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March 24, 2016

Dr. Tomas Oberding
Hydrologist, Adv-District 1
Environmental Bureau
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Mark Owen #9 Reserve Pit (AP #56)
2015 Annual Report

Dear Dr. Oberding,

On behalf of Chevron Environmental Management Company (CEMC), GHD Services, Inc. (GHD, formerly Conestoga-Rovers &Associates, CRA) has prepared the attached report *2015 Annual Report* for the Mark Owen #9 Reserve Pit (AP #56) project. The attached report provides documentation regarding the results of environmental investigation activities completed at the site during calendar year 2015 as well as an overview of planned 2016 activities.

CEMC appreciates your continued support of our efforts at the Mark Owen #9 site. Should you have any questions, please do not hesitate to contact me by phone at 713-372-7705 or via e-mail at kegan.boyer@chevron.com.

Sincerely,

Kegan W. Boyer, P.G.
Environmental Project Manager

cc: Jim Griswold, NMOCD
Bernie Bockish, GHD

2015 Annual Report

Mark Owen No. 9
NMOCD AP No. 56

Chevron Environmental Management Company

6121 Indian School Road, NE Suite 200 Albuquerque New Mexico 87110
046121 | Report No 12 | March 15 2016

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1. Project Information and Release Background

This Stage 1 Abatement Plan and Groundwater Monitoring Report presents a summary of soil and groundwater data collected during the 2015 reporting period at Mark Owen No. 9 Reserve Pit (Site) by GHD Services, Inc. (formerly Conestoga-Rovers & Associates (CRA)).

The legal description of the Site is the NW/4 of the SE/4 of Section 34, Township 21 South, Range 37 East, Lea County, New Mexico (Figure 1). The Site is situated immediately southeast of the town of Eunice, New Mexico and is associated with a release of fluids from the reserve pit used for the drilling of the Mark Owen No. 9 oil well by Chevron in 2006. Global Positioning System (GPS) coordinates for the Site are latitude 32° 25' 56.49" north and longitude 103° 08' 46.27" west. The O-GRID number assigned to the Site is reported as #4323. The Mark Owen No. 9 well Site is currently operated by Chevron USA. A Site detail map is provided as Figure 2.

Two geologic cross sections A – A' and B – B' have been included as Figure 3 and Figure 4, respectively. Cross section A – A' includes soil boring and analytical information from MW-16, MW-3, MW-1, MW-5, MW-10, and MW-13 originating in the northwest and progressing to the southeast. Cross section B – B' includes soil boring and analytical information from MW-15, MW-6, MW-5, MW-9 and MW-11 originating in the southeast and progressing to the northeast. Based on the boring logs and cross sections, general Site stratigraphy consists of sands (silty-sands, poorly graded sands) to approximately 30 to 60 feet (ft) below ground surface (bgs), sandy clay from approximately 30-75 ft bgs, and clay from approximately 48 to 82 ft bgs. Caliche is present in some areas of the site from ground surface to approximately 10 to 20 ft bgs. Groundwater is encountered between 25 and 42 ft bgs.

A Revised Stage 1 Abatement Plan (AP) for the Mark Owen No. 9 Reserve Pit was submitted on behalf of Chevron Environmental Management Company (CEMC) by GHD to the New Mexico Oil Conservation Division (NMOCD) in correspondence dated March 13, 2007. The NMOCD assigned AP No. 56 to this Abatement Plan. However, the agency did not approve the March 2007 submittal. Consequently, CEMC performed additional investigation work in October 2007 in order to collect additional soil and groundwater data. An Interim Investigation Report was submitted to the NMOCD in March 2008 summarizing the results of the October 2007 investigation. Reports for 2008 through 2014 were prepared by GHD (as CRA) and submitted by CEMC to the NMOCD in Santa Fe, New Mexico.

A revised AP had been submitted to the NMOCD in September of 2013. Administrative approval for the AP was received by NMOCD on November 13, 2013. Legal public notice was completed by running an article in the Hobbs News-Sun published in Hobbs, New Mexico and The Albuquerque Journal, in Bernalillo County, New Mexico. Receipt of the legal notice was notarized on the date of publication of June 27, 2014 for the Hobbs News-Sun and July 9, 2014 for The Albuquerque Journal. Written notice was also provided to approximately 560 property owners within a one mile radius of the Site. The scope of this AP has been verbally agreed to by the NMOCD and CEMC. Formal approval of the AP by the NMOCD has not been received as of the date of this report. The scope of work outlined in the proposed AP was completed during the 2014 and 2015 field work performed at the Site.

2. Regulatory Framework

The NMOCD guidelines require groundwater to be analyzed for constituents of concern (COC) as defined by the New Mexico Water Quality Control Commission (NMWQCC) regulations. The NMWQCC regulations provide Human Health Standards for Groundwater. The COC at the Site is chloride. In this report, groundwater analytical results for chloride, total dissolved solids (TDS), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and sulfate are compared to the NMWQCC standards shown in the following table.

Table 2.1 NMWQCC Standards

Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride[2]	250
Sulfate (SO4)[2]	600
Total Dissolved Solids (TDS)[2]	1,000
Benzene[1]	0.01
Toluene[1]	0.75
Ethylbenzene[1]	0.75
Total Xylenes[1]	0.62

Notes:
1) 1NMWQCC Human Health Standards per NMAC 20.6.2.310B
2) 2NMWQCC Other Standards for Domestic Water Supply per NMAC20.6.2.3103B

In addition to the above listed constituents, total alkalinity is also analyzed for each groundwater sample collected on Site; however, the NMWQCC does not have a standard for alkalinity.

3. Reserve Pit Restoration

Lobo's Services, Inc. of Midland, Texas and GHD were on site June 29, 2015 to begin reserve pit restoration activities. Prior to performing work, a New Mexico 811 One Call ticket was completed and Chevron dig plan and excavation permit were issued and approved by the Chevron Eunice Field Management Team (FMT).

Analytical results from soil borings advanced in the reserve pit in 2013 indicated that concentrations of chloride in soil in the northeast corner of the pit exceeded the Site NMOCD RRAL of 250 mg/Kg with concentrations ranging from 570 mg/L at 5 ft bgs to 3,300 mg/L at 15 ft bgs. Additionally, surface soil samples were collected on June 30, 2015 from the bottom of the reserve pit floor prior to restoration activities. Five samples were collected, one from each of the pit corners and one from the center of the pit. Chloride concentrations reported for the pit floor samples ranged in concentration from 2.69 mg/L to 8.81 mg/L. A summary of soil analytical results is included as Table 1. The corresponding laboratory analytical report can be found in Appendix A.

In order to prevent further migration of chloride in soil to groundwater, a 20 millimeter polyethylene liner was placed at 4 feet (ft) bgs in the pit. The initial depth of the former reserve pit was approximately 8 ft bgs. Soil from a nearby Chevron owned borrow pit was trucked to the Site, pushed into the pit, and wheel roll compacted with onsite heavy equipment. In addition to filling in the bottom of the reserve pit, the east, north, and south edges of the pit were benched out approximately 10 ft to a depth of approximately 4 ft bgs. The soil from the benching of the pit edges

was also pushed into the pit and compacted to help raise the pit floor. The west side of the pit was not benched due to the presence of underground and overhead electric lines.

Once benching of the pit edges and raising of the floor to 4 ft bgs was complete, the liner was placed. The liner overlapped the pit edge by approximately 10 ft in each direction except to the west (due to the presence of utilities). Placing of the liner was completed on July 2, 2015. Final backfilling of the pit to grade was completed August 31 through September 2, 2015. Clean soil stockpiled onsite and soil trucked in from the Chevron owned borrow pit were used to complete the backfilling. Soil was wheel roll compacted and a native grass seed mix was planted in the area of the former reserve pit. Beginning stages of grass growth were observed during a field visit in October 2015. The progress of growth will continue to be monitored throughout 2016.

4. Aquifer Testing – Pump Test

Between October 19 and October 21, 2015 GHD performed an aquifer pump test. The aquifer test was performed on well RW-1. Groundwater was pumped from the well for a period of 8 hours on October 20, 2015. To assess the radius of influence from pumping from RW-1, the water level in the adjacent monitoring well MW-1 was also logged. MW-1 is approximately 28 ft away from RW-1.

On October 19, 2015 a Grundfos Redi-Flo2 submersible pump was set in RW-1. Both RW-1 and MW-1 were equipped with a 15 pounds per square inch gauge (psig), vented, In-Situ Level TROLL® 700 transducer to log water levels throughout the pumping event. Prior to the installation of any equipment or pumping, RW-1 and MW-1 were gauged and groundwater levels were observed to be 31.50 ft and 32.13 ft below top of casing (TOC), respectively. A summary of well specifications and gauging data for RW-1 an MW-1 is presented below.

Well Number	Depth to Water (ft below TOC)	Total Depth (ft below TOC)	Water Column (ft)	Screen Interval (ft bgs)
RW-1	31.50	53.35	21.85	20-50
MW-1	32.13	54.15	22.02	16-51

Logging of data began at approximately 1530 hours on October 19, 2015. Various pump rates were tested between 1530 hours and 1700 hours on October 19, 2015 in preparation for the 8 hour pumping event conducted on October 20, 2015. Chloride samples were collected at the beginning, middle, and end of the pumping event. The results of the chloride samples can be found in Section 7, below. On October 20, 2015 pumping began at approximately 0812 hours and continued until 1637 hours for a total of 8 hours and 15 minutes. The average flow rate for the duration of the test was approximately 2.7 gallons per minute for a total of approximately 1300 gallons. All purged water was pumped into a water truck staged onsite. Once the pumping event was complete, Sundance Services of Eunice, New Mexico disposed of the purged water.

After pumping was stopped, transducers were left undisturbed, logging data in both RW-1 and MW-1 until approximately 0800 hours on October 21, 2015. The data logged on both transducers was downloaded and equipment was removed from both wells.

From the information logged on the transducers, groundwater drawdown versus time data were plotted and evaluated with methods suitable for unconfined aquifer conditions. The transmissivity (T), hydraulic conductivity (K), and storativity (S) parameters were evaluated by the Theis analytical

solution to evaluate pump test data with the commercially available software application AQTESOLV developed by HydroSOLVE, Inc. Displacement and estimated aquifer parameters are shown on plots included in Appendix B, and are summarized in the table below.

	T (ft2/day)	S	K (ft/day)
RW-1			
RW-1 Theis (low S)	199.6	1.243E-07	11.74
RW-1 Theis (high S)	100	0.01102	5.88
RW-1 Tartakovsky-Neuman	98.42	0.00028	5.79
RW-1 Recovery	174.3	0.00000155	10.25
MW-1			
MW-1 Theis	307.5	0.0052	18.09
MW-1 Recovery	242.7	0.0096	14.28
RW-1 and MW-1			
RW-1 & MW-1 Theis	90.67	0.01738	5.33
Average	173.31	0.01	10.19

Table Notes:

T indicates Transmissivity.

S indicates Storativity

K indicates Hydraulic Conductivity

Parameter evaluation utilized an aquifer thickness (B) of 17 ft.

The Theis solution was used for each model except the one labeled as Tartakovky-Neuman.

Hydraulic conductivity values were determined by dividing the T values by the aquifer thickness (B). An estimate of 17 ft was utilized for the saturated aquifer thickness based on the reported water level on the attached boring log (Appendix B) for RW-1, and the total depth of RW-1 (50 ft). A clay unit was observed in this boring log at a depth of 40 ft bgs. Depending on the saturated thickness used for the calculation (either 7 ft without the clay unit or 17 ft with the clay unit), the conductivity may change. A brief sensitivity analysis indicated that altering the aquifer thickness between 7 ft and 17 ft led to a variation in hydraulic conductivity of less than 2 ft/day for any given solution model/scenario.

A range of hydraulic conductivity from approximately 5 ft/day to 15 ft/day is consistent with the typical range of values anticipated in a silty/fine sand formation, which is observed at the Site. Formations with a higher hydraulic conductivity tend to exhibit a cone of depression that is less steep but covers a wider area. Formations with lower hydraulic conductivities tend to have a steep cone of depression that does not cover as wide an area. Pumping in a low hydraulic conductivity formation may lead to “pumping off” (pump shut down) before water can be extracted from a significant distance away. Pumping in an aquifer with a lower hydraulic conductivity will take longer to affect an area, or more wells will be required within the area, each pumping at a lower rate to achieve the desired influence on the aquifer. The hydraulic conductivity for the Site is estimated at an average of approximately 10 ft/day, a lower hydraulic conductivity rate. A draw down of a few inches was observed in MW-1 after the 8 hour pumping event in RW-1. This demonstrates that the radius of influence achieved by pumping from RW-1 at a rate of approximately 2.7 gpm leads to a radius of approximately 30 ft.

5. Geophysical Survey of Subsurface Soil

GHD completed a geophysical investigation at the Site between June 23 and June 26, 2015. The purpose of the investigation was to look for areas of suspected chloride impacts and the potential sources of these impacts. The geophysical investigation consisted of an electromagnetic (EM) survey using an EM31 terrain conductivity meter (EM31), which measured the conductivity of the shallow subsurface to an approximate depth of 17 ft below ground surface (bgs). Geophysical survey grids were established in three areas, namely the north, southwest and southeast sectors of the Site.

5.1 Geophysical Survey Coverage

The survey coverage for the previous phase (December 2013) and most recent phase (June 2015) of the investigation are presented on Figure 5. In the north half of the Site, additional surveying was completed east and south of the Mark Owen #9 well head and former brine disposal pit. Surveys were also completed over areas measuring approximately 6 acres and 3.5 acres, in the southwest and southeast areas of the Site, respectively. Survey coverage included areas around pump jack compounds and crushed aggregate (caliche) pads, and adjacent to naturally vegetated areas. Survey lines for all grids were spaced approximately 30 ft apart. In the southwest and southeast the EM31 survey lines were generally oriented south to north, and in the north survey area the lines were oriented both west to east and south to north. Topographic features such as access roads were also surveyed, for position control.

5.2 Geophysical Survey Methods

The EM31 consists of transmitter and receiver coils located at opposite ends of a 14 foot long boom. In vertical dipole mode (with the instrument held at hip level), this coil configuration yields an approximate depth of investigation of 17 ft bgs. The survey was conducted in terrain conductivity mode, by logging the quadrature (Q) component of the induced secondary field. The secondary field Q component measures the conductivity of the shallow subsurface, and yields results in MilliSiemens per meter (mS/m). The EM31 was used to determine the horizontal extent of suspected shallow brine impacts, by delineating areas of elevated conductivity response. During the course of the survey, data were automatically stored in an Archer 2 data logger equipped with a differential global positioning system (DGPS) receiver for position control.

Both the EM31 survey data and DGPS points were collected at 1 second intervals. The DGPS locations are reported as New Mexico State Plane coordinates, North American Datum of 1983 (NAD83) Geodetic System.

5.3 EM31 Conductivity Survey Results

The EM31 data for each survey grid were processed as colored contour plots, and superimposed over an aerial photograph outlining the survey areas as presented on Figure 6. The highest intensity conductivity responses on these plots are colored red to purple, while areas of low response are colored blue. All remaining intermediate responses correspond to the color scale presented on the figure. Review of the EM31 results reveals that non impacted areas were characterized by background conductivity responses which ranged from 5 mS/m to 10 mS/m. Several negative responses (contoured dark blue) were also observed, typically along linear trends within the survey grids. These responses corresponded to locations where the EM31 survey crossed over metal

pipes found on the ground surface. In locations where the survey was completed along the axis of a metal pipe the EM31 response was elevated. This result is attributed to the pipe acting as an infinitely long conductor when the EM31 meter was oriented parallel to it. Several moderate to high conductivity anomalies were also detected, and the results for each survey grid are presented as follows.

North Survey Grid

As previously indicated, the 2015 survey coverage was completed in areas east and south of the previous (2013) survey. Thus, the grid was extended to the boundary of the adjoining property to the east, and to the tank battery and associated access road to the south. Prior to merging the two data sets for processing and plotting, several lines from the 2013 grid were re-surveyed and the results were compared. Good correlation was observed between the 2013 and 2015 conductivity data, thus no adjustments were required prior to merging the two data sets.

The colored contour plot for the north survey area reveals that slightly anomalous responses (20 mS/m to 35 mS/m) were observed within the footprint of the former brine pit and around the Mark Owen No. 9 pump jack compound. These responses appear to extend to the south and south east, beyond the pump jack compound and crushed aggregate pad to the edge of the tank battery. In the northeast corner of the survey coverage, high intensity responses ranging from 60 mS/m to 100 mS/m were measured south of the caliche pad and perimeter fence. This suggests that the pump jack compound and/or the adjacent property may be the source of impacts in this area. Further to the south, peak values of 100 mS/m to 240 mS/m were detected along the fence, south of monitoring well MW-8. This area was characterized by a small topographic depression, and by dead vegetation. It was evident that the adjacent property is located upslope and likely discharges to this area during rain events. Several linear features were also evident in the survey results, and were characterized by either negative or moderately elevated responses. As previously indicated these responses delineate the location of metal pipes on the ground surface.

Southwest Survey Grid

The EM31 results for the southwest grid indicate that a linear conductivity anomaly was detected along the northern portion of the survey grid. Peak responses of 160 mS/m to 180 mS/m were measured adjacent to South 4th Street, with high intensity responses of 60 mS/m to 110 mS/m extending approximately 300 ft further east. At the east end of the anomaly, moderate intensity responses (40 mS/m to 50 mS/m) were observed. The linear conductivity anomaly was coincident with the limits of a drainage channel which extends from west to east across the southern half of the Site. The channel was also identified as the tan brown linear feature evident on the aerial photo (see Figure 5). The conductivity distribution observed along the channel strongly suggests that the source of this anomaly is located further upstream and west of the peak responses observed adjacent to South 4th Street.

South of the drainage channel, naturally vegetated areas generally yielded background responses of 5 mS/m to 10 mS/m. Low intensity responses were observed over the south half of the caliche pad, and moderate responses (30 mS/m to 50 mS/m) were measured in close proximity to the pump jack compound. Slightly anomalous values (15 mS/m to 20 mS/m) were detected north of the pump jack compound, and extended to the drainage channel. At the south end of the caliche pad, negative responses indicated the presence of a metal pipe on surface.

Southeast Survey Grid

Review of the conductivity results for the southeast grid indicates that the highest intensity EM31 responses for both phases of the investigation were measured in the northwest portion of this survey grid. Peak conductivity responses ranging from 200 mS/m to 300 mS/m were detected adjacent to a south to north-trending brine pipeline, which was demarcated along the western boundary of the grid. Further to the east, the caliche pad also yielded high intensity responses of 100 mS/m to 200 mS/m. At the south end of the caliche pad the area surrounding the pump jack compound was characterized by readings ranging from 50 mS/m to 100 mS/m. The distribution of conductivity responses in the north half of this survey grid suggests that the brine pipeline is the likely source of anomalous responses in this area.

A similar conductivity distribution was observed over the south half of the southeast grid. High intensity responses (100 mS/m to 150 mS/m) were measured adjacent to the brine pipeline, and further south lower responses ranging from 60 mS/m to 100 mS/m were observed in the vicinity of the pump jack. Areas of elevated response (50 mS/m to 80 mS/m) were also detected further to the east, beyond the extent of the caliche pad. Slightly anomalous responses were detected in the northeast corner of the survey grid, which yielded values of 25 mS/m to 30 mS/m.

5.4 Geophysical Survey Conclusions

Based on the results of the geophysical investigation presented herein, the following conclusions are presented:

- The EM31 conductivity survey indicated the presence of several suspected brine impacted areas in the shallow subsurface at the Site.
- In the north survey grid, conductivity responses beneath the former brine pit and downgradient area to the southeast were only slightly elevated; peak responses were detected in the northeast corner of the survey coverage, and further south along the perimeter fence.
- A linear conductivity anomaly was detected within the southwest survey grid, where moderate to high intensity responses closely corresponded to the boundaries of a drainage channel; the source of these responses appears to originate further upstream and west of South 4th Street.
- Peak conductivity responses were detected in the southeast survey grid adjacent to a brine pipeline in two locations; lower responses were observed in the vicinity of pump jack compounds located in this survey area, which suggests that the brine pipeline is the source of the peak responses observed.

6. Soil Boring Activities and Soil Analytical Results

Prior to mobilizing drilling equipment to the Site, the boring locations were pre-marked and a New Mexico 811 One Call utility locate was completed at least 48 hours prior to start of work. A secondary utility check of the soil boring locations was completed using ground penetrating radar (GPR). High Mesa of Albuquerque, New Mexico provided the utility clearance services. These activities were observed by GHD. Each boring location was pre-cleared to a depth of 5 ft bgs or until refusal by air knife prior to drilling.

On December 8, 2015, a total of four soil borings (SB-1(2), SB-2(2), SB-3(2) and SB-4(3)) were advanced by HCI Drilling of Lubbock, Texas using an air rotary rig. A total depth of 25 ft bgs was

reached in all four boring locations. The soil borings were plugged following completion with hydrated 3/8 inch bentonite hole-plug.

Soil samples and drill cuttings were used for logging the soil type in each of the investigational borings. Boring logs for SB-1(2), SB-2(2), SB-3(2) and SB-4(3) are included in Appendix C. Boring locations are shown on Figure 2. Soil observed during drilling activities consisted of sands (silty-sands, poorly graded sands) to approximately 25 ft bgs.

6.1 Soil Analytical Results

Soil samples were collected in 5 foot intervals from each of the soil borings for laboratory analysis. Soil samples for laboratory analysis were collected in laboratory prepared containers, packed on ice, and sent under chain of custody documentation to Xenco Laboratories (Xenco) of Midland, Texas. Soil samples were analyzed for chloride by Environmental Protection Agency (EPA) Method 300.0. A summary of soil analytical data has been included as Table 1 and presented on Figure 7. The corresponding laboratory analytical report for soil analysis is included in Appendix A.

As seen on Figure 7, soil analytical results for chloride from soil boring activities show a general correlation with EM31 survey conductivity results for boring SB-1(2); however, analytical results for borings SB-2(2), SB-3(3), and SB-4(3) do not directly correlate to the EM31 data. Correlation between chloride concentrations in soil and apparent conductivity values shown in the EM31 data can be influenced by several factors. Soil porosity, soil moisture content, and secondary cementation of soil (caliche) can all influence the response received by survey equipment. Soils with higher porosity or moisture content are generally more conductive and will show a higher response on the EM31. Calcium carbonate (cementation found in caliche) is generally resistive and will show a lower response on the EM31. Additionally, EM31 data presented in this report is an average of soil conductivity response from ground surface to approximately 17 ft bgs. Soil samples in the above stated borings were collected on 5 foot intervals beginning at 5 ft bgs; therefore, any surficial soil impacts could have influenced EM31 conductivity response, but were not confirmed by analytical means. Due to these factors the EM31 survey data observed at this site can be used for field screening, but cannot be used to quantify chloride concentrations in the sub surface.

6.2 Investigation Derived Waste

Soil cuttings generated during December 2015 drilling activities were thin spread onsite.

7. Groundwater Monitoring Activities

Site monitoring wells are sampled on a quarterly basis. Monitoring wells were sampled using disposable Hydrasleeves™, a no purge, passive sampling method accepted by the EPA. Prior to sampling the monitoring wells, a measurement of the static water level was measured for each well using an oil/water interface probe. The static water level of each well was measured to the nearest hundredth of a foot.

Once the water level was recorded, a Hydrasleeve™ was placed in the well and left undisturbed over night to allow the well to equilibrate prior to sampling. Within the 24 hours following placement of the Hydrasleeves™, samples were collected by removing the self-filling samplers from each well. Laboratory-supplied sample containers were filled directly from the Hydrasleeves™. Due to the low

volume of water retrieved via the Hydrasleeve™ field parameters are not collected during sample collection.

The groundwater samples were placed on ice in insulated coolers. Samples were delivered to Xenco using EPA-approved chain-of-custody procedures. Water samples were analyzed for total alkalinity (as CaCO3) by SM2320B, chloride and sulfate by EPA Method 300.0, and total dissolved solids (TDS) by SM2540C.

Groundwater sampling activities did not generate purge water and disposal was not required.

7.1 Potentiometric Surface and Gradient

Groundwater elevation data are presented in Table 2 and are consistent with elevations from historical data. Groundwater gradient maps for each quarter are presented as Figures 8, 9, 10 and 11. Groundwater elevations ranged from 3365.04 ft above mean sea level (amsl) at the lowest on June 9, 2015 to 3374.00 ft amsl at the highest on December 15, 2015. Groundwater flow at the Site is to the southeast at an average gradient of approximately 0.0069 foot/foot based on 2015 quarterly gauging data.

7.2 Analytical Results

Sixteen monitoring wells and one recovery well (MW-1 thru MW-16 and RW-1) were sampled during each quarterly event.

Site monitoring wells exceeded chloride and TDS NMWQCC standards during the quarterly monitoring events with the following exceptions; MW-2 was below standards for chloride and TDS during June, September, and December 2015, MW-3 was below standard for chloride and TDS for all four 2015 sampling events, and MW-7 was below standard for chloride and TDS in March and June 2015. A summary of groundwater analytical results for inorganics is presented in Table 3. A Chloride Concentrations vs. Time graph has been prepared for each monitoring well and are included as Appendix D. A map depicting chloride concentrations in Site wells for 2015 is presented as Figure 12.

Duplicate samples were collected from MW-5 and MW-11 during the March 2015 monitoring event, MW-6 and MW-11 in June 2015, and from MW-1 in September and December 2015. Copies of the laboratory analytical reports and chain-of-custody documentation are included in Appendix E.

Prior to 2014, BTEX had also been included in the analyses of Site groundwater samples. Historically, since concentrations of BTEX were rarely reported above detection limits, BTEX sampling was discontinued following the November 2013 groundwater sampling event. Historic BTEX and TPH groundwater analytical data is presented in Table 4.

7.3 Samples Collected During the Pump Test

Pumping began on October 19, 2015. The total volume pumped from RW-1 was approximately 1,300 gallons over 8 hours at a rate of approximately 2.7 gallons. Samples collected throughout the event for laboratory analysis were placed in laboratory prepared containers, stored on ice, and shipped under chain of custody documentation to Xenco.

Chloride concentrations remained relatively consistent throughout the course of the pumping event. A summary of the analytical data is presented as follows.

Sample Name	Sample Date and Time	Sample Result (mg/L)
GW-046121-101915-CM-001	10/19/2015 at 1545	3330
GW-046121-102015-CM-002	10/20/2015 at 0855	3070
GW-046121-102015-CM-003	10/20/2015 at 1025	3340
GW-046121-102015-CM-004	10/20/2015 at 1155	3450
GW-046121-102015-CM-005	10/20/2015 at 1325	3400
GW-046121-102015-CM-006	10/20/2015 at 1455	3440
GW-046121-102015-CM-007	10/20/2015 at 1625	3450

A copy of the associated laboratory analytical report and chain-of-custody documentation is included in Appendix E.

8. Conclusions and Recommendations

From review of available historical and 2015 data it appears that additional sources of chloride impacts to groundwater may be present. This is based on:

- The presence of elevated conductivity responses indicating potential chloride concentrations in the soil observed from the EM31 geophysical survey data.
- The reported elevated concentrations of chloride in soil samples collected during soil boring activities.
- The observed variability in chloride concentrations over time (Appendix D).
- The elevated concentrations of chloride in groundwater samples collected from monitoring wells considered upgradient (MW-15 and MW-16) and cross-gradient (MW-9, MW-11, MW-12, and MW-15) of the Mark Owen No. 9 reserve pit.

GHD proposes to perform further soil and groundwater assessment to assess the potential for additional source areas.

9. 2016 Scope of Work

Based on historical and 2015 Site data, it appears that chloride impacts to groundwater at the Site are likely attributed to multiple sources beyond that of the former reserve pit. The 2016 scope of work will include further geophysical surveying, advancement of investigational soil borings, the installation of groundwater monitoring wells, and the continuation of quarterly groundwater monitoring. A historical records search will also be performed for production wells located on

Chevron owned property within the vicinity of the Site. The 2016 field activities, results, and conclusions will be reported to the NMOCD in an annual report. The proposed 2016 work scope activities are described below.

9.1 Historical Records Search

Several production well sites are situated on Chevron owned property in the vicinity of the Site. A historical records search will be completed for wells located on Chevron property to obtain information regarding their installation and operation. Information obtained from the historical records search will be summarized and provided to CEMC for review. The primary source for this records search will be the NMOCD Online website.

9.2 Geophysical Survey

The purpose of the geophysical survey is to assess areas of elevated conductivity. The mapping of areas with elevated conductivity will help to guide the future drilling program. The geophysical survey will attempt to map the horizontal extent of chloride concentrations in the vadose zone. The proposed survey coverage is presented on Figure 13.

Measurements of terrain conductivity from the EM31 will be used to assess the horizontal extent of chlorides in the areas surveyed. The data for the EM31 survey will be processed as a colored contour plot. The plot will then be superimposed on a Site plan to correlate elevated conductivity responses indicative of chlorides relative to the Site features.

Based on the results of the EM31 survey, proposed investigational soil boring and monitoring well locations will be determined.

9.3 Proposed Soil Boring and Monitoring Well Drilling Program

GHD is proposing to advance up to six investigational soil borings and install up to six, 2-in. diameter groundwater monitoring wells. The exact locations of the proposed soil borings and monitoring wells will be determined following review of the geophysical survey data. Prior to mobilizing any drilling equipment, a New Mexico 811 utility locate will be completed. Prior to the installation of the groundwater monitoring wells, appropriate permits will be obtained from the New Mexico Office of the State Engineer (NMOSE).

In addition to the utility locate, a ground penetrating radar (GPR) sweep will be completed for each of the proposed boring locations. Following all utility clearance activities a Chevron Dig Plan and Excavation Permit will be prepared and approved prior to performing any drilling.

Drilling, sampling, and monitor well installation will be performed in accordance with GHD SOPs. Proposed soil borings will be advanced to an approximate depth of 25 ft bgs and proposed groundwater monitoring wells will be installed to an approximate depth of 50 ft bgs. Drilling will be performed using sonic or other appropriate drilling methods. During drilling, discrete soil samples will be collected in 5-foot intervals. Soil samples will be submitted to Xenco Analytical Laboratory (Xenco) in Midland, Texas for analysis of chloride by EPA Method 300.0.

9.4 Quarterly Groundwater Monitoring

GHD will continue groundwater monitoring of Site wells on a quarterly schedule (March, June, September, and December). Prior to collecting samples the static groundwater level, total depth,

and a vertical conductivity profile will be measured and recorded for each well using a Solinst® Temperature, Water Level, and Conductivity (TLC) meter, or similar. The static water level of each well will be measured to the nearest hundredth of a foot. Conductivity profiles will be completed by taking a conductivity reading approximately every 2 feet within the water column present in each well. The TLC meter will be cleaned with distilled water and Alconox between wells.

Subsequent to well gauging and conductivity profiling, the monitoring wells will be sampled using EPA approved no purge methodology using a Hydrasleeve™ to collect samples. Representative groundwater samples will be placed in laboratory supplied containers and preserved on ice in insulated coolers. Groundwater samples will be submitted to Xenco Laboratories of Midland, Texas for analysis of general groundwater quality parameters of total dissolved solids, total alkalinity, chloride, and sulfate.

In order to assess the accuracy of the Hydrasleeve™ method, GHD will also sample two selected wells, MW-4 and MW-7, by low-flow sampling methods. The groundwater data will be compared to the Hydrasleeve™ samples. Additional monitoring wells will be incorporated into the groundwater monitoring program following their installation.

9.5 Remedial Options Assessment

GHD will continue to evaluate the Site data to assess remedial options for the Site.

9.6 2016 Annual Report

Pursuant to 19.15.30.13.C (5) NMAC, CEMC and GHD will provide quarterly progress reports to the NMOCD detailing activities performed in the preceding quarter once formal approval of the AP has been received. The progress reports will be submitted in order to meet the regulatory requirements. These reports will consist of a description of activities performed in the previous quarter and the intended activities for the next quarter.

Site investigation and monitoring activities for the year will be summarized in an annual report. The annual report will include the following:

- Summary of the year's activities;
- Description and results of the geophysical survey;
- Description and results of soil boring investigation and groundwater monitoring wells installation; and
- Conclusions and recommendations for future work to be performed at the Site.

The annual report will be submitted for CEMC for review following the completion of field work. Once reviewed by CEMC the report will be submitted to the NMOCD.

10. Schedule

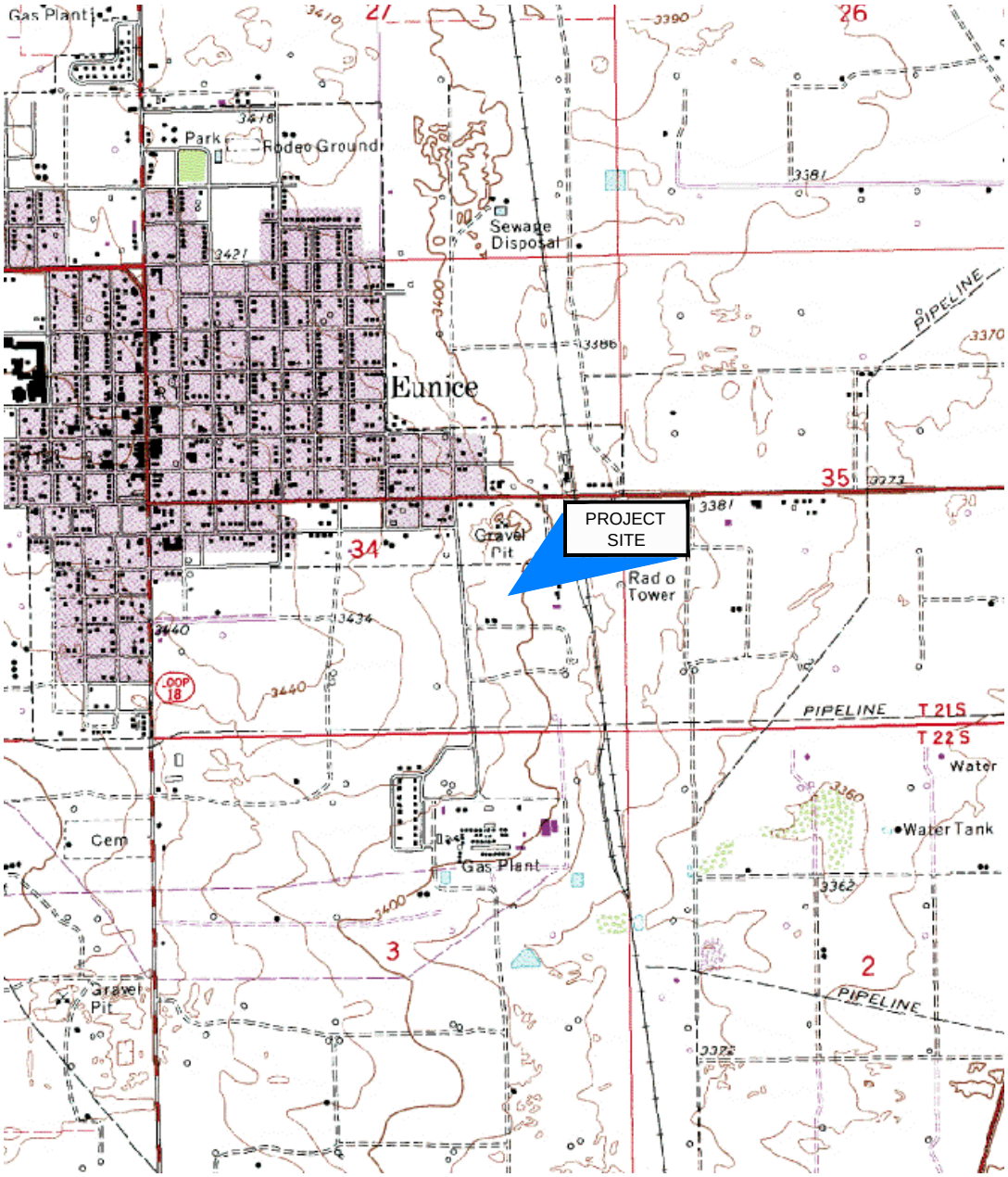
GHD has received CEMC approval to proceed with the scope of work. Work will be scheduled and initiated based on the availability of resources and stakeholder concurrence.

Figures

EUNICE QUADRANGLE
NEW MEXICO

LAT= 32° 25' 56.9" N
LONG= 103° 08' 47.9"W

PHOTOREVISED 1977



USGS MAP SERIES 1:24000

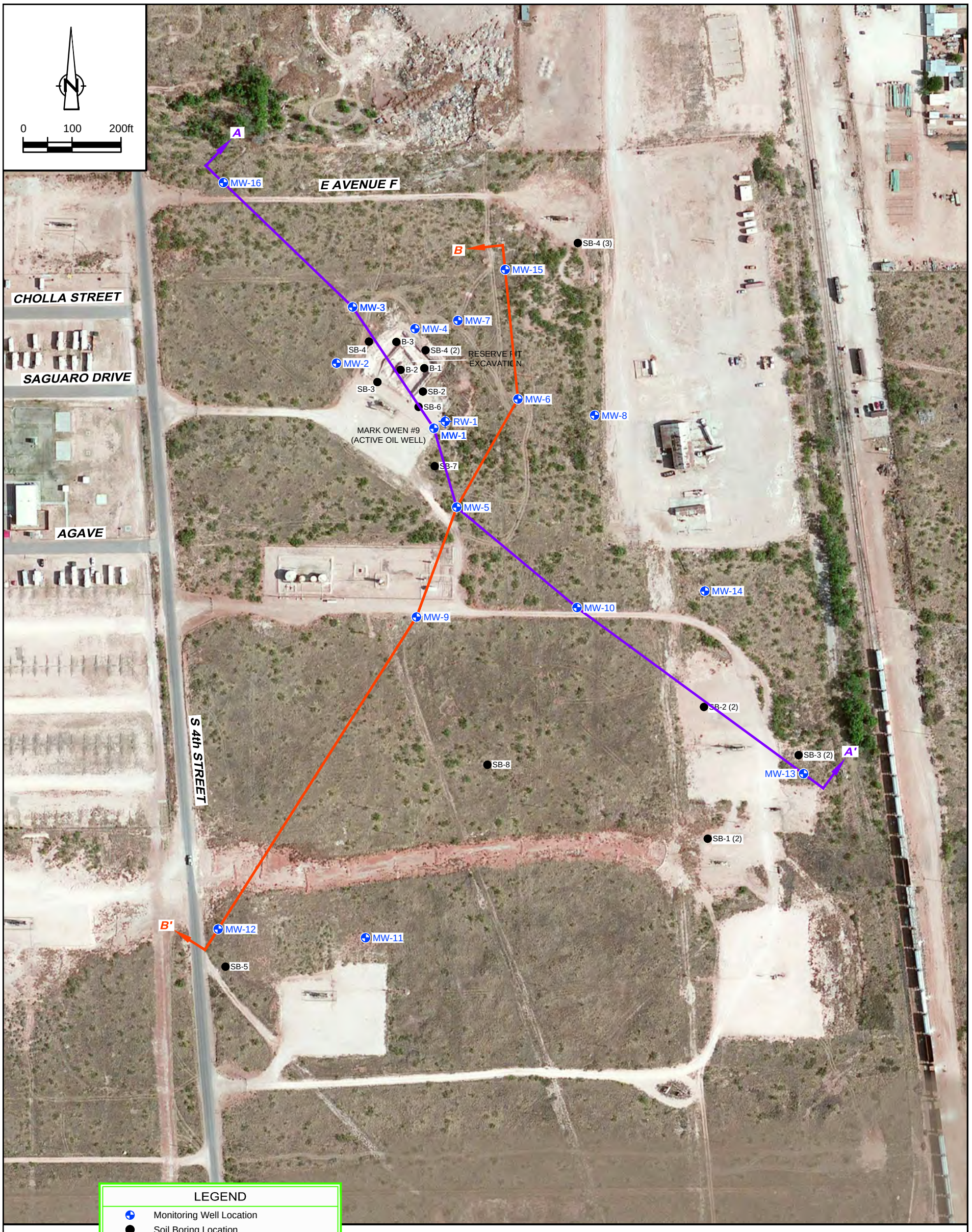
0 1/2 1 2
(Miles)

0 2000 4000 6000 8000
(Feet)

CONTOUR INTERVAL 5 FEET

Figure 1

SITE LOCATION MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company



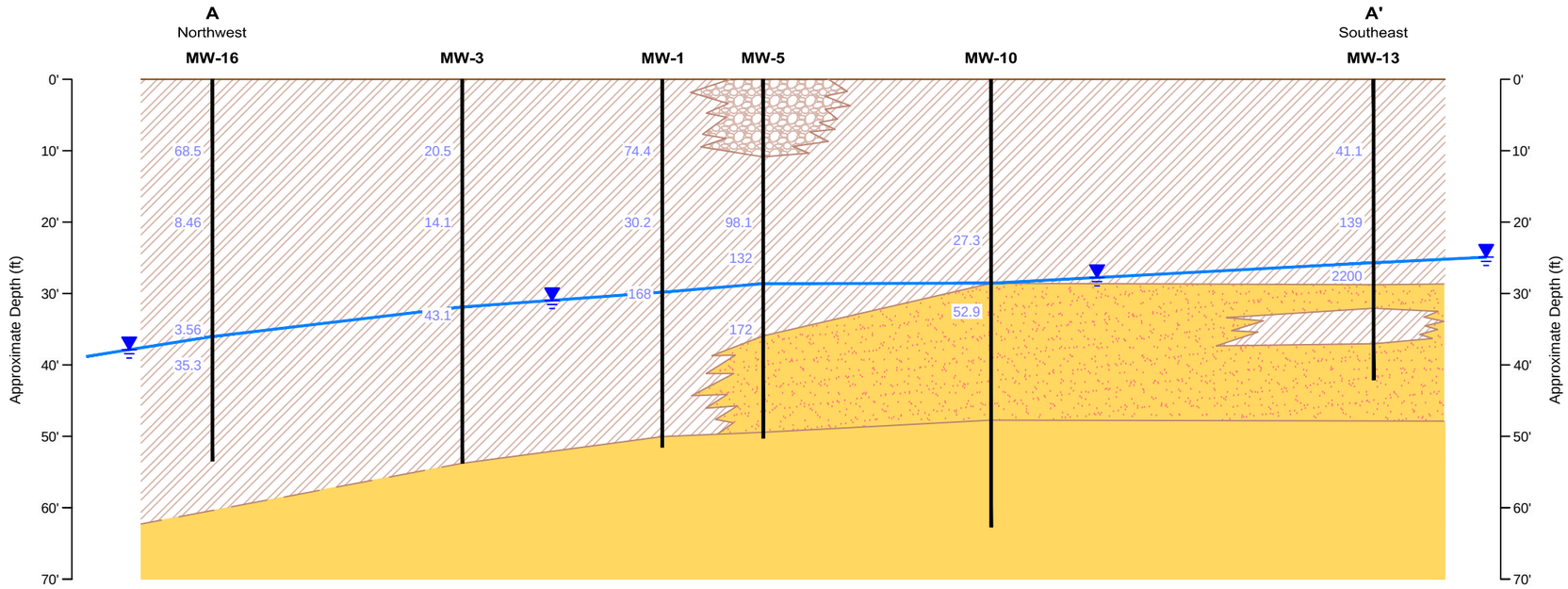
NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. MW-13, MW-14, MW-15, and MW-16 were installed in July 2014.
6. MW-12 was in stalled in December 2014.

