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August 18, 2014

**Sent VIA OVERNIGHT DELIVERY**

Mr. Rusty Lundberg  
Division of Radiation Control  
Utah Department of Environmental Quality  
195 North 1950 West  
P.O. Box 144850  
Salt Lake City, UT 84114-4820

**Re: Transmittal of 2nd Quarter 2014 Nitrate Monitoring Report  
Stipulation and Consent Order Docket Number UGW12-04 White Mesa Uranium Mill**

Dear Mr. Lundberg:

Enclosed are two copies of the White Mesa Uranium Mill Nitrate Monitoring Report for the 2<sup>nd</sup> Quarter of 2014 as required by the Stipulation and Consent Order Docket Number UGW12-04, as well as two CDs each containing a word searchable electronic copy of the report.

If you should have any questions regarding this report please contact me.

Yours very truly,

A handwritten signature in blue ink that reads 'Kathy Weinel'.

**ENERGY FUELS RESOURCES (USA) INC.**  
Kathy Weinel  
Quality Assurance Manager

cc: David C. Frydenlund  
Dan Hillsten  
Harold R. Roberts  
David E. Turk  
Frank Filas

**White Mesa Uranium Mill**  
**Nitrate Monitoring Report**

**State of Utah**  
**Stipulated Consent Agreement, January 2009**  
**Docket No. UGW09-03**

**2nd Quarter**  
**(April through June)**  
**2014**

Prepared by:



**Energy Fuels Resources (USA) Inc.**  
225 Union Boulevard, Suite 600  
Lakewood, CO 80228

**August 18, 2014**

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## ACRONYM LIST

AWAL	American West Analytical Laboratory
CA	Consent Agreement
CAP	Corrective Action Plan
CIR	Contamination Investigation Report
DIFB	Deionized Field Blanks
DRC	Utah Division of Radiation Control
EFRI	Energy Fuels Resources (USA) Inc.
ft amsl	feet above mean sea level
GWDP	Groundwater Discharge Permit
LCS	Laboratory Control Spike
MS	Matrix Spike
MSD	Matrix Spike Duplicate
QA	Quality Assurance
QAP	Groundwater Monitoring Quality Assurance Plan
QC	Quality Control
RPD	Relative Percent Difference
SCO	Stipulated Consent Order
SOPs	Standard Operating Procedures
UDEQ	Utah Department of Environmental Quality
VOC	Volatile Organic Compounds

## **1.0 INTRODUCTION**

The Utah Department of Environmental Quality (“UDEQ”) Division of Radiation Control (“DRC”) noted in a Request dated September 30, 2008 (the “Request”), for a Voluntary Plan and Schedule to Investigate and Remediate Nitrate Contamination at the White Mesa Uranium Mill (the “Mill”) (the “Plan”), that nitrate levels have exceeded the State water quality standard of 10 mg/L in certain monitoring wells. As a result of the Request, Energy Fuels Resources (USA) Inc. (“EFRI”) entered into a Stipulated Consent Agreement with the Utah Water Quality Board in January 2009 which directed the preparation of a Nitrate Contamination Investigation Report (“CIR”). A subsequent letter dated December 1, 2009, among other things, recommended that EFRI also address elevated chloride concentrations in the CIR. The Stipulated Consent Agreement was amended in August 2011. Under the amended Consent Agreement (“CA”), EFRI submitted a Corrective Action Plan (“CAP”), pursuant to the requirements of the Utah Groundwater Quality Protection Rules [UAC R317-6-6.15(C – E)] on November 29, 2011 and revised versions of the CAP on February 27, 2012 and May 7, 2012. On December 12, 2012, DRC signed the Stipulation and Consent Order (“SCO”), Docket Number UGW12-04, which approved the EFRI CAP, dated May 7, 2012. The SCO ordered EFRI to fully implement all elements of the May 7, 2012 CAP.

Based on the schedule included in the CAP and as delineated and approved by the SCO, the activities associated with the implementation of the CAP began in January 2013. The reporting requirements specified in the CAP and SCO are included in this quarterly nitrate report.

This is the Quarterly Nitrate Monitoring Report, as required under the SCO, State of UDEQ Docket No. UGW12-04 for the second quarter of 2014. This report meets the requirements of the SCO, State of UDEQ Docket No. UGW12-04 and is the document which covers nitrate corrective action and monitoring activities during the second quarter of 2014.

## **2.0 GROUNDWATER NITRATE MONITORING**

### **2.1 Samples and Measurements Taken During the Quarter**

A map showing the location of all groundwater monitoring wells, piezometers, existing wells, temporary chloroform contaminant investigation wells and temporary nitrate investigation wells is attached under Tab A. Nitrate samples and measurements taken during this reporting period are discussed in the remainder of this section.

## 2.1.1 Nitrate Monitoring

Quarterly sampling for nitrate monitoring parameters was performed in the following wells:

TWN-1	TW4-24*
TWN-2	TW4-25*
TWN-3	Piezometer 1
TWN-4	Piezometer 2
TWN-7	Piezometer 3
TWN-18	
TW4-22*	

As discussed in Section 2.1.2 the analytical constituents required by the CAP are inorganic chloride and nitrate+nitrite as N (referred to as nitrate in this document)

\* Wells TW4-22, TW4-24, TW4-25 are chloroform investigation wells (wells installed and sampled primarily for the chloroform investigation) and are sampled as part of the chloroform program. The analytical suite for these three wells includes nitrate, chloride and a select list of Volatile Organic Compounds (“VOCs”) as specified in the chloroform program. These three wells are included here because they are being pumped as part of the remediation of the nitrate contamination as required by the SCO and the CAP. The nitrate and chloride data are included in this report as well as in the chloroform program quarterly report. The VOC data for these three wells will be reported in the chloroform quarterly monitoring report only.

