							Pump Off		
iga Ontopinahodasi	FIELD PARAMET	ER STABILIZA		asanteistaj pasaj basistaj.	Negresiace dalami	).2 su pH, 2 degree	es C, and 200 μS/o	:m) Lastinianianianianianianianianianianianiania	
			SAN	IPLE INFOR	MATHON				
Sai	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
ナンノ	236	10:48	Poly	250m2	/	500. o		YW	
			/					/	
		, and the second	ATER LEVEL	MEASURE!	MENT COLL	ECTION			
Water le	vel measuremen								
☐ No wate	r level measurem	ent collected.	No access to we	ellhead.					
	r level measurem								
1	r level measurem	ent collected. \	Well is pumping	J.					
☐ Other:			ili ili weni	PURGING INF	ORMATION				
Purged	3 well volumes ar	nd field parame	BIR Victoria de la Company			uli ile maleja separasawi			
<i>y</i> , –	3 well volumes ba			nd field parem	eters stabilize	ed.			
	well until field par								
☐ Other:					·····			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Additional	Comments:			· · · · · · · · · · · · · · · · · · ·					
Acc.									



Project No:	ject No: 055038				Client: Freeport Copper Queen Branch					
Task No:	1.0				Date: 7/15/11					
Well ID:	TVI	7/3			Weather:					
ADWR No:	λ				Sampler:	BJD				
				WELL DA						
Well D	epth (ft bls):				Nomina	Casing I Size (inches)	Capacity Gallons per L	inear Foot		
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2	0.16	6		
Casing I	Diameter (in):					4 5	0.69 1.02			
Static Wate	er Level (ft bmp):	131	<u>. C (</u>			6	1.47			
Casing '	Volume (gal):		x3 =			8 10	2.6° 4.08			
					Casir	ng Volume = gallons	s/foot * water colum	nn (feet)		
l otal Volur	ne Purged (gal):		FE	D SAMPLIN	G DATA					
		Discharge	Total			Specific				
Time	Elapsed Time (min)	Rate	Discharge	pH (SU)	Temp (°C)	Conductance (µS/cm)	Comm	ents		
	Pump.On =	(gpm)	(gallons)							
				***************************************						
							Pump Off			
	FIELD PARAMET	ER STABILIZ		desprésas recipciones da management	aparatrangsing plot (glopter, &cri	0.2 su pH, 2 degree	es C, and 200 μS/c	m)		
			SAN	IPLE INFOR	MATION					
Sa	imple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)		
								k		
			I VATER LEVEL	MEAGIIDEI	MENT COLL	ECTON				
1	evel measuremen er level measuren		No poposo to um	allbood						
l	er level measuren er level measuren				•					
ł	er level measuren er level measuren									
□ Other:			• • •							
			WELL	PURGING INI	ORMATION					
☐ Purged	3 well volumes a	nd field parame	eters stabilized.							
☐ Purged	3 well volumes b	ased on previo	us water level a	nd field parem	eters stabiliz	ed.				
	well until field par	rameters stabil	ized.							
Other:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , ,			····		***************************************			
Additional	Comments:	(N)LO_								
								·		