Figure 2

SITE DETAILS MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

046121-10(012)GN-DL001 MAR 9/2016



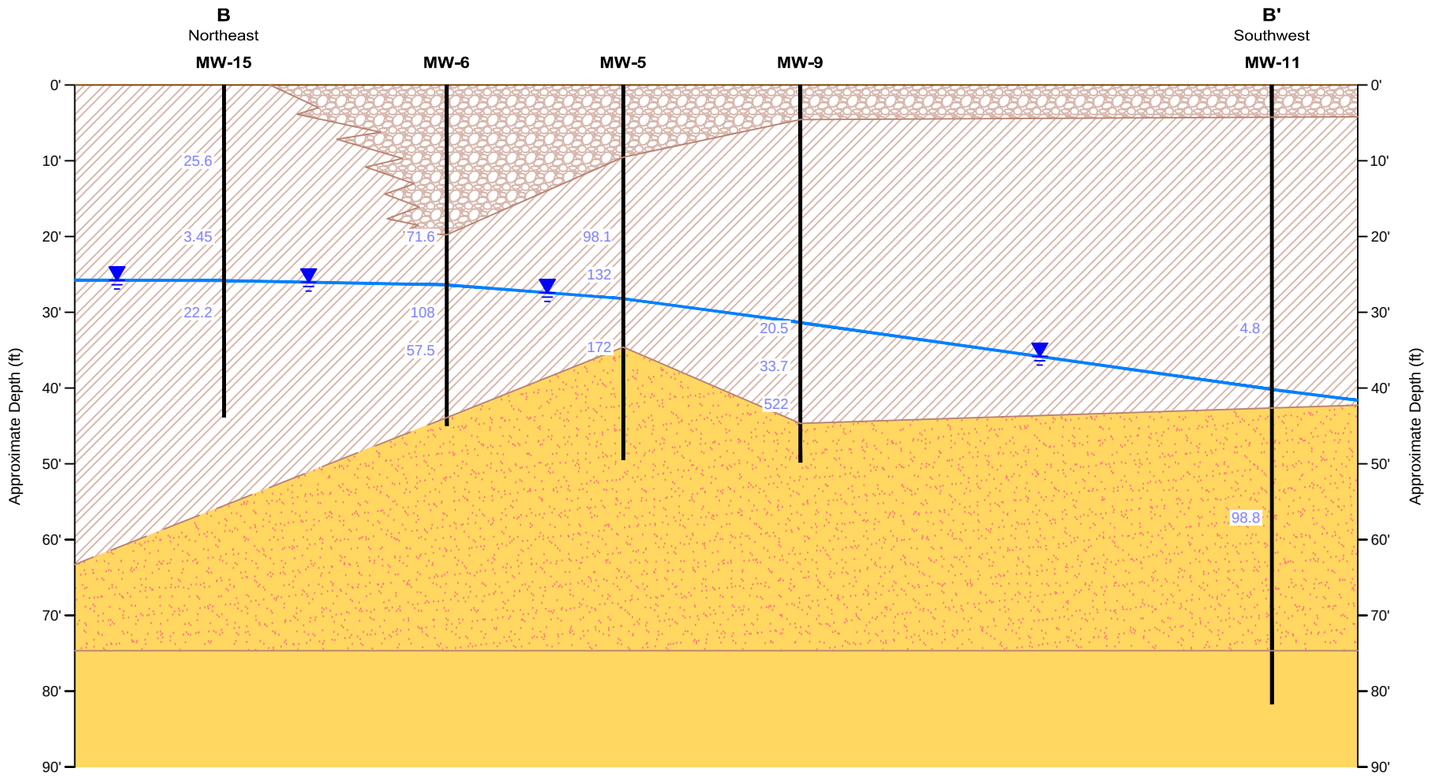
LEGEND

- CL
- SC
- Caliche
- SW/SP/SM
- 35.3 Chloride in Soil Concentrations (mg/kg)

Vertical Scale: 1" = 20'
Horizontal Scale: 1" = 200'

Figure 3

CROSS SECTION A-A'
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company



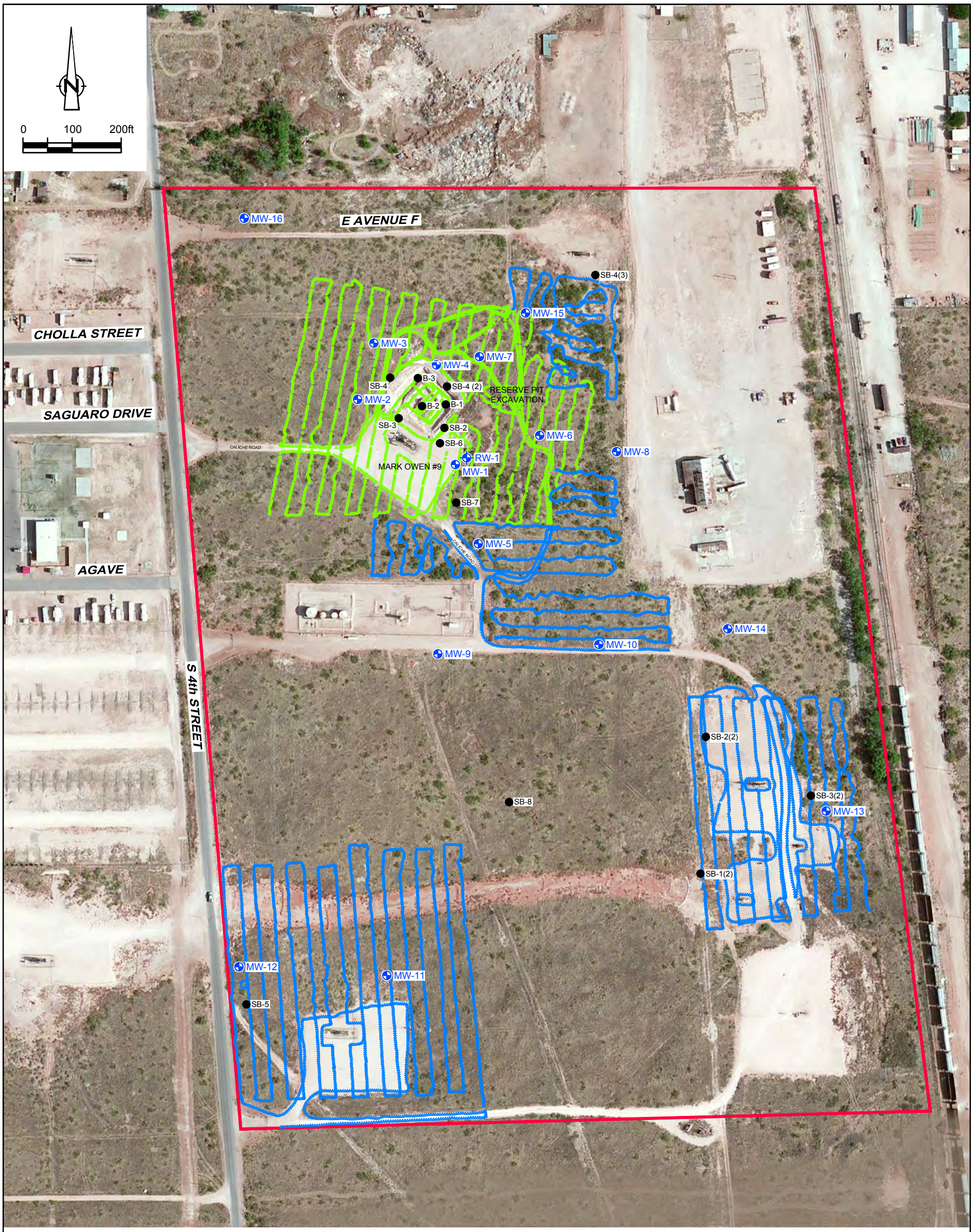
LEGEND

- CL
- SC
- Caliche
- SW/SP/SM
- 35.3 Chloride in Soil Concentrations (mg/kg)

Vertical Scale: 1" = 20'
Horizontal Scale: 1" = 200'

Figure 4

CROSS SECTION B-B'
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company



LEGEND

- Monitoring Well Location
- Soil Boring Location
- Survey Coverage December 2013
- Survey Coverage July 2015

NOTES:

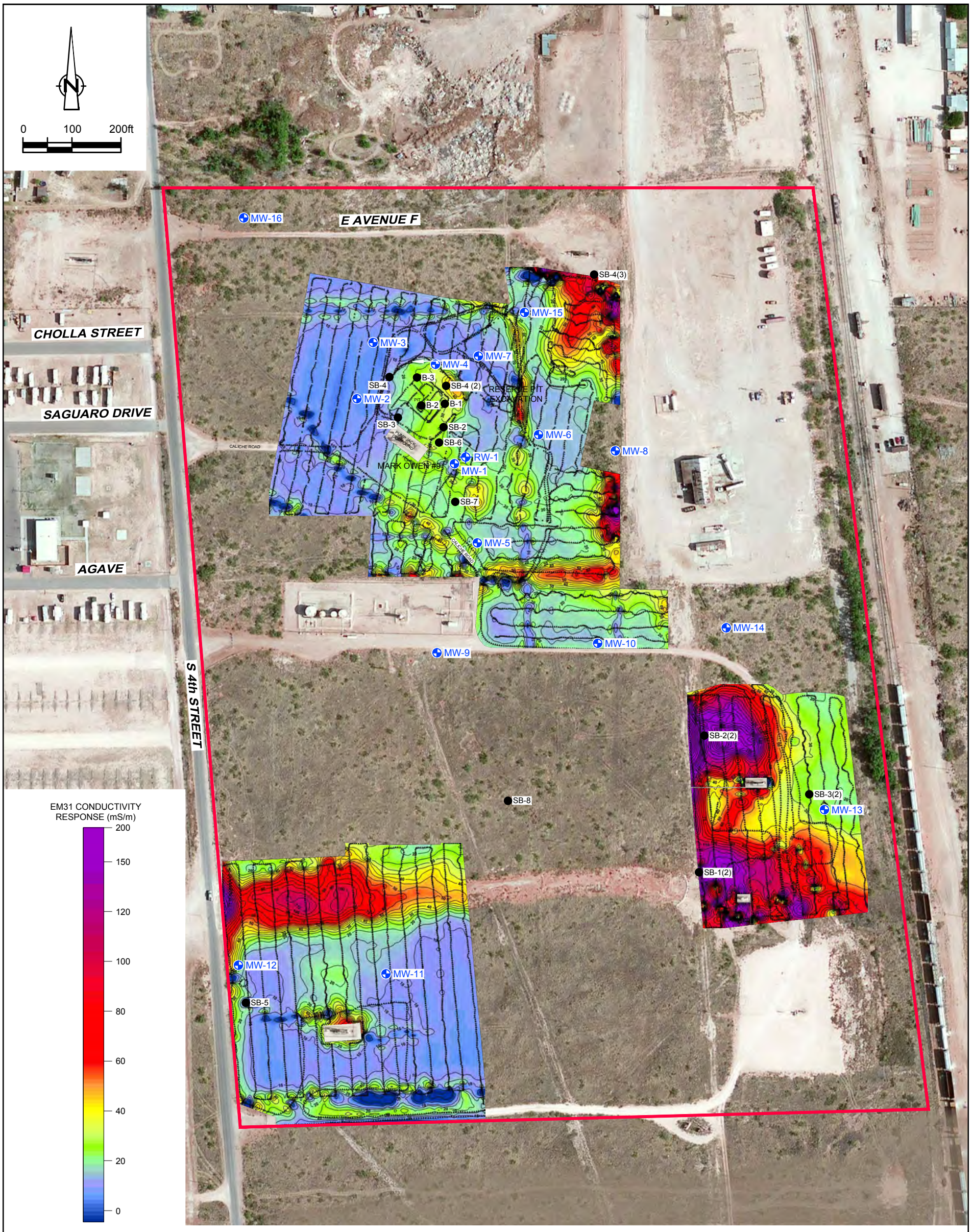
1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.

Figure 5

GEOPHYSICAL SURVEY COVERAGE
MARK OWEN WELLFIELD
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

GHD

46121-00(PRES002)GN-WA004 JAN 28, 2016



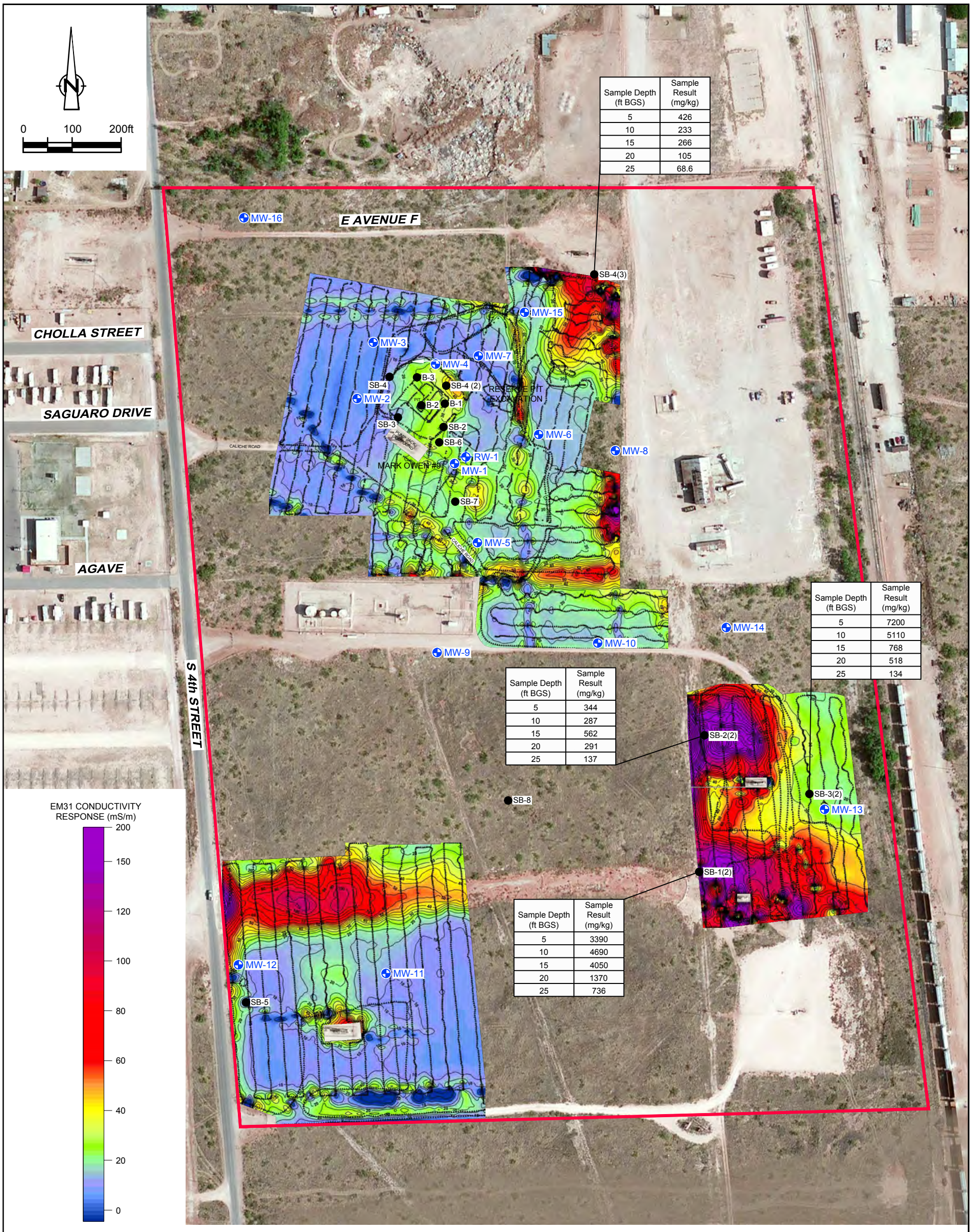
NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.

Figure 6

EM31 CONDUCTIVITY SURVEY RESULTS
MARK OWEN WELLFIELD
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

46121-00(PRES002)GN-WA003 JAN 28, 2016



Sample Depth (ft BGS)	Sample Result (mg/kg)
5	426
10	233
15	266
20	105
25	68.6

Sample Depth (ft BGS)	Sample Result (mg/kg)
5	7200
10	5110
15	768
20	518
25	134

Sample Depth (ft BGS)	Sample Result (mg/kg)
5	344
10	287
15	562
20	291
25	137

Sample Depth (ft BGS)	Sample Result (mg/kg)
5	3390
10	4690
15	4050
20	1370
25	736

LEGEND

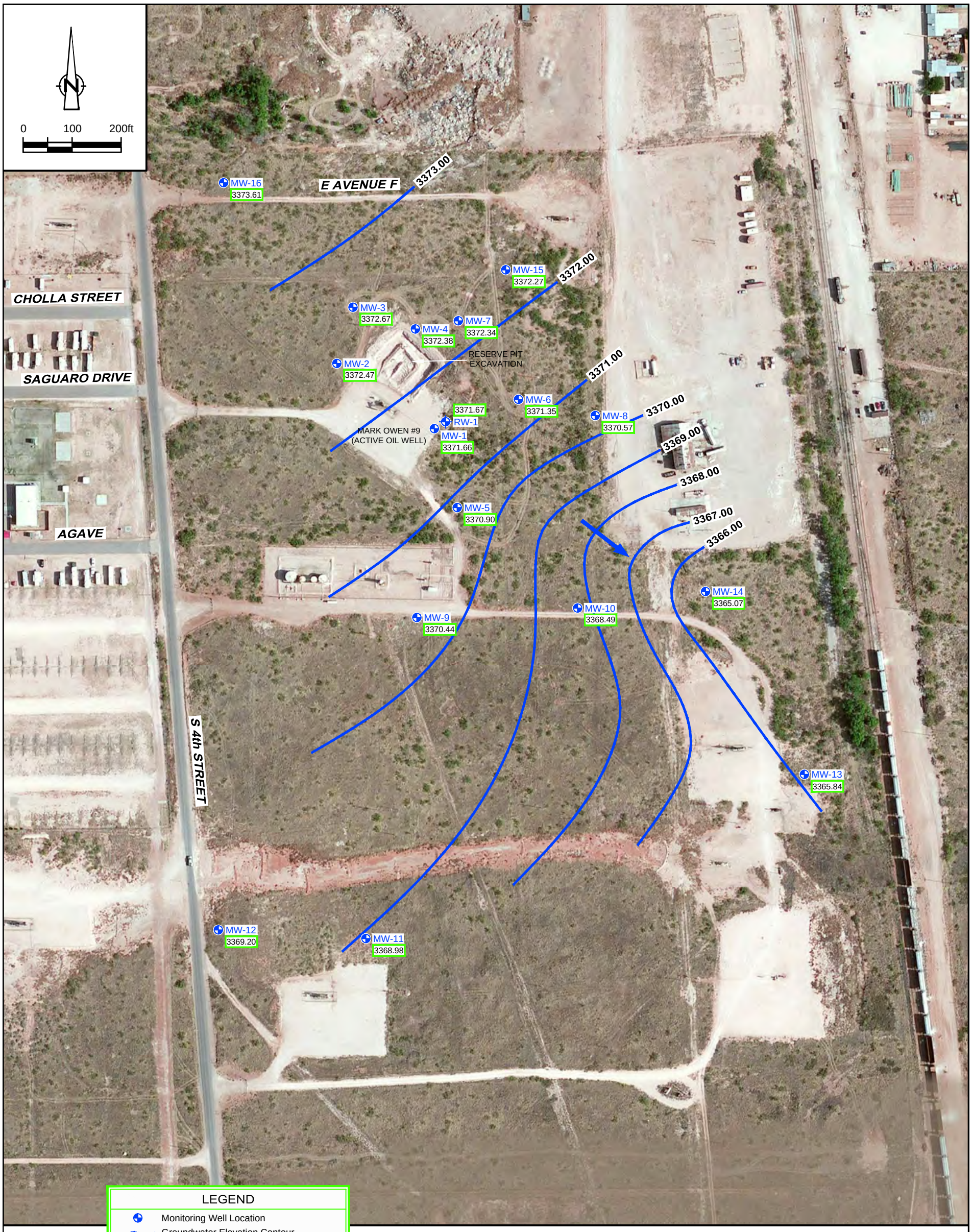
- Monitoring Well Location
- Soil Boring Location

NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.

Figure 7

DECEMBER 2015 CHLORIDE CONCENTRATION IN SOIL MAP
MARK OWEN WELLFIELD
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

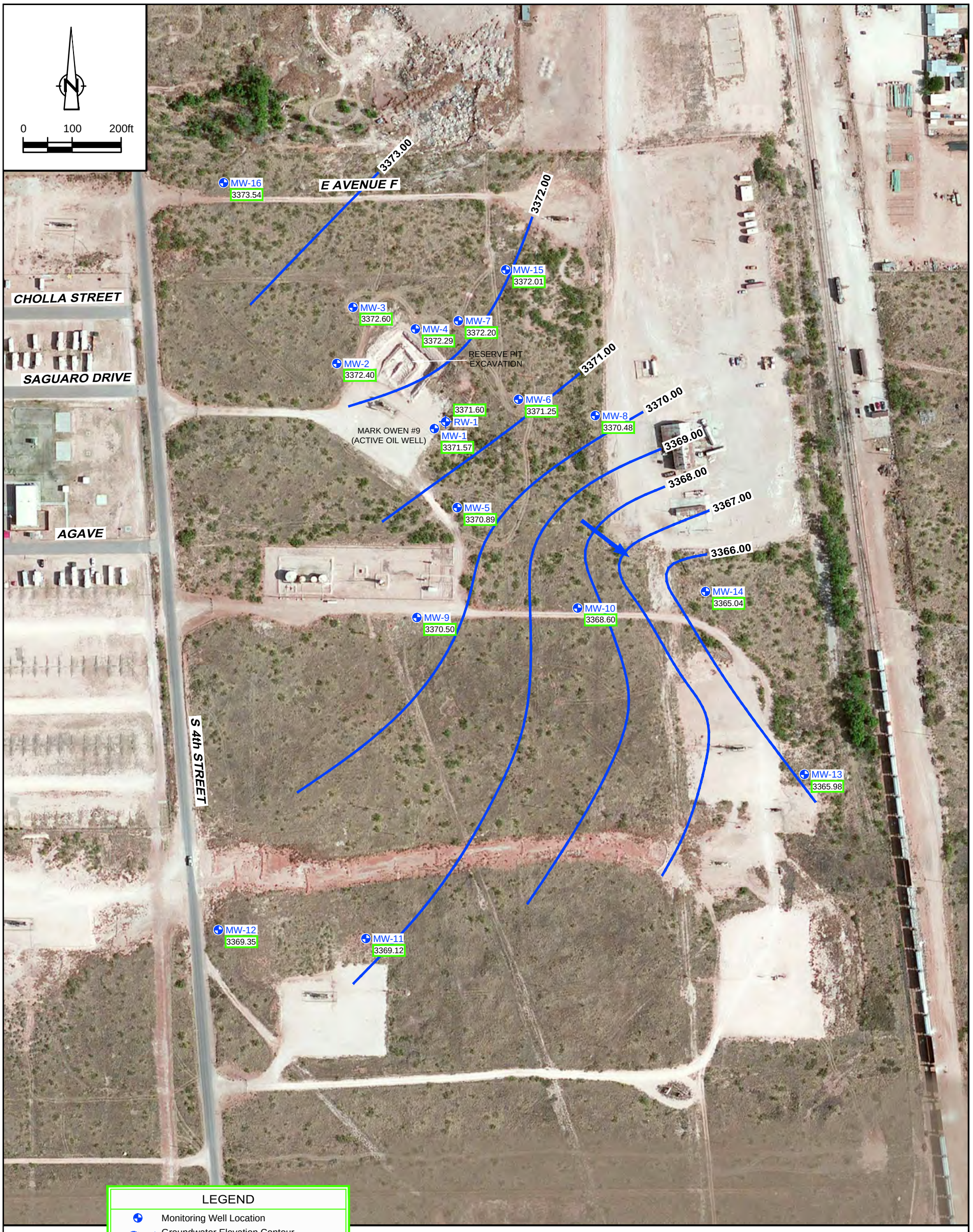


NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. Wells were gauged March 2015.

Figure 8

MARCH 2015 GROUNDWATER GRADIENT MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company



NOTES:

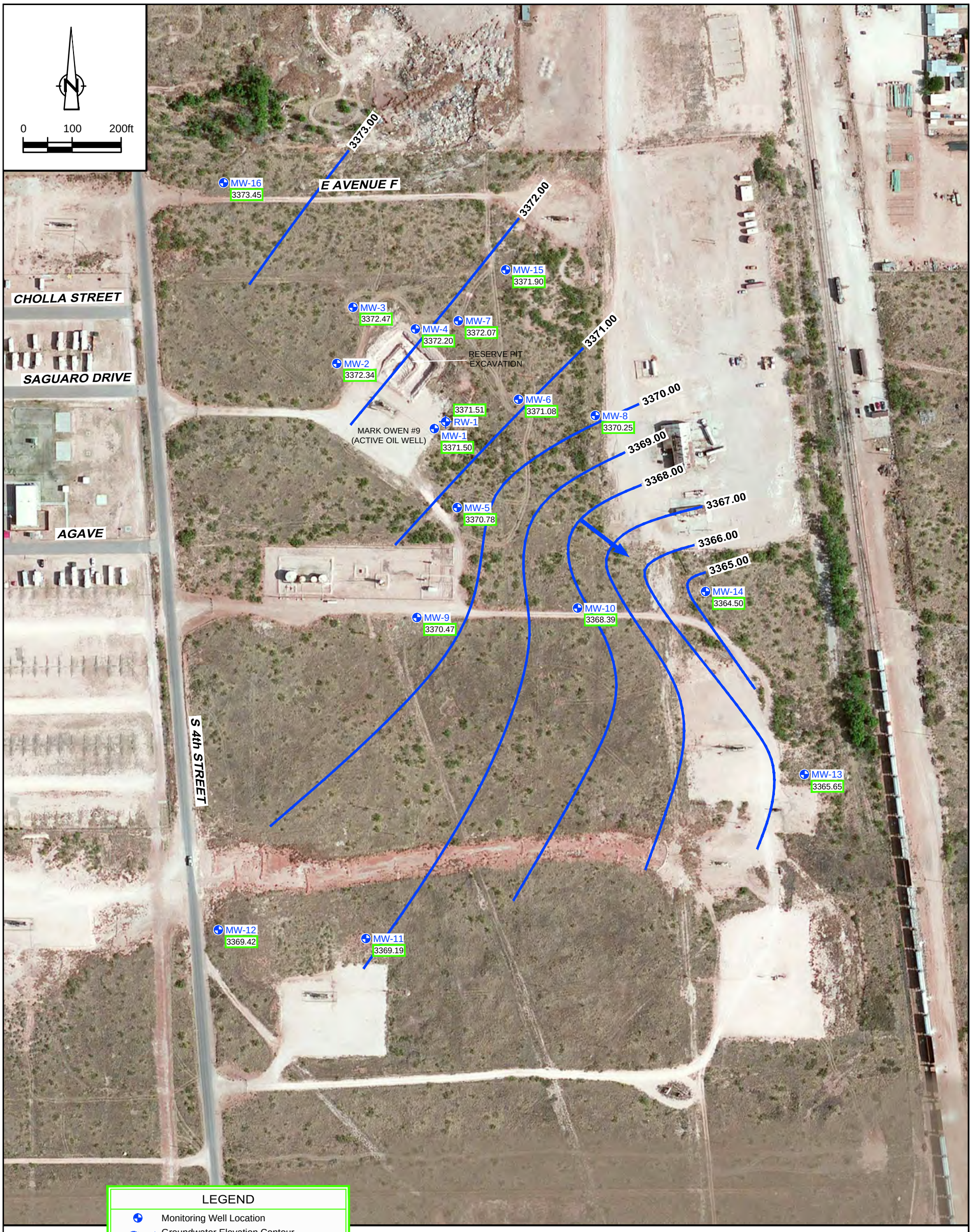
1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. Wells were gauged June 2015.

Figure 9

JUNE 2015 GROUNDWATER GRADIENT MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

GHD

046121-10(012)GN-DL001 MAR 10/2016



NOTES:

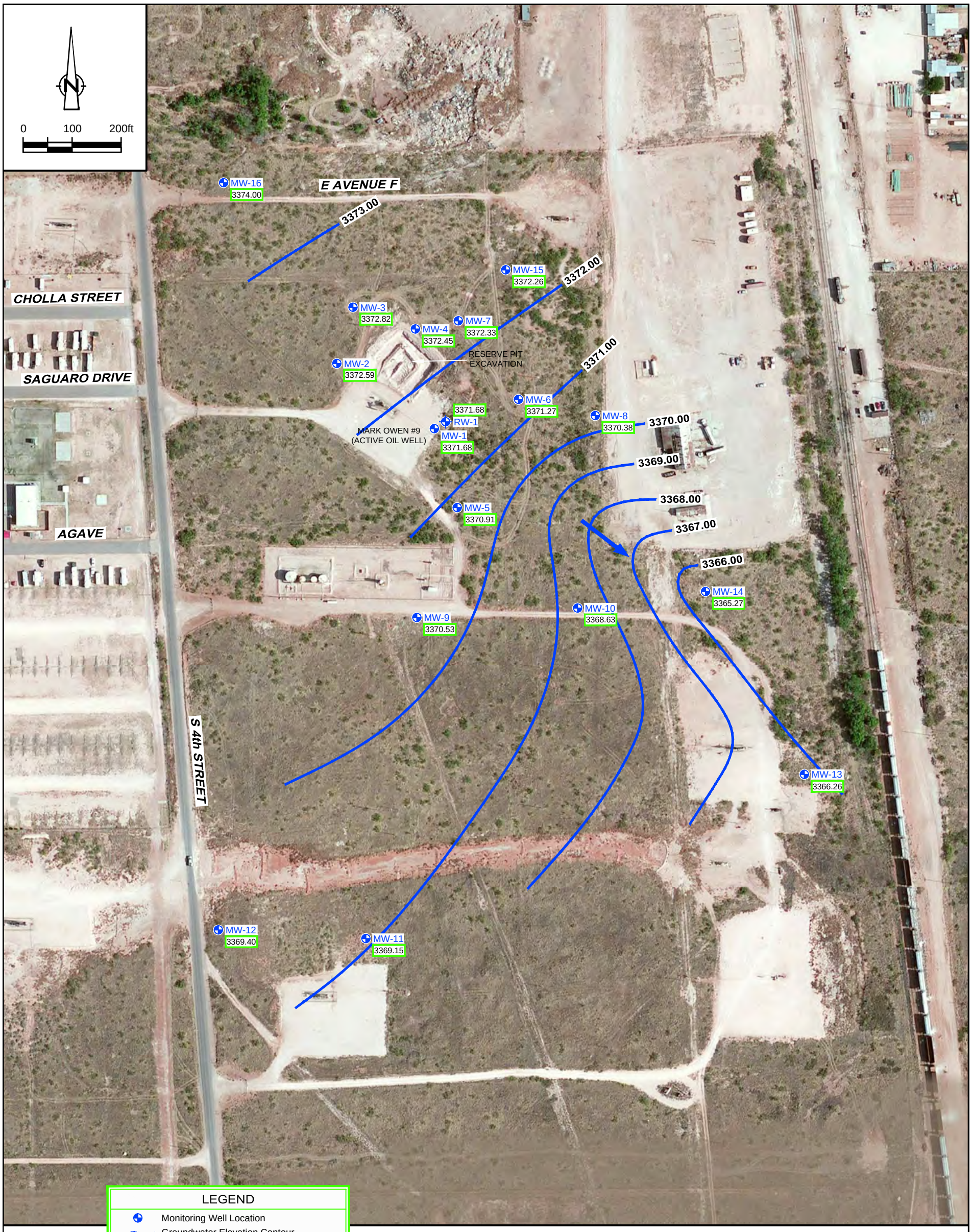
1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. Wells were gauged September 2015.

Figure 10

SEPTEMBER 2015 GROUNDWATER GRADIENT MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

GHD

046121-10(012)GN-DL001 MAR 10/2016



NOTES:

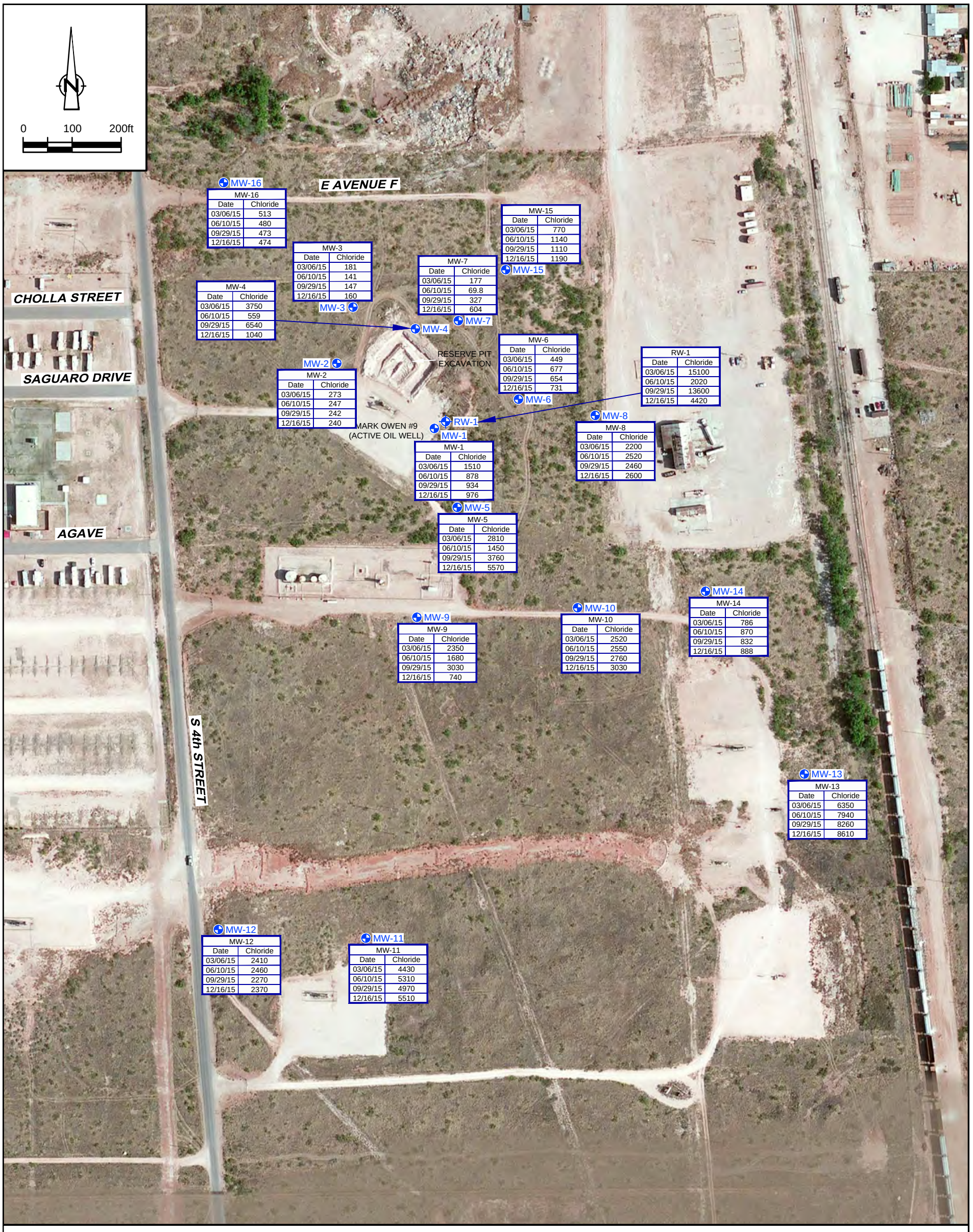
1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. Wells were gauged December 2015.

Figure 11

DECEMBER 2015 GROUNDWATER GRADIENT MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

GHD

046121-10(012)GN-DL001 MAR 10/2016



LEGEND
Monitoring Well Location

NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.
5. Chloride samples are in mg/L.

Figure 12

2015 CHLORIDE CONCENTRATION IN GROUNDWATER MAP
MARK OWEN #9 RESERVE PIT
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

046121-10(012)GN-DL001 MAR 10/2016

LEGEND

- Monitoring Well Location
- Soil Boring Location
- Survey Coverage December 2013
- Survey Coverage July 2015
- Proposed 2016 Survey Coverage

NOTES:

1. Soil boring, fence and monitor well locations surveyed by West and company December 3, 2007 and October 8, 2010.
2. MW-5, MW-6, and MW-7 were installed in September 2010.
3. MW-8, MW-9, and RW-1 were installed in September 2011.
4. MW-10 and MW-11 were installed in December 2012.

Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date: April 2011, Accessed: 2016.