The December 12, 2012 SCO approved the CAP, which specified the cessation of sampling in TWN-5, TWN-6, TWN-8, TWN-9, TWN-10, TWN-11, TWN-12, TWN-13, TWN-14, TWN-15, TWN-16, TWN-17, and TWN-19. The CAP and SCO also approved the abandonment of TWN-5, TWN-8, TWN-9, TWN-10, TWN-11, TWN-12, TWN-13, TWN-15, and TWN-17 within 1 year of the SCO approval. These wells were abandoned in accordance with the DRC-approved Well Abandonment Procedure on July 31, 2013. Wells TWN-6, TWN-14, TWN-16, and TWN-19 have been maintained for depth to groundwater monitoring only, as noted in the CAP.

Table 1 provides an overview of all locations sampled during the current period, along with the date samples were collected from each location, and the date(s) upon which analytical data were received from the contract laboratory. Table 1 also identifies rinsate samples collected, as well as sample numbers associated with any required duplicates.

As indicated in Table 1, nitrate monitoring was performed in the nitrate monitoring wells, chloroform wells TW4-22, TW4-24, TW4-25 and Piezometers 1, 2, and 3. Analytical data for all of the above-listed wells, and the piezometers, are included in Tab G.

Nitrate and chloride are also monitored in all of the Mill’s groundwater monitoring wells and chloroform investigation wells. Data from those wells for this quarter are incorporated in certain maps and figures in this report but are discussed in their respective programmatic reports.

## **2.1.2 Parameters Analyzed**

Locations sampled during this reporting period were analyzed for the following constituents:

- Inorganic Chloride
- Nitrate plus Nitrite as Nitrogen (referred to herein as nitrate)

Use of analytical methods consistent with the requirements found in the White Mesa Mill Groundwater Quality Assurance Plan, (“QAP”) Revision 7.2, dated June 6, 2012 was confirmed for all analytes, as discussed later in this report.

## **2.1.3 Groundwater Head and Level Monitoring**

Depth to groundwater was measured in the following wells and/or piezometers, pursuant to Part I.E.3 of the Groundwater Discharge Permit (“GWDP”) (dated August 24, 2012):

- The quarterly groundwater compliance monitoring wells
- Existing well MW-4 and all of the temporary chloroform investigation wells
- Piezometers – P-1, P-2, P-3, P-4 and P-5
- MW-20, MW-22, and MW-34
- The DR piezometers that were installed during the Southwest Hydrogeologic Investigation
- Nitrate wells TWN-1, TWN-2, TWN-3, TWN-4, TWN-6, TWN-7, TWN-14, TWN-16, TWN-18 and TWN-19

In addition to the above, depth to water measurements are routinely observed in conjunction with sampling events for all wells sampled during quarterly and accelerated efforts, regardless of the sampling purpose.

All well levels used for groundwater contour mapping were measured and recorded within 5 calendar days of each other as indicated by the measurement dates in the summary sheet under Tab C. Field data sheets for groundwater measurements are also provided in Tab C.

Weekly and monthly depth to groundwater measurements were taken in the chloroform pumping wells MW-4, MW-26, TW4-19, TW4-20, and TW4-4, and the nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2. In addition, monthly water level measurements were taken in non-pumping wells MW-27, MW-30, MW-31, TW4-21, TWN-1, TWN-3, TWN-4, TWN-7, and TWN-18 as required by the CAP.

## **2.2 Sampling Methodology and Equipment and Decontamination Procedures**

The QAP provides a detailed presentation of procedures utilized for groundwater sampling activities under the GWDP (August 24, 2012).

The sampling methodology, equipment and decontamination procedures that were performed for the nitrate contaminant investigation, as summarized below, are consistent with the QAP.

### **2.2.1 Well Purging, Sampling and Depth to Groundwater**

A list of the wells in order of increasing nitrate contamination is generated quarterly. The order for purging is thus established. The list is included with the Field Data Worksheets under Tab B. Mill personnel start purging with all of the nondetect wells and then move to the wells with detectable nitrate concentrations, progressing from the wells having the lowest nitrate contamination to wells with the highest nitrate contamination.

Before leaving the Mill office, the pump and hose are decontaminated using the cleaning agents described in Attachment 2-2 of the QAP. Rinsate blanks are collected at a frequency of one rinsate per 20 field samples.

Purging is completed to remove stagnant water from the casing and to assure that representative samples of formation water are collected for analysis. There are three purging strategies specified in the QAP that are used to remove stagnant water from the casing during groundwater sampling at the Mill. The three strategies are as follows:

1. Purging three well casing volumes with a single measurement of field parameters
2. Purging two casing volumes with stable field parameters (within 10% Relative Percent Difference [“RPD”])
3. Purging a well to dryness and stability (within 10% RPD) of a limited list of field parameters after recovery.

Mill personnel proceed to the first well, which is the well with the lowest concentration (i.e. non-detect) of nitrate based on the previous quarter’s sampling results. Well depth measurements are taken and the one casing volume is calculated. The purging strategy that will be used for the well is determined at this time based on the depth to water measurement and the previous production of the well. The Grundfos pump (a 6 to 10 gallon per minute [gpm] pump) is then lowered to the appropriate depth in the well and purging is started. At the first well, the purge rate is measured for the purging event by using a calibrated 5 gallon bucket. After the evacuation of the well has been completed, the well is sampled when possible, and the pump is removed from the well and the process is repeated at each well location moving from the least contaminated to most contaminated well. If sample collection is not possible due to the well being purged dry, a sample is collected after recovery using a disposable bailer and as described in Attachment 2-3 of the QAP. Sample collection follows the procedures described in Attachment 2-4 of the QAP.

After the samples have been collected for a particular well, the samples are placed into a cooler that contains ice. The well is then recapped and Mill personnel proceed to the next well. If a bailer has been used it is disposed of.

Decontamination of non-dedicated equipment, using the reagents in Attachment 2-2 of the QAP, is performed between each sample location, and at the beginning of each sampling day, in addition to the pre-event decontamination described above.