Project No:	055038				Client:	Freeport Copp	er Queen Bran	ich	
Task No:	1.0				Date:	7-15-11		•	
Well ID:	TUI	875			Weather:				
ADWR No:					Sampler:	BJD		***************************************	
		eks vet vetsaklender ett Kjølskendes delengende		WELL DA					
Well D	epth (ft bls):	ス:	30		Nomina	Casing I Size (inches)	Capacity Gallons per	l inear Foot	
			<u>ラン</u> ラ ^		Tronina	2	0.1	16	
Casing	Diameter (in):	(	<u> </u>			4 5	0.6 1.0		
Static Wate	er Level (ft bmp):					6	1.4	<b>47</b>	
Casing	Volume (gal):		x3 =		8 2.61 10 4.08				
					Casir	ng Volume = gallon:	s/foot * water colu	mn (feet)	
rotai voiu	me Purged (gal):			D SAMPLIN	I IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comn	nents	
10:05	Pump On			6.83					
10:07		500	1000	213	22.8	791.6			
10:09	1 2	500	2000	6.77	72.8	·			
6:11	6	560	3000	6.75	7.2.2	791.9		***************************************	
						<del></del>			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	ATION: Three co	onsecutive rea	idings within (	0.2 su pH, 2 degree	s C, and 200 μS/	cm)	
			SAN	APLE INFOR	MATION				
Sa	ample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
TUI	1 875	10:13	Pos	ZSOM	8	300.0		1 y ys	
//					/			/	
			I /ATER LEVEL	I Meaghdei	I MENTICOLI	EGELON			
					VI-INIE VOIS				
	evel measuremen er level measurem		No poposo to uv	llbood					
r	er level measuren er level measuren								
	er level measurem								
☐ Other:			····						
			WELL	PURGING INF	ORMATION				
☐ Purged	3 well volumes ar	nd field parame	eters stabilized.						
1 1	3 well volumes ba			nd field parem	eters stabilize	ed.			
Purged  Other:	well until field par	ameters stabili	zed.						
	Commonter	0			1 , 2 , 14	· · · · · · · · · · · · · · · · · · ·			
Additional	Comments:	YUMP	Was	on al	1 Neght				
					-				

Project No: 055038					Client: Freeport Copper Queen Branch  Date: 7-18-/1				
Task No:	1.0								
Well ID:	LJE/	INEFO			Weather: Lloudy 80 c				
ADWR No:					Sampler:	BJD			
son Alba				WELL DA	A	ran utt 190 sa ustradrá Righter de laskost asartistic			
Well Depth (ft bis): 320				Nomina	Casing Size (inches)	Capacity Gallons per Linear Foot			
Caeina I	Diameter (in):	X3 =			2 4 5 6 8 10		0.16 0.65 1.02 1.47 2.61 4.08		
Static Wate	er Level (ft bmp):								
Casing '	Volume (gal):								
Total Volur	ne Purged (gal):					ng Volume = gallons	s/foot * water colum	n (feet)	
			ia crammini dipendica.	LD SAMPLIN	IG DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments		
10 :10	Pump On			7 <i>56</i>					
14:30	7.0			7-35	23.7	378.8			
14 :30	7.5			7.56	22.0	380.0			
14 40	30			7.56	770	379.3			
						- / / -			
							Pump Off		
tipania and a	FIELD PARAMET	ER STABILIZA	rodajetski danokraj koja Majaga, Ipa	ca (econoles) (Alegáno) (apraigo,	esta de la constanta de la con	0.2 su pH, 2 degree	es C, and 200 μS/ci	n)	
			SAN	IPLE INFOR	<b>T</b>				
Sample ID		Tìme	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
		14:50						k	
						·			
			ATER LEVEL	MEASURE	MENT COLI	ECTION		16, 120 - 13 nes tu es 1811 - 15 nes tu es	
□ Water	evel measuremen								
	er level measurem		No access to w	ellhead.					
	er level measuren								
☐ No wat	er level measuren	nent collected. \	Nell is pumping	<b>]</b> .					
☐ Other:	Kanagasing dan padasin			a da a d	-20-004-020				
				PURGING IN					
,	i 3 well volumes a i 3 well volumes b			nd field narem	neters stabiliza	ed.			
1	s well until field par			now poich	, which were the second	<del></del> -			
☐ Other:									
Additiona	Comments:								
***************************************					····				