Figure 13

PROPOSED GEOPHYSICAL SURVEY COVERAGE
MARK OWEN WELLFIELD
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM
Chevron Environmental Management Company

Tables

TABLE 1

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (Feet BGS)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	CHLORIDE (mg/kg)	TPH (8015 Modified)		
									TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH (GRO/DRO) (mg/kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Based on Total Ranking Score 30)											
			10 (mg/kg)	---	---	---	50 (mg/kg)	250 (mg/kg)	100 mg/kg		
Soil Boring Samples											
SB-1/MW-1 9-10'	10/22/2007	9-10	<0.00248	<0.00683	<0.00592	<0.001819	BDL	74.4	0.324J	**220**	**220**
SB-1/MW-1 19-20'	10/22/2007	19-20	<0.00254	<0.00699	<0.00607	<0.001869	BDL	**302**	0.392J	<1.25	<1.25
SB-1/MW-1 29-30'	10/22/2007	29-30	<0.00229	<0.0063	<0.00547	<0.0168	BDL	168	0.317J	<1.13	<1.13
SB-2 9-10'	10/23/2007	9-10	<0.00241	<0.00663	<0.00575	<0.01766	BDL	20.1	0.399J	<1.19	<1.19
SB-2 19-20'	10/23/2007	19-20	<0.00238	<0.00656	<0.00569	<0.01747	BDL	22.7	0.423J	<1.18	<1.18
SB-2 29-30'	10/23/2007	29-30	<0.00247	<0.00681	<0.00591	<0.01815	BDL	46.4	0.361J	<1.22	<1.22
SB-3 9-10'	10/23/2007	9-10	<0.00216	<0.00594	<0.00515	<0.01582	BDL	21.3	0.397J	78	78
SB-3 19-20'	10/23/2007	19-20	<0.00215	<0.00592	0.01010J	0.0201J	BDL	17.1	0.306J	<1.06	<1.06
SB-3 29-30'	10/23/2007	29-30	<0.00258	0.00717J	<0.00616	<0.0189	BDL	30.3	0.314J	16	16
SB-4 9-10'	10/23/2007	9-10	<0.00223	<0.00613	<0.00532	<0.01634	BDL	26.7	0.372J	13	13
SB-4 19-20'	10/23/2007	19-20	<0.00255	<0.00704	<0.0061	<0.01874	BDL	25.2	0.334J	<1.26	<1.26
SB-4 30-31'	10/23/2007	30-31	<0.00239	<0.00659	0.00828J	<0.01755	BDL	29.8	0.354J	<1.18	<1.18
SB-5/MW-2 9-10'	10/23/2007	9-10	<0.00229	<0.00631	<0.00547	<0.01680	BDL	12	0.368J	<1.13	<1.13
SB-5/MW-2 19-20'	10/23/2007	19-20	<0.0025	<0.00689	<0.00598	<0.01836	BDL	20.9	0.331J	<1.24	<1.24
SB-5/MW-2 33-34'	10/23/2007	33-34	<0.00216	<0.00596	<0.00517	<0.01589	BDL	35	0.330J	**320**	**320**
SB-6/MW-3 9-10'	10/24/2007	9-10	<0.00222	<0.00612	<0.00531	<0.01631	BDL	20.5	0.241J	<1.1	<1.1
SB-6/MW-3 19-20'	10/24/2007	19-20	<0.00209	<0.00574	<0.00498	<0.01531	BDL	14.1	0.315J	<1.03	<1.03
SB-6/MW-3 31-32'	10/24/2007	31-32	<0.00253	<0.00697	<0.00604	<0.01856	BDL	43.1	0.330J	**250**	**250**
SB-7/MW-4 9-10'	10/24/2007	9-10	<0.00258	<0.00711	<0.00617	<0.01895	BDL	24.2	0.352J	26	26
SB-7/MW-4 19-20'	10/24/2007	19-20	<0.00206	<0.00569	<0.00493	<0.01516	BDL	**1080**	0.358J	15	15
SB-7/MW-4 29-30'	10/24/2007	29-30	<0.00263	<0.00726	<0.00629	<0.01933	BDL	217	0.389J	**410**	**410**
MW-5 20'	9/22/2010	20	<0.0021	<0.0021	<0.0021	<0.0054	BDL	98.1	<0.200	11	11
MW-5 25'	9/22/2010	25	<0.0022	<0.0022	<0.0022	<.0.0055	BDL	132	<0.200	8.2	8.2
MW-5 35'	9/22/2010	35	<0.0023	<0.0023	<0.0023	<0.0056	BDL	172	<0.200	<4.6	BDL
MW-6 20'	9/22/2010	20'	<0.0021	<0.0021	<0.0021	<0.0052	BDL	71.6	<0.200	<4.2	BDL

TABLE 1

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (Feet BGS)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	CHLORIDE (mg/kg)	TPH (8015 Modified)		
									TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH (GRO/DRO) (mg/kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Based on Total Ranking Score 30)											
			10 (mg/kg)	---	---	---	50 (mg/kg)	250 (mg/kg)	100 mg/kg		
Soil Boring Samples											
MW-6 30'	9/22/2010	30	<0.0022	<0.0022	<0.0022	<0.0056	BDL	108	<0.200	11	11
MW-6 35'	9/22/2010	35	<0.0020	<0.0020	<0.0020	<0.0051	BDL	57.5	<0.200	7.8	7.8
MW-7 5'	9/22/2010	5	<0.0021	<0.0021	<0.0021	<0.0053	BDL	11.5	<0.200	<4.2	BDL
MW-7 10'	9/22/2010	10	<0.0020	<0.0020	<0.0020	<0.0051	BDL	30.9	<0.200	<4.2	BDL
MW-7 35'	9/22/2010	35	<0.0022	<0.0022	<0.0022	<0.0055	BDL	14.1	<0.200	<4.4	BDL
MW-8 30'-35'	9/12/2011	30-35	<0.00109	<0.00219	<0.00109	<0.00328	BDL	**309**	<16.4	31	60
MW-8 40'-45'	9/12/2011	40-45	<0.00117	<0.00233	<0.00117	<0.00333	BDL	**275**	<17.6	<17.6	BDL
MW-8 45-50	9/12/2011	45-50	<0.00111	<0.00222	<0.00111	<0.00333	BDL	105	<16.6	<16.6	BDL
MW-9 30-35	9/12/2011	30-35	<0.00107	<0.00215	<0.00107	<0.00322	BDL	20.5	<16.1	<16.1	BDL
MW-9 35-40	9/12/2011	35-40	<0.00109	<0.00218	<0.00109	<0.00327	BDL	33.7	<16.4	<16.4	BDL
MW-9 45-50	9/12/2011	45-50	<0.00124	<0.00249	<0.00124	<0.00373	BDL	**522**	<18.7	<18.7	BDL
RW-1 10-15	9/13/2011	10-15	<0.00104	<0.00208	<0.00104	<0.00312	BDL	10.4	<15.6	<15.6	BDL
RW-1 30-35	9/13/2011	30-35	<0.00106	<0.00212	<0.00106	<0.00318	BDL	93.5	<15.9	<15.9	BDL
RW-1 40-45	9/13/2011	40-45	<0.00134	<0.00268	<0.00134	<0.00402	BDL	**3770**	<20.3	<20.3	BDL
MW-10 20-25	12/3/2012	20-25	<0.00105	<0.00211	<0.00105	<0.00105	<0.00105	27.3	<15.9	<15.9	BDL
MW-10 30-35	12/3/2012	30-35	<0.00116	<0.00233	<0.00116	<0.00116	<0.00116	52.9	<17.5	<17.5	BDL
MW-11 35-40	12/3/2012	35-40	<0.00101	<0.00203	<0.00101	<0.00101	<0.00101	4.8	<15.3	<15.3	BDL
MW-11 50-55	12/3/2012	50-55	<0.00111	<0.00223	<0.00111	<0.00111	<0.00111	98.8	<16.8	<16.8	BDL
S-046121-111813-CM-B-1 (5-6.5)	11/18/13	5-6.5	NA	NA	NA	NA	NA	**570**	NA	NA	NA
S-046121-111813-CM-B-1 (10-11.5)	11/18/13	10-11.5	NA	NA	NA	NA	NA	**904**	NA	NA	NA
S-046121-111813-CM-B-1 (15-16.5)	11/18/13	15-16.5	NA	NA	NA	NA	NA	**3,300**	NA	NA	NA
S-046121-111813-CM-B-1 (20.21.5)	11/18/13	20-21.5	NA	NA	NA	NA	NA	**968**	NA	NA	NA
S-074636-112013-CM-B-2(5-6.5)	11/18/13	5-6.5	NA	NA	NA	NA	NA	26.9	NA	NA	NA
S-074636-112013-CM-B-2(10-11.5)	11/18/13	10-11.5	NA	NA	NA	NA	NA	16.9	NA	NA	NA
S-074636-112013-CM-B-2(15-16.5)	11/18/13	15-16.5	NA	NA	NA	NA	NA	105	NA	NA	NA

TABLE 1

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (Feet BGS)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	CHLORIDE (mg/kg)	TPH (8015 Modified)		
									TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH (GRO/DRO) (mg/kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Based on Total Ranking Score 30)											
			10 (mg/kg)	---	---	---	50 (mg/kg)	250 (mg/kg)	100 mg/kg		
Soil Boring Samples											
S-074636-112013-CM-B-2(20-21.5)	11/18/13	20-21.5	NA	NA	NA	NA	NA	167	NA	NA	NA
S-046121-111813-CM-B-3 (5-6.5)	11/18/13	5-6.5	NA	NA	NA	NA	NA	15.9	NA	NA	NA
S-046121-111813-CM-B-3 (10-11.5)	11/18/13	10-11.5	NA	NA	NA	NA	NA	16.0	NA	NA	NA
S-046121-111813-CM-B-3 (16-17.5)	11/18/13	16-17.5	NA	NA	NA	NA	NA	64.6	NA	NA	NA
S-046121-111813-CM-B-3 (20-21.5)	11/18/13	20-21.5	NA	NA	NA	NA	NA	109	NA	NA	NA
S-046121-070814-CK-MW-13-10	7/8/14	10	<0.00106	<0.00211	<0.00106	<0.00106	<0.00106	41.1	<15.9	<15.9	<15.9
S-046121-070814-CK-MW-13-20	7/8/14	20	<0.00112	<0.00224	<0.00112	<0.00112	<0.00112	139	<16.9	27.8	27.8
S-046121-070814-CK-MW-13-28	7/8/14	28	<0.00161	<0.00322	<0.00161	<0.00161	<0.00161	**2220**	<24.1	<24.1	<24.1
S-046121-070814-CK-MW-14-10	7/8/14	10	<0.00121	<0.00241	<0.00121	<0.00121	<0.00121	514	<18.1	<18.1	<18.1
S-046121-070814-CK-MW-14-20	7/8/14	20	<0.00111	<0.00222	<0.00111	<0.00111	<0.00111	202	<16.7	<16.7	<16.7
S-046121-070814-CK-MW-14-30	7/8/14	30	<0.00109	<0.00218	<0.00109	<0.00109	<0.00109	102	<16.4	<16.4	<16.4
S-046121-070814-CK-MW-15-10	7/8/14	10	<0.00109	<0.00219	<0.00109	<0.00109	<0.00109	25.6	<16.5	34.8	<16.5
S-046121-070814-CK-MW-15-20	7/8/14	20	<0.00101	<0.00202	<0.00101	<0.00101	<0.00101	3.45	<15.2	<15.2	<15.2
S-046121-070814-CK-MW-15-25	7/8/14	25	<0.00102	<0.00204	<0.00102	<0.00102	<0.00102	22.2	<15.3	<15.3	<15.3
S-046121-070814-CK-MW-16-10	7/8/14	10	<0.00103	<0.00205	<0.00103	<0.00103	<0.00103	68.5	<15.4	<15.4	<15.4
S-046121-070814-CK-MW-16-20	7/8/14	20	<0.00101	<0.00203	<0.00101	<0.00101	<0.00101	8.46	<15.2	<15.2	<15.2
S-046121-070814-CK-MW-16-30	7/8/14	30	<0.00100	<0.00201	<0.00100	<0.00100	<0.00100	3.56	<15.1	<15.1	<15.1
S-046121-070814-CK-MW-16-35	7/8/14	35	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	35.3	<15.9	37.6	37.6
S-046121-070814-CK-SB-4-10	7/8/14	10	<0.00102	<0.00203	<0.00102	<0.00102	<0.00102	15.0	<15.3	<15.3	<15.3
S-046121-070814-CK-SB-4-20	7/8/14	20	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	18.9	<15.8	<15.8	<15.8
S-046121-070814-CK-SB-4-25	7/8/14	25	<0.00102	<0.00204	<0.00102	<0.00102	<0.00102	25.5	<15.3	<15.3	<15.3
SO-046121-120814-CK-SB-7-10-11.5	12/8/14	10-11.5	<0.00107	<0.00213	<0.00107	<0.00107	<0.00107	**286**	<16.0	16.1	16.1
SO-046121-120814-CK-SB-7-20-21.5	12/8/14	20-21.5	<0.00107	<0.00214	<0.00107	<0.00107	<0.00107	62.7	<16.1	<16.1	<16.1
SO-046121-120814-CK-SB-7-25-26.5	12/8/14	25-26.5	<0.00113	<0.00225	<0.00113	<0.00113	<0.00113	83.8	<16.9	<16.9	<16.9
SO-046121-120914-CK-SB-6-10-11.5	12/9/14	10-11.5	<0.00106	<0.00213	<0.00106	<0.00106	<0.00106	39.4	<16.1	<16.1	<16.1

TABLE 1

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (Feet BGS)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	CHLORIDE (mg/kg)	TPH (8015 Modified)		
									TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH (GRO/DRO) (mg/kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Based on Total Ranking Score 30)											
			10 (mg/kg)	---	---	---	50 (mg/kg)	250 (mg/kg)	100 mg/kg		
Soil Boring Samples											
SO-046121-120914-CK-SB-6-20-21.5	12/9/14	20-21.5	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	168	<15.7	<15.7	<15.7
SO-046121-120914-CK-SB-6-25-26.5	12/9/14	25-26.5	<0.00114	<0.00229	<0.00114	<0.00114	<0.00114	140	<17.3	<17.3	<17.3
SO-046121-120914-CK-MW-12-25-26.5	12/9/14	25-26.5	<0.00103	<0.00206	<0.00103	<0.00103	<0.00103	3.38	<15.4	<15.4	<15.4
SO-046121-120914-CK-MW-12-30-31.5	12/9/14	30-31.5	<0.00102	<0.00203	<0.00102	<0.00102	<0.00102	3.30	<15.3	<15.3	<15.3
SO-046121-120914-CK-MW-12-40-41.5	12/9/14	40-41.5	<0.00102	<0.00203	<0.00102	<0.00102	<0.00102	3.60	<15.3	<15.3	<15.3
SO-046121-121014-CK-SB-8-20-21.5	12/10/14	20-21.5	<0.00109	<0.00217	<0.00109	<0.00109	<0.00109	3.41	<16.3	<16.3	<16.3
S-046121-063015-SP-01	6/30/15	NW pit floor	NA	NA	NA	NA	NA	3.09	NA	NA	NA
S-046121-063015-SP-02	6/30/15	NE pit floor	NA	NA	NA	NA	NA	2.69	NA	NA	NA
S-046121-063015-SP-03	6/30/15	SE pit floor	NA	NA	NA	NA	NA	2.73	NA	NA	NA
S-046121-063015-SP-04	6/30/15	SW pit floor	NA	NA	NA	NA	NA	<2.00	NA	NA	NA
S-046121-063015-SP-05	6/30/15	Center pit floor	NA	NA	NA	NA	NA	8.81	NA	NA	NA
SS-046121-JNF-SB1	12/18/15	5	NA	NA	NA	NA	NA	**3390**	NA	NA	NA
SS-046121-JNF-SB1	12/18/15	10	NA	NA	NA	NA	NA	**4690**	NA	NA	NA
SS-046121-JNF-SB1	12/18/15	15	NA	NA	NA	NA	NA	**4050**	NA	NA	NA
SS-046121-JNF-SB1	12/18/15	20	NA	NA	NA	NA	NA	**1370**	NA	NA	NA
SS-046121-JNF-SB1	12/18/15	25	NA	NA	NA	NA	NA	**736**	NA	NA	NA
SS-046121-JNF-SB2	12/18/15	5	NA	NA	NA	NA	NA	**344**	NA	NA	NA
SS-046121-JNF-SB2	12/18/15	10	NA	NA	NA	NA	NA	**287**	NA	NA	NA
SS-046121-JNF-SB2	12/18/15	15	NA	NA	NA	NA	NA	**562**	NA	NA	NA
SS-046121-JNF-SB2	12/18/15	20	NA	NA	NA	NA	NA	**291**	NA	NA	NA
SS-046121-JNF-SB2	12/18/15	25	NA	NA	NA	NA	NA	137	NA	NA	NA
SS-046121-JNF-SB3	12/18/15	5	NA	NA	NA	NA	NA	**7200**	NA	NA	NA
SS-046121-JNF-SB3	12/18/15	10	NA	NA	NA	NA	NA	**5110**	NA	NA	NA
SS-046121-JNF-SB3	12/18/15	15	NA	NA	NA	NA	NA	**768**	NA	NA	NA

TABLE 1

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (Feet BGS)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	CHLORIDE (mg/kg)	TPH (8015 Modified)		
									TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH (GRO/DRO) (mg/kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Based on Total Ranking Score 30)											
			10 (mg/kg)	---	---	---	50 (mg/kg)	250 (mg/kg)	100 mg/kg		
Soil Boring Samples											
SS-046121-JNF-SB3	12/18/15	20	NA	NA	NA	NA	NA	**518**	NA	NA	NA
SS-046121-JNF-SB3	12/18/15	25	NA	NA	NA	NA	NA	134	NA	NA	NA
SS-046121-JNF-SB4	12/18/15	5	NA	NA	NA	NA	NA	**426**	NA	NA	NA
SS-046121-JNF-SB4	12/18/15	10	NA	NA	NA	NA	NA	233	NA	NA	NA
SS-046121-JNF-SB4	12/18/15	15	NA	NA	NA	NA	NA	**266**	NA	NA	NA
SS-046121-JNF-SB4	12/18/15	20	NA	NA	NA	NA	NA	105	NA	NA	NA
SS-046121-JNF-SB4	12/18/15	25	NA	NA	NA	NA	NA	68.6	NA	NA	NA

Notes:

mg/kg = milligrams per kilogram
NA = not analyzed
BDL = below detection limit
BGS = below ground surface
Highlighted cells indicate concentrations above the NMOCD RRAL

TABLE 2

GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

WELL	TOC elev[1]	Well Diameter (inches)	Screen interval (bgs[3])	DATE	Total Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL[2])
MW-01	3403.68	4	16-51	11/1/2007	54.00	32.55	3371.13
				4/25/2008	54.03	32.60	3371.08
				9/16/2008	--	32.81	3370.87
				4/20/2009	55.00	32.72	3370.96
				10/26/2009	54.10	32.75	3370.93
				2/25/2010	53.90	32.68	3371.00
				6/3/2010	54.02	32.80	3370.88
				8/31/2010	53.85	32.51	3371.17
				11/22/2010	53.90	32.40	3371.28
				3/10/2011	53.86	32.44	3371.24
				6/3/2011	53.88	32.80	3370.88
				8/23/2011	53.88	32.78	3370.90
				12/16/2011	--	32.69	3370.99
				3/22/2012	54.17	32.66	3371.02
				6/11/2012	--	32.79	3370.89
				9/25/2012	53.87	32.90	3370.78
				12/13/2012	54.10	32.71	3370.97
				3/18/2013	53.89	32.70	3370.98
				6/6/2013	54.08	32.84	3370.84
				9/11/2013	53.90	32.87	3370.81
				11/19/2013	53.94	32.61	3371.07
				5/12/2014	54.12	32.75	3370.93
				8/6/2014	54.02	32.89	3370.79
				11/4/2014	53.80	31.92	3371.76
				1/12/2015	53.93	31.94	3371.74
				3/5/2015	53.93	32.02	3371.66
				6/9/2015	--	32.11	3371.57
				9/28/2015	54.12	32.18	3371.50
				12/15/2015	54.12	32.00	3371.68
MW-02	3408.23	4	22-57	11/1/2007	60.00	36.24	3371.99
				4/25/2008	60.29	36.40	3371.83
				9/16/2008	--	36.48	3371.75
				4/20/2009	60.22	36.45	3371.78
				10/26/2009	60.30	36.46	3371.77
				2/25/2010	61.25	36.42	3371.81
				6/3/2010	60.26	36.41	3371.82
				8/31/2010	60.28	36.05	3372.18
				11/22/2010	60.19	35.93	3372.30
				3/10/2011	60.19	36.18	-36.18
				6/3/2011	60.18	36.36	3371.87
				8/23/2011	60.18	36.31	3371.92
				12/16/2011	60.18	36.34	3371.89
				3/22/2012	60.33	36.35	3371.88
				6/11/2012	--	36.49	3371.74
				9/25/2012	60.18	36.51	3371.72
				12/13/2012	60.18	36.33	3371.90
				3/18/2013	60.18	36.45	3371.78
				6/6/2013	60.29	36.59	3371.64
				9/11/2013	60.14	36.45	3371.78
				11/19/2013	60.68	36.11	3372.12
				5/12/2014	60.37	36.47	3371.76
				8/6/2014	60.12	36.53	3371.70
				11/4/2014	60.16	35.51	3372.72
				1/12/2015	60.19	35.68	3372.55
				3/5/2015	60.19	35.76	3372.47
				6/9/2015	--	35.83	3372.40
				9/28/2015	60.28	35.89	3372.34
				12/15/2015	60.28	35.64	3372.59

TABLE 2

GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

WELL	TOC elev[1]	Well Diameter (inches)	Screen interval (bgs[3])	DATE	Total Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL[2])
MW-03	3407.04	4	19-54	11/1/2007	56.50	34.69	3372.35
				4/25/2008	57.55	34.89	3372.15
				9/16/2008	--	35.00	3372.04
				4/20/2009	57.51	35.02	3372.02
				10/26/2009	57.44	35.05	3371.99
				2/25/2010	58.60	34.88	3372.16
				6/3/2010	57.52	35.03	3372.01
				8/31/2010	57.55	34.62	3372.42
				11/22/2010	57.55	34.53	3372.51
				3/10/2011	57.43	34.81	3372.23
				6/3/2011	57.47	34.91	3372.13
				8/23/2011	57.45	34.96	3372.08
				12/16/2011	--	35.02	3372.02
				3/22/2012	57.58	35.02	3372.02
				6/11/2012	--	35.15	3371.89
				9/25/2012	57.46	35.15	3371.89
				12/13/2012	57.58	35.03	3372.01
				3/18/2013	57.58	35.11	3371.93
				6/6/2013	57.53	35.27	3371.77
				9/11/2013	57.49	35.17	3371.87
				11/19/2013	58.02	34.85	3372.19
				5/12/2014	57.55	35.14	3371.90
				8/6/2014	57.52	35.20	3371.84
				11/4/2014	57.47	33.97	3373.07
				1/12/2015	57.42	34.23	3372.81
				3/5/2015	57.42	34.37	3372.67
				6/9/2015	--	34.44	3372.60
				9/28/2015	57.51	34.57	3372.47
				12/15/2015	57.51	34.22	3372.82
MW-04	3404.74	4	16-51	11/1/2007	54.00	32.69	3372.05
				4/25/2008	54.22	32.83	3371.91
				9/16/2008	--	33.02	3371.72
				4/20/2009	54.23	33.02	3371.72
				10/26/2009	54.25	33.05	3371.69
				2/25/2010	54.92	33.00	3371.74
				6/3/2010	54.07	33.05	3371.69
				8/31/2010	54.15	32.85	3371.89
				11/22/2010	54.15	32.55	3372.19
				3/10/2011	54.14	32.79	3371.95
				6/3/2011	54.15	33.04	3371.70
				8/23/2011	54.15	33.00	3371.74
				12/16/2011	--	33.02	3371.72
				3/22/2012	54.25	33.04	3371.70
				6/11/2012	--	33.15	3371.59
				9/25/2012	54.15	33.28	3371.46
				12/13/2012	54.14	33.08	3371.66
				3/18/2013	54.23	33.09	3371.65
				6/6/2013	54.25	33.28	3371.46
				9/11/2013	54.02	33.44	3371.30
				11/19/2013	54.19	32.92	3371.82
				5/12/2014	54.30	33.15	3371.59
				8/6/2014	54.19	33.30	3371.44
				11/4/2014	54.15	32.00	3372.74
				1/12/2015	54.10	32.21	3372.53
				3/5/2015	54.10	32.36	3372.38
				6/9/2015	--	32.45	3372.29
				9/28/2015	54.27	32.54	3372.20
				12/15/2015	54.27	32.29	3372.45

TABLE 2

GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

WELL	TOC elev[1]	Well Diameter (inches)	Screen interval (bgs[3])	DATE	Total Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL[2])
MW-05	3402.10	4	15-50	11/22/2010	52.74	31.62	3370.48
				3/10/2011	52.64	31.59	3370.51
				6/3/2011	52.65	31.88	3370.22
				8/23/2011	52.63	31.82	3370.28
				12/15/2011	--	31.80	3370.30
				3/20/2012	52.63	31.73	3370.37
				6/11/2012	--	31.87	3370.23
				9/25/2012	52.63	32.05	3370.05
				12/13/2012	52.63	31.89	3370.21
				3/18/2013	52.62	31.76	3370.34
				6/6/2013	52.76	31.94	3370.16
				9/11/2013	52.84	32.07	3370.03
				11/19/2013	52.52	31.79	3370.31
				5/12/2014	52.76	31.81	3370.29
				8/6/2014	52.70	32.02	3370.08
				11/4/2014	52.65	31.30	3370.80
				1/12/2015	52.63	31.22	3370.88
				3/5/2015	52.63	31.20	3370.90
				6/9/2015	--	31.21	3370.89
				9/28/2015	52.69	31.32	3370.78
				12/15/2015	52.69	31.19	3370.91
MW-06	3400.24	4	10-45	11/22/2010	48.68	29.26	3370.98
				3/10/2011	48.37	29.37	3370.87
				6/3/2011	48.36	29.69	3370.55
				8/23/2011	48.36	29.65	3370.59
				12/15/2011	--	29.71	3370.53
				3/20/2013	48.45	29.65	3370.59
				6/11/2012	--	29.78	3370.46
				9/25/2012	48.68	30.16	3370.08
				12/13/2012	48.69	29.83	3370.41
				3/18/2013	48.68	29.75	3370.49
				6/6/2013	48.68	29.91	3370.33
				9/11/2013	48.41	30.18	3370.06
				11/19/2013	48.50	29.74	3370.50
				5/12/2014	48.72	29.74	3370.50
				8/6/2014	48.34	30.00	3370.24
				11/4/2014	48.67	28.96	3371.28
				1/12/2015	48.49	28.87	3371.37
				3/5/2015	48.49	28.89	3371.35
				6/9/2015	--	28.99	3371.25
				9/28/2015	48.65	29.16	3371.08
				12/15/2015	48.65	28.97	3371.27
MW-07	3402.13	4	13-48	11/22/2010	51.01	30.07	3372.06
				3/10/2011	51.00	30.24	3371.89
				6/3/2011	51.15	30.52	3371.61
				8/23/2011	51.10	30.50	3371.63
				12/15/2011	--	30.55	3371.58
				3/20/2012	51.00	30.52	3371.61
				6/11/2012	--	30.65	3371.48
				9/25/2012	51.04	30.87	3371.26
				12/13/2012	51.20	30.66	3371.47
				3/18/2013	51.20	30.60	3371.53
				6/6/2013	51.21	30.80	3371.33
				9/11/2013	51.10	30.92	3371.21
				11/19/2013	51.00	30.50	3371.63
				5/12/2014	51.23	30.68	3371.45
				8/6/2014	51.14	30.87	3371.26
				11/4/2014	50.97	29.56	3372.57
				1/12/2015	50.98	29.70	3372.43
				3/5/2015	50.98	29.79	3372.34
				6/9/2015	--	29.93	3372.20
				9/28/2015	51.19	30.06	3372.07
				12/15/2015	51.19	29.80	3372.33

TABLE 2

GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

WELL	TOC elev[1]	Well Diameter (inches)	Screen interval (bgs[3])	DATE	Total Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL[2])
MW-08	3397.24	4	20-50	12/16/2011	--	27.88	3369.36
				3/20/2012	53.41	27.79	3369.45
				6/11/2012	--	28.00	3369.24
				9/25/2012	53.40	28.17	3369.07
				12/13/2012	53.42	27.98	3369.26
				3/18/2013	53.41	27.87	3369.37
				6/6/2013	53.44	28.10	3369.14
				9/11/2013	53.31	28.25	3368.99
				11/19/2013	53.44	28.03	3369.21
				5/12/2014	53.44	27.85	3369.39
				8/6/2014	53.22	28.06	3369.18
				11/4/2014	53.39	26.47	3370.77
				1/12/2015	53.07	26.60	3370.64
				3/5/2015	53.07	26.67	3370.57
				6/9/2015	--	26.76	3370.48
				9/28/2015	53.40	26.99	3370.25
				12/15/2015	53.40	26.86	3370.38
MW-09	3404.76	4	20-50	12/16/2011	--	34.72	3370.04
				3/20/2012	53.40	34.64	3370.12
				6/11/2012	--	34.76	3370.00
				9/25/2012	53.45	34.90	3369.86
				12/13/2012	53.45	34.78	3369.98
				3/18/2013	53.45	34.68	3370.08
				6/6/2013	53.47	34.81	3369.95
				9/11/2013	53.35	34.89	3369.87
				11/19/2013	53.41	34.69	3370.07
				5/12/2014	53.51	34.73	3370.03
				8/6/2014	53.43	34.91	3369.85
				11/4/2014	53.22	34.53	3370.23
				1/12/2015	53.19	34.32	3370.44
				3/5/2015	53.19	34.32	3370.44
				6/9/2015	--	34.26	3370.50
				9/28/2015	53.47	34.29	3370.47
				12/15/2015	53.47	34.23	3370.53
MW-10	3399.04	4	30-60	12/13/2012	61.80	31.19	3367.85
				3/18/2013	61.76	31.09	3367.95
				6/6/2013	61.75	31.31	3367.73
				9/11/2013	61.72	31.54	3367.50
				11/19/2013	62.51	31.18	3367.86
				5/12/2014	61.75	31.07	3367.97
				8/6/2014	61.61	31.44	3367.60
				11/5/2014	61.49	30.82	3368.22
				1/12/2015	61.48	30.62	3368.42
				3/5/2015	61.48	30.55	3368.49
				6/9/2015	--	30.44	3368.60
				9/28/2015	61.63	30.65	3368.39
				12/15/2015	61.63	30.41	3368.63
MW-11	3411.74	4	40-80	12/13/2012	81.40	42.64	3369.10
				3/18/2013	80.82	42.71	3369.03
				6/6/2013	80.83	42.82	3368.92
				9/11/2013	80.50	42.83	3368.91
				11/19/2013	82.09	42.61	3369.13
				5/12/2014	80.87	42.83	3368.91
				8/6/2014	80.57	42.85	3368.89
				11/4/2014	80.00	42.92	3368.82
				1/12/2015	80.73	42.84	3368.90
				3/5/2015	80.73	42.76	3368.98
				6/9/2015	--	42.62	3369.12
				9/28/2015	80.77	42.55	3369.19
				12/15/2015	80.77	42.59	3369.15

TABLE 2

GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

WELL	TOC elev[1]	Well Diameter (inches)	Screen interval (bgs[3])	DATE	Total Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL[2])
MW-12	3417.39	2	45-65	1/12/2015	67.24	48.26	3369.13
				3/5/2015	67.19	48.19	3369.20
				6/9/2015	--	48.04	3369.35
				9/28/2015	67.21	47.97	3369.42
				12/15/2015	67.21	47.99	3369.40
MW-13	3393.59	2	22-42	8/6/2014	45.10	28.67	3364.92
				11/5/2014	45.08	27.71	3365.88
				1/12/2015	45.03	27.66	3365.93
				3/5/2015	45.03	27.75	3365.84
				6/9/2015	--	27.61	3365.98
				9/28/2015	44.94	27.94	3365.65
				12/15/2015	44.94	27.33	3366.26
MW-14	3395.35	2	25-45	8/6/2014	47.99	31.87	3363.48
				11/5/2014	47.73	30.62	3364.73
				1/12/2015	47.76	30.24	3365.11
				3/5/2015	47.76	30.28	3365.07
				6/9/2015	--	30.31	3365.04
				9/28/2015	48.01	30.85	3364.50
				12/15/2015	48.01	30.08	3365.27
MW-15	3400.76	2	24-44	8/6/2014	46.88	29.70	3371.06
				11/4/2014	46.84	28.49	3372.27
				1/12/2015	46.84	28.37	3372.39
				3/5/2015	46.84	28.49	3372.27
				6/9/2015	--	28.75	3372.01
				9/28/2015	46.91	28.86	3371.90
				12/15/2015	46.91	28.50	3372.26
MW-16	3413.91	2	33-53	8/6/2014	--	41.13	3372.78
				11/4/2014	55.91	39.81	3374.10
				1/12/2015	56.04	40.18	3373.73
				3/5/2015	56.04	40.30	3373.61
				6/9/2015	--	40.37	3373.54
				9/28/2015	56.08	40.46	3373.45
				12/15/2015	56.08	39.91	3374.00
RW-1	3403.03	6	20'-50'	12/16/2011	--	32.04	3370.99
				3/20/2012	53.16	32.00	3371.03
				6/11/2012	--	32.11	3370.92
				9/25/2012	53.30	32.40	3370.63
				12/13/2012	53.17	32.08	3370.95
				3/18/2013	53.16	32.03	3371.00
				6/6/2013	53.34	32.20	3370.83
				9/11/2013	53.20	32.27	3370.76
				11/19/2013	53.26	32.00	3371.03
				5/12/2014	53.38	32.09	3370.94
				8/6/2014	53.12	32.26	3370.77
				11/4/2014	53.30	31.24	3371.79
				1/12/2015	53.16	31.33	3371.70
				3/5/2015	53.16	31.36	3371.67
				6/9/2015	--	31.43	3371.60
				9/28/2015	53.35	31.52	3371.51
				12/15/2015	53.35	31.35	3371.68

Notes:

[1]TOC - Top of Casing
[2]MSL - Mean Sea Level
[3]BGS - Below ground surface
Professional Survey conducted by West Company of Midland, Inc. in March 2013 and January 2015.

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
NMWQCC Human Health Standards for Groundwater[1]										MWQCC Other Standards for Domestic Water Supply			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-1	11/01/07	0.0144 B	0.0839	<0.00073	<0.00155	<0.0021	<0.000053	0.00752 B	<0.00125	201	321	84.4	1,010
	04/25/08	0.0118 B	0.127	<0.00073	0.0036 B	<0.0021	<0.000066	0.00536 B	<0.00125	167	623	124	NA
	09/16/08	0.014	0.40	<0.002	0.0024 B	<0.003	<0.0002	0.0072	<0.005	146	1,590	154	3,620
	04/21/09	NA	NA	NA	NA	NA	NA	NA	NA	212	1,320	207	2,860
DUP	04/21/09	NA	NA	NA	NA	NA	NA	NA	NA	200	1,740	181	3,720
	10/27/09	NA	NA	NA	NA	NA	NA	NA	NA	126	9,770	297	19,000
	02/25/10	NA	NA	NA	NA	NA	NA	NA	NA	163	5,210	207	11,900
DUP	02/25/10	NA	NA	NA	NA	NA	NA	NA	NA	163	5,320	204	11,300
	06/03/10	NA	NA	NA	NA	NA	NA	NA	NA	140	7,390	243	15,200
	08/31/10	NA	NA	NA	NA	NA	NA	NA	NA	166	8,220	196	12,300
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	158	8,070	264	17,600
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	160	15,500	1350	26,000
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	172	14,000	258	26,800
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	140	14,200	886	28,500
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	148	15,800	665	31,000
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,700	488	30,900
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	224	5,290	247	11,000
DUP-1	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	166	4,630	293	10,400
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	154	17,600	619	34,100
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,800	484	29,600
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	286	2,820	177	4,530
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	168	14,900	414	28,000
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	315	4,600	187	1,600
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	236	7,240	361	12,000
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	306	6,680	517	11,000
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	331	2,280	<200	3,280
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	267	2,560	315	5,510
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	269	1,510	232	2,770
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	301	878	97.0	1,990
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	335	934	112	2,120
DUP	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	353	635	115	1,590
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	289	976	69.6	1,970
DUP	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	290	838	66.6	1,620

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
NMWQCC Human Health Standards for Groundwater[1]										MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-2	11/01/07	0.0123 B	0.0979	<0.00073	<0.00155	<0.0021	<0.000053	0.00403 B	<0.00125	187	200	72.4	698
	04/25/08	0.0133 B	0.0992	<0.00073	0.00186 B	<0.0021	<0.000066	0.00315 B	<0.00125	174	190	72.9	NA
	09/16/08	0.012	0.12 B	<0.002	0.0056	<0.003	<0.0002	0.006	<0.005	181	182	91.9	729
	04/21/09	NA	NA	NA	NA	NA	NA	NA	NA	203	167	172	744
	10/27/09	NA	NA	NA	NA	NA	NA	NA	NA	205	175	163	830
	02/25/10	NA	NA	NA	NA	NA	NA	NA	NA	224	167	193	832
	06/03/10	NA	NA	NA	NA	NA	NA	NA	NA	221	181	141	818
	08/31/10	NA	NA	NA	NA	NA	NA	NA	NA	226	208	138	814
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	233	162	125	823
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	240	194	120	2,290
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	260	229	144	1,150
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	220	242	197	837
DUP	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	180	249	201	1,160
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	297	223	167	828
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	256	189	1,140
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	275	257	204	1,050
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	286	256	204	1,130
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	283	203	1,030
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	334	257	116	928
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	306	138	84.8	972
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	311	270	156	1,160
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	344	239	108	942
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	322	286	161	1,080
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	310	293	156	1,070
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	304	245	153	1,120
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	309	273	169	1,020
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	380	247	88.8	928
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	309	242	145	984
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	386	240	83.6	955

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
		NMWQCC Human Health Standards for Groundwater[1]								MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-3	11/01/07	0.0185 B	0.102	<0.00073	<0.00155	<0.0021	<0.000053	0.00282 B	<0.00125	212	77	40.6	476
	04/25/08	0.0218	0.0882	<0.00073	0.00178 B	<0.0021	<0.000066	<0.00203	<0.00125	206	99.3	49.9	NA
	09/16/08	0.026	0.096 B	<0.002	<0.005	<0.003	<0.0002	<0.005	<0.005	222	63.7	31.8	457
	04/21/09	NA	NA	NA	NA	NA	NA	NA	NA	229	53.6	32.2	447
	10/27/09	NA	NA	NA	NA	NA	NA	NA	NA	223	65.5	35.5	488
	02/25/10	NA	NA	NA	NA	NA	NA	NA	NA	231	62.7	34.8	467
	06/03/10	NA	NA	NA	NA	NA	NA	NA	NA	230	87.1	42.2	530
	08/31/10	NA	NA	NA	NA	NA	NA	NA	NA	226	82.4	46.8	495
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	225	64	52.6	490
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	220	292	98.2	1,560
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	224	307	102	948
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	160	101	53.7	290
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	209	335	137	834
DUP	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	208	309	126	1,030
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	168	83.3	956
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	212	307	141	1,180
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	222	290	137	1,080
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	282	121	853
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	240	88.6	58	523
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	224	139	86	560
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	242	128	86.3	677
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	259	130	80.2	608
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	250	227	110	822
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	255	191	89.4	690
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	263	162	89.1	787
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	269	181	99.7	663
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	295	141	66.3	698
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	296	147	80.5	725
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	300	160	87.7	719

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
NMWQCC Human Health Standards for Groundwater[1]										MWQCC Other Standards for Domestic Water Supply			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-4	11/01/07	0.0203	0.117	<0.00073	<0.00205	<0.0021	<0.000053	0.00425 B	<0.00125	193	6,360	180	12,100
DUP	11/01/07	0.0176 B	0.116	<0.00073	<0.00155	<0.0021	<0.000053	0.00246B	<0.00125	193	6,170	189	12,800
	04/25/08	0.0206	0.0856	<0.00073	<0.00155	<0.0021	<0.000066	0.00316 B	<0.00125	195	5,680	163	NA
DUP	04/25/08	0.0203	0.0858	<0.00073	<0.00158	<0.0021	<0.000066	<0.00203	<0.00125	191	5,540	163	NA
	09/16/08	0.018	0.092 B	<0.002	<0.005	<0.003	<0.0002	<0.005	<0.005	196	4,420	136	8,140
DUP	09/16/08	0.019	0.088 B	<0.002	<0.005	<0.003	<0.0002	<0.005	<0.005	202	4,210	135	7,940
	04/21/09	NA	NA	NA	NA	NA	NA	NA	NA	208	128	33.2	551
	10/27/09	NA	NA	NA	NA	NA	NA	NA	NA	196	5,070	173	10,800
DUP	10/27/09	NA	NA	NA	NA	NA	NA	NA	NA	209	1,520	73.4	2,810
	02/25/10	NA	NA	NA	NA	NA	NA	NA	NA	189	10,600	339	21,800
	06/30/10	NA	NA	NA	NA	NA	NA	NA	NA	204	3,640	124	6,530
DUP	06/30/10	NA	NA	NA	NA	NA	NA	NA	NA	202	3,310	124	6,480
	08/31/10	NA	NA	NA	NA	NA	NA	NA	NA	205	3,520	121	6,480
DUP	08/31/10	NA	NA	NA	NA	NA	NA	NA	NA	207	3,520	125	6,480
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	202	3,160	122	11,500
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	280	36,900	5,970	63,200
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	228	35,600	575	51,300
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	170	39,500	3,690	90,800
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	172	33,700	<2500	68,500
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	15,600	472	28,300
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500	492	27,600
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	283	7,870	284	14,600
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	173	38,200	1,320	66,900
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	14,400	567	28,800
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	235	129	48.1	572
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	239	131	45.4	525
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	239	127	50.2	605
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	245	115	52.1	549
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	202	21,100	1,400	39,600
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	211	13,900	<1000	23,500
DUP	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	210	13,800	<1000	25,400
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	225	11,300	1,550	19,000
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	252	3,750	438	8,410
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	273	559	84.4	1,330
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	190	6,540	317	15,100
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	265	1,040	56.4	1,770