## **2.2.2 Piezometer Sampling**

Samples are collected from Piezometers 1, 2 and 3, if possible. Samples are collected from piezometers using a disposable bailer after one set of field measurements have been collected. Due to the difficulty in obtaining samples from the piezometers, the purging protocols set out in the QAP are not followed.

After samples are collected, the bailer is disposed of and samples are placed into a cooler containing ice for sample preservation and transit to the Mill's contract analytical laboratory, American West Analytical Laboratories ("AWAL").

## **2.3 Field Data**

Attached under Tab B are copies of all Field Data Worksheets that were completed during the quarter for the nitrate investigation monitoring wells and piezometers identified in Section 2.1.1 and Table 1.

## **2.4 Depth to Groundwater Data and Water Table Contour Map**

Depth-to-groundwater measurements that were utilized for groundwater contours are included on the Quarterly Depth to Water Sheet at Tab C of this Report along with the kriged groundwater contour map for the current quarter generated from this data. All well levels used for groundwater contour mapping were measured and recorded within 5 calendar days of each other as indicated by the measurement dates in the summary sheet under Tab C. A copy of the kriged groundwater contour map generated from the previous quarter's data is provided under Tab D.

## **2.5 Laboratory Results**

### **2.5.1 Copy of Laboratory Results**

The analytical results were provided by AWAL. Table 1 lists the dates when analytical results were reported to the Quality Assurance ("QA") Manager for each well or other sample.

Analytical results for the samples collected for this quarter's nitrate investigation and a limited list of chloroform investigation nitrate and chloride results are provided under Tab G of this Report. Also included under Tab G are the results of analyses for duplicate samples and rinsate samples for this sampling effort, as identified in Table 1. See the Groundwater Monitoring Report and Chloroform Monitoring Report for this quarter for nitrate and chloroform analytical results for the groundwater monitoring wells and chloroform investigation wells not listed in Table 1.

### **2.5.2 Regulatory Framework**

As discussed in Section 1.0 above, the Request, Plan, and CA each triggered a series of actions on EFRI's part. Potential surficial sources of nitrate and chloride have been described in the December 30, 2009 CIR and additional investigations into potential sources were completed and discussed with DRC in 2011. Pursuant to the CA, the CAP was submitted to the Director of the Division of Radiation Control (the "Director") on May 7, 2012. The CAP describes activities

associated with the nitrate in groundwater. The CAP was approved by the Director on December 12, 2012. This quarterly report documents the monitoring consistent with the program described in the CAP.

### **3.0 QUALITY ASSURANCE AND DATA VALIDATION**

EFRI's QA Manager performed a QA/Quality Control ("QC") review to confirm compliance of the monitoring program with the requirements of the QAP. As required in the QAP, data QA includes preparation and analysis of QC samples in the field, review of field procedures, an analyte completeness review, and QC review of laboratory data methods and data. Identification of field QC samples collected and analyzed is provided in Section 3.1. Discussion of adherence to Mill sampling Standard Operating Procedures ("SOPs") is provided in Section 3.2. Analytical completeness review results are provided in Section 3.3. The steps and tests applied to check field data QA/QC, holding times, receipt temperature and laboratory data QA/QC are discussed in Sections 3.4.1 through 3.4.7 below.

The analytical laboratory has provided summary reports of the analytical QA/QC measurements necessary to maintain conformance with National Environmental Laboratory Accreditation Conference certification and reporting protocol. The Analytical Laboratory QA/QC Summary Reports, including copies of the Mill's Chain of Custody and Analytical Request Record forms for each set of Analytical Results, follow the analytical results under Tab G. Results of the review of the laboratory QA/QC information are provided under Tab H and discussed in Section 3.4, below.

#### **3.1 Field QC Samples**

The following QC samples were generated by Mill personnel and submitted to the analytical laboratory in order to assess the quality of data resulting from the field sampling program.

Field QC samples for the nitrate investigation program consist of one field duplicate sample for each 20 samples, DI Field Blanks ("DIFB"), and equipment rinsate samples.

During the quarter, one duplicate sample was collected as indicated in Table 1. The duplicate was sent blind to the analytical laboratory and analyzed for the same parameters as the nitrate wells.

One rinsate blank sample was collected as indicated on Table 1. Rinsate samples are labeled with the name of the subsequently purged well with a terminal letter "R" added (e.g. TWN-7R).

The field QC sample results are included with the routine analyses under Tab G.

#### **3.2 Adherence to Mill Sampling SOPs**

The QA Manager review of Mill Personnel's adherence to the existing SOPs, confirmed that the QA/QC requirements established in the QAP and Chloroform QAP were met.

### **3.3 Analyte Completeness Review**

All analyses required by the GWDP for nitrate monitoring for the period were performed.

### **3.4 Data Validation**

The QAP and GWDP (August 24, 2012) identify the data validation steps and data QC checks required for the nitrate monitoring program. Consistent with these requirements, the QA Manager performed the following evaluations: a field data QA/QC evaluation, a holding time evaluation, an analytical method check, a reporting limit evaluation, a QC evaluation of sample duplicates, a QC evaluation of control limits for analysis and blanks, a receipt temperature evaluation, and a rinsate evaluation. Because no VOCs are analyzed for the nitrate contamination investigation, no trip blanks are required in the sampling program. Each evaluation is discussed in the following sections. Data check tables indicating the results of each test are provided under Tab H.

#### **3.4.1 Field Data QA/QC Evaluation**

The QA Manager performs a review of all field recorded parameters to assess their adherence with QAP requirements. The assessment involved review of two sources of information: the Field Data Sheets and the Quarterly Depth to Water summary sheet. Review of the Field Data Sheets addresses well purging volumes and stability of five parameters: conductance, pH, temperature, redox potential, and turbidity. Review of the Depth to Water data confirms that all depth measurements used for development of groundwater contour maps were conducted within a five-day period of each other. The results of this quarter's review are provided under Tab H.