Project No:	o: 055038				Client:	Freeport Copper Queen Branch			
Task No:	1.0				Date:	8-26-11			
Well ID:	(NE1S	WEISKOPF				Su~~~ 80's			
ADWR No:					Sampler:	13.50			
	e di di ci gang dag			WELL DAT	A				
Well De	pth (ft bls):	7.00			Nominal Size (inches)		Capacity Gallons per Linear Foot		
		<u> </u>			2 4		0.16 0.65		
	Casing Diameter (in):		1/1/2 00			5		1.02 1.47	
Static Water	r Level (ft bmp):	198.06				6 8	2.61		
Casing V	olume (gal):	80 x3=240		10		4.08			
Total Volum	ie Purged (gal):				Casing Volume = gallons/foot * water column (feet)				
			tetered melpjeges at allem herest at recent	D SAMPLIN	G DATA				
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments		
9:35	Pump On								
9:45	10	8.5	85	6.97	75.B	1230			
7 J5	70	8.5	170	7.05	74.4	1240			
10:05	30	85	265	6.83	74.3	1200			
				ı			AM 18 A 19 A		
							Pump Off		
	FIELD PARAMET	ER STABILIZA		ausepēlā ismelnus ķirvēju ismeļu	stembren menjel sojejša	0.2 su pH, 2 degree	s C, and 200 μS/c	:m)	
			SAN	IPLE INFOR	MATION				
	mple ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
WEIS	KOYF	10:10	Pol	250m	1	3 <i>0</i> 0 · 0	<i>(1)</i>	Y X	
							/		
	iviji Salaji Alvanga	w	ATER LEVEL	MEASURE	VENT COLL	ECTION			
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □									
□ No water level measurement collected. No access to wellhead.									
□ No water level measurement collected. Obstruction in well.									
No water level measurement collected. Well is pumping.									
U Other:  WELL PURGING INFORMATION									
Purged 3 well volumes and field parameters stabilized.									
'I "	☐ Purged 3 well volumes based on previous water level and field paremeters stabilized.								
□ Purged well until field parameters stabilized.									
Other:									
Additional Comments:									
								***************************************	

Project No:	1.0				Client: Freeport Copper Queen Branch				
Task No:					Date:	<u>7-13-11                                 </u>		:	
Well ID:	ZAND	ANDER			Weather: Clear, 905				
ADWR No:					Sampler: BJD				
				WELL DAT	TA				
Well D	epth (ft bls):	Z80			Nominal Size (inches)		Capacity  Gallons per Linear Foot		
. , ,		6"			2		0.16 0.65		
Casing	Diameter (in):	1/10 97			<b>4</b> 5		1.02		
Static Wate	er Level (ft bmp):	148-91			6 8		1.47 2.61		
Casing '	Volume (gal):	193 <b>x3</b> = 579				10	4.0		
Total Volume Purged (gal):		795			Casing Volume = gallons/foot * water column (feet)				
			THE	D SAMPLIN	G DATA	din Populati			
Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments		
14:45	Pump On	ecselekolygu osto collusija Paraste dile sala dilebijale							
15:05	ZO	13.5	270	6.96	25.0	406.8			
15:15	30	13.5	\$05	7.00	23:7	407.5			
15:25	40	13.5	540	7.40	23.3	408-7	-		
18:35	50	135	675	7.30	22.5	409.3	·		
15:40	55	13:5	743	7.29	22.9	410-1			
							Pump Off		
	FIELD PARAMET	ER STABILIZA	ATION: Three o	onsecutive rea	dings within	0.2 su pH, 2 degree	s C, and 200 μS/c	:m) naczatrzanyapostanianouskas	
			SAN	IPLE INFOR	MATION				
Sample ID		Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Filtered (y/n)	
ZAN	DER	15-48	Poh	ZSOML	/	300-0		Y NO	
		15:44	7					7	
		Schiller of Compagnition and Communication	I /ATER LEVEL	I MEASUREI	MENTEGOLI	Eesle V			
Water level measurement collected.  No water level measurement collected. No access to wellhead.									
□ No water level measurement collected. Obstruction in well.									
	er level measurem	ent collected.	Well is pumping	l <b>.</b>					
Other:									
WELL-PURGING INFORMATION  Purged 3 well volumes and field parameters stabilized.									
<i>x</i> \ -				nd field parem	eters stabilize	ed.			
☐ Purged 3 well volumes based on previous water level and field paremeters stabilized. ☐ Purged well until field parameters stabilized.									
□ Other:							······································		
Additional Comments:									
	······································							······································	
						<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			