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
		NMWQCC Human Health Standards for Groundwater[1]								MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-5	09/23/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	571	102	NA
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	285	1,030	120	2,500
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	310	7,530	582	12,700
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	288	6,480	376	13,400
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	242	7,380	545	15,900
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	286	5,200	279	10,500
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	679	89.6	1,690
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	242	7,700	410	16,200
	09/25/12	NA	NA	NA	NA	NA	NA	NA	NA	240	7,570	485	15,700
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,890	337	8,570
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	329	319	62.1	1,010
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	286	581	72.5	4,550
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	246	6,090	319	6,110
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	236	4,240	294	7,250
DUP-1	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	238	2,030	171	4,110
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	260	7,650	617	14,500
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	237	1,910	<400	4,220
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	246	3,340	417	7,920
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	270	2,810	455	6,460
DUP-1	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	305	1,850	255	3,970
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	268	1,450	191	3,050
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	234	3,760	339	9,920
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	243	5,570	267	11,100
MW-6	09/23/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	554	349	NA
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	198	589	310	1,710
DUP	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	193	551	302	1,720
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	212	745	284	1,840
DUP	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	236	664	262	1,940
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	232	796	296	2,270
DUP	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	220	797	299	3,290
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	160	891	372	2,530
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	215	715	334	1,920
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	394	328	1,710
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	208	838	379	2,510
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	207	825	367	2,580
	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	888	384	2,000
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	249	307	256	1,220
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	249	304	252	1,080
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	250	264	226	1,130
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	255	254	228	1,010
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	225	618	572	1,720
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	215	805	337	2,240
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	214	677	339	2,180
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	224	449	241	1,440
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	211	677	296	2,060
DUP-1	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	217	612	274	1,850
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	205	654	297	2,180
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	200	731	294	1,990

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
		NMWQCC Human Health Standards for Groundwater[1]								MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-7	09/23/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	120	70.5	NA
	11/22/10	NA	NA	NA	NA	NA	NA	NA	NA	204	372	178	1,260
	03/10/11	NA	NA	NA	NA	NA	NA	NA	NA	20	798	252	1,880
	06/03/11	NA	NA	NA	NA	NA	NA	NA	NA	220	353	116	1,040
	08/23/11	NA	NA	NA	NA	NA	NA	NA	NA	190	872	324	2,730
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	214	618	237	1,620
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	80	70.4	712
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	201	875	335	2,650
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	199	863	313	2,600
DUP-1	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	196	882	318	2,460
	12/13/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	195	86.4	779
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	218	420	166	1,220
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	215	556	214	1,180
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	222	457	181	1,480
DUP	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	219	473	187	1,680
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	250	538	207	1,210
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	220	666	270	1,670
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	233	412	164	1,160
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	239	243	129	760
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	245	177	93	687
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	262	69.8	64.3	532
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	230	327	133	1,110
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	208	604	205	1,540
MW-8	09/12/11	NA	NA	NA	NA	NA	NA	NA	NA	194	3,180	765	7,680
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	196	3,440	706	8,010
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,960	753	7,840
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	199	3,310	732	8,450
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	200	3,130	732	7,940
	12/13/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,360	725	6,660
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	219	2,590	755	5,860
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	224	2,280	712	4,810
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	227	2,040	674	5,600
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	235	2,110	731	4,620
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	207	2,760	699	6,690
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	197	2,680	580	7,770
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	194	2,500	697	7,500
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	213	2,200	671	5,020
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	200	2,520	624	6,860
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	189	2,460	599	6,640
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	191	2,600	562	6,020

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
NMWQCC Human Health Standards for Groundwater[1]										MWQCC Other Standards for Domestic Water Supply			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-9	09/12/11	NA	NA	NA	NA	NA	NA	NA	NA	261	913	104	2,580
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	291	6,660	362	14,700
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	403	74.4	1,150
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	292	8,380	524	16,700
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	283	9,920	585	20,500
	12/13/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	595	17,500
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	308	385	81.3	1,170
DUP	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	306	400	88.3	1,200
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	326	393	79.6	1,040
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	329	359	64.5	1,260
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	330	2,000	153	3,720
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	306	9,800	713	17,200
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	304	7,660	408	16,500
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	354	386	105	1,880
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	335	2,350	404	5,340
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	319	1,680	177	3,340
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	292	3,030	295	6,940
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	361	740	131	1,850
MW-10	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,500	149	3,810
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	319	2,580	211	5,010
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	326	2,330	177	8,760
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	329	2,550	206	5,420
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	336	2,610	244	5,020
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	341	3,030	486	5,650
DUP	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	340	2,920	557	5,630
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	333	2,730	<400	6,280
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	328	2,430	<200	6,140
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	340	2,520	407	5,960
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	339	2,550	297	5,710
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	320	2,760	239	5,000
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	324	3,030	181	5,470
MW-11	12/14/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,030	224	2,000
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	255	3,480	127	6,940
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	238	3,760	113	4,430
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	241	4,290	106	5,320
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	242	4,630	166	10,600
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	249	5,210	400	12,200
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	235	5,150	<400	13,400
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	229	4,510	296	12,500
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	223	4,430	395	12,400
DUP-2	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	223	4,440	384	12,100
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	227	5,310	291	12,000
DUP-2	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	227	5,100	267	13,900
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	221	4,970	261	7,150
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	218	5,510	157	11,700

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
		NMWQCC Human Health Standards for Groundwater[1]								MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
MW-12	12/23/14	NA	NA	NA	NA	NA	NA	NA	NA	298	2,220	545	6,270
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	282	2,410	549	6,820
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	310	2,460	497	7,390
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	295	2,270	440	5,670
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	311	2,370	407	4,570
MW-13	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	183	7,330	729	8,840
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	179	6,510	851	16,100
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	155	6,350	814	17,600
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	182	7,940	929	20,800
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	175	8,260	893	20,500
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	178	8,610	796	16,700
MW-14	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	401	786	326	2,010
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	375	659	266	2,030
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	365	786	269	2,050
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	368	870	249	2,100
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	363	832	229	2,180
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	367	888	210	1,950
MW-15	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	202	1,340	502	3,840
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	215	1,080	464	3,130
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	236	770	353	2,130
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	225	1,140	466	3,240
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	215	1,110	485	8,740
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	213	1,190	507	2,450
MW-16	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	283	549	351	114
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	305	447	350	1,590
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	307	513	318	1,910
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	302	480	362	1,790
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	292	473	364	1,760
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	282	474	359	1,550

TABLE 3

GROUNDWATER ANALYTICAL SUMMARY - INORGANICS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
MARK OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved (mg/L)
NMWQCC Human Health Standards for Groundwater[1]										MWQCC Other Standards for Domestic Water Suppl			
		0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L		250 mg/L	600 mg/L	1000 mg/L
RW-1	09/13/11	NA	NA	NA	NA	NA	NA	NA	NA	156	9,820D	306	18,600
	12/16/11	NA	NA	NA	NA	NA	NA	NA	NA	177	18,000	661	32,200
	03/22/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,800	944	34,200
	06/11/12	NA	NA	NA	NA	NA	NA	NA	NA	245	1,430	520	3,720
	09/26/12	NA	NA	NA	NA	NA	NA	NA	NA	183	19,100	665	35,500
	12/13/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,300	633	29,600
	03/19/13	NA	NA	NA	NA	NA	NA	NA	NA	214	10,600	573	15,200
	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	203	17,000	457	27,200
DUP-1	06/06/13	NA	NA	NA	NA	NA	NA	NA	NA	201	16,100	451	32,000
	09/12/13	NA	NA	NA	NA	NA	NA	NA	NA	207	13,400	391	20,200
	11/19/13	NA	NA	NA	NA	NA	NA	NA	NA	202	11,500	558	21,500
	05/13/14	NA	NA	NA	NA	NA	NA	NA	NA	194	15,200	763	30,500
	08/07/14	NA	NA	NA	NA	NA	NA	NA	NA	216	7,040	<400	14,100
	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	190	16,400	952	29,400
DUP	11/05/14	NA	NA	NA	NA	NA	NA	NA	NA	192	14,700	889	29,500
	03/06/15	NA	NA	NA	NA	NA	NA	NA	NA	196	15,100	1070	33,700
	06/10/15	NA	NA	NA	NA	NA	NA	NA	NA	243	2,020	227	4,750
	09/29/15	NA	NA	NA	NA	NA	NA	NA	NA	238	13,600	465	23,200
	12/16/15	NA	NA	NA	NA	NA	NA	NA	NA	258	4,420	155	6,900

Notes:

1) RCRA Metals Analysis by EPA Methods 6010B and 7470A.
2) Groundwater Quality by EPA Methods 160.1, 300.0, and 310.1.
3) Higlighted values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.
4) [1] NMWQCC Human Health Standards Per NMAC 20.6.2.3103A
5) [2] NMWQCC Other Standards for Domestic Water Supply Per NMAC 20.6.2.3103B
6) NA= Not analyzed
7) DUP = Duplicate sample

TABLE 4

GROUNDWATER ANALYTICAL SUMMARY - HISTORICAL BTEX AND TPH
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Well ID	Sample Date	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH		
						GRO	DRO	Total
New Mexico Water Quality Control Commission Standard								
		0.01	**0.75**	**0.75**	**0.62**	**---**	**---**	**---**
MW-1	11/1/07	<0.00006	<0.0001	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
	4/25/08	<0.00037	<0.00039	<0.00042	0.00035	<0.050	<0.000024	<0.050024
	9/16/08	<0.001	<0.001	<0.001	<0.003	<0.100	0.25	0.25
	4/21/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
DUP	4/21/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	10/27/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	2/25/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
DUP	2/25/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	8/31/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	11/22/10	<0.0002	<.0002	<.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/26/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/20/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-2	11/1/07	<0.00006	0.00035J	<0.00012	<0.00021	<0.02014	1.8	1.82014
	4/25/08	<0.00037	<0.00039	<0.00042	0.00035	<0.050	<0.000024	<0.050024
	9/16/08	<0.001	<0.001	<0.001	<0.003	<0.100	0.07	0.070
	4/21/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	10/27/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	2/25/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	8/31/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
DUP	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/20/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA

TABLE 4

GROUNDWATER ANALYTICAL SUMMARY - HISTORICAL BTEX AND TPH
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Well ID	Sample Date	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH		
						GRO	DRO	Total
New Mexico Water Quality Control Commission Standard								
		0.01	**0.75**	**0.75**	**0.62**	**---**	**---**	**---**
MW-3	11/1/07	<0.00006	0.0005J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
	4/25/08	<0.00037	<0.00039	<0.00042	0.00035	<0.050	<0.000024	<0.050024
	9/16/08	<0.001	<0.001	<0.001	<0.003	<0.100	0.073	0.073
	4/21/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	10/27/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	2/25/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	8/31/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	0.00146	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/20/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-4	11/1/07	<0.00006	0.00052J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
DUP	11/1/07	<0.00006	0.00054J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
	4/25/08	<0.00037	<0.00039	<0.00042	0.00035	<0.050	<0.000024	<0.050024
DUP	4/25/08	<0.00037	<0.00039	<0.00042	0.00035	<0.050	<0.000024	<0.050024
	9/16/08	<0.001	<0.001	<0.001	<0.003	<0.100	0.052	0.052
DUP	9/16/08	<0.001	<0.001	<0.001	<0.003	<0.100	0.052	0.052
	4/21/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	10/27/09	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	2/25/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	8/31/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA

TABLE 4

GROUNDWATER ANALYTICAL SUMMARY - HISTORICAL BTEX AND TPH
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Well ID	Sample Date	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH		
						GRO	DRO	Total
New Mexico Water Quality Control Commission Standard								
		0.01	**0.75**	**0.75**	**0.62**	**---**	**---**	**---**
MW-5	9/23/10	<0.0002	<0.0002	<0.0002	<0.0006	<0.0020	0.002	0.002
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
DUP	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-6	9/23/10	<0.0002	<0.0002	<0.0002	<0.0006	<0.0020	0.280	0.280
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
DUP	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
DUP	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-7	9/23/10	<0.0002	<0.0002	<0.0002	<0.0006	<0.0020	0.340	0.340
	11/22/10	<0.0002	<0.0002	<0.0002	<0.0006	NA	NA	NA
	3/10/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/3/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	8/24/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
DUP-1	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/13/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
DUP	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA

TABLE 4

GROUNDWATER ANALYTICAL SUMMARY - HISTORICAL BTEX AND TPH
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
OWEN #9 RESERVE PIT RELEASE
NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

Well ID	Sample Date	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH		
						GRO	DRO	Total
New Mexico Water Quality Control Commission Standard								
		0.01	**0.75**	**0.75**	**0.62**	**---**	**---**	**---**
MW-8	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/13/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-9	12/16/11	0.0241	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	0.00108	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	0.0301	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	0.0854	<0.0020	<0.0010	0.00104	NA	NA	NA
	12/13/12	0.143	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
DUP	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-10	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
MW-11	12/14/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
RW-1	12/16/11	<0.0010	<0.0020	<0.0020	<0.0010	NA	NA	NA
	3/22/12	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
DUP-1	6/11/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	9/26/12	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	12/14/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	3/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
DUP-1	6/6/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA
RW-1	9/12/13	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA
	11/19/13	<0.0010	<0.0020	<0.0010	<0.0010	NA	NA	NA

Notes:

1) Highlighted concentrations above lab reporting limits.
2) BTEX analysis by EPA Method 8021B
3) TPH (GRO/DRO) analysis by EPA Method 8015 Modified.
4) Results shown in mg/L.
5) J = estimated value between RL & MDL
6) DUP = Duplicate sample

Appendices

Appendix A
Soil Laboratory Analytical Reports

Analytical Report 511725

for

GHD-Albuquerque, NM

Project Manager: Bernie Bockisch

Mark Owen #9

046121

24-JUL-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

24-JUL-15

Project Manager: **Bernie Bockisch**
GHD-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **511725**
Mark Owen #9
Project Address: EUNICE, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 511725. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 511725 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-046121-063015-SP-01	S	06-30-15 10:58		511725-001
S-046121-063015-SP-02	S	06-30-15 11:14		511725-002
S-046121-063015-SP-03	S	06-30-15 13:20		511725-003
S-046121-063015-SP-04	S	06-30-15 13:30		511725-004
S-046121-063015-SP-05	S	06-30-15 13:50		511725-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**S-046121-063015-SP-01**	Matrix:	Soil	Date Received:	07.17.15 09.40
Lab Sample Id:	511725-001	Date Collected:	06.30.15 10.58		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	07.21.15 15.30	Basis:	Wet Weight
Seq Number:	972965				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3.09**	2.00	mg/kg	07.21.15 19.35		1

Certificate of Analytical Results 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**S-046121-063015-SP-02**	Matrix:	Soil	Date Received:	07.17.15 09.40
Lab Sample Id:	511725-002	Date Collected:	06.30.15 11.14		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	07.21.15 15.30	Basis:	Wet Weight
Seq Number:	972965				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.69**	2.00	mg/kg	07.21.15 19.58		1

Certificate of Analytical Results 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**S-046121-063015-SP-03**	Matrix:	Soil	Date Received:	07.17.15 09.40
Lab Sample Id:	511725-003	Date Collected:	06.30.15 13.20		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	07.21.15 15.30	Basis:	Wet Weight
Seq Number:	972965				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.73**	2.00	mg/kg	07.21.15 20.20		1

Certificate of Analytical Results 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**S-046121-063015-SP-04**	Matrix:	Soil	Date Received:	07.17.15 09.40
Lab Sample Id:	511725-004	Date Collected:	06.30.15 13.30		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	07.21.15 15.30	Basis:	Wet Weight
Seq Number:	972965				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	ND	2.00	mg/kg	07.21.15 20.43	U	1

Certificate of Analytical Results 511725

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**S-046121-063015-SP-05**	Matrix:	Soil	Date Received:	07.17.15 09.40
Lab Sample Id:	511725-005	Date Collected:	06.30.15 13.50		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	07.21.15 15.30	Basis:	Wet Weight
Seq Number:	972965				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.81**	2.00	mg/kg	07.21.15 21.06		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 511725

GHD-Albuquerque, NM

Mark Owen #9

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 972965 Matrix: Solid Date Prep: 07.21.15
MB Sample Id: 695476-1-BLK LCS Sample Id: 695476-1-BKS LCSD Sample Id: 695476-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	50.1	100	49.7	99	90-110	1	20	mg/kg	07.21.15 17:41	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 972965 Matrix: Soil Date Prep: 07.21.15
Parent Sample Id: 511687-001 MS Sample Id: 511687-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4210	8080	12200	99	80-120	mg/kg	07.21.15 18:50	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 972965 Matrix: Soil Date Prep: 07.21.15
Parent Sample Id: 511818-001 MS Sample Id: 511818-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	824	1310	2230	107	80-120	mg/kg	07.21.15 23:22	

Analytical Method: **Percent Moisture**
Seq Number: 972700 Matrix: Solid
MB Sample Id: 972700-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	07.17.15 17:15	

Analytical Method: **Percent Moisture**
Seq Number: 972700 Matrix: Soil
Parent Sample Id: 511725-001 MD Sample Id: 511725-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	29.1	25.6	13	20	%	07.17.15 17:15	

511725

Xenco Labs - Odessa

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Conestoga Rovers + Associates	Turn-Around Time: ☑ Standard ☐ Rush
Mailing Address: 6121 Indian School Rd NE Ste 200 Albuquerque, NM, 87110	Project Name: Mark Owen #9
Phone #: 505-884-0672	Project #: 046121
email or Fax#: bbockisch@craworld.com	Project Manager: Bernie Bockisch 505-280-0572
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	
Accreditation ☐ NELAP ☐ Other	Sampler: Steve Perez sperez@craworld.com
☐ EDD (Type)	On Ice: ☐ Yes ☐ No
	Sample Temperature:

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.0				Air Bubbles (Y or N)
6/30/15	1058	Soil	S-046121-063015-SP-01	4oz glass	ICE													X				
	1114		S-046121-063015-SP-02																			
	~~1125~~																					
	1320		S-046121-063015-SP-03																			
	1330		S-046121-063015-SP-04																			
	1350		S-046121-063015-SP-05																			

Date	Time	Relinquished by	Received by	Date	Time
6/30/15	5:15	Steve Perez	Cole Hawkins	7-16-15	1400
7-16-15	1500	Cole Hawkins	[illegible]	7/17/15	940

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Final 1.000

Analytical Report 520893

for

GHD-Albuquerque, NM

Project Manager: Bernie Bockisch

Mark Owen #9

046121

17-DEC-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

17-DEC-15

Project Manager: **Bernie Bockisch**
GHD-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **520893**
Mark Owen #9
Project Address: EUNICE, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 520893. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 520893 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS-046121-JNF-SB4	S	12-08-15 10:15	- 5 ft	520893-001
SS-046121-JNF-SB4	S	12-08-15 10:20	- 10 ft	520893-002
SS-046121-JNF-SB4	S	12-08-15 10:25	- 15 ft	520893-003
SS-046121-JNF-SB4	S	12-08-15 10:30	- 20 ft	520893-004
SS-046121-JNF-SB4	S	12-08-15 10:35	- 25 ft	520893-005
SS-046121-JNF-SB1	S	12-08-15 12:00	- 5 ft	520893-006
SS-046121-JNF-SB1	S	12-08-15 12:05	- 10 ft	520893-007
SS-046121-JNF-SB1	S	12-08-15 12:10	- 15 ft	520893-008
SS-046121-JNF-SB1	S	12-08-15 12:15	- 20 ft	520893-009
SS-046121-JNF-SB1	S	12-08-15 12:20	- 25 ft	520893-010
SS-046121-JNF-SB2	S	12-08-15 12:40	- 5 ft	520893-011
SS-046121-JNF-SB2	S	12-08-15 12:45	- 10 ft	520893-012
SS-046121-JNF-SB2	S	12-08-15 12:50	- 15 ft	520893-013
SS-046121-JNF-SB2	S	12-08-15 12:55	- 20 ft	520893-014
SS-046121-JNF-SB2	S	12-08-15 13:00	- 25 ft	520893-015
SS-046121-JNF-SB3	S	12-08-15 13:10	- 5 ft	520893-016
SS-046121-JNF-SB3	S	12-08-15 13:15	- 10 ft	520893-017
SS-046121-JNF-SB3	S	12-08-15 13:20	- 15 ft	520893-018
SS-046121-JNF-SB3	S	12-08-15 13:25	- 20 ft	520893-019
SS-046121-JNF-SB3	S	12-08-15 13:30	- 25 ft	520893-020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB4**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-001	Date Collected:	12.08.15 10.15	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	11.08
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**426**	22.5	mg/kg	12.16.15 22.45		10

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB4**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-002	Date Collected:	12.08.15 10.20	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	7.01
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**233**	10.8	mg/kg	12.16.15 23.03		5

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB4**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-003	Date Collected:	12.08.15 10.25	Sample Depth:	15 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	6.69
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**266**	10.7	mg/kg	12.16.15 23.58		5

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB4**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-004	Date Collected:	12.08.15 10.30	Sample Depth:	20 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	5.43
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**105**	10.6	mg/kg	12.17.15 00.16		5

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB4**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-005	Date Collected:	12.08.15 10.35	Sample Depth:	25 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	5.99
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.6**	2.13	mg/kg	12.17.15 00.34		1

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB1**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-006	Date Collected:	12.08.15 12.00	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	10.32
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3390**	223	mg/kg	12.17.15 00.52		100

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB1**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-007	Date Collected:	12.08.15 12.05	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	19.88
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4690**	250	mg/kg	12.17.15 01.11		100

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB1**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-008	Date Collected:	12.08.15 12.10	Sample Depth:	15 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	16.54
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4050**	240	mg/kg	12.17.15 01.47		100

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB1**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-009	Date Collected:	12.08.15 12.15	Sample Depth:	20 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	9.53
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1370**	44.2	mg/kg	12.17.15 02.05		20

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB1**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-010	Date Collected:	12.08.15 12.20	Sample Depth:	25 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	10.1
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**736**	22.2	mg/kg	12.17.15 02.23		10

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB2**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-011	Date Collected:	12.08.15 12.40	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	8.01
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**344**	21.7	mg/kg	12.17.15 02.42		10

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB2**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-012	Date Collected:	12.08.15 12.45	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	8.6
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**287**	10.9	mg/kg	12.17.15 03.36		5

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB2**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-013	Date Collected:	12.08.15 12.50	Sample Depth:	15 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	13.23
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**562**	23.0	mg/kg	12.17.15 03.55		10

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB2**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-014	Date Collected:	12.08.15 12.55	Sample Depth:	20 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	15.74
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**291**	23.7	mg/kg	12.17.15 04.13		10

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB2**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-015	Date Collected:	12.08.15 13.00	Sample Depth:	25 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	6.64
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	10.7	mg/kg	12.17.15 04.31		5

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB3**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-016	Date Collected:	12.08.15 13.10	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	13.46
Analyst:	MNR	Date Prep:	12.16.15 08.00	Basis:	Dry Weight
Seq Number:	983694				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7200**	462	mg/kg	12.17.15 04.49		200

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB3**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-017	Date Collected:	12.08.15 13.15	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	17.04
Analyst:	MNR	Date Prep:	12.16.15 14.00	Basis:	Dry Weight
Seq Number:	983712				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5110**	482	mg/kg	12.17.15 06.39		200

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB3**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-018	Date Collected:	12.08.15 13.20	Sample Depth:	15 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	14.75
Analyst:	MNR	Date Prep:	12.16.15 14.00	Basis:	Dry Weight
Seq Number:	983712				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**768**	46.9	mg/kg	12.17.15 06.59		20

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB3**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-019	Date Collected:	12.08.15 13.25	Sample Depth:	20 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	10.92
Analyst:	MNR	Date Prep:	12.16.15 14.00	Basis:	Dry Weight
Seq Number:	983712				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**518**	44.9	mg/kg	12.17.15 07.10		20

Certificate of Analytical Results 520893

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id:	**SS-046121-JNF-SB3**	Matrix:	Soil	Date Received:	12.09.15 12.12
Lab Sample Id:	520893-020	Date Collected:	12.08.15 13.30	Sample Depth:	25 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	7.52
Analyst:	MNR	Date Prep:	12.16.15 14.00	Basis:	Dry Weight
Seq Number:	983712				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**134**	10.8	mg/kg	12.17.15 07.20		5

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

GHD-Albuquerque, NM

Mark Owen #9

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983694 — Matrix: Solid — Date Prep: 12.16.15
MB Sample Id: 702276-1-BLK — LCS Sample Id: 702276-1-BKS — LCSD Sample Id: 702276-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	50.3	101	50.1	100	90-110	0	20	mg/kg	12.16.15 20:37	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983712 — Matrix: Solid — Date Prep: 12.16.15
MB Sample Id: 702281-1-BLK — LCS Sample Id: 702281-1-BKS — LCSD Sample Id: 702281-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	49.9	100	49.5	99	90-110	1	20	mg/kg	12.17.15 06:02	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983694 — Matrix: Soil — Date Prep: 12.16.15
Parent Sample Id: 520877-001 — MS Sample Id: 520877-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	2470	5000	7860	108	80-120	mg/kg	12.16.15 21:32	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983694 — Matrix: Soil — Date Prep: 12.16.15
Parent Sample Id: 520893-007 — MS Sample Id: 520893-007 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4690	6240	10900	100	80-120	mg/kg	12.17.15 01:29	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983712 — Matrix: Soil — Date Prep: 12.16.15
Parent Sample Id: 520893-017 — MS Sample Id: 520893-017 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5110	12100	17500	102	80-120	mg/kg	12.17.15 06:49	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 983712 — Matrix: Soil — Date Prep: 12.16.15
Parent Sample Id: 521037-003 — MS Sample Id: 521037-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	146	250	398	101	80-120	mg/kg	12.17.15 09:16	

QC Summary 520893

GHD-Albuquerque, NM

Mark Owen #9

Analytical Method: **Percent Moisture**
Seq Number: 983706 Matrix: Solid
MB Sample Id: 983706-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	12.14.15 12:55	

Analytical Method: **Percent Moisture**
Seq Number: 983706 Matrix: Soil
Parent Sample Id: 520893-001 MD Sample Id: 520893-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	11.1	10.9	2	20	%	12.14.15 12:55	

Analytical Method: **Percent Moisture**
Seq Number: 983706 Matrix: Soil
Parent Sample Id: 520893-011 MD Sample Id: 520893-011 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	8.01	8.06	1	20	%	12.14.15 12:55	

CHAIN OF CUSTODY

Page 1 Of 2

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Odessa, Texas (432-563-1800)
Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)

Xenco Quote #
Xenco Job # 520893

Client / Reporting Information

Company Name / Branch: GHD Services, Inc - Albuquerque, NM
Company Address: 6121 Indian School Road NE, Suite 200, Albuquerque, NM 87110
Email: bernard.bockisch@ghd.com
Phone No: 505-884-0672
Project Contact: Bernie Bockisch
Samplers's Name: John Fergerson

Project Information

Project Name/Number: JF CENC/ ~~041621~~ 046121
Project Location: Mark Owen #9
Invoice To:
PO Number:

Analytical Information

Chlorides 300

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SS-046121-JNF-SB4	5'	12/8/15	1015	S	1								X	
2	SS-046121-JNF-SB4	10'	"	1020	S	1								X	
3	SS-046121-JNF-SB4	15'	"	1025	S	1								X	
4	SS-046121-JNF-SB4	20'	"	1030	S	1								X	
5	SS-046121-JNF-SB4	25'	"	1035	S	1								X	
6	SS-046121-JNF-SB1	5'	12/8/15	1200	S	1								X	
7	SS-046121-JNF-SB1	10'	"	1205	S	1								X	
8	SS-046121-JNF-SB1	15'	"	1210	S	1								X	
9	SS-046121-JNF-SB1	20'	"	1215	S	1								X	
10	SS-046121-JNF-SB1	25'	"	1220	S	1								X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [x] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/9/15 1212	1	2	12/9 12:12	2
2	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X — Cooler Temp. 5.6°C — Thermo. Corr. Factor 0°C

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

Page 2 Of 2

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)

Xenco Quote #
Xenco Job # 520893

Client / Reporting Information

Company Name / Branch: GHD Services, Inc. - Albuquerque, NM
Company Address: 6121 Indian School Road NE Suite 200, Albuquerque, NM 87110
Email: bernard.backisch@ghd.com
Phone No: 505-884-0672
Project Contact: Bernie Backisch
Samplers's Name: John Ferguson

Project Information

Project Name/Number: CENC/046121
Project Location: Mark Owen #9
Invoice To:
PO Number:

Analytical Information

Chloride 300

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SS-046121-JMF-SB2	5'	12/8/15	1240	S	1								X	
2	SS-046121-JMF-SB2	10'		1245	S	1								X	
3	SS-046121-JMF-SB2	15'		1250	S	1								X	
4	SS-046121-JMF-SB2	20'		1255	S	1								X	
5	SS-046121-JMF-SB2	25'		1300	S	1								X	
6	SS-046121-JMF-SB3	5'	12/8/15	1310	S	1								X	
7	SS-046121-JMF-SB3	10'		1315	S	1								X	
8	SS-046121-JMF-SB3	15'		1320	S	1								X	
9	SS-046121-JMF-SB3	20'		1325	S	1								X	
10	SS-046121-JMF-SB3	25'		1330	S	1								X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [X] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1	Date Time: 12/9/15 1212	Received By: 1	Relinquished By: 2	Date Time: 12/9 12:12	Received By: 2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X; Cooler Temp. 5.6°C; Thermo. Corr. Factor 0°C

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD-Albuquerque, NM

Date/ Time Received: 12/09/2015 12:12:00 PM

Work Order #: 520893

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : r8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6 *Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

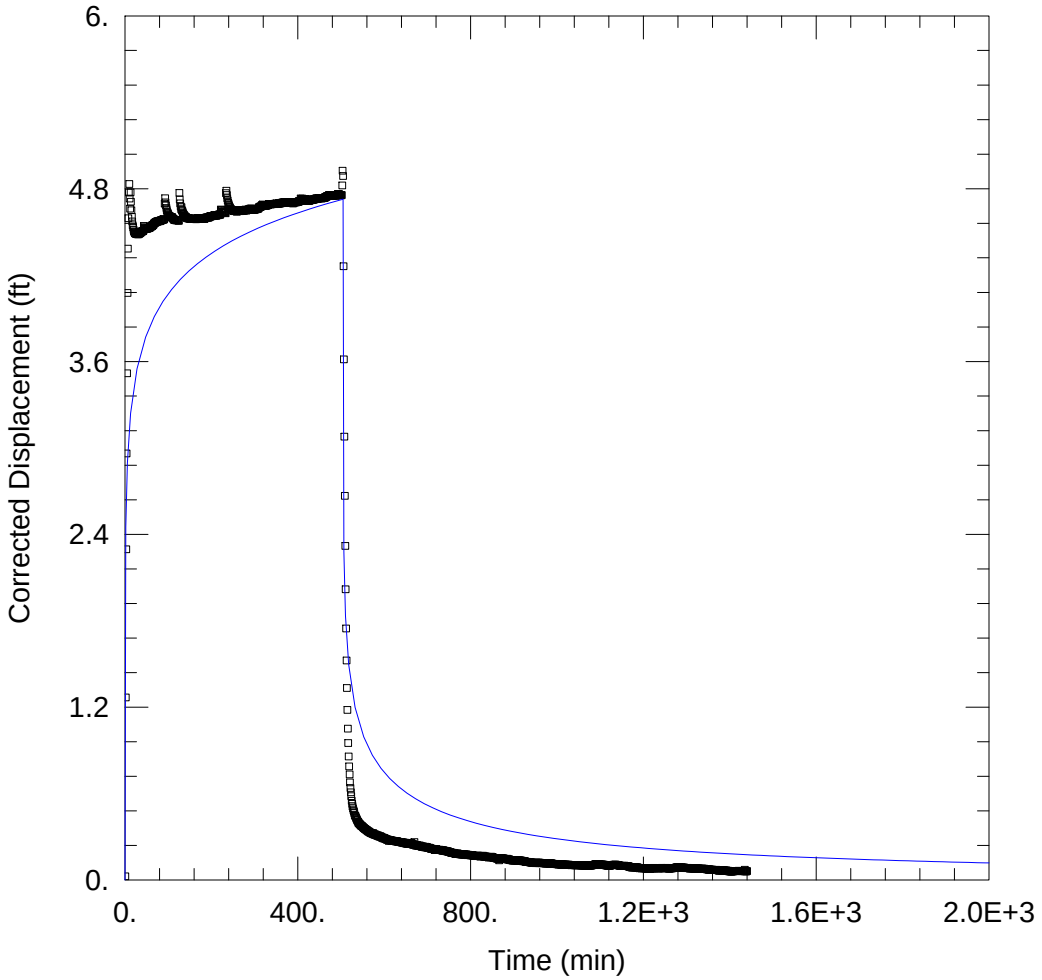
Analyst:

PH Device/Lot#: OC679789

Checklist completed by: Carley Owens — Date: 12/09/2015

Checklist reviewed by: Kelsey Brooks — Date: 12/10/2015

Appendix B
Pump Test Data Plots and Boring Logs



OWEN #9

RW- 1 Theis (high S)

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

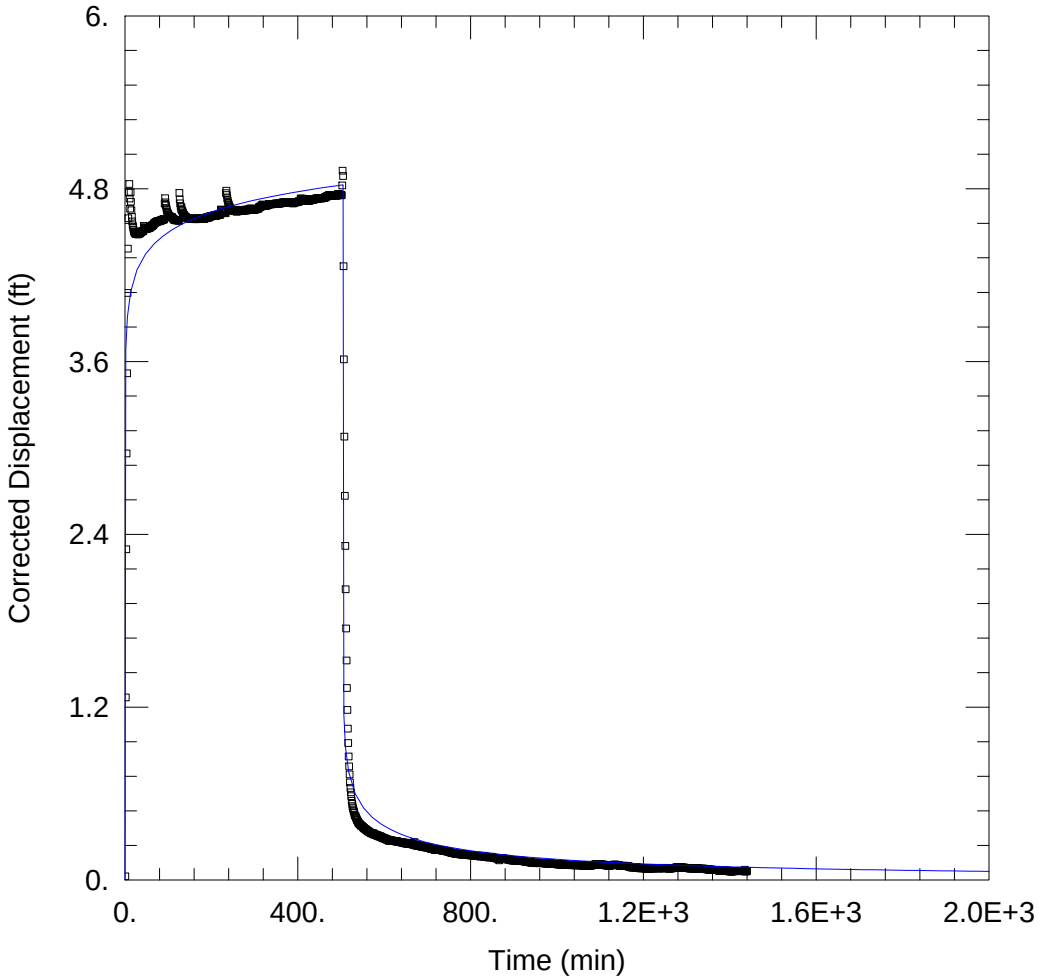
Observation Wells

Well Name	X (ft)	Y (ft)
▫ RW-1	0	0

SOLUTION

Aquifer Model: Unconfined
T = 100. ft^2/day
Kz/Kr = 0.001

Solution Method: Theis
S = 0.01102
b = 17. ft



OWEN #9

RW- 1 Theis (low S)

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

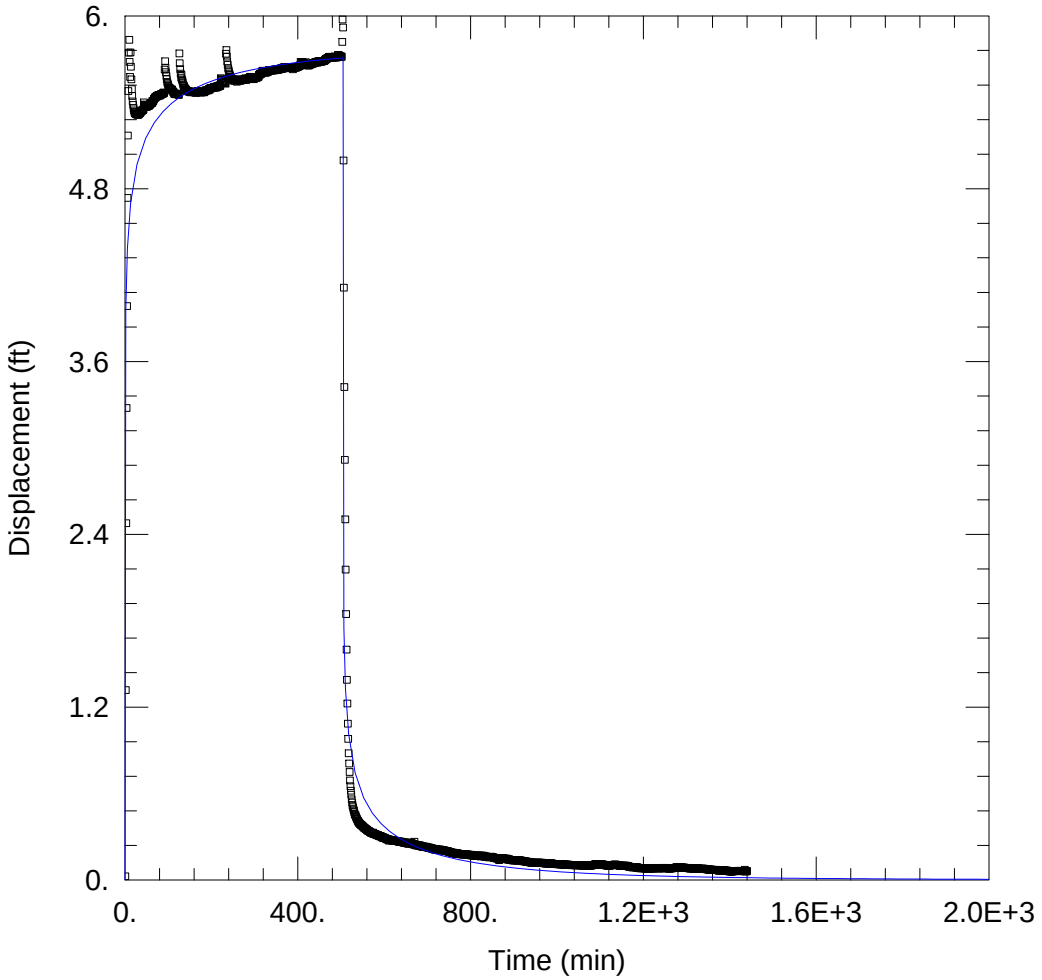
Observation Wells

Well Name	X (ft)	Y (ft)
▫ RW-1	0	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 199.6 ft^2/day
S = 1.243E-7
Kz/Kr = 0.001
b = 17. ft



OWEN #9

RW- 1 Tartakovsky-Neuman

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

AQUIFER DATA

Saturated Thickness: 17. ft

Anisotropy Ratio (Kz/Kr): 0.001

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ RW-1	0	0

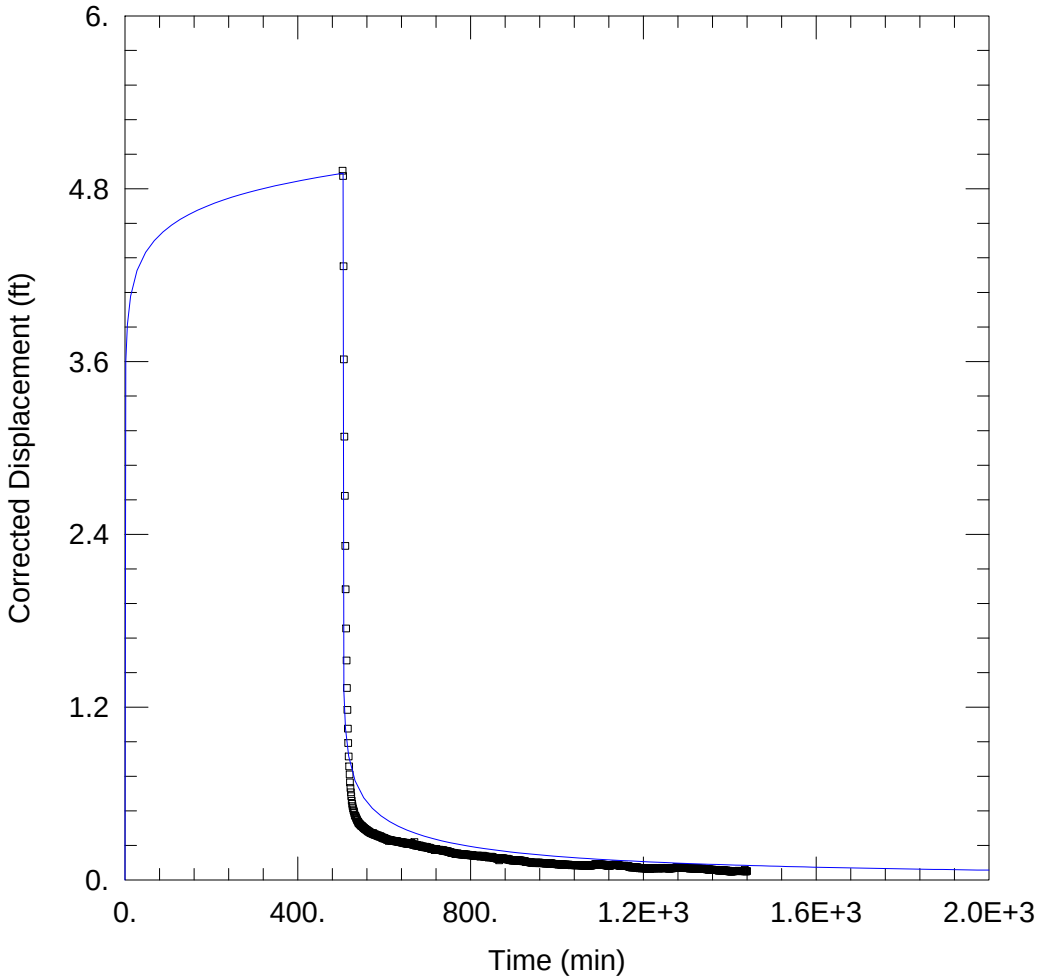
SOLUTION

Aquifer Model: Unconfined

Solution Method: Tartakovsky-Neuman

T = 98.42 ft^2/day
Sy = 0.5
kD = 1000.