Based upon the review of the field data sheets, field work conformed with the QAP purging and field measurement requirements. A summary of the purging techniques employed and field measurements taken is described below:

#### Purging Two Casing Volumes with Stable Field Parameters (within 10% RPD)

Wells TWN-01, TWN-04, and TWN-18 were sampled after two casing volumes were removed. Field parameters pH, specific conductivity, turbidity, water temperature, and redox potential were measured during purging. All field parameters for this requirement were stable within 10% RPD.

#### Purging a Well to Dryness and Stability of a Limited List of Field Parameters

Wells TWN-03 and TWN-07 were purged to dryness before two casing volumes were evacuated. After well recovery, one set of measurements for the field parameters of pH, specific conductivity, and water temperature only were taken; the samples were collected, and another set of measurements for pH, specific conductivity, and water temperature were taken. Stabilization of pH, conductivity and temperature are required within 10% RPD under the QAP. All field parameters for this requirement were stable within 10% RPD.

#### Continuously Pumped Wells

Wells TWN-02, TW4-22, TW4-24, and TW4-25 are continuously pumped wells. These wells are pumped on a set schedule per the remediation plan and are considered sufficiently evacuated to

immediately collect a sample. As previously noted, TW4-22, TW4-24, and TW4-25 are chloroform investigation wells and are sampled under the chloroform program. Data for nitrate and chloride are provided here for completeness purposes.

During review of the field data sheets, it was observed that sampling personnel consistently recorded depth to water to the nearest 0.01 foot.

All field parameters for all wells were within the QAP required limits, as indicated below.

The review of the field sheets for compliance with QAP requirements resulted in the observations noted below. The QAP requirements in Attachment 2-3 specifically state that field parameters must be stabilized to within 10% over at least 2 consecutive measurements for wells purged to two casing volumes or to dryness. The QAP Attachment 2-3 states that turbidity should be less than 5 NTU prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP Attachment 2-3 does not require that turbidity measurements be less than 5 NTU prior to sampling. As such the noted observations regarding turbidity measurements greater than 5 NTU below are included for information purposes only.

- Three well measurements exceeded the QAP's 5 NTU turbidity goal as noted in Tab H. All required turbidity RPD's met the QAP Requirement to stabilize within 10%.

EFRI's letter to DRC of March 26, 2010 discusses further why turbidity does not appear to be an appropriate parameter for assessing well stabilization. In response to DRC's subsequent correspondence dated June 1, 2010 and June 24, 2010, EFRI completed a monitoring well redevelopment program. The redevelopment report was submitted to DRC on September 30, 2011. DRC responded to the redevelopment report via letter on November 15, 2012. Per the DRC letter dated November 15, 2012, the field data generated this quarter are compliant with the turbidity requirements of the approved QAP.

### **3.4.2 Holding Time Evaluation**

QAP Table 1 identifies the method holding times for each suite of parameters. Sample holding time checks are provided in Tab H. All samples were received and analyzed within the required holding time.

### **3.4.3 Analytical Method Checklist**

All analytical methods reported by the laboratory were checked against the required methods enumerated in the QAP. Analytical method checks are provided in Tab H. All methods were consistent with the requirements of the QAP.

### **3.4.4 Reporting Limit Evaluation**

All analytical method reporting limits ("RLs") reported by the laboratory were checked against the reporting limits enumerated in the QAP. Reporting Limit Checks are provided in Tab H. All analytes were measured and reported to the required reporting limits, with the exception of several samples that had increased reporting limits due to matrix interference or required dilution due to the sample concentration. However, in all of those cases the analytical results were

greater than the reporting limit used.

### **3.4.5 QA/QC Evaluation for Sample Duplicates**

Section 9.1.4 a) of the QAP states that RPDs will be calculated for the comparison of duplicate and original field samples. The QAP acceptance limits for RPDs between the duplicate and original field sample is less than or equal to 20% unless the measured results are less than 5 times the required detection limit. This standard is based on the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994, 9240.1-05-01 as cited in the QAP. The RPDs are calculated for duplicate pairs for all analytes regardless of whether or not the reported concentrations are greater than 5 times the required detection limits. However, data will be considered noncompliant only when the results are greater than 5 times the required detection limit and the RPD is greater than 20%.

The duplicate results were within a 20% RPD. Results of the RPD test are provided in Tab H.

### **3.4.6 Other Laboratory QA/QC**

Section 9.2 of the QAP requires that the laboratory's QA/QC Manager check the following items in developing data reports: (1) sample preparation information is correct and complete, (2) analysis information is correct and complete, (3) appropriate Analytical Laboratory procedures are followed, (4) analytical results are correct and complete, (5) QC samples are within established control limits, (6) blanks are within QC limits, (7) special sample preparation and analytical requirements have been met, and (8) documentation is complete. In addition to other laboratory checks described above, EFRI's QA Manager rechecks QC samples and blanks (items (5) and (6)) to confirm that the percent recovery for spikes and the relative percent difference for spike duplicates are within the method-specific required limits, or that the case narrative sufficiently explains any deviation from these limits. Results of this quantitative check are provided in Tab H.

The lab QA/QC results met these specified acceptance limits.

The QAP Section 8.1.2 requires that a Matrix Spike/Matrix Spike Duplicate ("MS/MSD") pair be analyzed with each analytical batch. The QAP does not specify acceptance limits for the MS/MSD pair, and the QAP does not specify that the MS/MSD pair be prepared on EFRI samples only. Acceptance limits for MS/MSDs are set by the laboratories. The review of the information provided by the laboratories in the data packages verified that the QAP requirement to analyze an MS/MSD pair with each analytical batch was met. While the QAP does not require it, the recoveries were reviewed for compliance with the laboratory established acceptance limits. The QAP does not require this level of review, and the results of this review are provided for information only.

The information from the Laboratory QA/QC Summary Reports indicates that the MS/MSDs recoveries and the associated RPDs for the samples were within acceptable laboratory limits for the regulated compounds except as indicated in Tab H. The MS/MSD recoveries that are outside the laboratory established acceptance limits do not affect the quality or usability of the data because the recoveries are above the acceptance limits and are indicative of matrix interference. Matrix interferences are applicable to the individual sample results only. The requirement in the

QAP to analyze a MS/MSD pair with each analytical batch was met and as such the data are compliant with the QAP.

The information from the Laboratory QA/QC Summary Reports indicates that the Laboratory Control Sample recoveries were acceptable, which indicate that the analytical system was operating properly.

The QAP Section 8.1.2 requires that each analytical batch shall be accompanied by a reagent blank. All analytical batches routinely contain a blank, which is a laboratory-grade water blank sample made and carried through all analytical steps. For the Mill samples, a method blank is prepared for all analytical methods. The information from the Laboratory QA/QC Summary Reports indicates that the method blanks did not contain detections of any target analytes above the Reporting Limit.

### **3.4.7 Receipt Temperature Evaluation**

Chain of Custody sheets were reviewed to confirm compliance with the QAP requirement in QAP Table 1 that samples be received at 6°C or lower. Sample temperature checks are provided in Tab H. All samples were received within the required temperature limit.

### **3.4.8 Rinsate Check**

Rinsate checks are provided in Tab H. A comparison of the rinsate blank sample concentration levels to the QAP requirements – that rinsate sample concentrations be one order of magnitude lower than that of the actual well – indicated that all of the rinsate blank analytes met this criterion. All rinsate and DIFB blank samples were non-detect for the quarter.

## **4.0 INTERPRETATION OF DATA**

### **4.1 Interpretation of Groundwater Levels, Gradients and Flow Directions.**

#### **4.1.1 Current Site Groundwater Contour Map**

As stated above, a listing of groundwater level readings for the current quarter (shown as depth to groundwater in feet) is included under Tab C. The data from this tab has been interpreted (interpolated by kriging) and plotted in a water table contour map, provided under the same tab. The contour map is based on the current quarter's data for all wells.

The water level contour map indicates that perched water flow ranges from generally southwesterly beneath the Mill site and tailings cells to generally southerly along the eastern and western margins of White Mesa. Perched water mounding associated with the wildlife ponds locally changes the generally southerly perched water flow patterns. For example, northeast of the Mill site, mounding associated with wildlife ponds results in locally northerly flow near PIEZ-1. The impact of the mounding associated with the northern ponds, to which water has not been delivered since March 2012, is diminishing and is expected to continue to diminish as the mound decays due to reduced recharge.

Not only has recharge from the wildlife ponds impacted perched water elevations and flow directions at the site, but the cessation of water delivery to the northern ponds, which are generally upgradient of the nitrate and chloroform plumes at the site, has resulted in changing conditions that are expected to impact constituent concentrations and migration rates within the plumes. Specifically, past recharge from the ponds has helped limit many constituent concentrations within the plumes by dilution while the associated groundwater mounding has increased hydraulic gradients and contributed to plume migration. Since use of the northern wildlife ponds ceased in March 2012, the reduction in recharge and decay of the associated groundwater mound are expected to increase many constituent concentrations within the plumes while reducing hydraulic gradients and acting to reduce rates of plume migration. EFRI and its consultants have raised the issues and potential effects associated with cessation of water delivery to the northern wildlife ponds during discussions with DRC in March 2012 and May 2013.

The impacts associated with cessation of water delivery to the northern ponds are expected to propagate downgradient (south and southwest) over time. Wells close to the ponds are generally expected to be impacted sooner than wells farther downgradient of the ponds. Therefore, constituent concentrations are generally expected to increase in downgradient wells close to the ponds before increases are detected in wells farther downgradient of the ponds. Although such increases are anticipated to result from reduced dilution, the magnitude and timing of the increases are difficult to predict due to the complex permeability distribution at the site and factors such as pumping and the rate of decay of the groundwater mound. The potential exists for some wells completed in higher permeability materials to be impacted sooner than some wells completed in lower permeability materials even though the wells completed in lower permeability materials may be closer to the ponds.

Localized increases in concentrations of constituents such as nitrate and chloride within and near the nitrate plume may occur even when the nitrate plume is under control based on the Nitrate CAP requirements. Ongoing mechanisms that can be expected to increase the concentrations of nitrate and chloride locally as a result of reduced wildlife pond recharge include but are not limited to:

- 1) Reduced dilution - the mixing of low constituent concentration pond recharge into existing perched groundwater will be reduced over time.
- 2) Reduced saturated thicknesses – dewatering of higher permeability zones receiving primarily low constituent concentration pond water will result in wells intercepting the zones receiving a smaller proportion of the low constituent concentration water.

The combined impact of the above two mechanisms may be especially evident at chloroform pumping wells MW-4, MW-26, TW4-4, TW4-19, and TW4-20; nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2; and non-pumped wells adjacent to the pumped wells. The overall impact is expected to be generally higher constituent concentrations in these wells over the short term until mass reduction resulting from pumping and natural attenuation eventually reduce concentrations.

In addition to changes in the flow regime caused by reduced wildlife pond recharge, perched flow directions are locally influenced by operation of the chloroform and nitrate pumping wells.

As shown in the detail water level map provided under Tab C, well defined cones of depression are evident in the vicinity of all chloroform pumping wells except TW4-4, which began pumping in the first quarter of 2010. Although operation of chloroform pumping well TW4-4 has depressed the water table in the vicinity of TW4-4, a well-defined cone of depression is not clearly evident. The lack of a well-defined cone of depression near TW4-4 likely results from 1) variable permeability conditions in the vicinity of TW4-4, and 2) persistent relatively low water levels at adjacent well TW4-14.