S = 0.0002839
Kz/Kr = 0.001



OWEN #9

RW- 1 Recovery Theis

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

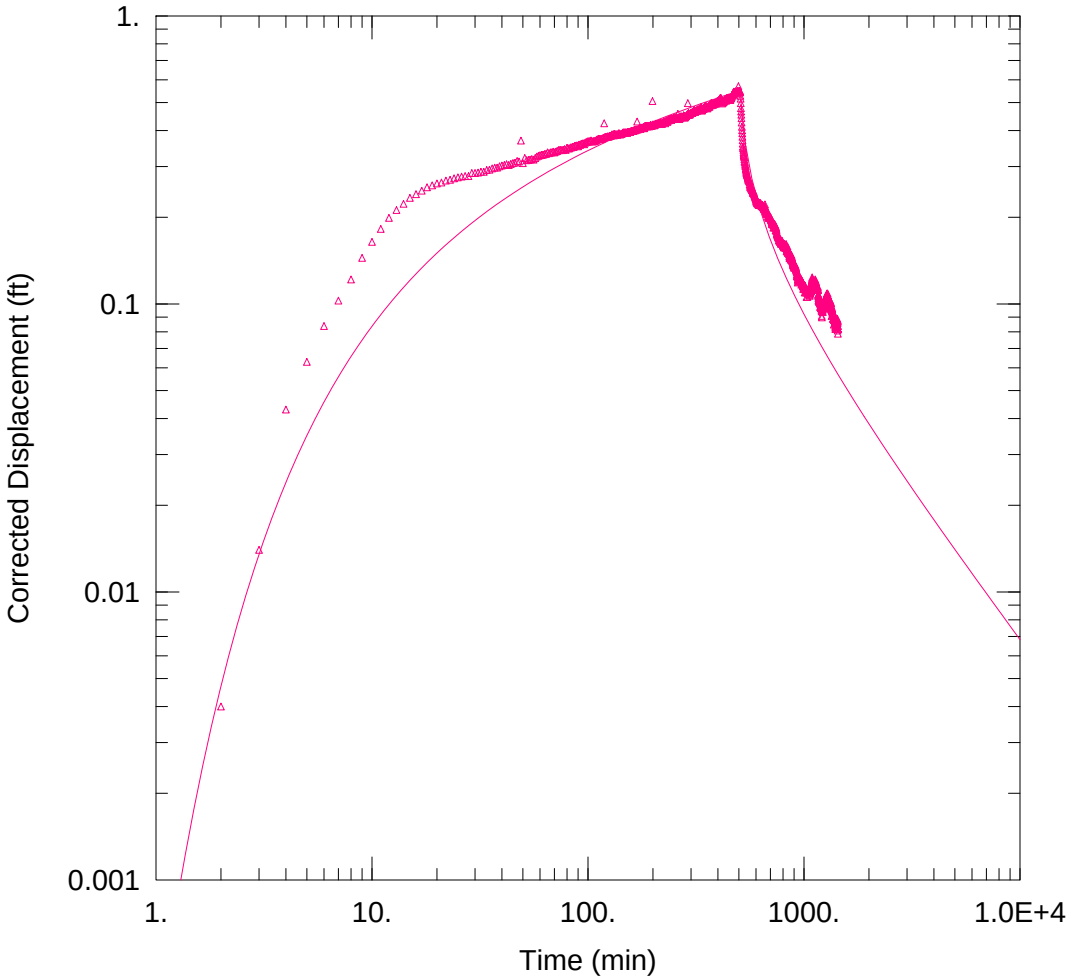
Observation Wells

Well Name	X (ft)	Y (ft)
▫ RW-1	0	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 174.3 ft^2/day
S = 1.557E-6
Kz/Kr = 0.001
b = 17. ft



OWEN #9

MW- 1 Theis

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

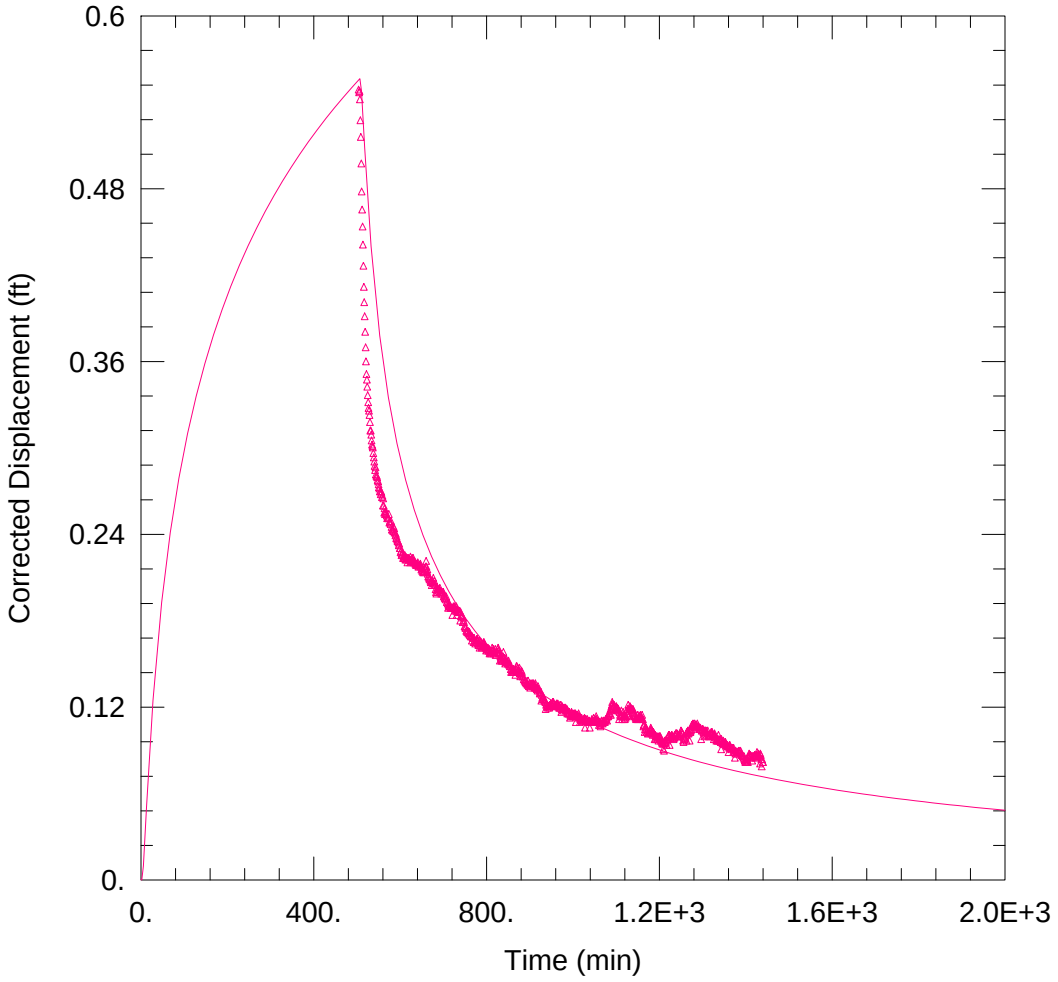
Observation Wells

Well Name	X (ft)	Y (ft)
MW-1	27	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 307.5 ft^2/day
S = 0.0052
Kz/Kr = 0.001
b = 17. ft



OWEN #9

MW- 1 Recovery Theis

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

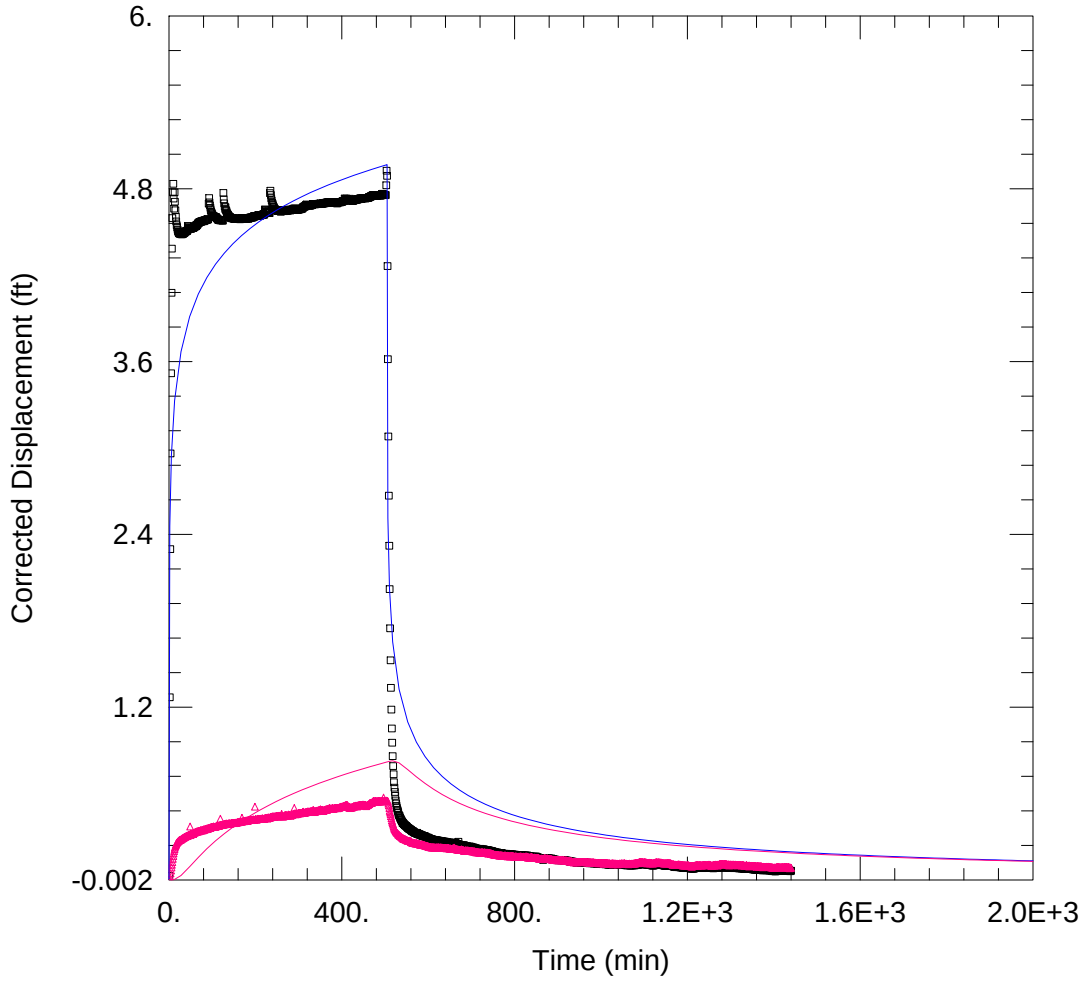
Observation Wells

Well Name	X (ft)	Y (ft)
MW-1	27	0

SOLUTION

Aquifer Model: Unconfined
T = 242.7 ft^2/day
Kz/Kr = 0.001

Solution Method: Theis
S = 0.009643
b = 17. ft



OWEN #9

RW-1 and MW-1 Theis

PROJECT INFORMATION

Company: GHD
Client: Chemvron EMC
Project: 046121
Location: Eunice, NM
Test Well: MW-1
Test Date: 10/20/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ RW-1	0	0
▵ MW-1	27	0

SOLUTION

Aquifer Model: Unconfined

T = 90.67 ft^2/day
Kz/Kr = 0.001

Solution Method: Theis

S = 0.01738
b = 17. ft

SOIL BORING LOG

Project: OWEN #9 ASSESSMENT
EUNICE, NEW MEXICO

No. SB-1/MW-1

Client: CHEVRON ENVIROMENTAL
MANAGEMENT COMPANY

File No.: 46121
Date: 10/22/2007
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOL AIR ROTARY T3W
Logged by: TOM LARSON

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 1215 Finish Time: 1500
											Silty Sand: Buff, tan, with indurated hard calcum carbonate seams 10-50% dry.
						18.4	X	5			
0.00248	0.00683	0.00592	0.001819	220.324	74.4	(6.8 spl)	X	10			
											Sand: Light reddish brown, very fine grained, loose, dry.
						3.6	X	15			
0.00254	0.00699	0.00607	0.001869	1.642	302	(2.8 spl)	X	20			
						3.6	X	25			
0.00229	0.0063	0.00547	0.0168	1.447	168	(2.8 spl)	X	30	▽		
											Sand: Light reddish brown, very fine grained, wet @ 31'
								35			
								40			

X Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

▽ Water First Noted

(oval) Analyzed Sample

SOIL BORING LOG

Project: OWEN #9 ASSESSMENT
EUNICE, NEW MEXICO

Client: CHEVRON ENVIROMENTAL
MANAGEMENT COMPANY

No. SB-1/MW-1
CONT'D

File No.: 46121
Date: 10/22/2007
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOL AIR ROTARY T3W
Logged by: TOM LARSON

LABORATORY TEST DATA (Results Reported in mg/kg)					FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 1215 Finish Time: 1500
							45			
							50			Clay: Red brown, saturated, soft.
										BORING TERMINATED AT 51'
							55			
							60			
							65			
							70			
							75			
							80			

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

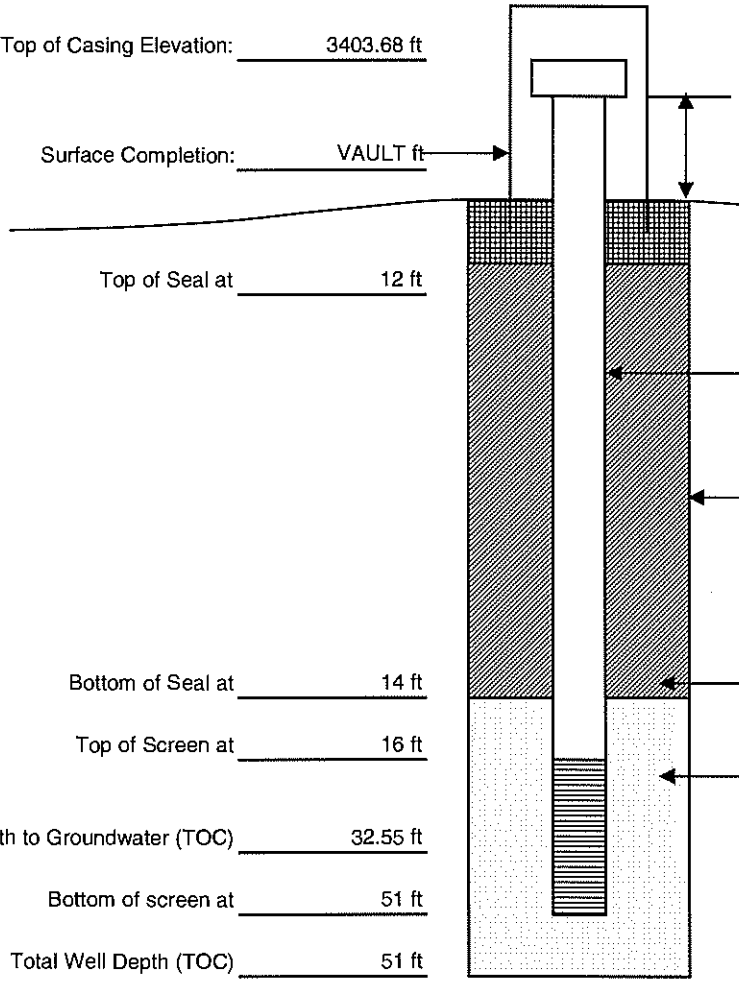
MONITORING WELL CONSTRUCTION DETAIL

Project: OWEN #9 ASSESSMENT
EUNICE, NEW MEXICO

No. SB-1/MW-1

Client: CHEVRON ENVIROMENTAL
MANAGEMENT COMPANY

File No.: 46121
Date: 10/22/2007
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOL AIR ROTARY T3W
Logged by: TOM LARSON



Top of Casing Elevation: 3403.68 ft

Surface Completion: VAULT ft

Stick Up: 3 ft

ground surface

Surface Seal: CEMENT

Top of Seal at 12 ft

Well Casing

Annulus Backfill Type: SAND 51' - 14'

Bottom of Seal at 14 ft

Seal Type: HOLE-PLUG, BENTONITE 3/8"

Top of Screen at 16 ft

Pack Type:
Sand, size 8/16
Gravel
Natural

Depth to Groundwater (TOC) 32.55 ft

Bottom of screen at 51 ft

Total Well Depth (TOC) 51 ft

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: ☒ slotted ☐ perforated other:

Screen Material: ☐ stainless steel ☒ PVC other:

Screen Length: 35 feet Screen Diameter: 4 inches Screen Slot Size: 0.020 inches

Well Casing Material: PVC Well Casing Diameter: 4 inches

Development - Method: Bailed 50 gallons Hole Diameter: 8 inches

Duration/Volume: 1 hour to clean

SOIL BORING LOG

Project: OWEN #9
EUNICE, NEW MEXICO

No. RW-1

Client: CHEVRON ENVIROMENTAL
MANAGEMENT COMPANY

File No.: 46121
Date: 9/13/2011
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOIL AIR ROTARY T3W
Logged by: B Ford

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 917 Finish Time:
											Caliche 1 foot down Silty Sands; dry, tan
						1.4	X				
								5			Silty Sands: loose to firm. Light brown, dry, 25% integrated with with small rounded caliche fragments
						1.8	X	10			Silty Sands: Medium brown, slightly moist, loose to firm, integrated with rounded 0.1 to 0.5 mm caliche fragments
<0.00104	<0.00208	<0.00104	<0.00104	<15.6	10.4	(2.2)	X	15			
% Moisture 4.47											
						2.1	X	20			
						2.1	X	25			Silty Sands/Clay: large grain, moist, firm, dark brown integrated integrated with 5% 1-2 mm sand stone fragments reddish in color color
						1.9	X	30			50% sand stone fragments 1-2 mm, white to dark brown 50% silty sands, brown with reddish tint, dry, loose to firm
									▽		Hit water at 33 feet.
<0.00106	<0.00212	<0.00106	<0.00106	<15.9	93.5	(2.1)		35			Silty Sands/Clay Mixture: Large grain, moist, reddish tint, firm
% moisture 5.74											
						2		40			

X Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

▽ Water First Noted

( ) Analyzed Sample

SOIL BORING LOG

Project: OWEN #9
EUNICE, NEW MEXICO

No. RW-1

Client: CHEVRON ENVIROMENTAL
MANAGEMENT COMPANY

File No.: 46121
Date: 9/13/2011
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOL AIR ROTARY T3W
Logged by: B Ford

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Chlorides	Total TPH (C6-C35)	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 1215 Finish Time: 1500
											Clay: Saturated red clay imbedded with limestone pieces (0.5 to 2 inches) with calcium carbonate lines
<0.00134	<0.00268	<0.00134	<0.00134	3770	<20.3	2		45			
% moisture 26.1											TD at 50 feet.
								50			
								55			
								60			
								65			
								70			
								75			
								80			

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

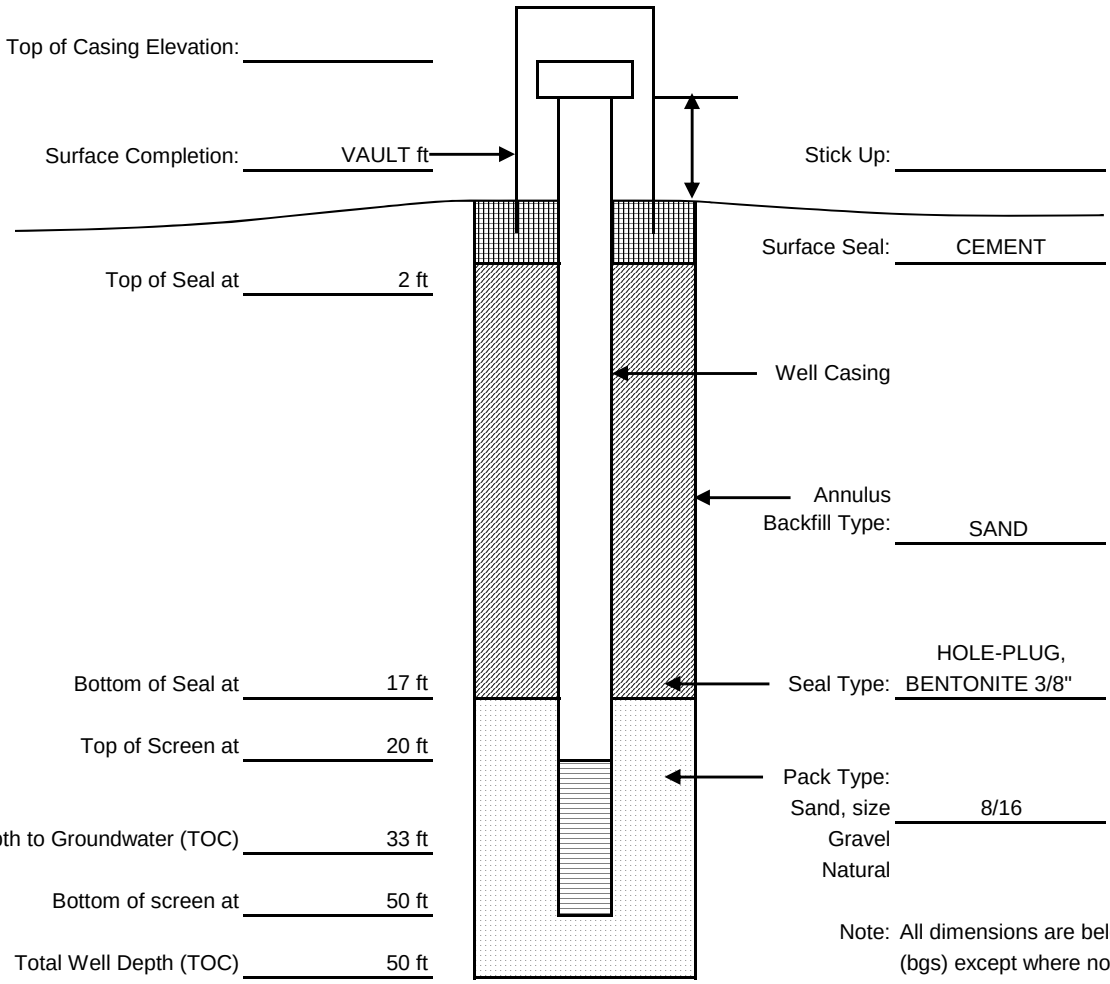
MONITORING WELL CONSTRUCTION DETAIL

Project: OWEN #9
EUNICE, NEW MEXICO

No. RW-1

Client: CHEVRON ENVIROMENTAL MANAGEMENT COMPANY

File No.: 46121
Date: 9/13/2011
Drilling Co.: WHITE DRILLING
Supervisor: J. WHITE
Type Rig: INGERSOL AIR ROTARY T3W
Logged by: B Ford



Screen Type: ☒ slotted ☐ perforated other:

Screen Material: ☐ stainless steel ☒ PVC other:

Screen Length: 30 ft Screen Diameter: 6 inches Screen Slot Size: 0.020 inches

Well Casing Material: PVC Well Casing Diameter: 6 inches

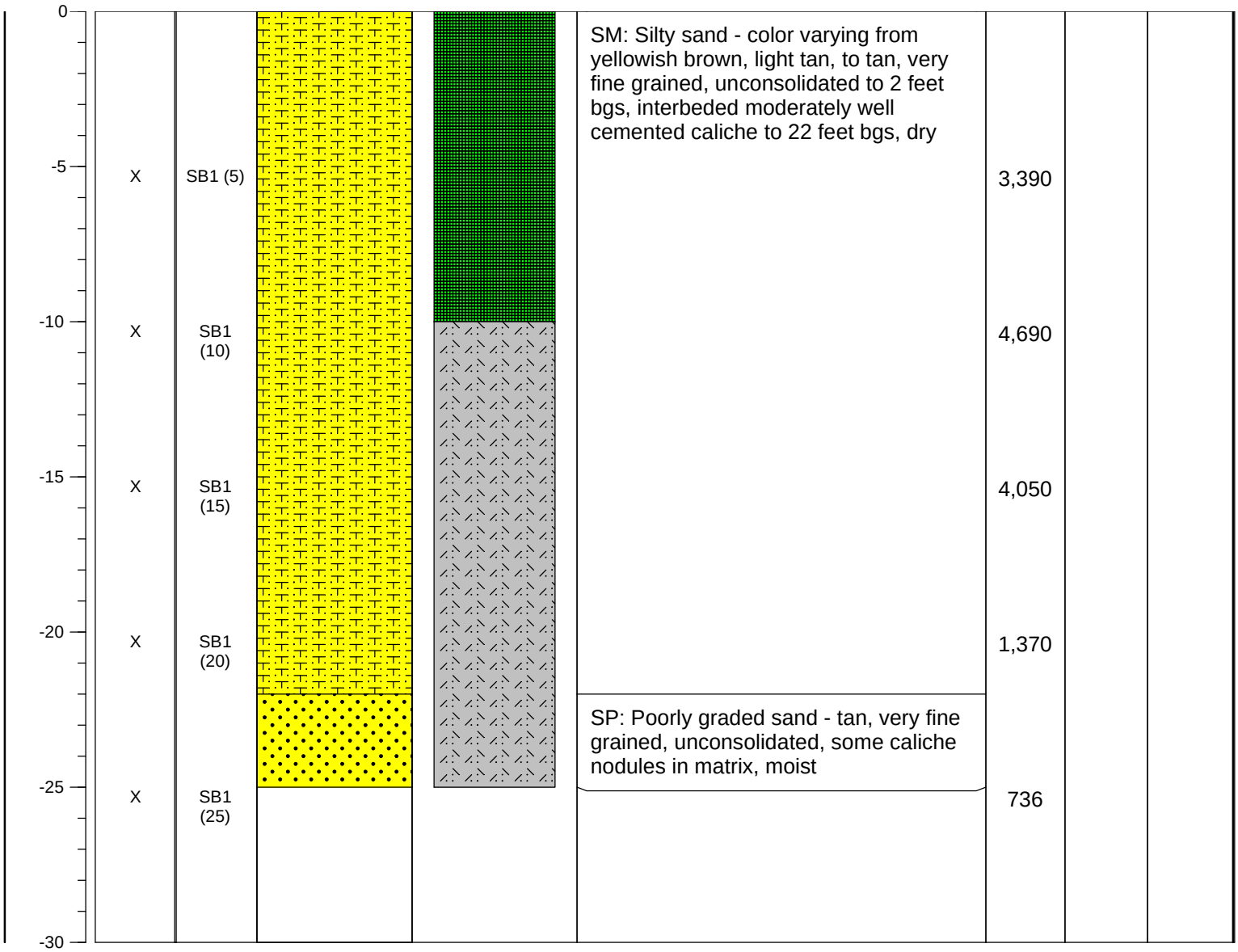
Development - Method: Bailing Hole Diameter:

Duration/Volume: 2 bbl

Appendix C
Soil Boring Logs

PROJECT NAME: Mark Owen #9
LOCATION: Eunice, New Mexico
FIELD LOGGED BY: John Fergerson
SURFACE ELEVATION (msl): No Survey Data Available
GROUNDWATER ELEVATION (msl): N/A
REMARKS:
COORDINATES: ~ 32.430078, -103.144676

SOIL BORING NO: SB-1(2)
DRILL TYPE: Air rotary
BORE HOLE DIAMETER: 6"
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME HOLE STARTED: 12/8/15
DATE/TIME HOLE COMPLETED: 12/8/15



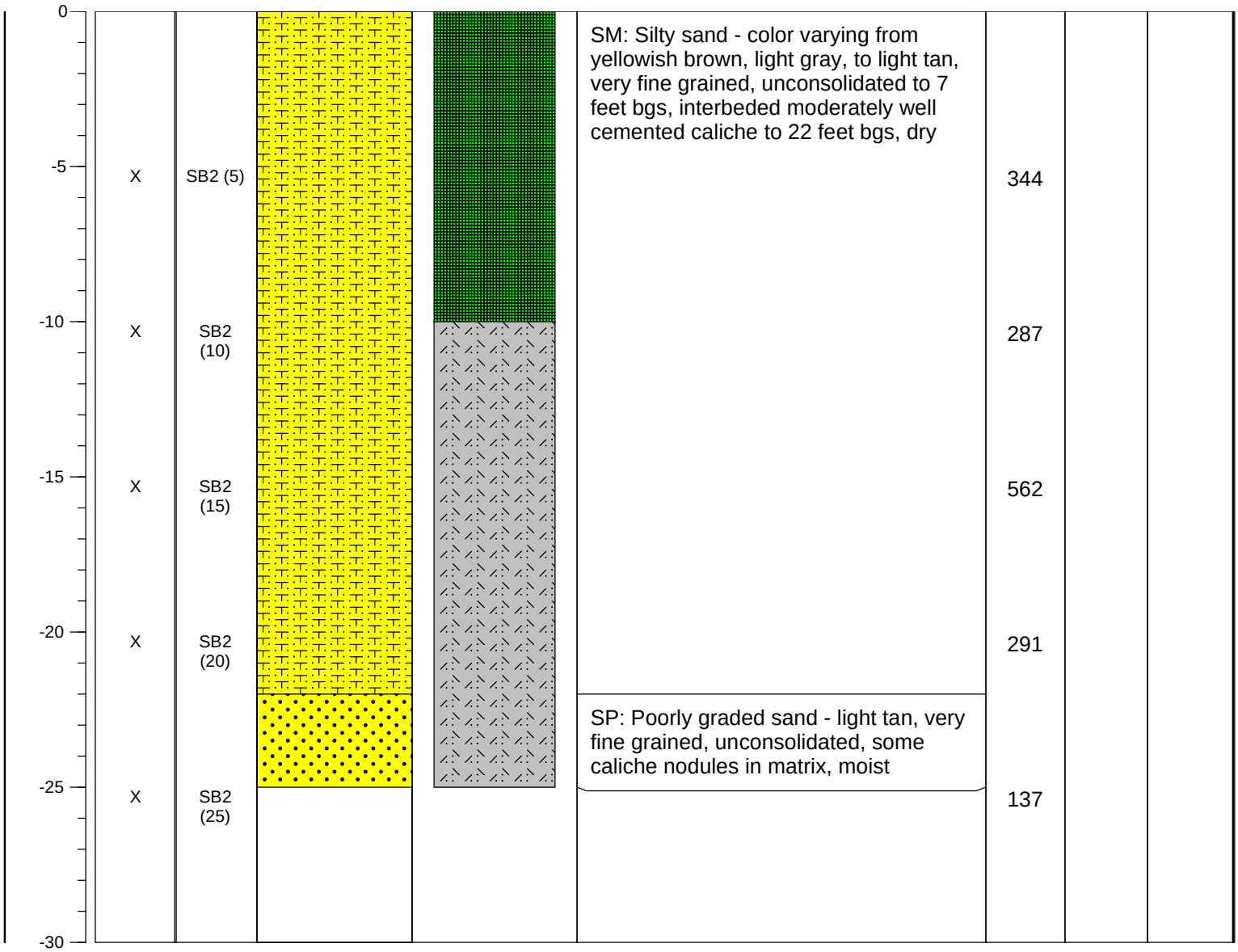
25 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

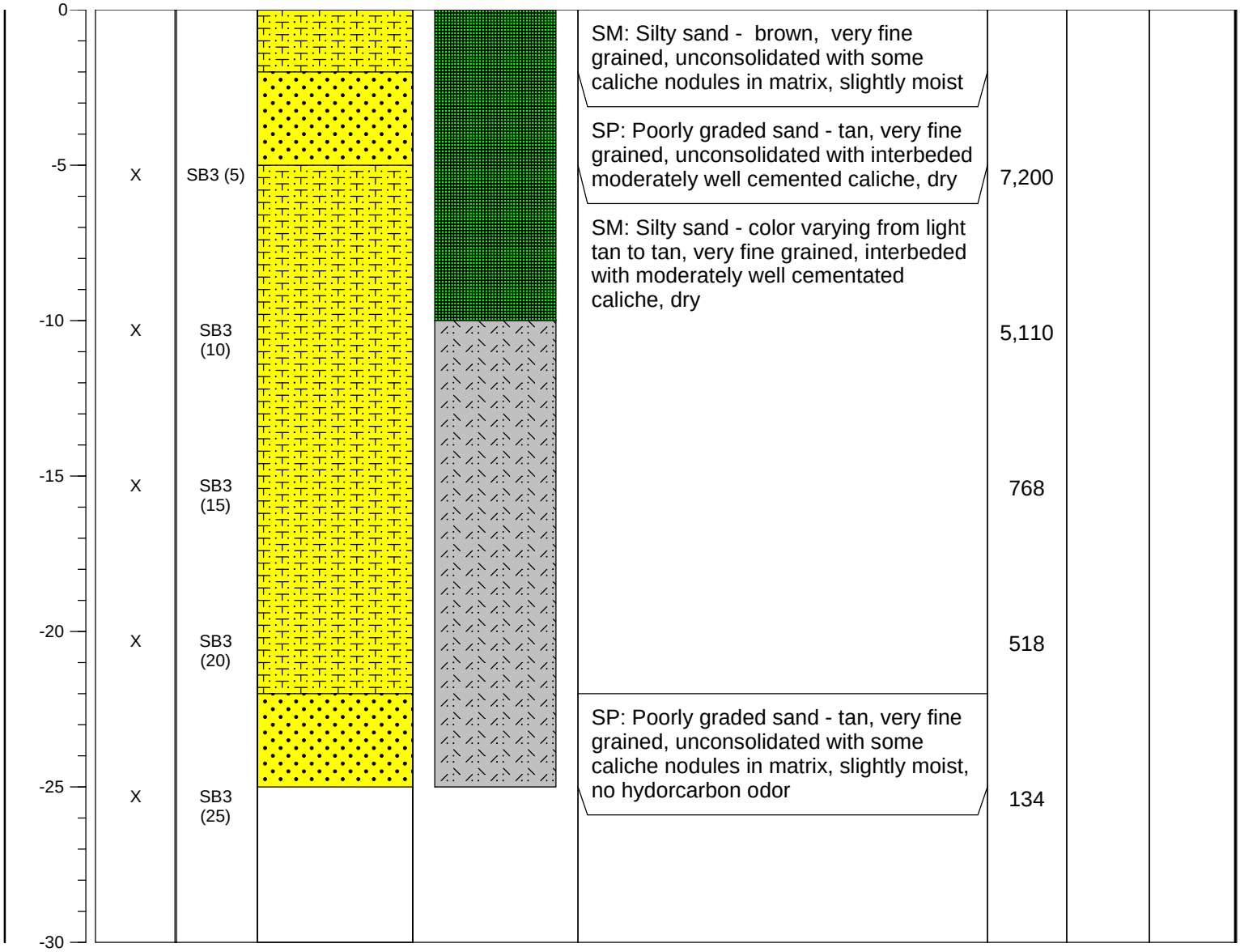
PROJECT NAME: Mark Owen #9
LOCATION: Eunice, New Mexico
FIELD LOGGED BY: John Fergerson
SURFACE ELEVATION (msl): No Survey Data Available
GROUNDWATER ELEVATION (msl): N/A
REMARKS:
COORDINATES: ~ 32.430883, -103.144649

SOIL BORING NO: SB-2(2)
DRILL TYPE: Air rotary
BORE HOLE DIAMETER: 6"
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME HOLE STARTED: 12/8/15
DATE/TIME HOLE COMPLETED: 12/8/15



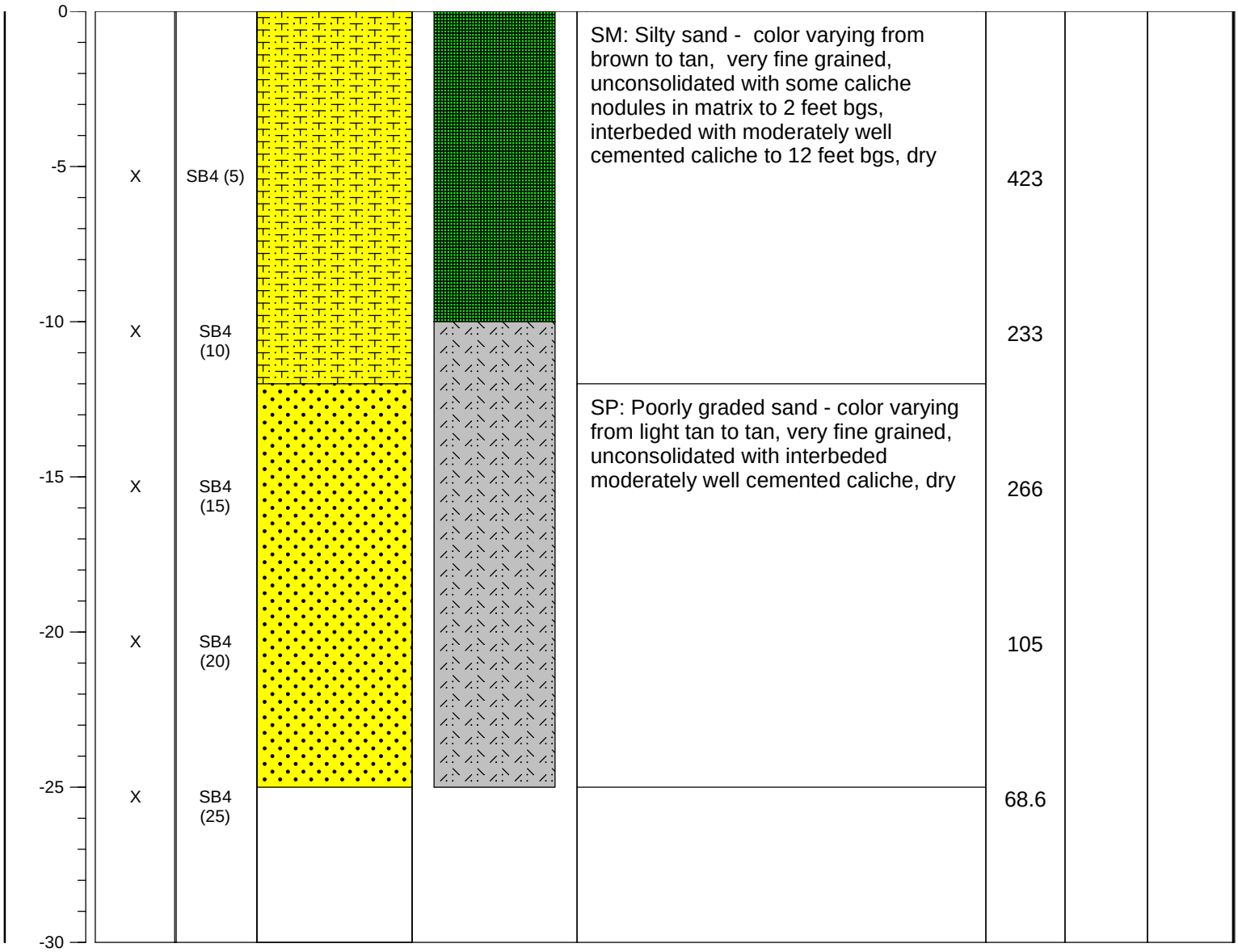
PROJECT NAME: Mark Owen #9
LOCATION: Eunice, New Mexico
FIELD LOGGED BY: John Fergerson
SURFACE ELEVATION (msl): No Survey Data Available
GROUNDWATER ELEVATION (msl): N/A
REMARKS:
COORDINATES: ~ 32.430580, -103.144012