Pumping of nitrate wells TW4-22, TW4-24, TW4-25, and TWN-2 began during the first quarter of 2013. Water level patterns near these wells are expected to be influenced by the presence of and the decay of the groundwater mound associated with the northern wildlife ponds, and by the persistently low water level elevation at TWN-7, which is located upgradient of the nitrate pumping wells

Decreases in water levels at nitrate pumping wells TWN-2, TW4-22 and TW4-25 this quarter are consistent with continuing development of capture associated with nitrate pumping, which is expected to increase over time as water levels decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Interaction between nitrate and chloroform pumping is expected to enhance the capture of the nitrate pumping system. The long term interaction between nitrate and chloroform pumping systems will, however, require more data to be collected as part of routine monitoring.

As discussed above, variable permeability conditions are one likely reason for the lack of a well-defined cone of depression near chloroform pumping well TW4-4. Changes in water levels at wells immediately south of TW4-4 resulting from TW4-4 pumping are expected to be muted because TW4-4 is located at a transition from relatively high to relatively low permeability conditions south (downgradient) of TW4-4. The permeability of the perched zone at TW4-6 and TW4-26, and recently installed wells TW4-29, TW4-30, TW4-31, TW4-33, TW4-34, and new well TW4-35 is one to two orders of magnitude lower than at TW4-4. Any drawdown of water levels at wells immediately south of TW4-4 resulting from TW4-4 pumping is also difficult to determine because of the general, long-term increase in water levels in this area due to recharge from the wildlife ponds.

Water levels at TW4-4 and TW4-6 increased by nearly 2.7 and 2.9 feet, respectively, between the fourth quarter of 2007 and the fourth quarter of 2009 (just prior to the start of TW4-4 pumping) at rates of approximately 1.2 feet/year and 1.3 feet/year, respectively. However, the rate of increase in water level at TW4-6 has been reduced since the start of pumping at TW4-4 (first quarter of 2010) to less than 0.5 feet/year suggesting that TW4-6 is within the hydraulic influence of TW4-4 (note: hydrographs for these wells are provided in the quarterly Chloroform Monitoring Report). Water level elevations at these wells are eventually expected to be influenced by cessation of water delivery to the northern wildlife ponds as discussed above. Recharge from the southern wildlife pond is expected to continue to have an effect on water levels near TW4-4, but the effects related to recharge from the northern ponds is expected to diminish over time as water is no longer delivered to the northern ponds.

The lack of a well-defined cone of depression at TW4-4 is also influenced by the persistent, relatively low water level at non-pumping well TW4-14, located east of TW4-4 and TW4-6. For

the current quarter, the water level at TW4-14 was measured at approximately 5529.2 feet above mean sea level (“ft amsl”). This is approximately 10 feet lower than the water level at TW4-6 (approximately 5538.9 ft amsl) and 14 feet lower than the water level at TW4-4 (approximately 5543.6 ft amsl) even though TW4-4 is pumping.

Well TW4-27 (installed south of TW4-14 in the fourth quarter of 2011) has a static water level of approximately 5527.4 ft amsl, similar to TW4-14 (approximately 5529.2 ft amsl). Prior to the installation of TW4-27, the persistently low water level at TW4-14 was considered anomalous because it appeared to be downgradient of all three wells TW4-4, TW4-6, and TW4-26, yet chloroform was not detected at TW4-14. Chloroform had apparently migrated from TW4-4 to TW4-6 and from TW4-6 to TW4-26 which suggested that TW4-26 was actually downgradient of TW4-6, and TW4-6 was actually downgradient of TW4-4, regardless of the flow direction implied by the low water level at TW4-14. The water level at TW4-26 (5537.9 feet amsl) is, however, lower than water levels at adjacent wells TW4-6 (5538.9 feet amsl), and TW4-23 (5541.4 feet amsl), as shown in the detail water level map under Tab C.

Hydraulic tests indicate that the permeability at TW4-27 is an order of magnitude lower than at TW4-6 and three orders of magnitude lower than at TW4-4 (see Hydro Geo Chem, Inc. [HGC], September 20, 2010: Hydraulic Testing of TW4-4, TW4-6, and TW4-26, White Mesa Uranium Mill, July 2010; and HGC, November 28, 2011: Installation, Hydraulic Testing, and Perched Zone Hydrogeology of Perched Monitoring Well TW4-27, White Mesa Uranium Mill Near Blanding, Utah). The similar water levels at TW4-14 and TW4-27, and the low permeability estimate at TW4-27 suggest that both wells are completed in materials having lower permeability than nearby wells. The low permeability condition likely reduces the rate of long-term water level increase at TW4-14 and TW4-27 compared to nearby wells, yielding water levels that appear anomalously low. This behavior is consistent with hydraulic test data collected from recently installed wells TW4-29, TW4-30, TW4-31, TW4-33 and TW4-34 which indicate that the permeability of these wells is one to two orders of magnitude higher than the permeability of TW4-27 (see HGC, January 23, 2014; Contamination Investigation Report, TW4-12 and TW4-27 Areas, White Mesa Uranium Mill Near Blanding, Utah; and HGC, July 1, 2014, Installation and Hydraulic Testing of TW4-35 and TW4-36, White Mesa Uranium Mill Near Blanding, Utah [As-Built Report]). Hydraulic tests also indicate that the permeability at TW4-36 is slightly higher than but comparable to the low permeability at TW4-27, suggesting that TW4-36, TW4-14 and TW4-27 are completed in a continuous low permeability zone.

#### **4.1.2 Comparison of Current Groundwater Contour Map to Groundwater Contour Map for Previous Quarter**

The groundwater contour maps for the Mill site for the previous quarter, as submitted with the Nitrate Monitoring Report for the previous quarter, are attached under Tab D.

A comparison of the water table contour maps for the current quarter (second quarter of 2014) to the water table contour maps for the previous quarter (first quarter of 2014) indicates slightly larger drawdowns related to operation of chloroform pumping wells MW-26, TW4-19 and TW4-20 and nitrate pumping well TW4-25. Nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 were brought into operation during the first quarter of 2013 and their impact on water

level patterns was evident as of the fourth quarter of 2013. Water levels in nitrate pumping wells TW4-22, TW4-25, and TWN-2 showed small decreases this quarter, consistent with continuing development of cones of depression centered on these wells, and with the development of capture associated with the nitrate pumping system.

As discussed in Section 4.1.1, pumping at chloroform well TW4-4, which began in the first quarter of 2010, has depressed the water table near TW4-4, but a well-defined cone of depression is not clearly evident, likely due to variable permeability conditions near TW4-4 and the persistently low water level at adjacent well TW4-14.

Water levels and water level contours for the site have not changed significantly since the last quarter except for a few locations. Reported decreases in water levels (increases in drawdown) of approximately 4.4, 3.6, 3.2, and 2.4 feet occurred in chloroform pumping wells MW-26, TW4-19, TW4-20 and nitrate pumping well TW4-25, respectively. Changes in water levels at other pumping wells (chloroform pumping wells MW-4 and TW4-4, and nitrate pumping wells TW4-22, TW4-24 and TWN-2) were less than 2 feet. Water level fluctuations at pumping wells typically occur in part because of fluctuations in pumping conditions just prior to and at the time the measurements are taken.

The decreases in water levels (increases in drawdown) at chloroform pumping wells MW-26, TW4-19 and TW4-20 and nitrate pumping well TW4-25 have slightly increased the apparent capture of these wells relative to other pumping wells.

Reported water level decreases of 1.3 and 0.9 feet at Piezometers 2 and 3 likely result from cessation of water delivery to the northern wildlife ponds as discussed in Section 4.1.1 and the consequent continuing decay of the associated perched water mound. The reported water level decreases of 1.4 feet and 1.9 feet at Piezometers 4 and 5 may result from reduced recharge at the southern wildlife pond.

Reported water levels decreased by 3.5 feet at MW-20 and increased by 2.3 feet at MW-37 between the previous quarter and the current quarter. The water level decrease at MW-20 likely resulted from insufficient recovery after purging and sampling due to its low permeability. The water level increase at MW-37 is within the range of historical variability at this well. This variability is also likely the result of low permeability and variable intervals between purging/sampling and water level measurement.

### **4.1.3 Hydrographs**

Attached under Tab E are hydrographs showing groundwater elevation in each nitrate contaminant investigation monitor well over time. Per the CAP, nitrate wells TWN-6, TWN-14, TWN-16, and TWN-19 have been maintained for depth to groundwater monitoring only. These hydrographs are also included in Tab E.

As noted in Section 2.1.1, nitrate wells TWN-05, TWN-08, TWN-09, TWN-10, TWN-11, TWN-12, TWN-13, TWN-15, and TWN-17 were abandoned in accordance with the DRC-approved Well Abandonment Procedure on July 31, 2013. The historic hydrographs will not be included in future quarterly reports unless requested by DRC.

#### **4.1.4 Depth to Groundwater Measured and Groundwater Elevation**

Attached in Tab F are tables showing depth to groundwater measured and groundwater elevation over time for each of the wells listed in Section 2.1.1 above.

As noted in Section 2.1.1, nitrate wells TWN-05, TWN-08, TWN-09, TWN-10, TWN-11, TWN-12, TWN-13, TWN-15, and TWN-17 were abandoned in accordance with the DRC-approved Well Abandonment Procedure on July 31, 2013. The historic measured depth to groundwater and groundwater elevation data will not be included in future quarterly reports unless requested by DRC.

#### **4.2 Effectiveness of Hydraulic Containment and Capture**

##### **4.2.1 Hydraulic Containment and Control**

The CAP states that hydraulic containment and control will be evaluated in part based on water level data and in part on concentrations in wells downgradient of pumping wells TW4-22 and TW4-24.

As per the CAP, the fourth quarter of 2013 was the first quarter that hydraulic capture associated with nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 was evaluated. Hydraulic containment and control based on water level data is considered successful per the CAP if the entire nitrate plume upgradient of TW4-22 and TW4-24 falls within the combined capture of the nitrate pumping wells. Capture zones based on water level contours calculated by kriging the current quarter's water level data are provided on water level contour maps included under Tab C. The nitrate capture zones are defined by the bounding stream tubes associated with nitrate pumping wells. Each bounding stream tube represents a flow line parallel to the hydraulic gradient and therefore perpendicular to the intersected water level contours. Assuming that the stream tubes do not change over time, all flow between the bounding stream tubes associated with a particular pumping well is presumed to eventually reach and be removed by that well. Capture associated with chloroform pumping wells is also included on these maps because the influence of the chloroform and nitrate pumping systems overlap.

The specific methodology for calculating the nitrate capture zones is substantially the same as that used since the fourth quarter of 2005 to calculate the capture zones for the chloroform program, as agreed to by the DRC and International Uranium (USA) Corp. The procedure for calculating nitrate capture zones is as follows:

- 1) Calculate water level contours by gridding the water level data on approximately 50-foot centers using the ordinary linear kriging method in Surfer<sup>TM</sup>. Default kriging parameters are used that include a linear variogram, an isotropic data search, and all the available water level data for the quarter, including relevant seep and spring elevations.
- 2) Calculate the capture zones by hand from the kriged water level contours following the rules for flow nets:
  - from each pumping well, reverse track the stream tubes that bound the capture zone of each well,
  - maintain perpendicularity between each stream tube and the kriged water level contours.

A decrease in water level at nitrate pumping well TW4-25 of approximately 2.4 feet slightly increased the apparent capture of this well compared to last quarter. The water level changes reported at nitrate pumping wells TW4-22, TW4-24 and TWN-2 were less than two feet, as were the reported water level changes at chloroform pumping wells MW-4 and TW4-4. However, decreases in water levels at nitrate pumping wells TW4-22 and TW4-24 indicated that the capture associated with nitrate pumping wells continues to develop. Reported water level decreases of 4.4, 3.6 and 3.2 feet at chloroform pumping wells MW-26, TW4-19 and TW4-20, respectively, slightly increased the apparent capture associated with these wells.