SOIL BORING NO: SB-3(2)
DRILL TYPE: Air rotary
BORE HOLE DIAMETER: 6"
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME HOLE STARTED: 12/8/15
DATE/TIME HOLE COMPLETED: 12/8/15



PROJECT NAME: Mark Owen #9
LOCATION: Eunice, New Mexico
FIELD LOGGED BY: John Fergerson
SURFACE ELEVATION (msl): No Survey Data Available
GROUNDWATER ELEVATION (msl): N/A
REMARKS:
COORDINATES: ~ 32.430580, -103.144012

SOIL BORING NO: SB-4(3)
DRILL TYPE: Air rotary
BORE HOLE DIAMETER: 6"
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME HOLE STARTED: 12/8/15
DATE/TIME HOLE COMPLETED: 12/8/15



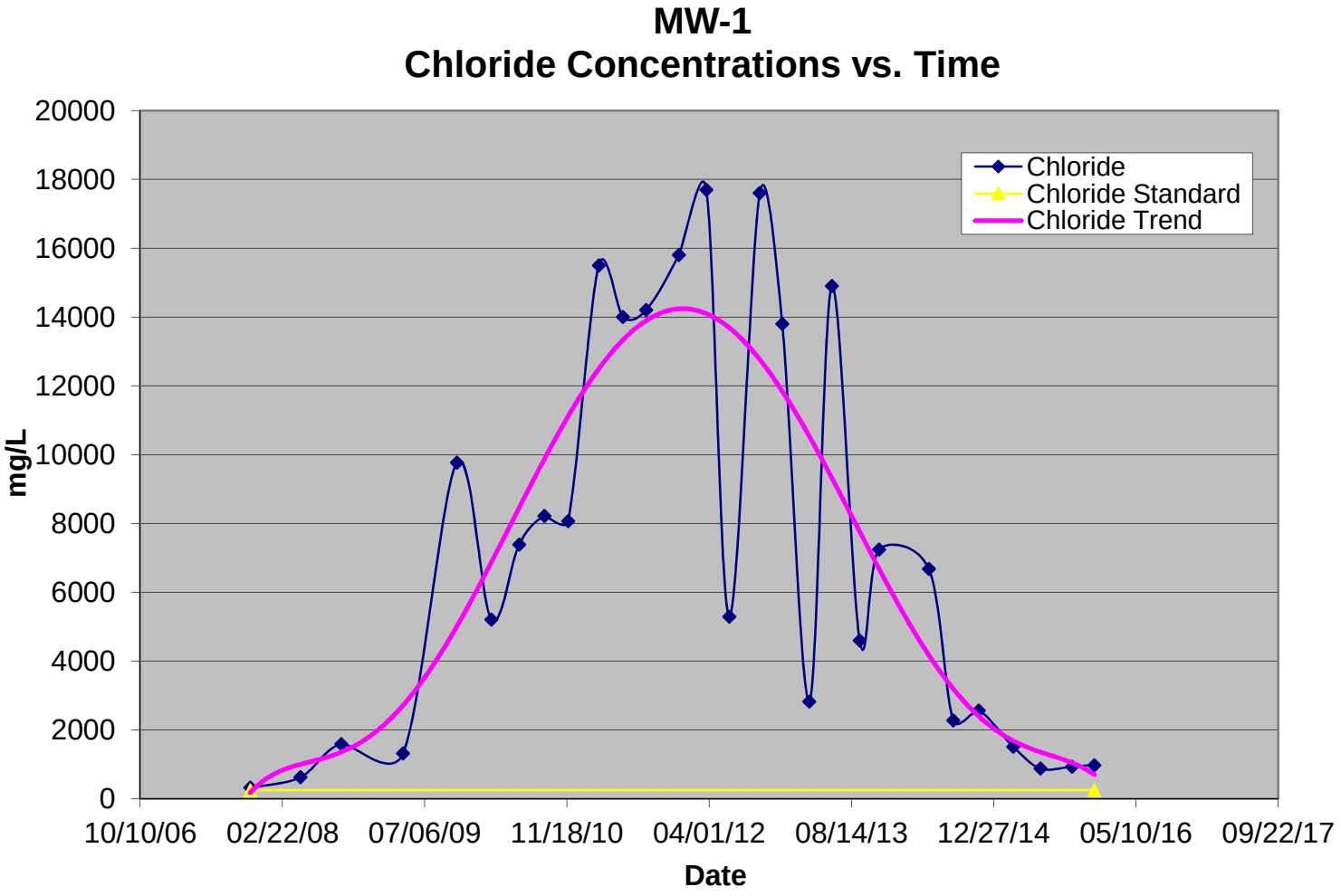
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	Chlorides (mg/kg)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0								
-5	X	SB4 (5)			SM: Silty sand - color varying from brown to tan, very fine grained, unconsolidated with some caliche nodules in matrix to 2 feet bgs, interbeded with moderately well cemented caliche to 12 feet bgs, dry	423		
-10	X	SB4 (10)				233		
-15	X	SB4 (15)			SP: Poorly graded sand - color varying from light tan to tan, very fine grained, unconsolidated with interbeded moderately well cemented caliche, dry	266		
-20	X	SB4 (20)				105		
-25	X	SB4 (25)				68.6		
-30								

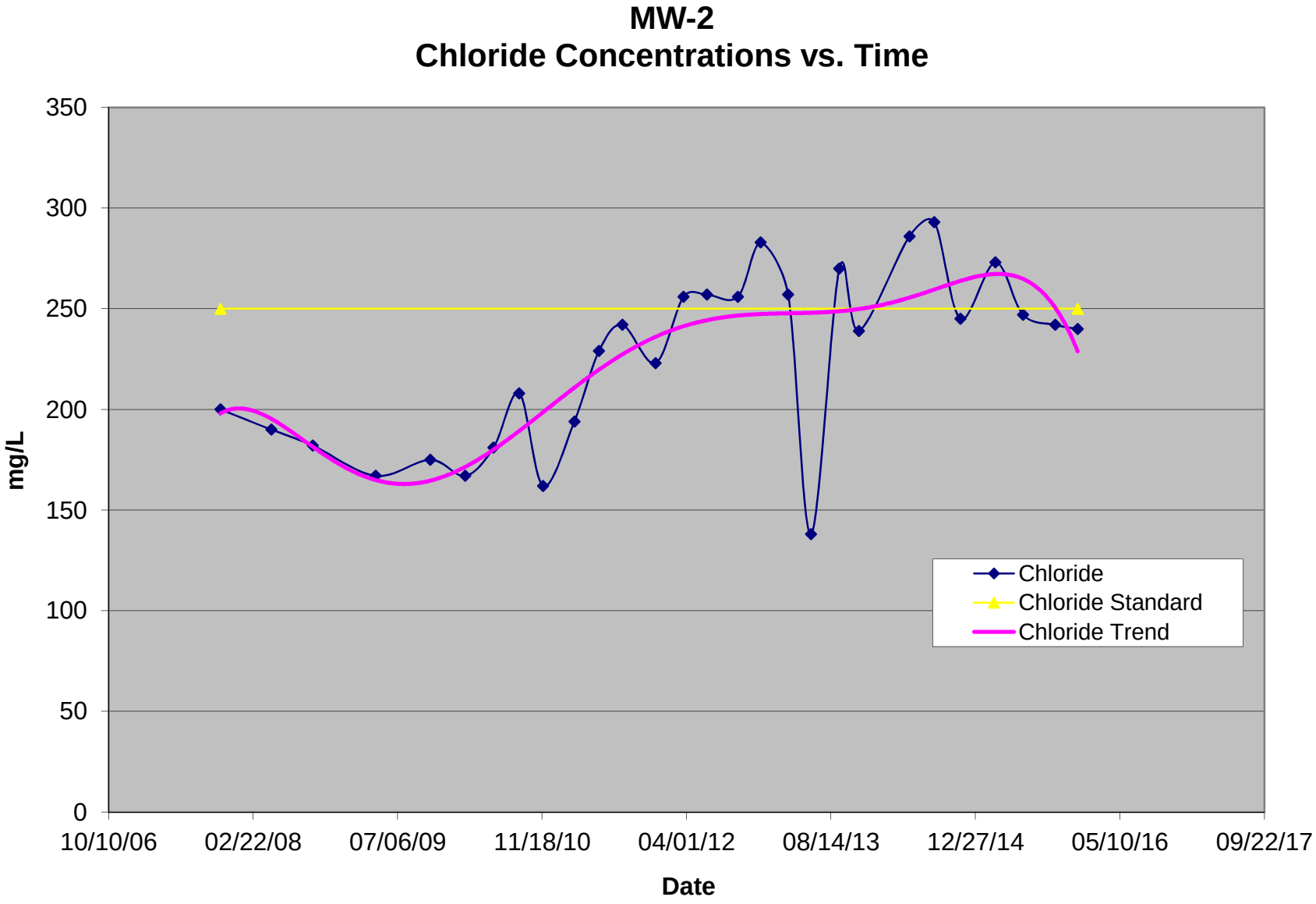
25 feet bgs

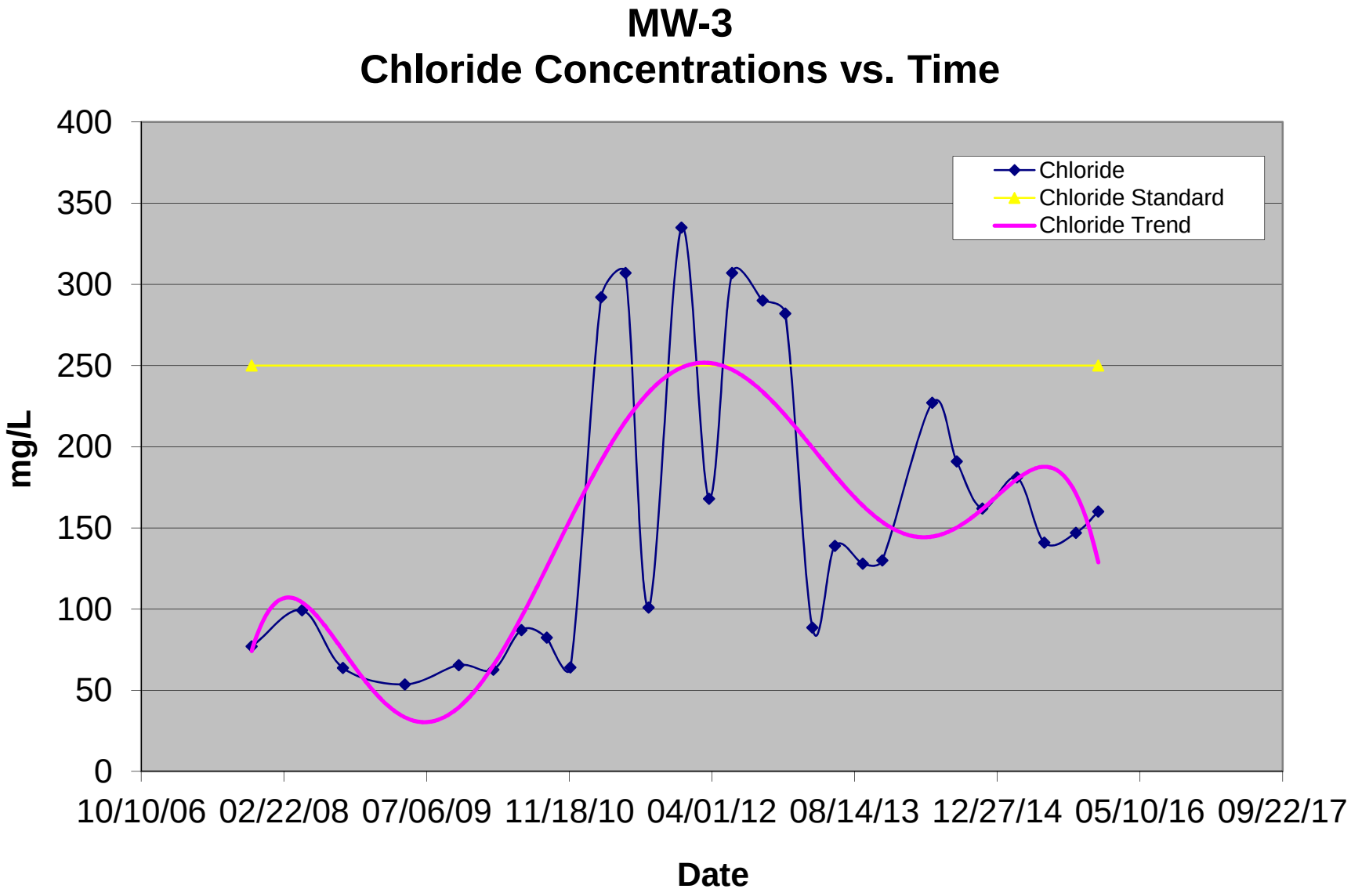
GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

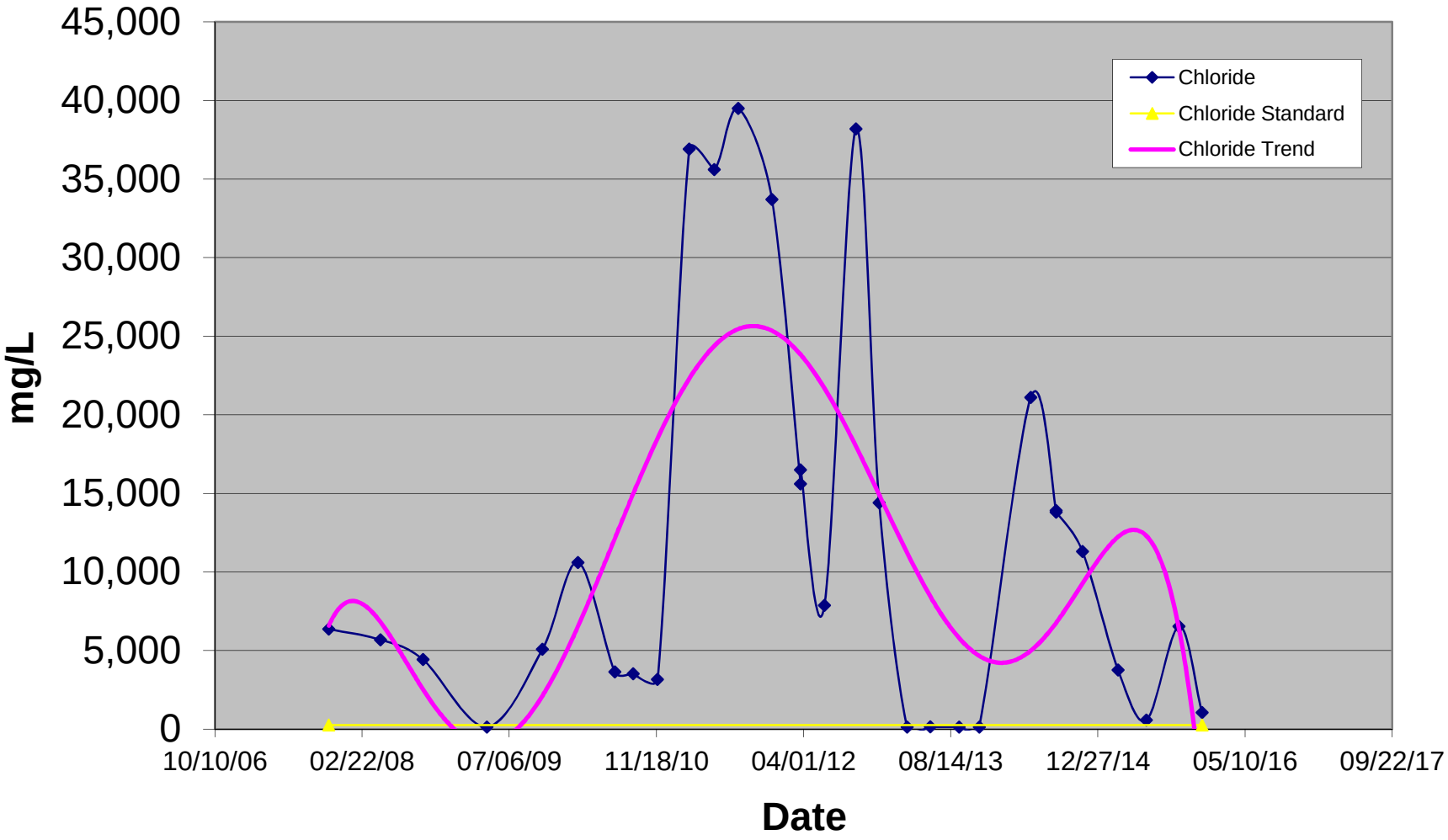
Appendix D
Chloride Concentrations vs. Time Graphs

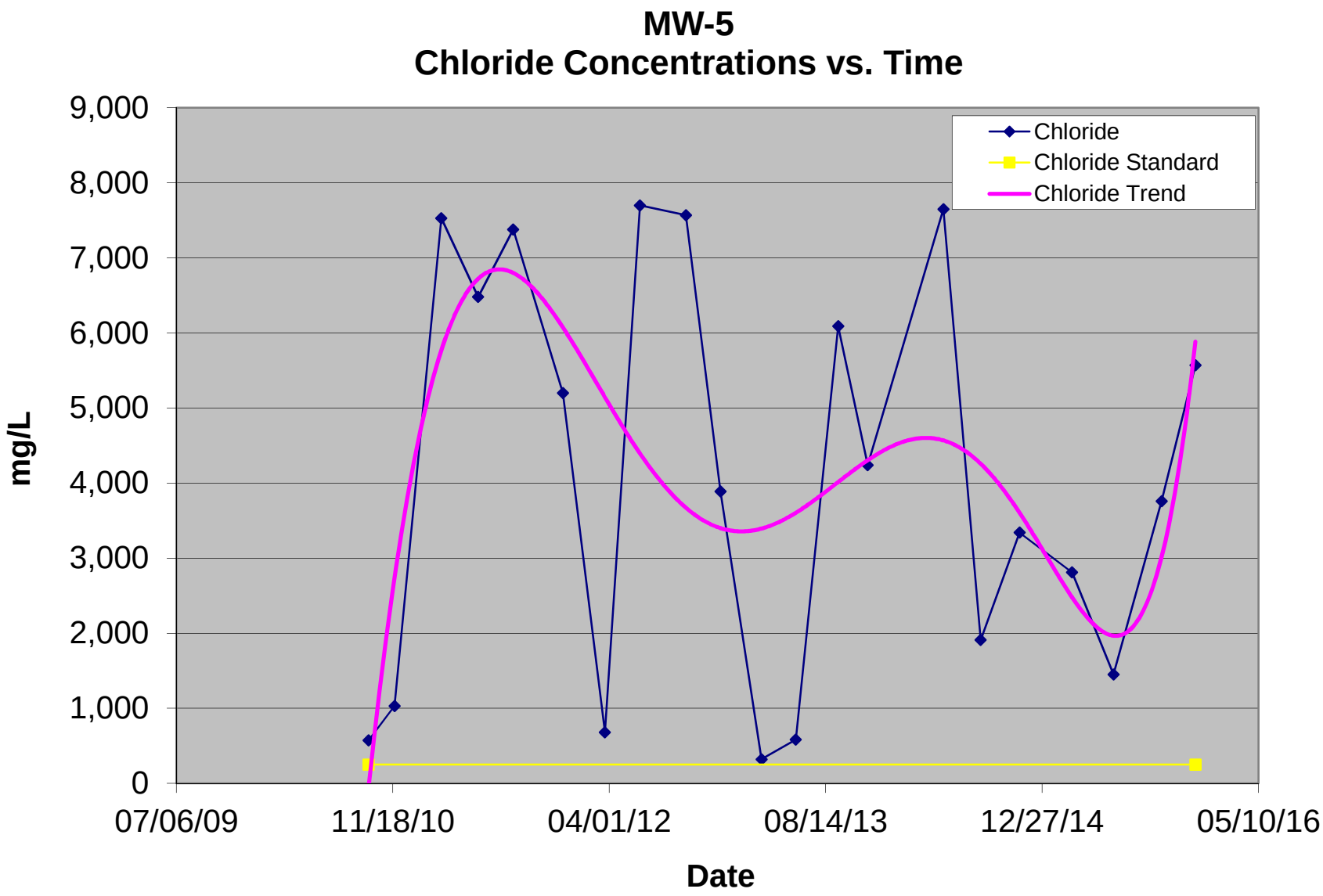

MW-1
Chloride Concentrations vs. Time
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
mg/L
Chloride
Chloride Standard
Chloride Trend
10/10/06
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
Date

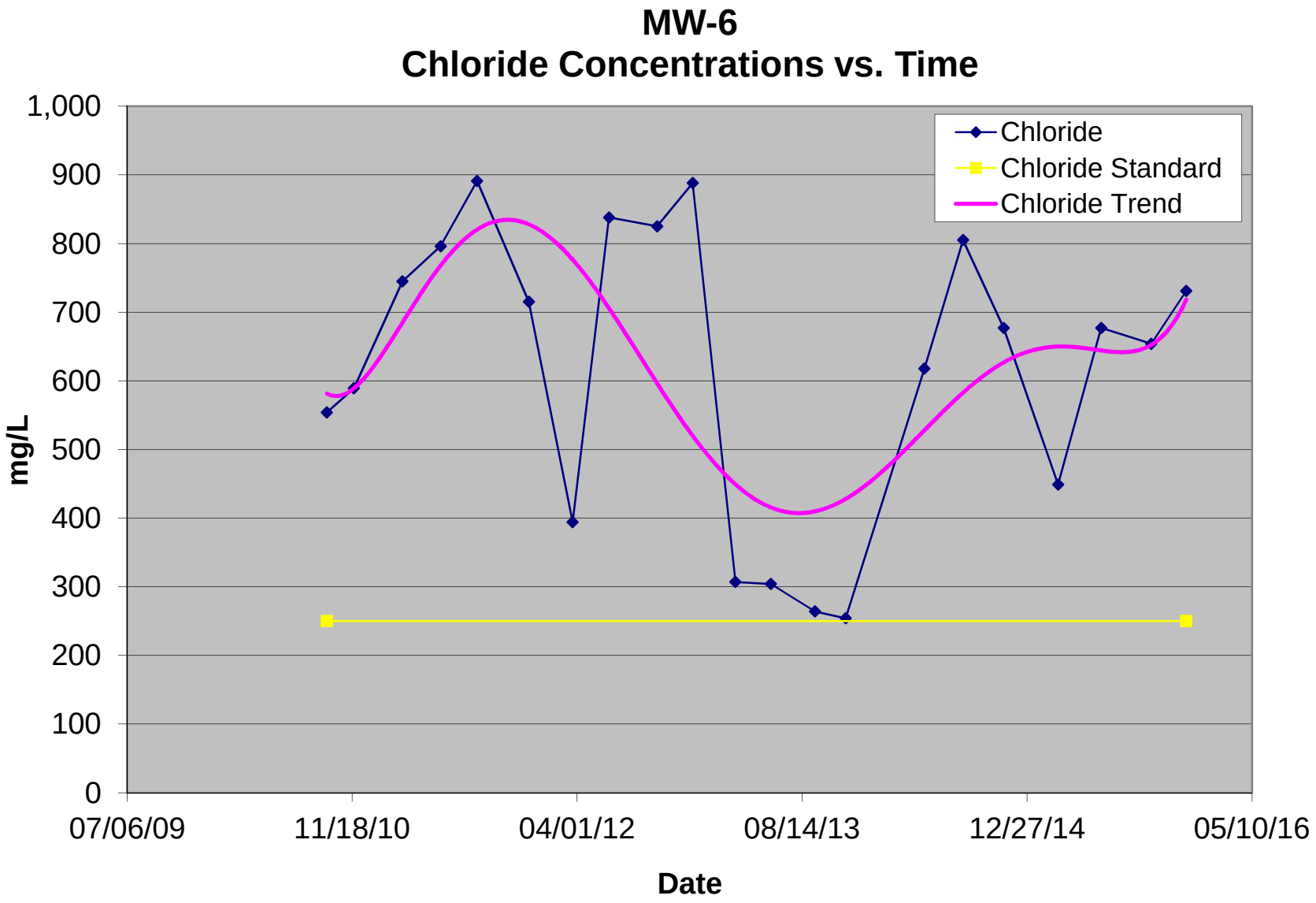

MW-2
Chloride Concentrations vs. Time
350
300
250
200
150
100
50
0
mg/L
10/10/06
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
Date
Chloride
Chloride Standard
Chloride Trend

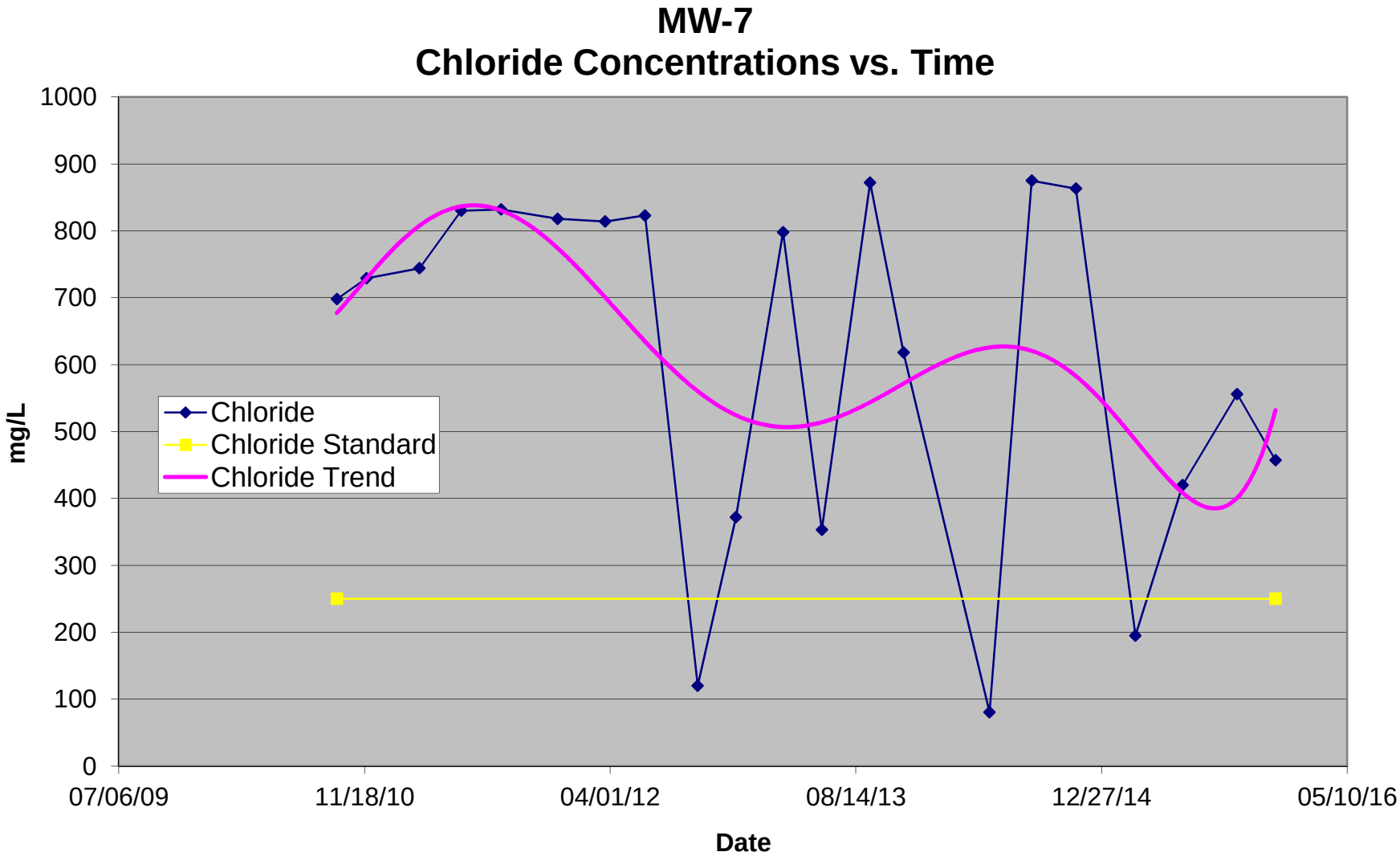

MW-3
Chloride Concentrations vs. Time
400
350
300
250
200
150
100
50
0
mg/L
Chloride
Chloride Standard
Chloride Trend
10/10/06
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
Date

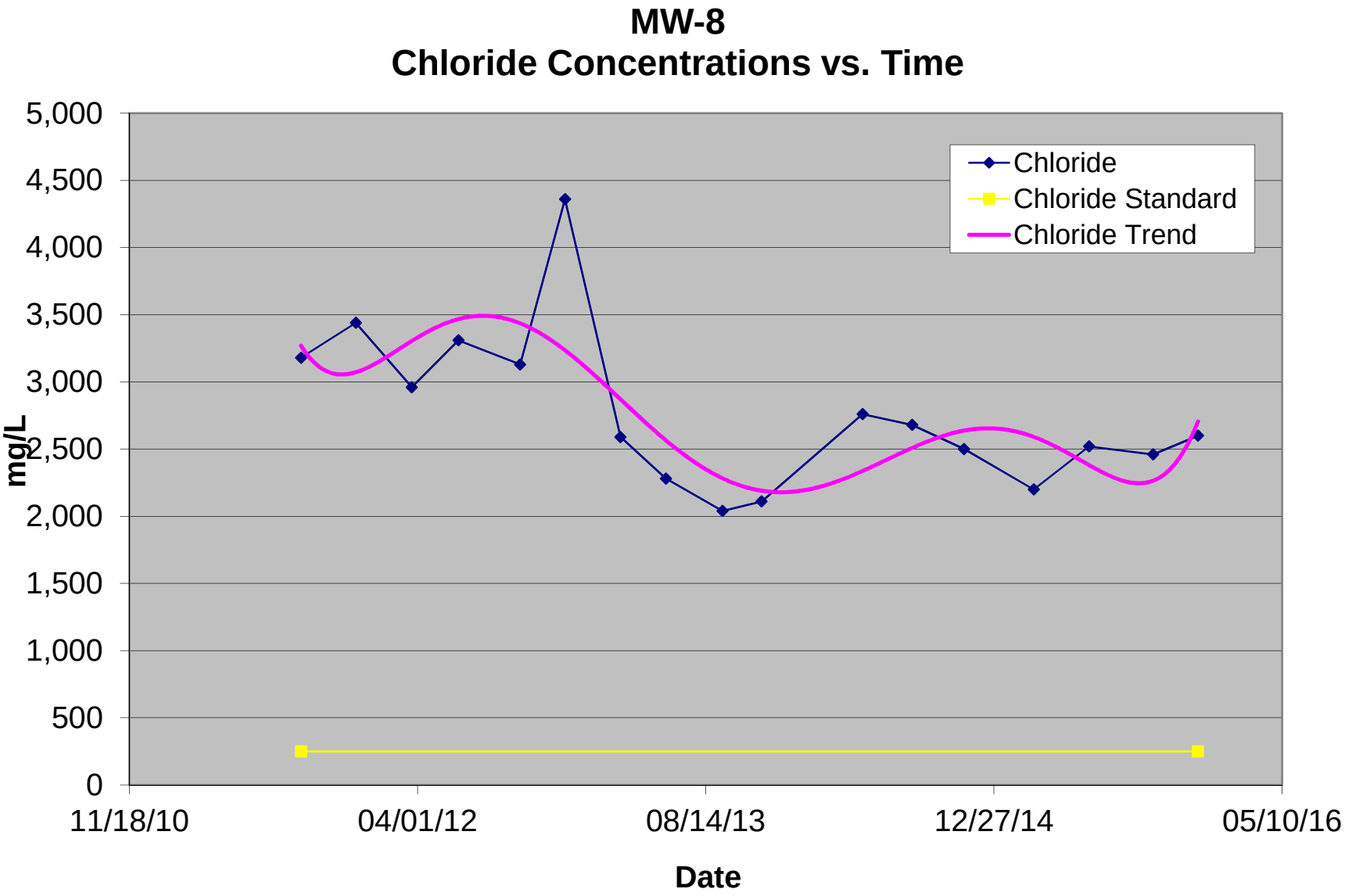
MW-4
Chloride Concentrations vs. Time

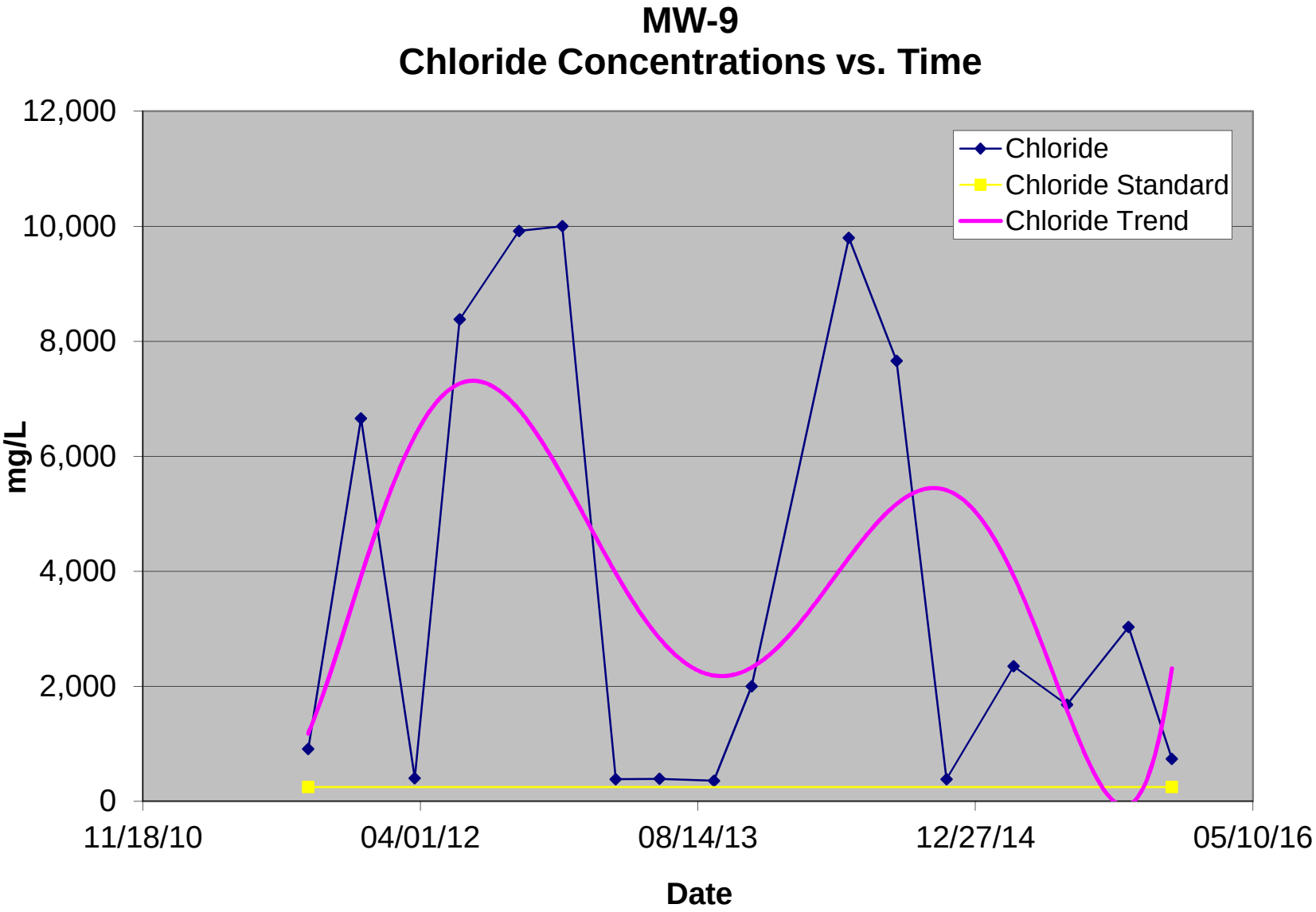


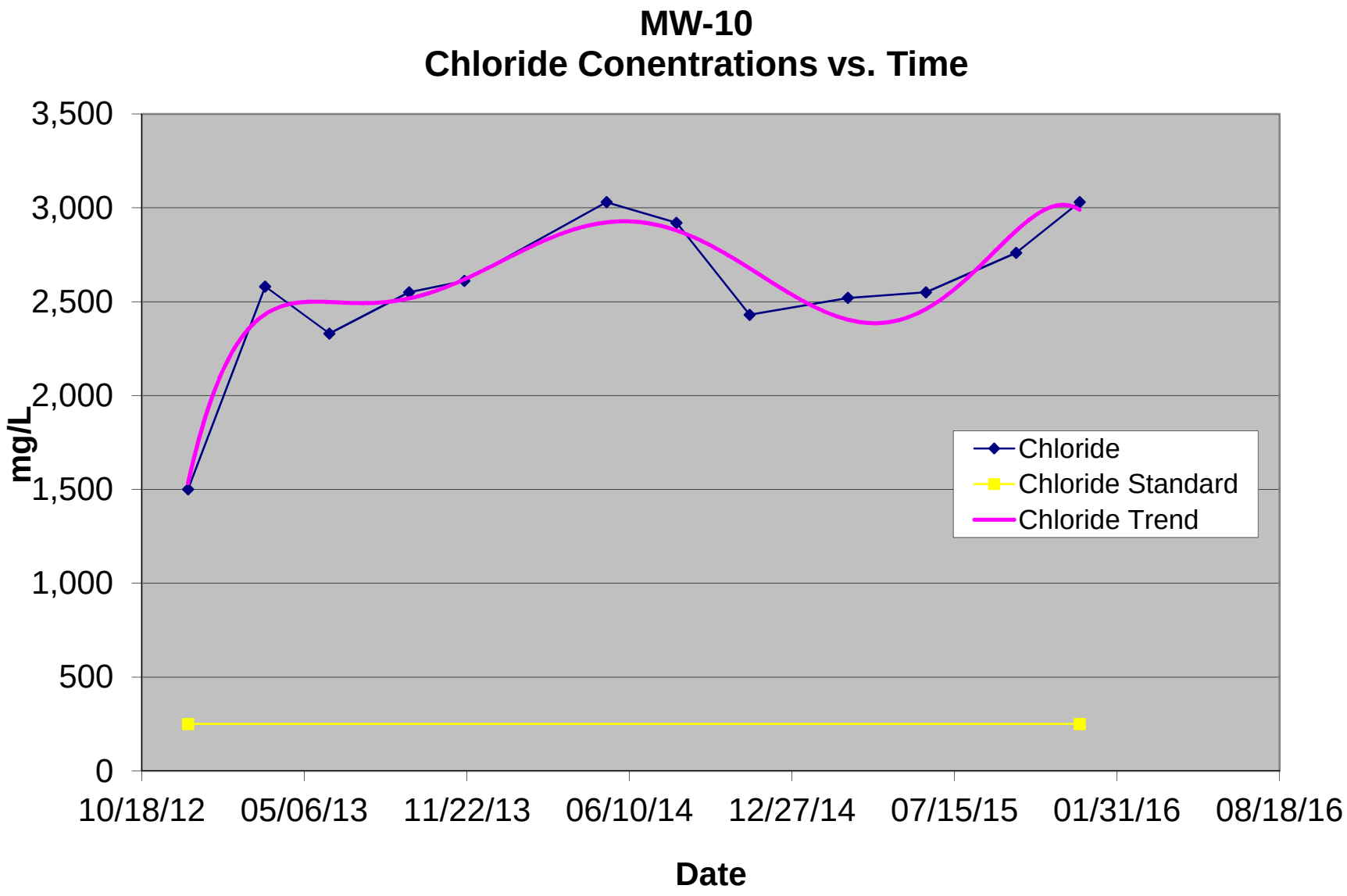

MW-5
Chloride Concentrations vs. Time
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
mg/L
Chloride
Chloride Standard
Chloride Trend
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
Date

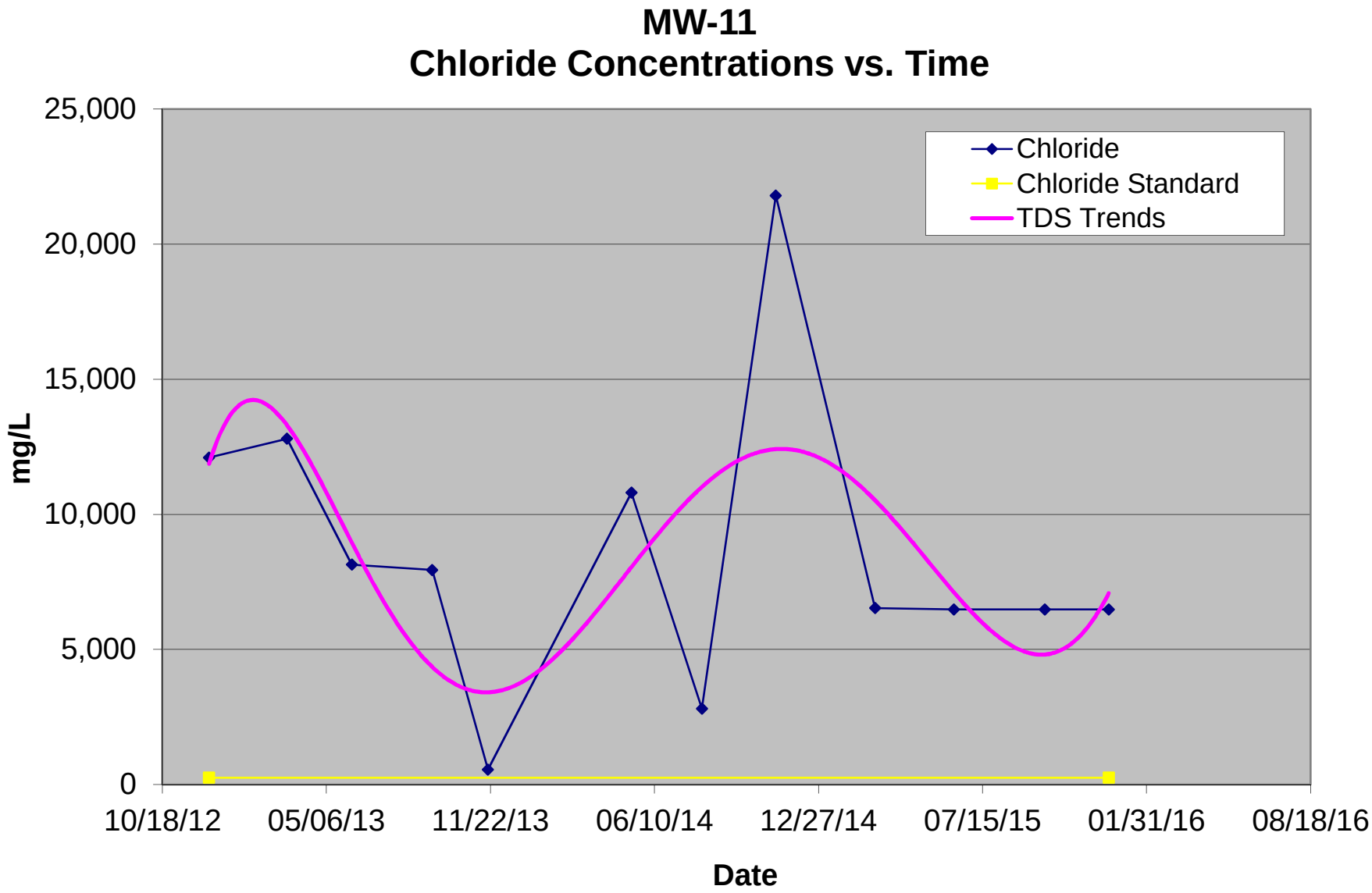

MW-6
Chloride Concentrations vs. Time
1,000
900
800
700
600
500
400
300
200
100
0
mg/L
Chloride
Chloride Standard
Chloride Trend
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
Date

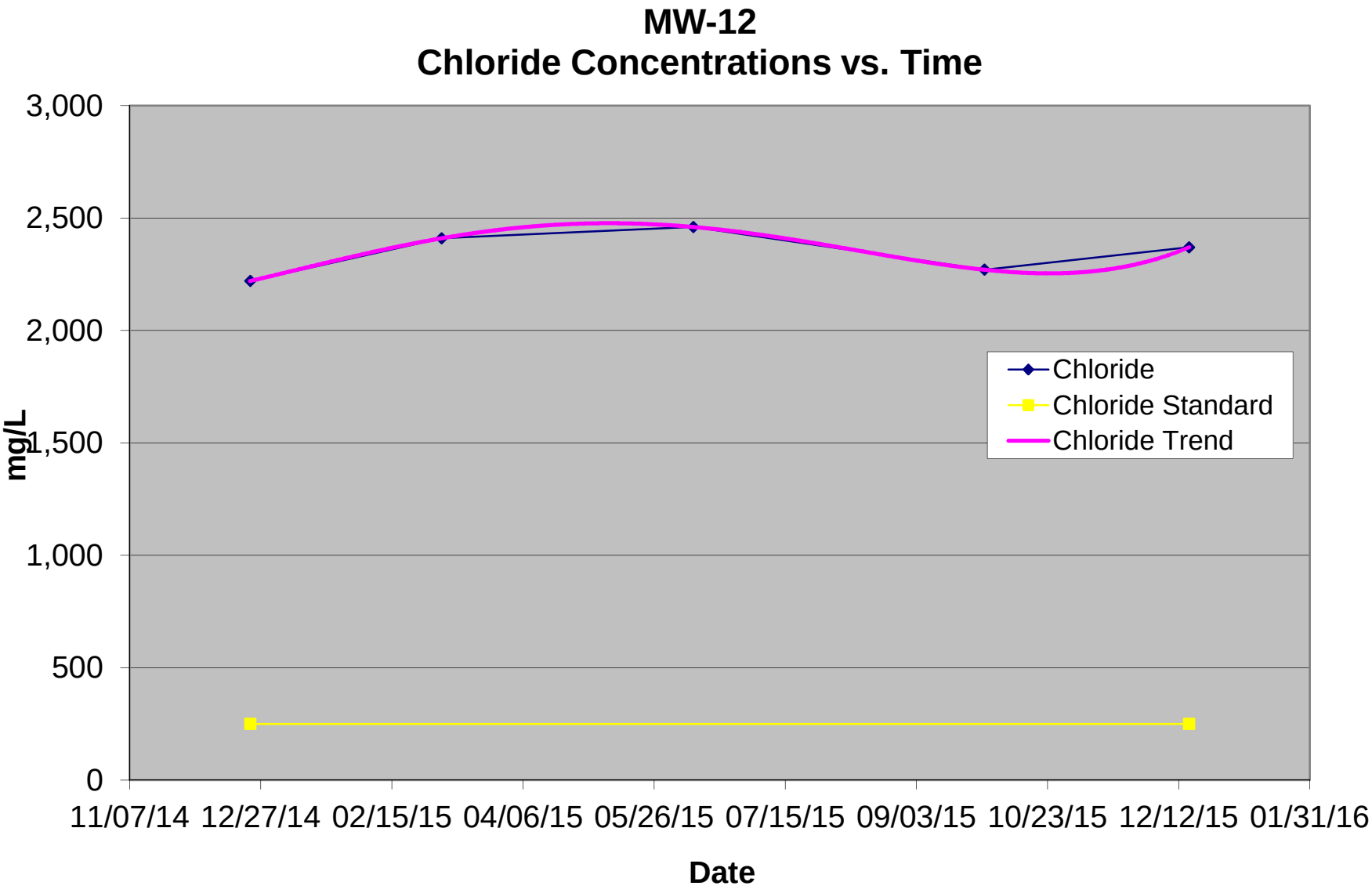

MW-7
Chloride Concentrations vs. Time
1000
900
800
700
600
500
400
300
200
100
0
mg/L
Chloride
Chloride Standard
Chloride Trend
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
Date

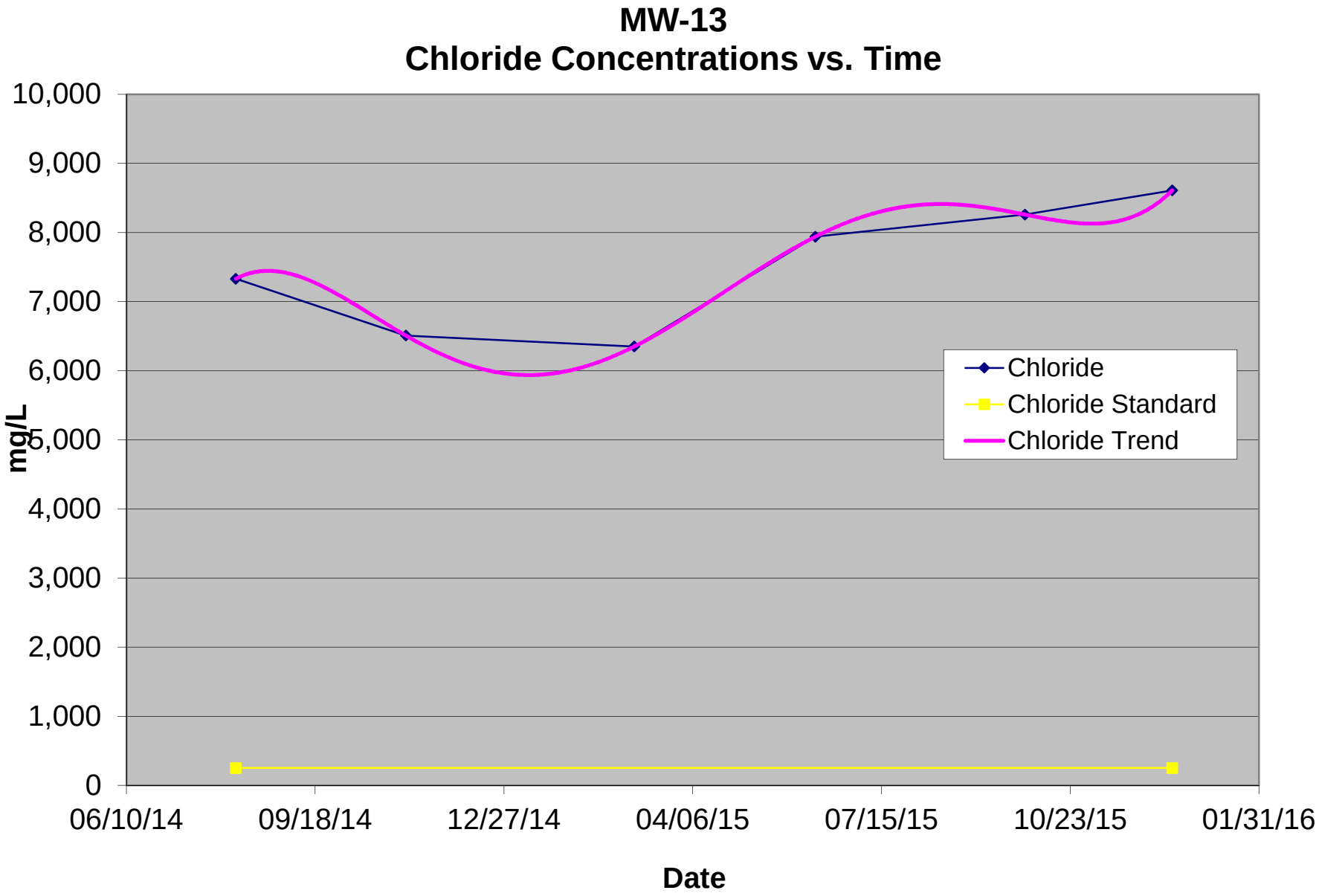

MW-8
Chloride Concentrations vs. Time
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
mg/L
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
Date
Chloride
Chloride Standard
Chloride Trend

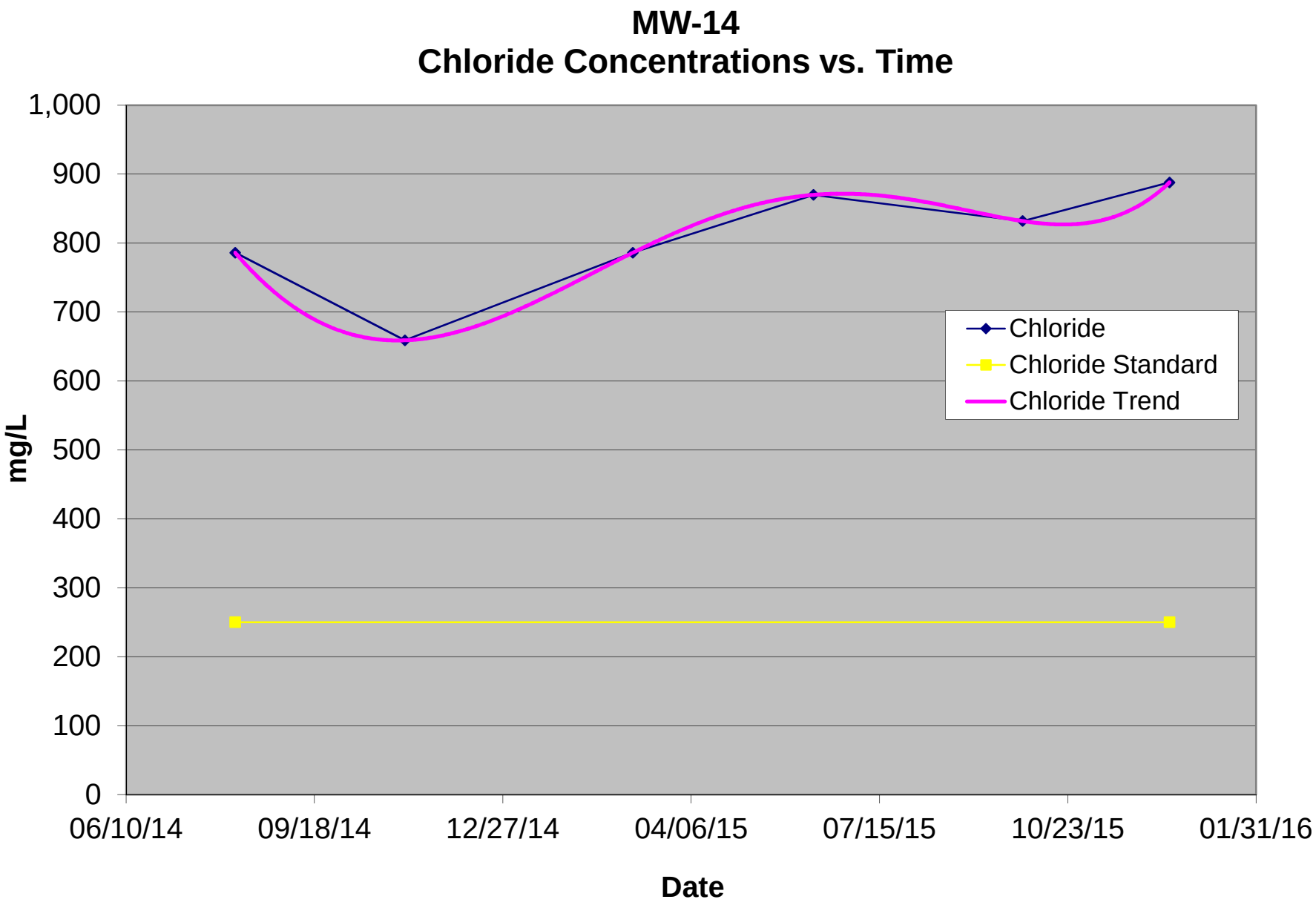

MW-9
Chloride Concentrations vs. Time
12,000
10,000
8,000
6,000
4,000
2,000
0
mg/L
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
Date
Chloride
Chloride Standard
Chloride Trend

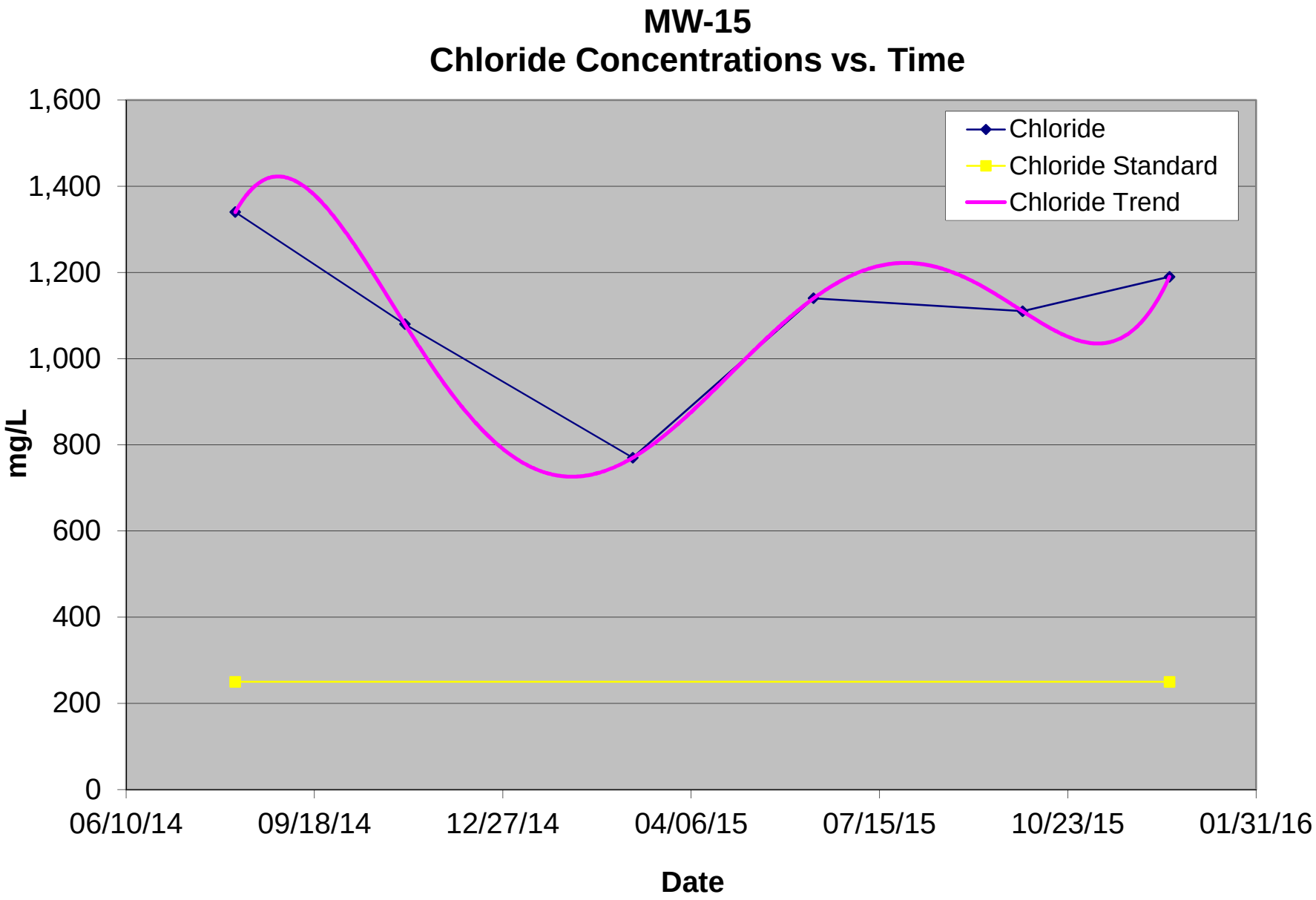

MW-10
Chloride Conentrations vs. Time
3,500
3,000
2,500
2,000
1,500
1,000
500
0
mg/L
10/18/12
05/06/13
11/22/13
06/10/14
12/27/14
07/15/15
01/31/16
08/18/16
Date
Chloride
Chloride Standard
Chloride Trend

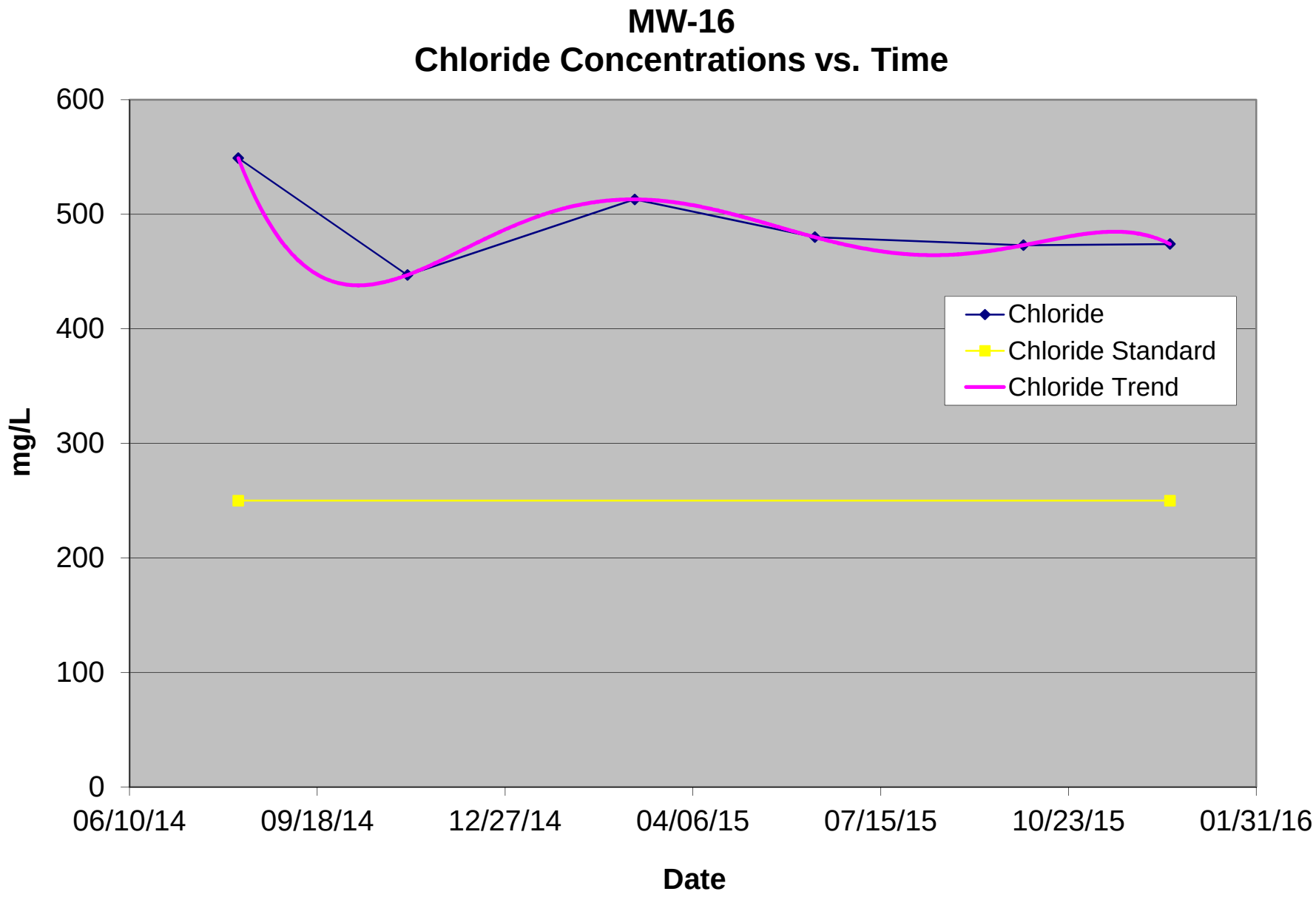

MW-11
Chloride Concentrations vs. Time
25,000
20,000
15,000
10,000
5,000
0
mg/L
Chloride
Chloride Standard
TDS Trends
10/18/12
05/06/13
11/22/13
06/10/14
12/27/14
07/15/15
01/31/16
08/18/16
Date


MW-12
Chloride Concentrations vs. Time
3,000
2,500
2,000
1,500
1,000
500
0
mg/L
Chloride
Chloride Standard
Chloride Trend
11/07/14
12/27/14
02/15/15
04/06/15
05/26/15
07/15/15
09/03/15
10/23/15
12/12/15
01/31/16
Date


MW-13
Chloride Concentrations vs. Time
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
mg/L
06/10/14
09/18/14
12/27/14
04/06/15
07/15/15
10/23/15
01/31/16
Date
Chloride
Chloride Standard
Chloride Trend


MW-14
Chloride Concentrations vs. Time
1,000
900
800
700
600
500
400
300
200
100
0
mg/L
06/10/14
09/18/14
12/27/14
04/06/15
07/15/15
10/23/15
01/31/16
Date
Chloride
Chloride Standard
Chloride Trend


MW-15
Chloride Concentrations vs. Time
1,600
1,400
1,200
1,000
800
600
400
200
0
mg/L
Chloride
Chloride Standard
Chloride Trend
06/10/14
09/18/14
12/27/14
04/06/15
07/15/15
10/23/15
01/31/16
Date


MW-16
Chloride Concentrations vs. Time
600
500
400
300
200
100
0
mg/L
06/10/14
09/18/14
12/27/14
04/06/15
07/15/15
10/23/15
01/31/16
Date
Chloride
Chloride Standard
Chloride Trend

Appendix E
Groundwater Laboratory Analytical Reports

Analytical Report 503650

for

Conestoga-Rovers & Associates-Albuquerque, NM

Project Manager: Bernie Bockisch

Mark Owen #9

046121

17-MAR-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-18), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

17-MAR-15

Project Manager: **Bernie Bockisch**
Conestoga-Rovers & Associates-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **503650**
Mark Owen #9
Project Address: EUNICE, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 503650. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 503650 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuqu

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GW-046121-030615-SP-MW1	W	03-06-15 10:50		503650-001
GW-046121-030615-SP-RW1	W	03-06-15 10:55		503650-002
GW-046121-030615-SP-MW2	W	03-06-15 11:15		503650-003
GW-046121-030615-SP-MW3	W	03-06-15 11:29		503650-004
GW-046121-030615-SP-MW4	W	03-06-15 11:38		503650-005
GW-046121-030615-SP-MW7	W	03-06-15 12:00		503650-006
GW-046121-030615-SP-MW15	W	03-06-15 12:12		503650-007
GW-046121-030615-SP-MW16	W	03-06-15 12:28		503650-008
GW-046121-030615-SP-MW6	W	03-06-15 12:42		503650-009
GW-046121-030615-SP-MW8	W	03-06-15 12:54		503650-010
GW-046121-030615-SP-MW5	W	03-06-15 13:07		503650-011
GW-046121-030615-SP-DUP1	W	03-06-15 00:00		503650-012
GW-046121-030615-SP-MW9	W	03-06-15 13:24		503650-013
GW-046121-030615-SP-MW10	W	03-06-15 13:40		503650-014
GW-046121-030615-SP-MW14	W	03-06-15 13:55		503650-015
GW-046121-030615-SP-MW13	W	03-06-15 14:03		503650-016
GW-046121-030615-SP-MW11	W	03-06-15 14:15		503650-017
GW-046121-030615-SP-DUP2	W	03-06-15 00:00		503650-018
GW-046121-030615-SP-MW12	W	03-06-15 14:27		503650-019

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW1** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-001 Date Collected: 03.06.15 10.50

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.11.15 19.15

Seq Number: 963584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1510**	100	mg/L	03.11.15 19.15		100
Sulfate	14808-79-8	**232**	100	mg/L	03.11.15 19.15		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2770**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**269**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-RW1** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-002 Date Collected: 03.06.15 10.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 06.17

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15100**	500	mg/L	03.14.15 06.17		500
Sulfate	14808-79-8	**1070**	500	mg/L	03.14.15 06.17		500

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963823

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**33700**	5.00	mg/L	03.13.15 10.30		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**196**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW2** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-003 Date Collected: 03.06.15 11.15

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.11.15 20.01

Seq Number: 963584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**273**	20.0	mg/L	03.11.15 20.01		20
Sulfate	14808-79-8	**169**	20.0	mg/L	03.11.15 20.01		20

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1020**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**309**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW3** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-004 Date Collected: 03.06.15 11.29

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.11.15 20.23

Seq Number: 963584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**181**	10.0	mg/L	03.11.15 20.23		10
Sulfate	14808-79-8	**99.7**	10.0	mg/L	03.11.15 20.23		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**663**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**269**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW4** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-005 Date Collected: 03.06.15 11.38

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 08.33

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3750**	200	mg/L	03.14.15 08.33		200
Sulfate	14808-79-8	**438**	200	mg/L	03.14.15 08.33		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**8410**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**252**	4.00	mg/L	03.13.15 13.49		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW7** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-006 Date Collected: 03.06.15 12.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 09.41

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**177**	10.0	mg/L	03.14.15 09.41		10
Sulfate	14808-79-8	**93.0**	10.0	mg/L	03.14.15 09.41		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**687**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**245**	4.00	mg/L	03.13.15 13.49		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW15** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-007 Date Collected: 03.06.15 12.12

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 10.03

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**770**	50.0	mg/L	03.14.15 10.03		50
Sulfate	14808-79-8	**353**	50.0	mg/L	03.14.15 10.03		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2130**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**236**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW16** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-008 Date Collected: 03.06.15 12.28

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 10.26

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**513**	50.0	mg/L	03.14.15 10.26		50
Sulfate	14808-79-8	**318**	50.0	mg/L	03.14.15 10.26		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963823

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1910**	5.00	mg/L	03.13.15 10.30		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**307**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW6** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-009 Date Collected: 03.06.15 12.42

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 10.49

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**449**	50.0	mg/L	03.14.15 10.49		50
Sulfate	14808-79-8	**241**	50.0	mg/L	03.14.15 10.49		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1440**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**224**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW8** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-010 Date Collected: 03.06.15 12.54

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 11.11

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2200**	100	mg/L	03.14.15 11.11		100
Sulfate	14808-79-8	**671**	100	mg/L	03.14.15 11.11		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**5020**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**213**	4.00	mg/L	03.13.15 13.49		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW5** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-011 Date Collected: 03.06.15 13.07

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 11.57

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2810**	200	mg/L	03.14.15 11.57		200
Sulfate	14808-79-8	**455**	200	mg/L	03.14.15 11.57		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**6460**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**270**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-DUP1** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-012 Date Collected: 03.06.15 00.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 12.19

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1850**	100	mg/L	03.14.15 12.19		100
Sulfate	14808-79-8	**255**	100	mg/L	03.14.15 12.19		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**3970**	5.00	mg/L	03.11.15 10.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**305**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW9** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-013 Date Collected: 03.06.15 13.24

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 12.42

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2350**	200	mg/L	03.14.15 12.42		200
Sulfate	14808-79-8	**404**	200	mg/L	03.14.15 12.42		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: JUM

Seq Number: 963709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**5340**	5.00	mg/L	03.12.15 13.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**335**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW10** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-014 Date Collected: 03.06.15 13.40

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 13.05

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2520**	200	mg/L	03.14.15 13.05		200
Sulfate	14808-79-8	**407**	200	mg/L	03.14.15 13.05		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963823

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**5960**	5.00	mg/L	03.13.15 10.30		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**340**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW14** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-015 Date Collected: 03.06.15 13.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 14.13

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**786**	100	mg/L	03.14.15 14.13		100
Sulfate	14808-79-8	**269**	100	mg/L	03.14.15 14.13		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: JUM

Seq Number: 963709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2050**	5.00	mg/L	03.12.15 13.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**365**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW13** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-016 Date Collected: 03.06.15 14.03

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 14.35

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6350**	200	mg/L	03.14.15 14.35		200
Sulfate	14808-79-8	**814**	200	mg/L	03.14.15 14.35		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: JUM

Seq Number: 963709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**17600**	5.00	mg/L	03.12.15 13.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**155**	4.00	mg/L	03.13.15 13.49		1

Certificate of Analytical Results 503650

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW11** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-017 Date Collected: 03.06.15 14.15

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 14.58

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4430**	200	mg/L	03.14.15 14.58		200
Sulfate	14808-79-8	**395**	200	mg/L	03.14.15 14.58		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 963823

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**12400**	5.00	mg/L	03.13.15 10.30		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**223**	4.00	mg/L	03.13.15 13.49		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-DUP2** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-018 Date Collected: 03.06.15 00.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 15.21

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4440**	200	mg/L	03.14.15 15.21		200
Sulfate	14808-79-8	**384**	200	mg/L	03.14.15 15.21		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: JUM

Seq Number: 963709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**12100**	5.00	mg/L	03.12.15 13.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**223**	4.00	mg/L	03.13.15 13.49		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-030615-SP-MW12** Matrix: Water Date Received:03.10.15 12.25

Lab Sample Id: 503650-019 Date Collected: 03.06.15 14.27

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 03.14.15 15.43

Seq Number: 963845

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2410**	200	mg/L	03.14.15 15.43		200
Sulfate	14808-79-8	**549**	200	mg/L	03.14.15 15.43		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: JUM

Seq Number: 963709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**6820**	5.00	mg/L	03.12.15 13.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 963778 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**282**	4.00	mg/L	03.13.15 13.49		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 963584 Matrix: Water Date Prep: 03.11.15
MB Sample Id: 689625-1-BLK LCS Sample Id: 689625-1-BKS LCSD Sample Id: 689625-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	25.0	25.3	101	24.8	99	90-110	2	20	mg/L	03.11.15 18:30	
Sulfate	<1.00	25.0	27.4	110	22.6	90	90-110	19	20	mg/L	03.11.15 18:30	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 963845 Matrix: Water Date Prep: 03.14.15
MB Sample Id: 689760-1-BLK LCS Sample Id: 689760-1-BKS LCSD Sample Id: 689760-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	25.0	24.8	99	24.9	100	90-110	0	20	mg/L	03.14.15 05:32	
Sulfate	<1.00	25.0	23.4	94	23.5	94	90-110	0	20	mg/L	03.14.15 05:32	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 963584 Matrix: Water Date Prep: 03.11.15
Parent Sample Id: 503650-001 MS Sample Id: 503650-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	1510	2500	3610	84	80-120	mg/L	03.11.15 19:38	
Sulfate	232	2500	2680	98	80-120	mg/L	03.11.15 19:38	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 963845 Matrix: Water Date Prep: 03.14.15
Parent Sample Id: 503650-002 MS Sample Id: 503650-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	15100	12500	28300	106	80-120	mg/L	03.14.15 06:40	
Sulfate	1070	12500	12100	88	80-120	mg/L	03.14.15 06:40	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 963845 Matrix: Water Date Prep: 03.14.15
Parent Sample Id: 503650-010 MS Sample Id: 503650-010 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	2200	2500	4930	109	80-120	mg/L	03.14.15 11:34	
Sulfate	671	2500	3060	96	80-120	mg/L	03.14.15 11:34	

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: TDS by SM2540C
Seq Number: 963589 Matrix: Water
MB Sample Id: 963589-1-BLK LCS Sample Id: 963589-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	1030	103	80-120	mg/L	03.11.15 10:00	

Analytical Method: TDS by SM2540C
Seq Number: 963709 Matrix: Water
MB Sample Id: 963709-1-BLK LCS Sample Id: 963709-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	954	95	80-120	mg/L	03.12.15 13:00	

Analytical Method: TDS by SM2540C
Seq Number: 963823 Matrix: Water
MB Sample Id: 963823-1-BLK LCS Sample Id: 963823-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	949	95	80-120	mg/L	03.13.15 10:30	

Analytical Method: TDS by SM2540C
Seq Number: 963589 Matrix: Water
Parent Sample Id: 503650-001 MD Sample Id: 503650-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	2770	2720	2	10	mg/L	03.11.15 10:00	

Analytical Method: TDS by SM2540C
Seq Number: 963589 Matrix: Water
Parent Sample Id: 503650-011 MD Sample Id: 503650-011 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	6460	6410	1	10	mg/L	03.11.15 10:00	

Analytical Method: TDS by SM2540C
Seq Number: 963709 Matrix: Water
Parent Sample Id: 503559-003 MD Sample Id: 503559-003 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	250	258	3	10	mg/L	03.12.15 13:00	

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: **TDS by SM2540C**
Seq Number: 963709 Matrix: Water
Parent Sample Id: 503650-013 MD Sample Id: 503650-013 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	5340	5240	2	10	mg/L	03.12.15 13:00	

Analytical Method: **TDS by SM2540C**
Seq Number: 963823 Matrix: Water
Parent Sample Id: 503650-002 MD Sample Id: 503650-002 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	33700	32200	5	10	mg/L	03.13.15 10:30	

Analytical Method: **Alkalinity by SM2320B**
Seq Number: 963778 Matrix: Water
MB Sample Id: 963778-1-BLK LCS Sample Id: 963778-1-BKS LCSD Sample Id: 963778-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	248	99	259	104	80-120	4	20	mg/L	03.13.15 13:49	

Analytical Method: **Alkalinity by SM2320B**
Seq Number: 963778 Matrix: Water
Parent Sample Id: 503650-001 MD Sample Id: 503650-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	269	272	1	20	mg/L	03.13.15 13:49	

Analytical Method: **Alkalinity by SM2320B**
Seq Number: 963778 Matrix: Water
Parent Sample Id: 503650-011 MD Sample Id: 503650-011 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	270	273	1	20	mg/L	03.13.15 13:49	

CHAIN OF CUSTODY

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Xenco Quote #

Xenco Job # 503650

Client / Reporting Information

Company Name / Branch: Conestoga Rovers + Assoc

Company Address: 6121 Indian School Rd Ste 200 Albuquerque, NM 87110

Email: bbockisch@craworld.com

Phone No:

Project Contact: Bernie Bockisch

Samplers's Name: Steve Perez

Project Information

Project Name/Number: 046121 MarkOwen #9

Project Location: Eunice, NM

Invoice To:

PO Number: See SSOW

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride 325.3	TDS 160.1	Sulfate 375.4	Alkalinity 310.1	Field Comments
1	GW-046121-030615-SP-MW1		03/06/15	1050	GW	1									X	X	X	X	
2	GW-046121-030615-SP-MW1			1055		1													
3	GW-046121-030615-SP-MW2			1115		1													
4	GW-046121-030615-SP-MW3			1129		1													
5	GW-046121-030615-SP-MW4			1138		1													
6	GW-046121-030615-SP-MW7			1200		1													
7	GW-046121-030615-SP-MW15			1212		1													
8	GW-046121-030615-SP-MW16			1228		1													
9	GW-046121-030615-SP-MW6			1242		1													
10	GW-046121-030615-SP-MW8			1254		1													

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☑ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Steven Perez 3/9/15	3/9/15 10:15	Bell Rahmann		3/10/15 12:25	
2						
3						
4						
5						

Custody Seal #

Preserved where applicable ☐

On Ice ☑

Cooler Temp. 1.0°C

Thermo. Corr. Factor

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job # 502650

Client / Reporting Information

Company Name / Branch: Cornerstone Rovers + Associates

Company Address: 6121 Indian School Rd Ste 200, Albuquerque NM 87110

Email: bbruckisch@cranrid.com

Phone No:

Project Contact: Bernie Bruckisch 505 280 0572

Samplers's Name: Steven Perez

Project Information

Project Name/Number: 046121 Marathon #9

Project Location: Eunice, NM

Invoice To:

PO Number: See SSOW

Analytical Information

Chloride 325.3
TDS 160.1
Sulfate 375.4
Alkalinity 310.1

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	GW-046121-030615-SP-MW5		3/6/15	1307	GW	1									
2	GW-046121-030615-SP-DUP1		3/6/15			1									
3	GW-046121-030615-SP-MW9		3/6/15	1324		1									
4	GW-046121-030615-SP-MW10			1340		1									
5	GW-046121-030615-SP-MW14			1355		1									
6	GW-046121-030615-SP-MW13			1403		1									
7	GW-046121-030615-SP-MW11			1415		1									
8	GW-046121-030615-SP-~~MW~~DUP2					1									
9	GW-046121-030615-SP-MW12			1427		1									
10															

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Steven Perez	3/9/15 10:20	1 Bill Rahmann	2	3/10/15 12:25	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 1.0° Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negiotiated under a fully executed client contract.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga-Rovers & Associates-Albuqu

Date/ Time Received: 03/10/2015 12:25:00 PM

Work Order #: 503650

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**No**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**No**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**No**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 03/10/2015

Checklist reviewed by: Kelsey Brooks Date: 03/10/2015

Analytical Report 509407

for

Conestoga-Rovers & Associates-Albuquerque, NM

Project Manager: Bernie Bockisch

Mark Owen #9

046121

17-JUN-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-18), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

17-JUN-15

Project Manager: **Bernie Bockisch**
Conestoga-Rovers & Associates-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **509407**
Mark Owen #9
Project Address: EUNICE, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 509407. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 509407 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuqu

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GW-046121-061015-SP-RW-1	W	06-10-15 11:00		509407-001
GW-046121-061015-SP-MW-1	W	06-10-15 11:10		509407-002
GW-046121-061015-SP-MW2	W	06-10-15 11:20		509407-003
GW-046121-061015-SP-MW3	W	06-10-15 11:30		509407-004
GW-046121-061015-SP-MW4	W	06-10-15 11:40		509407-005
GW-046121-061015-SP-MW5	W	06-10-15 11:50		509407-006
GW-046121-061015-SP-MW6	W	06-10-15 12:00		509407-007
GW-046121-061015-SP-MW7	W	06-10-15 12:20		509407-008
GW-046121-061015-SP-MW8	W	06-10-15 12:30		509407-009
GW-046121-061015-SP-MW15	W	06-10-15 12:45		509407-010
GW-046121-061015-SP-MW16	W	06-10-15 12:55		509407-011
GW-046121-061015-SP-MW9	W	06-10-15 13:10		509407-012
GW-046121-061015-SP-MW10	W	06-10-15 13:20		509407-013
GW-046121-061015-SP-MW14	W	06-10-15 13:30		509407-014
GW-046121-061015-SP-MW13	W	06-10-15 13:40		509407-015
GW-046121-061015-SP-MW11	W	06-10-15 13:55		509407-016
GW-046121-061015-SP-MW12	W	06-10-15 14:10		509407-017
GW-046121-061015-SP-DUP 1	W	06-10-15 00:00		509407-018
GW-046121-061015-SP-DUP 2	W	06-10-15 00:00		509407-019

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-970419 TDS by SM2540C

Total dissolved solids recovered below QC limits in the laboratory control sample. Samples in the analytical batch are: 509407-011, -012, -013, -014, -015, -016, -017, -018, -019.

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-RW-1** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-001 Date Collected: 06.10.15 11.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.16.15 22.45

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2020**	100	mg/L	06.16.15 22.45		100
Sulfate	14808-79-8	**227**	100	mg/L	06.16.15 22.45		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**4750**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**243**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW-1** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-002 Date Collected: 06.10.15 11.10

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.16.15 23.07

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**878**	50.0	mg/L	06.16.15 23.07		50
Sulfate	14808-79-8	**97.0**	50.0	mg/L	06.16.15 23.07		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1990**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**301**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW2** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-003 Date Collected: 06.10.15 11.20

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.16.15 23.30

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**247**	20.0	mg/L	06.16.15 23.30		20
Sulfate	14808-79-8	**88.8**	20.0	mg/L	06.16.15 23.30		20

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**928**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**380**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW3** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-004 Date Collected: 06.10.15 11.30

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 00.15

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**141**	10.0	mg/L	06.17.15 00.15		10
Sulfate	14808-79-8	**66.3**	10.0	mg/L	06.17.15 00.15		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**698**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**295**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW4** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-005 Date Collected: 06.10.15 11.40

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 00.38

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**559**	50.0	mg/L	06.17.15 00.38		50
Sulfate	14808-79-8	**84.4**	50.0	mg/L	06.17.15 00.38		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1330**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**273**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW5** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-006 Date Collected: 06.10.15 11.50

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 01.01

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1450**	100	mg/L	06.17.15 01.01		100
Sulfate	14808-79-8	**191**	100	mg/L	06.17.15 01.01		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**3050**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**268**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW6** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-007 Date Collected: 06.10.15 12.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 01.23

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**677**	50.0	mg/L	06.17.15 01.23		50
Sulfate	14808-79-8	**296**	50.0	mg/L	06.17.15 01.23		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2060**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**211**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW7** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-008 Date Collected: 06.10.15 12.20

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 02.31

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.8**	10.0	mg/L	06.17.15 02.31		10
Sulfate	14808-79-8	**64.3**	10.0	mg/L	06.17.15 02.31		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**532**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**262**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW8** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-009 Date Collected: 06.10.15 12.30

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 02.54

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2520**	100	mg/L	06.17.15 02.54		100
Sulfate	14808-79-8	**624**	100	mg/L	06.17.15 02.54		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**6860**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**200**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW15** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-010 Date Collected: 06.10.15 12.45

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 03.16

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	50.0	mg/L	06.17.15 03.16		50
Sulfate	14808-79-8	**466**	50.0	mg/L	06.17.15 03.16		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970418

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**3240**	5.00	mg/L	06.15.15 16.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**225**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW16** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-011 Date Collected: 06.10.15 12.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 03.39

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**480**	50.0	mg/L	06.17.15 03.39		50
Sulfate	14808-79-8	**362**	50.0	mg/L	06.17.15 03.39		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1790**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**302**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW9** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-012 Date Collected: 06.10.15 13.10

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 04.02

Seq Number: 970402

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1680**	100	mg/L	06.17.15 04.02		100
Sulfate	14808-79-8	**177**	100	mg/L	06.17.15 04.02		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**3340**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**319**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW10** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-013 Date Collected: 06.10.15 13.20

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 06.18

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2550**	200	mg/L	06.17.15 06.18		200
Sulfate	14808-79-8	**297**	200	mg/L	06.17.15 06.18		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**5710**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**339**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW14** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-014 Date Collected: 06.10.15 13.30

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 07.03

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**870**	100	mg/L	06.17.15 07.03		100
Sulfate	14808-79-8	**249**	100	mg/L	06.17.15 07.03		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2100**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**368**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW13** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-015 Date Collected: 06.10.15 13.40

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 07.26

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7940**	200	mg/L	06.17.15 07.26		200
Sulfate	14808-79-8	**929**	200	mg/L	06.17.15 07.26		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**20800**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**182**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW11** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-016 Date Collected: 06.10.15 13.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 07.48

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5310**	200	mg/L	06.17.15 07.48		200
Sulfate	14808-79-8	**291**	200	mg/L	06.17.15 07.48		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**12000**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**227**	4.00	mg/L	06.15.15 14.11		1

Certificate of Analytical Results 509407

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-MW12** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-017 Date Collected: 06.10.15 14.10

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 08.11

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2460**	200	mg/L	06.17.15 08.11		200
Sulfate	14808-79-8	**497**	200	mg/L	06.17.15 08.11		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**7390**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**301**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-DUP 1** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-018 Date Collected: 06.10.15 00.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 08.34

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**612**	50.0	mg/L	06.17.15 08.34		50
Sulfate	14808-79-8	**274**	50.0	mg/L	06.17.15 08.34		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1850**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970280 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**217**	4.00	mg/L	06.15.15 14.11		1

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerq

Mark Owen #9

Sample Id: **GW-046121-061015-SP-DUP 2** Matrix: Water Date Received:06.11.15 09.45

Lab Sample Id: 509407-019 Date Collected: 06.10.15 00.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 06.17.15 09.42

Seq Number: 970408

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5100**	200	mg/L	06.17.15 09.42		200
Sulfate	14808-79-8	**267**	200	mg/L	06.17.15 09.42		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 970419

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**13900**	5.00	mg/L	06.16.15 14.00		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 970281 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**227**	4.00	mg/L	06.15.15 17.23		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 970402 Matrix: Water Date Prep: 06.16.15
MB Sample Id: 693881-1-BLK LCS Sample Id: 693881-1-BKS LCSD Sample Id: 693881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	25.0	25.1	100	25.1	100	90-110	0	20	mg/L	06.16.15 17:50	
Sulfate	<1.00	25.0	22.9	92	23.1	92	90-110	1	20	mg/L	06.16.15 17:50	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 970408 Matrix: Water Date Prep: 06.17.15
MB Sample Id: 693953-1-BLK LCS Sample Id: 693953-1-BKS LCSD Sample Id: 693953-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	25.0	25.0	100	25.0	100	90-110	0	20	mg/L	06.17.15 05:32	
Sulfate	<1.00	25.0	23.5	94	23.2	93	90-110	1	20	mg/L	06.17.15 05:32	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 970402 Matrix: Water Date Prep: 06.16.15
Parent Sample Id: 509672-001 MS Sample Id: 509672-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	18900	12500	29800	87	80-120	mg/L	06.16.15 18:58	
Sulfate	1420	12500	14600	105	80-120	mg/L	06.16.15 18:58	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 970402 Matrix: Water Date Prep: 06.16.15
Parent Sample Id: 509407-003 MS Sample Id: 509407-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	247	500	730	97	80-120	mg/L	06.16.15 23:53	
Sulfate	88.8	500	560	94	80-120	mg/L	06.16.15 23:53	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 970408 Matrix: Water Date Prep: 06.17.15
Parent Sample Id: 509407-013 MS Sample Id: 509407-013 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	2550	5000	7980	109	80-120	mg/L	06.17.15 06:40	
Sulfate	297	5000	5730	109	80-120	mg/L	06.17.15 06:40	

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: **TDS by SM2540C**
Seq Number: 970418 Matrix: Water
MB Sample Id: 970418-1-BLK LCS Sample Id: 970418-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	961	96	80-120	mg/L	06.15.15 16:00	

Analytical Method: **TDS by SM2540C**
Seq Number: 970419 Matrix: Water
MB Sample Id: 970419-1-BLK LCS Sample Id: 970419-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	<5.00	0	80-120	mg/L	06.16.15 14:00	L

Analytical Method: **TDS by SM2540C**
Seq Number: 970418 Matrix: Water
Parent Sample Id: 509407-001 MD Sample Id: 509407-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	4750	4280	10	10	mg/L	06.15.15 16:00	

Analytical Method: **TDS by SM2540C**
Seq Number: 970419 Matrix: Water
Parent Sample Id: 509407-011 MD Sample Id: 509407-011 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	1790	1700	5	10	mg/L	06.16.15 14:00	

Analytical Method: **Alkalinity by SM2320B**
Seq Number: 970280 Matrix: Water
MB Sample Id: 970280-1-BLK LCS Sample Id: 970280-1-BKS LCSD Sample Id: 970280-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	262	105	263	105	80-120	0	20	mg/L	06.15.15 14:11	

Analytical Method: **Alkalinity by SM2320B**
Seq Number: 970281 Matrix: Water
MB Sample Id: 970281-1-BLK LCS Sample Id: 970281-1-BKS LCSD Sample Id: 970281-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	265	106	266	106	80-120	0	20	mg/L	06.15.15 17:23	

Conestoga-Rovers & Associates-Albuquerque, NM

Mark Owen #9

Analytical Method: Alkalinity by SM2320B

Seq Number: 970280 Matrix: Ground Water

Parent Sample Id: 509278-001 MD Sample Id: 509278-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	<4.00	0	20	mg/L	06.15.15 14:11	U

Analytical Method: Alkalinity by SM2320B

Seq Number: 970280 Matrix: Water

Parent Sample Id: 509371-001 MD Sample Id: 509371-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	239	238	0	20	mg/L	06.15.15 14:11	

Analytical Method: Alkalinity by SM2320B

Seq Number: 970281 Matrix: Water

Parent Sample Id: 509399-001 MD Sample Id: 509399-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	229	230	0	20	mg/L	06.15.15 17:23	

CHAIN OF CUSTODY

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Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

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Xenco Quote #

Xenco Job # 509407

Client / Reporting Information

Company Name / Branch: Cornerstone Envers + Associates

Company Address: 1621 Indian School Rd NE Ste 200, Albuquerque, NM

Email: bbackisch@cesaworld.com

Phone No: 505-280-0572

Project Contact: Bernie Backisch

Samplers's Name: Steve Perez

Project Information

Project Name/Number: 046121 Maddox #9

Project Location: Eunice, NM

Invoice To: See SOW

PO Number: See SOW

Analytical Information

Chloride 325.3

TDS 160.1

Sulfate 375.4

Alkalinity 310.1

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	~~BW~~ SW GW-046121-061015-SP-RW1		6/10/15	1100	GW	1								X	
2	GW-046121-061015-SP-MW1			1110											
3	GW-046121-061015-SP-MW2			1120											
4	GW-046121-061015-SP-MW3			1130											
5	GW-046121-061015-SP-MW4			1140											
6	GW-046121-061015-SP-MW5			1150											
7	GW-046121-061015-SP-MW6			1200											
8	GW-046121-061015-SP-MW7			1220											
9	GW-046121-061015-SP-MW8			1230											Collection Time 12:20
10	GW-046121-061015-SP-MW15			1245											

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Steve Perez	06/10/15 4:15		2	6/11/15 9:45	
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo. Corr. Factor 3

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

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Xenco Quote #

Xenco Job # 509407

Client / Reporting Information

Company Name / Branch: Conestoga Rovers + Associates

Company Address: 1621 Indian School Rd NE Ste 200, Albuquerque NM 87110

Email: bbockisch@crawford.com

Phone No: 505 2800572

Project Contact: Bernie Bockisch

Samplers's Name: Steve Perez

Project Information

Project Name/Number: Mark Owen #9 046121

Project Location: Eunice, NM

Invoice To: See SOW

PO Number: SOW

Analytical Information

Chloride 325.3

TDS 160.1

Sulfate 375.4

Alkalinity 310.1

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride 325.3	TDS 160.1	Sulfate 375.4	Alkalinity 310.1	Field Comments
1	GW-046121-061015-SP-MW16		06/10/15	1255	GW	1								X	X	X	X	X	
2	GW-046121-061015-SP-MW9			1310															
3	GW-046121-061015-SP-MW10			1320															
4	GW-046121-061015-SP-MW14			1330															
5	GW-046121-061015-SP-MW13			1340															
6	GW-046121-061015-SP-MW11			1355															
7	GW-046121-061015-SP-MW12			1410															
8	GW-046121-061015-SP-DUP I																		
9	GW-046121-061015-SP-DUP II																		
10																			

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☑ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

1 Relinquished by Sampler: Steven Perez	Date Time: 06.10.15 4:15	Received By: 1	Relinquished By: 2	Date Time: 6/11/15	Received By: 2 945
3 Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5 Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga-Rovers & Associates-Albuqu

Date/ Time Received: 06/11/2015 09:45:00 AM

Work Order #: 509407

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6 *Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 06/11/2015

Checklist reviewed by: Kelsey Brooks Date: 06/11/2015

Analytical Report 516631

for

GHD-Albuquerque, NM

Project Manager: Cale Kanack

Mark Owen #9

046121

09-OCT-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

09-OCT-15

Project Manager: **Cale Kanack**
GHD-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **516631**
Mark Owen #9
Project Address: Eunice, NM

Cale Kanack:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 516631. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 516631 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 516631

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GW-046121-092915-CK-MW-1	W	09-29-15 09:45		516631-001
GW-046121-092915-CK-MW-2	W	09-29-15 09:10		516631-002
GW-046121-092915-CK-MW-3	W	09-29-15 09:15		516631-003
GW-046121-092915-CK-MW-4	W	09-29-15 09:25		516631-004
GW-046121-092915-CK-MW-5	W	09-29-15 10:20		516631-005
GW-046121-092915-CK-MW-6	W	09-29-15 09:40		516631-006
GW-046121-092915-CK-MW-7	W	09-29-15 09:30		516631-007
GW-046121-092915-CK-MW-8	W	09-29-15 10:15		516631-008
GW-046121-092915-CK-MW-9	W	09-29-15 10:25		516631-009
GW-046121-092915-CK-MW-10	W	09-29-15 10:35		516631-010
GW-046121-092915-CK-MW-11	W	09-29-15 10:55		516631-011
GW-046121-092915-CK-MW-12	W	09-29-15 11:00		516631-012
GW-046121-092915-CK-MW-13	W	09-29-15 10:45		516631-013
GW-046121-092915-CK-MW-14	W	09-29-15 10:40		516631-014
GW-046121-092915-CK-MW-15	W	09-29-15 10:00		516631-015
GW-046121-092915-CK-MW-16	W	09-29-15 10:05		516631-016
GW-046121-092915-CK-RW-1	W	09-29-15 09:50		516631-017
GW-046121-092915-CK-Dup	W	09-29-15 00:00		516631-018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 516631

GHD-Albuquerque, NM, Albuquerque, NM

Project Name: Mark Owen #9

Project Id: 046121
Contact: Cale Kanack
Project Location: Eunice, NM

Date Received in Lab: Wed Sep-30-15 10:00 am
Report Date: 09-OCT-15
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	516631-001		516631-002		516631-003		516631-004		516631-005		516631-006	
	Field Id:	GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW	
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	Sampled:	Sep-29-15 09:45		Sep-29-15 09:10		Sep-29-15 09:15		Sep-29-15 09:25		Sep-29-15 10:20		Sep-29-15 09:40	
Alkalinity by SM2320B SUB: TX104704215	***Extracted:***												
	Analyzed:	Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Alkalinity, Total (CaCO3)		335	4.00	309	4.00	296	4.00	190	4.00	234	4.00	205	4.00
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-07-15 13:06		Oct-07-15 13:51		Oct-07-15 14:14		Oct-07-15 14:37		Oct-07-15 14:59		Oct-07-15 15:22	
	Analyzed:	Oct-07-15 13:06		Oct-07-15 13:51		Oct-07-15 14:14		Oct-07-15 14:37		Oct-07-15 14:59		Oct-07-15 15:22	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		934	50.0	242	20.0	147	10.0	6540	200	3760	200	654	50.0
Sulfate		112	50.0	145	20.0	80.5	10.0	317	200	339	200	297	50.0
TDS by SM2540C	***Extracted:***												
	Analyzed:	Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Total dissolved solids		2120	5.00	984	5.00	725	5.00	15100	5.00	9920	5.00	2180	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 516631

GHD-Albuquerque, NM, Albuquerque, NM

Project Name: Mark Owen #9

Project Id: 046121
Contact: Cale Kanack
Project Location: Eunice, NM

Date Received in Lab: Wed Sep-30-15 10:00 am
Report Date: 09-OCT-15
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	516631-007		516631-008		516631-009		516631-010		516631-011		516631-012	
	Field Id:	GW-046121-092915-CK-MV		GW-046121-092915-CK-MV		GW-046121-092915-CK-MV		GW-046121-092915-CK-MV		GW-046121-092915-CK-MV		GW-046121-092915-CK-MV	
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	Sampled:	Sep-29-15 09:30		Sep-29-15 10:15		Sep-29-15 10:25		Sep-29-15 10:35		Sep-29-15 10:55		Sep-29-15 11:00	
Alkalinity by SM2320B SUB: TX104704215	***Extracted:***												
	Analyzed:	Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Alkalinity, Total (CaCO3)		230	4.00	189	4.00	292	4.00	320	4.00	221	4.00	295	4.00
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-07-15 16:30		Oct-07-15 16:53		Oct-07-15 17:15		Oct-07-15 17:38		Oct-07-15 18:01		Oct-07-15 18:46	
	Analyzed:	Oct-07-15 16:30		Oct-07-15 16:53		Oct-07-15 17:15		Oct-07-15 17:38		Oct-07-15 18:01		Oct-07-15 18:46	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		327	20.0	2460	100	3030	200	2760	100	4970	200	2270	100
Sulfate		133	20.0	599	100	295	200	239	100	261	200	440	100
TDS by SM2540C	***Extracted:***												
	Analyzed:	Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Total dissolved solids		1110	5.00	6640	5.00	6940	5.00	5000	5.00	7150	5.00	5670	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 516631

GHD-Albuquerque, NM, Albuquerque, NM

Project Name: Mark Owen #9

Project Id: 046121
Contact: Cale Kanack
Project Location: Eunice, NM

Date Received in Lab: Wed Sep-30-15 10:00 am
Report Date: 09-OCT-15
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	516631-013		516631-014		516631-015		516631-016		516631-017		516631-018	
	Field Id:	GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-MW		GW-046121-092915-CK-RW		GW-046121-092915-CK-Du	
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	Sampled:	Sep-29-15 10:45		Sep-29-15 10:40		Sep-29-15 10:00		Sep-29-15 10:05		Sep-29-15 09:50		Sep-29-15 00:00	
Alkalinity by SM2320B SUB: TX104704215	***Extracted:***												
	Analyzed:	Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39		Oct-06-15 09:39	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Alkalinity, Total (CaCO3)		175	4.00	363	4.00	215	4.00	292	4.00	238	4.00	353	4.00
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-07-15 19:09		Oct-07-15 19:31		Oct-07-15 19:54		Oct-07-15 21:02		Oct-07-15 21:25		Oct-07-15 21:47	
	Analyzed:	Oct-07-15 19:09		Oct-07-15 19:31		Oct-07-15 19:54		Oct-07-15 21:02		Oct-07-15 21:25		Oct-07-15 21:47	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		8260	200	832	50.0	1110	50.0	473	50.0	13600 D	500	635	50.0
Sulfate		893	200	229	50.0	485	50.0	364	50.0	465	200	115	50.0
TDS by SM2540C	***Extracted:***												
	Analyzed:	Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40		Oct-06-15 15:40	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Total dissolved solids		20500	5.00	2180	5.00	8740	5.00	1760	5.00	23200	5.00	1590	5.00

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Blank Spike Recovery

Project Name: Mark Owen #9

Work Order #: 516631 **Project ID:** 046121

Lab Batch #: 978566 **Sample:** 978566-1-BKS **Matrix:** Water

Date Analyzed: 10/06/2015 **Date Prepared:** 10/06/2015 **Analyst:** MNR

Reporting Units: mg/L **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	975	98	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: Mark Owen #9

Work Order #: 516631 **Project ID:** 046121

Analyst: DHE **Date Prepared:** 10/06/2015 **Date Analyzed:** 10/06/2015

Lab Batch ID: 978377 **Sample:** 978377-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Alkalinity by SM2320B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Alkalinity, Total (CaCO3)	<4.00	250	253	101	250	253	101	0	89-106	20	

Analyst: MNR **Date Prepared:** 10/07/2015 **Date Analyzed:** 10/07/2015

Lab Batch ID: 978618 **Sample:** 699194-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	25.0	25.2	101	25.0	25.4	102	1	90-110	20	
Sulfate	<1.00	25.0	24.9	100	25.0	24.5	98	2	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Mark Owen #9

Work Order #: 516631

Lab Batch #: 978618 **Project ID:** 046121

Date Analyzed: 10/07/2015 **Date Prepared:** 10/07/2015 **Analyst:** MNR

QC- Sample ID: 516631-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	934	1250	2200	101	80-120	
Sulfate	112	1250	1290	94	80-120	

Lab Batch #: 978618

Date Analyzed: 10/07/2015 **Date Prepared:** 10/07/2015 **Analyst:** MNR

QC- Sample ID: 516631-011 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	4970	5000	9910	99	80-120	
Sulfate	261	5000	5000	95	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: Mark Owen #9

Work Order #: 516631

Lab Batch #: 978377 **Project ID:** 046121
Date Analyzed: 10/06/2015 09:39 **Date Prepared:** 10/06/2015 **Analyst:** DHE
QC- Sample ID: 516631-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

Alkalinity by SM2320B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (CaCO3)	335	334	0	20	

Lab Batch #: 978377
Date Analyzed: 10/06/2015 09:39 **Date Prepared:** 10/06/2015 **Analyst:** DHE
QC- Sample ID: 516631-011 D **Batch #:** 2 **Matrix:** Water
Reporting Units: mg/L

Alkalinity by SM2320B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (CaCO3)	221	217	2	20	

Lab Batch #: 978566
Date Analyzed: 10/06/2015 15:40 **Date Prepared:** 10/06/2015 **Analyst:** MNR
QC- Sample ID: 516596-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

TDS by SM2540C Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	3240	3480	7	10	

Lab Batch #: 978566
Date Analyzed: 10/06/2015 15:40 **Date Prepared:** 10/06/2015 **Analyst:** MNR
QC- Sample ID: 516631-010 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

TDS by SM2540C Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	5000	4580	9	10	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

CHAIN OF CUSTODY RECORD

COC NO.: 49067
PAGE 1 OF 2

CONESTOGA-ROVERS & ASSOCIATES
Address: 6121 INDIAN SCHOOL RD NE, STE 200, ABQ, NM 87110
Phone: 505-884-0672 Fax:

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 046121	Laboratory Name: XENCO	Lab Location: MIDLAND, TX	SSOW ID:
Project Name: MARK OWEN #9	Lab Contact: K. BROOKS	Lab Quote No:	Cooler No:
Project Location: EUNICE, NM			Carrier:
Chemistry Contact: CHRIS KNIGHT			Airbill No:
Sampler(s): CALE KANACK			Date Shipped: 9/29/15

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: TPS	Alkalinity	Sulfate	Chloride	MS/MSD Request	Comments/ Special Instructions:
1	GW-046121-092915-CK-MW-1	9/29/15	0945	WG	G	1								1	X	X	X	X		5466031
2	GW-046121-092915-CK-MW-2		0910			1								1	X	X	X	X		
3	GW-046121-092915-CK-MW-3		0915			1								1	X	X	X	X		
4	GW-046121-092915-CK-MW-4		0925			1								1	X	X	X	X		
5	GW-046121-092915-CK-MW-5		1020			1								1	X	X	X	X		
6	GW-046121-092915-CK-MW-6		0940			1								1	X	X	X	X		
7	GW-046121-092915-CK-MW-7		0930			1								1	X	X	X	X		
8	GW-046121-092915-CK-MW-8		1015			1								1	X	X	X	X		
9	GW-046121-092915-CK-MW-9		1025			1								1	X	X	X	X		
10	GW-046121-092915-CK-MW-10		1035			1								1	X	X	X	X		
11	GW-046121-092915-CK-MW-11		1055			1								1	X	X	X	X		
12	GW-046121-092915-CK-MW-12		1100			1								1	X	X	X	X		
13	GW-046121-092915-CK-MW-13		1045			1								1	X	X	X	X		
14	GW-046121-092915-CK-MW-14		1040			1								1	X	X	X	X		
15	GW-046121-092915-CK-MW-15	↓	1000	↓	↓	1								1	X	X	X	X		

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☒ Other: STD

Total Number of Containers: 18
All Samples in Cooler must be on COC

Notes/ Special Requirements: 20°C

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	CHD	9-29-15	12:21	Misty Lemons	Mail Services	9/29/15	12:21
2.					XENCO	9/30/15	1000
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (2011/0804)

CHAIN OF CUSTODY RECORD

COC NO.: 49068
PAGE 2 OF 2
(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES

Address: 6121 INDIAN SCHOOL NE, STE 200, ABQ, NM 87110
Phone: 505-884-0672 Fax:

Project No/ Phase/Task Code: 046121	Laboratory Name: XENCO	Lab Location: MIDLAND, TX	SSOW ID:
Project Name: MARK OWEN #9	Lab Contact: K. BROOKS	Lab Quote No:	Cooler No:
Project Location: EUNICE, NM			Carrier:
Chemistry Contact: CHRIS KNIGHT			Airbill No:
Sampler(s): CALE KANACK			Date Shipped: 9/29/15

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: TDS	ALKALINITY	SULFATE	CHLORIDE	MS/MSD Request	Comments/ Special Instructions:
1	GW-046121-092915-CK-MW-16	9/29/15	1005	WG	G	1								1	X	X	X	X		516031
2	GW-046121-092915-CK-RW-1	↓	0950	↓	↓	1								1	X	X	X	X		
3	GW-046121-092915-CK-DUP	↓	—	↓	↓	1								1	X	X	X	X		
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☒ Other: STD

Total Number of Containers: 18
All Samples in Cooler must be on COC

Notes/ Special Requirements:

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.		GHD	9-29-15	12:21	Misty Lemons	Mail Services	9/29/15	12:21
2.						XENCO	9/30/15	1000
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-109 (2011/08/04)

Final 1.001

Page 14 of 15

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: GHD-Albuquerque, NM

Date/ Time Received: 09/30/2015 10:00:00 AM

Work Order #: 516631

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 10/01/2015

Checklist reviewed by: Kelsey Brooks Date: 10/01/2015

Analytical Report 521564

for

GHD-Albuquerque, NM

Project Manager: Bernie Bockisch

Mark Owen #9

046121

30-DEC-15

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

30-DEC-15

Project Manager: **Bernie Bockisch**
GHD-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **521564**
Mark Owen #9
Project Address: EUNICE, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 521564. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 521564 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GW-046121-121615-CK-MW-1	W	12-16-15 09:10		521564-001
GW-046121-121615-CK-MW-2	W	12-16-15 08:35		521564-002
GW-046121-121615-CK-MW-3	W	12-16-15 08:45		521564-003
GW-046121-121615-CK-MW-4	W	12-16-15 08:50		521564-004
GW-046121-121615-CK-MW-5	W	12-16-15 09:40		521564-005
GW-046121-121615-CK-MW-6	W	12-16-15 09:15		521564-006
GW-046121-121615-CK-MW-7	W	12-16-15 08:55		521564-007
GW-046121-121615-CK-MW-8	W	12-16-15 09:35		521564-008
GW-046121-121615-CK-MW-9	W	12-16-15 09:45		521564-009
GW-046121-121615-CK-MW-10	W	12-16-15 09:55		521564-010
GW-046121-121615-CK-MW-11	W	12-16-15 10:20		521564-011
GW-046121-121615-CK-MW-12	W	12-16-15 10:10		521564-012
GW-046121-121615-CK-MW-13	W	12-16-15 10:05		521564-013
GW-046121-121615-CK-MW-14	W	12-16-15 10:00		521564-014
GW-046121-121615-CK-MW-15	W	12-16-15 09:30		521564-015
GW-046121-121615-CK-MW-16	W	12-16-15 09:20		521564-016
GW-046121-121615-CK-RW-1	W	12-16-15 09:05		521564-017
GW-046121-121615-CK-DUP	W	12-16-15 00:00		521564-018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-984314 TDS by SM2540C
Lab Sample ID 521564-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Total dissolved solids recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 521564-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018.
The Laboratory Control Sample for Total dissolved solids is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-1** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-001 Date Collected: 12.16.15 09.10

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**976**	50.0	mg/L	12.24.15 22.07		50
Sulfate	14808-79-8	**69.6**	50.0	mg/L	12.24.15 22.07		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1970**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**289**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-2** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-002 Date Collected: 12.16.15 08.35

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**240**	10.0	mg/L	12.24.15 22.43		10
Sulfate	14808-79-8	**83.6**	10.0	mg/L	12.24.15 22.43		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**955**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**386**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-3** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-003 Date Collected: 12.16.15 08.45

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**160**	10.0	mg/L	12.24.15 23.02		10
Sulfate	14808-79-8	**87.7**	10.0	mg/L	12.24.15 23.02		10

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**719**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**300**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-4** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-004 Date Collected: 12.16.15 08.50

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1040**	50.0	mg/L	12.24.15 23.20		50
Sulfate	14808-79-8	**56.4**	50.0	mg/L	12.24.15 23.20		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1770**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**265**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-5** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-005 Date Collected: 12.16.15 09.40

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5570**	200	mg/L	12.24.15 23.38		200
Sulfate	14808-79-8	**267**	200	mg/L	12.24.15 23.38		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**11100**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**243**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-6** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-006 Date Collected: 12.16.15 09.15

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**731**	50.0	mg/L	12.24.15 23.56		50
Sulfate	14808-79-8	**294**	50.0	mg/L	12.24.15 23.56		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1990**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**200**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-7** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-007 Date Collected: 12.16.15 08.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**604**	20.0	mg/L	12.25.15 00.51		20
Sulfate	14808-79-8	**205**	20.0	mg/L	12.25.15 00.51		20

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1540**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**208**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-8** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-008 Date Collected: 12.16.15 09.35

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2600**	100	mg/L	12.25.15 01.09		100
Sulfate	14808-79-8	**562**	100	mg/L	12.25.15 01.09		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**6020**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**191**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-9** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-009 Date Collected: 12.16.15 09.45

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**740**	50.0	mg/L	12.25.15 01.27		50
Sulfate	14808-79-8	**131**	50.0	mg/L	12.25.15 01.27		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1850**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**361**	4.00	mg/L	12.21.15 17.01		1

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-10** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-010 Date Collected: 12.16.15 09.55

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3030**	100	mg/L	12.25.15 01.45		100
Sulfate	14808-79-8	**181**	100	mg/L	12.25.15 01.45		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**5470**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**324**	4.00	mg/L	12.21.15 17.01		1

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-11** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-011 Date Collected: 12.16.15 10.20

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5510**	200	mg/L	12.25.15 02.03		200
Sulfate	14808-79-8	**157**	100	mg/L	12.29.15 12.08	D	100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**11700**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**218**	4.00	mg/L	12.21.15 17.01		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-12** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-012 Date Collected: 12.16.15 10.10

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2370**	100	mg/L	12.25.15 02.40		100
Sulfate	14808-79-8	**407**	100	mg/L	12.25.15 02.40		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**4570**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**311**	4.00	mg/L	12.21.15 17.01		1

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-13** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-013 Date Collected: 12.16.15 10.05

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8610**	200	mg/L	12.25.15 02.58		200
Sulfate	14808-79-8	**796**	200	mg/L	12.25.15 02.58		200

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**16700**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984031 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**178**	4.00	mg/L	12.21.15 17.01		1

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GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-14** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-014 Date Collected: 12.16.15 10.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**888**	50.0	mg/L	12.25.15 03.16		50
Sulfate	14808-79-8	**210**	50.0	mg/L	12.25.15 03.16		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1950**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984308 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**367**	4.00	mg/L	12.24.15 10.33		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-15** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-015 Date Collected: 12.16.15 09.30

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1190**	50.0	mg/L	12.25.15 03.34		50
Sulfate	14808-79-8	**507**	50.0	mg/L	12.25.15 03.34		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**2450**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984308 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**213**	4.00	mg/L	12.24.15 10.33		1

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-MW-16** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-016 Date Collected: 12.16.15 09.20

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**474**	20.0	mg/L	12.25.15 04.29		20
Sulfate	14808-79-8	**359**	20.0	mg/L	12.25.15 04.29		20

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1550**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984308 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**282**	4.00	mg/L	12.24.15 10.33		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-RW-1** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-017 Date Collected: 12.16.15 09.05

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4420**	100	mg/L	12.29.15 12.26		100
Sulfate	14808-79-8	**155**	100	mg/L	12.29.15 12.26		100

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**6900**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984308 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**258**	4.00	mg/L	12.24.15 10.33		1

Certificate of Analytical Results 521564

GHD-Albuquerque, NM, Albuquerque, NM

Mark Owen #9

Sample Id: **GW-046121-121615-CK-DUP** Matrix: Water Date Received:12.18.15 10.33

Lab Sample Id: 521564-018 Date Collected: 12.16.15 00.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MNR % Moisture:

Analyst: MNR Date Prep: 12.24.15 13.00

Seq Number: 984361

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**838**	50.0	mg/L	12.25.15 05.05		50
Sulfate	14808-79-8	**66.6**	50.0	mg/L	12.25.15 05.05		50

Analytical Method: TDS by SM2540C

Tech: MNR % Moisture:

Analyst: MNR

Seq Number: 984314

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total dissolved solids	TDS	**1620**	5.00	mg/L	12.23.15 08.10		1

Analytical Method: Alkalinity by SM2320B

Tech: DHE % Moisture:

Analyst: DHE

Seq Number: 984308 SUB: E871002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO3)		**290**	4.00	mg/L	12.24.15 10.33		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

GHD-Albuquerque, NM

Mark Owen #9

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 984361 Matrix: Water Date Prep: 12.24.15
MB Sample Id: 702683-1-BLK LCS Sample Id: 702683-1-BKS LCSD Sample Id: 702683-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	25.0	26.0	104	25.9	104	90-110	0	20	mg/L	12.24.15 21:31	
Sulfate	<1.00	25.0	25.8	103	25.5	102	90-110	1	20	mg/L	12.24.15 21:31	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 984361 Matrix: Water Date Prep: 12.24.15
Parent Sample Id: 521564-001 MS Sample Id: 521564-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	976	1250	2280	104	80-120	mg/L	12.24.15 22:25	
Sulfate	69.6	1250	1360	103	80-120	mg/L	12.24.15 22:25	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 984361 Matrix: Water Date Prep: 12.24.15
Parent Sample Id: 521564-011 MS Sample Id: 521564-011 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5510	5000	10900	108	80-120	mg/L	12.25.15 02:22	
Sulfate	<200	5000	5430	109	80-120	mg/L	12.25.15 02:22	

Analytical Method: **TDS by SM2540C**
Seq Number: 984314 Matrix: Water
MB Sample Id: 984314-1-BLK LCS Sample Id: 984314-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	<5.00	1000	964	96	80-120	mg/L	12.23.15 08:10	

Analytical Method: **TDS by SM2540C**
Seq Number: 984314 Matrix: Water
Parent Sample Id: 521564-001 MD Sample Id: 521564-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total dissolved solids	1970	1840	7	10	mg/L	12.23.15 08:10	

GHD-Albuquerque, NM

Mark Owen #9

Analytical Method: TDS by SM2540C

Seq Number: 984314 Matrix: Water

Parent Sample Id: 521564-011 MS Sample Id: 521564-011 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Total dissolved solids	11700	1000	11500	0	80-120	mg/L	12.23.15 08:10	X

Analytical Method: Alkalinity by SM2320B

Seq Number: 984308 Matrix: Water

MB Sample Id: 984308-1-BLK LCS Sample Id: 984308-1-BKS LCSD Sample Id: 984308-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	251	100	251	100	80-120	0	20	mg/L	12.24.15 10:33	

Analytical Method: Alkalinity by SM2320B

Seq Number: 984031 Matrix: Water

MB Sample Id: 984031-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	ND	mg/L	12.21.15 17:01	

Analytical Method: Alkalinity by SM2320B

Seq Number: 984031 Matrix: Water

Parent Sample Id: 521564-004 MD Sample Id: 521564-004 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	265	265	0	20	mg/L	12.21.15 17:01	

Analytical Method: Alkalinity by SM2320B

Seq Number: 984308 Matrix: Water

Parent Sample Id: 521564-014 MD Sample Id: 521564-014 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	367	366	0	20	mg/L	12.24.15 10:33	

Analytical Method: Alkalinity by SM2320B

Seq Number: 984308 Matrix: Water

Parent Sample Id: 521604-007 MD Sample Id: 521604-007 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	287	286	0	20	mg/L	12.24.15 10:33	

CHAIN OF CUSTODY

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
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Xenco Quote #: | Xenco Job #: 521564

Client / Reporting Information

Company Name / Branch: GHD ALBUQUERQUE
Company Address: 6121 INDIAN SCHOOL NE, STE 200, 87110
Email: BERNARD.BOCKISCH@GHD.COM
Phone No: 505-884-0672
Project Contact: BERNIE BOCKISCH
Samplers's Name: CALE KAMACK

Project Information

Project Name/Number: MARK OWEN #9 046121
Project Location: EUNICE, NM
Invoice To:
PO Number:

Analytical Information

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	ALKALINITY	TDS	CHLORIDE	SULFATE	Field Comments
1	GW-046121-121615-CK-MW-1	—	12/16/15	0910	GW	1								1	X	X	X	X	
2	GW-046121-121615-CK-MW-2	↓	↓	0835	↓	↓								↓	X	X	X	X	
3	GW-046121-121615-CK-MW-3			0845											X	X	X	X	
4	GW-046121-121615-CK-MW-4			0850											X	X	X	X	
5	GW-046121-121615-CK-MW-5			0940											X	X	X	X	
6	GW-046121-121615-CK-MW-6			0915											X	X	X	X	
7	GW-046121-121615-CK-MW-7			0855											X	X	X	X	
8	GW-046121-121615-CK-MW-8			0935											X	X	X	X	
9	GW-046121-121615-CK-MW-9			0945											X	X	X	X	
10	GW-046121-121615-CK-MW-10	↓	↓	0955	↓	↓								↓	X	X	X	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY
- X STD

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12-16-15 0582	Mary Bynum	2	12/17/15 8:29	2 Cale Owen 12/18 10:33
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 2°C / Thermo. Corr. Factor

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
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Xenco Quote #: | Xenco Job #: 581564

Client / Reporting Information

Company Name / Branch: GHD ALBUQUERQUE
Company Address:
Email: SEE PAGE 1 Phone No:
Project Contact: BERNIE BOCKISCH
Samplers's Name: CALE KAMACK

Project Information

Project Name/Number: MARK OWEN #9
Project Location: EUNICE, NM 046121
Invoice To:
PO Number:

Analytical Information

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	ALKALINITY	TDS	CHLORIDE	SULFATE	Field Comments
1	GW-046121-121615-CK-MW-11	—	12/16/15	1020	GW	1								1	X	X	X	X	
2	GW-046121-121615-CK-MW-12			1010											X	X	X	X	
3	GW-046121-121615-CK-MW-13			1005											X	X	X	X	
4	GW-046121-121615-CK-MW-14			1000											X	X	X	X	
5	GW-046121-121615-CK-MW-15			0930											X	X	X	X	
6	GW-046121-121615-CK-MW-16			0920											X	X	X	X	
7	GW-046121-121615-CK-RW-1			0905											X	X	X	X	
8	GW-046121-121615-CK-DUP			—											X	X	X	X	
9																			
10																			

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12-17-15 0827		2	12/17/15 8:29	2 12/18 10:34
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 2°C Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD-Albuquerque, NM

Date/ Time Received: 12/18/2015 10:33:00 AM

Work Order #: 521564

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6 *Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Sample instructions complete on Chain of Custody?	**Yes**	
#9 Any missing/extra samples?	**No**	
#10 Chain of Custody signed when relinquished/ received?	**Yes**	
#11 Chain of Custody agrees with sample label(s)?	**Yes**	
#12 Container label(s) legible and intact?	**Yes**	
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**	
#14 Samples in proper container/ bottle?	**Yes**	
#15 Samples properly preserved?	**Yes**	
#16 Sample container(s) intact?	**Yes**	
#17 Sufficient sample amount for indicated test(s)?	**Yes**	
#18 All samples received within hold time?	**Yes**	
#19 Subcontract of sample(s)?	**Yes**	SUBCONTRACT TO XENCO HOUSTON
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Carley Owens Date: 12/18/2015
Carley Owens

Checklist reviewed by: Kelsey Brooks Date: 12/18/2015
Kelsey Brooks