The capture associated with nitrate pumping wells is expected to increase over time as water levels continue to decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Slow development of hydraulic capture is consistent with and expected based on the relatively low permeability of the perched zone at the site. Furthermore, the presence of the perched groundwater mound, and the apparently anomalously low water level at TWN-7, will influence the definition of capture associated with the nitrate pumping system.

That pumping is likely sufficient to eventually capture the entire plume upgradient of TW4-22 and TW4-24 can be demonstrated by comparing the combined average pumping rates of all nitrate pumping wells for the current quarter to estimates of pre-pumping flow through the nitrate plume near the locations of TW4-22 and TW4-24. The pre-pumping flow calculation is assumed to represent a steady state 'background' condition that includes constant recharge, hydraulic gradients, and saturated thicknesses. Changes after pumping are assumed to result only from pumping. As will be discussed below, the average combined nitrate pumping rate for the quarter exceeds the calculated pre-pumping rate of perched water flow through the nitrate plume by a factor between approximately 1.1 and 2.4.

The cumulative volume of water removed by TW4-22, TW4-24, TW4-25, and TWN-2 during the current quarter was approximately 413,620 gallons. This equates to an average total extraction rate of approximately 3.2 gpm over the 90 day quarter. This average accounts for time periods when pumps were off due to insufficient water columns in the wells.

Pre-pumping flow through the nitrate plume near TW4-22 and TW4-24 was estimated using Darcy's Law to lie within a range of approximately 1.31 gpm to 2.79 gpm. Calculations were based on an average hydraulic conductivity range of 0.15 feet per day (ft/day) to 0.32 ft/day (depending on the calculation method), a pre-pumping hydraulic gradient of 0.025 feet per foot (ft/ft), a plume width of 1,200 feet, and a saturated thickness (at TW4-22 and TW4-24) of 56 feet. The hydraulic conductivity range was estimated by averaging the results obtained from slug test data that were collected automatically by data loggers from wells within the plume and analyzed using the KGS unconfined slug test solution available in Aqtesolve™ (see Hydro Geo Chem, Inc. [HGC], August 3, 2005: Perched Monitoring Well Installation and Testing at the White Mesa Uranium Mill, April Through June 2005; HGC, March 10, 2009: Perched Nitrate Monitoring Well Installation and Hydraulic Testing, White Mesa Uranium Mill; and HGC, March 17 2009: Letter Report to David Frydenlund, Esq, regarding installation and testing of TW4-23, TW4-24, and TW4-25). These results are summarized in Table 6. Data from fourth

quarter 2012 were used to estimate the pre-pumping hydraulic gradient and saturated thickness. These data are also summarized in Tables 7 and 8.

The average hydraulic conductivity was estimated to lie within a range of 0.15 ft/day to 0.32 ft/day. Averages were calculated four ways. As shown in Table 6 arithmetic and geometric averages for wells MW-30, MW-31, TW4-22, TW4-24, TW4-25, TWN-2, and TWN-3 were calculated as 0.22 and 0.15 ft/day, respectively. Arithmetic and geometric averages for a subset of these wells (MW-30, MW-31, TW4-22, and TW4-24) were calculated as 0.32 and 0.31 ft/day, respectively. The lowest value, 0.15 ft/day, represented the geometric average of the hydraulic conductivity estimates for all the plume wells. The highest value, 0.32 ft/day, represented the arithmetic average for the four plume wells having the highest hydraulic conductivity estimates (MW-30, MW-31, TW4-22, and TW4-24).

Pre-pumping hydraulic gradients were estimated at two locations; between TW4-25 and MW-31 (estimated as 0.023 ft/ft), and between TWN-2 and MW-30 (estimated as 0.027 ft/ft). These results were averaged to yield the value used in the calculation (0.025 ft/ft). The pre-pumping saturated thickness of 56 feet was an average of pre-pumping saturated thicknesses at TW4-22 and TW4-24.

The hydraulic gradient and saturated thickness used in the calculations are assumed to represent a steady state 'background' condition. However, assumption of a steady state 'background' is inconsistent with the cessation of water delivery to the northern wildlife ponds, located upgradient of the nitrate plume. Hydraulic gradients and saturated thicknesses within the plume are declining as a result of two factors: reduced recharge from the ponds, and the effects of nitrate pumping. Separating the impacts of nitrate pumping from the impacts of reduced recharge from the ponds is problematic. Should pumping cease and 'background' conditions be allowed to re-establish, however, smaller hydraulic gradients and saturated thicknesses would be expected due to reduced recharge, which would lower estimates of 'background' flow.

As a result, the 'background' flow calculated using the hydraulic gradient of 0.025 ft/ft and saturated thickness of 56 feet is considered conservatively large. Furthermore, using the arithmetic average hydraulic conductivity of a subset of plume wells having the highest conductivities is considered less representative of actual conditions than using the geometric average conductivity of all of the plume wells. Nitrate pumping may therefore exceed flow through the plume by a factor greater than 2.4, the high end of the calculated range.

The CAP states that MW-5, MW-11, MW-30, and MW-31 are located downgradient of TW4-22 and TW4-24. MW-30 and MW-31 are within the plume near its downgradient edge and MW-5 and MW-11 are outside and downgradient of the plume. Per the CAP, hydraulic control based on concentration data will be considered successful if the concentrations of nitrate in MW-30 and MW-31 remain stable or decline, and concentrations of nitrate in downgradient wells MW-5 and MW-11 do not exceed the 10 mg/L standard.

Table 5 presents the nitrate concentration data for MW-30, MW-31, MW-5 and MW-11, which are down-gradient of pumping wells TW4-22 and TW4-24. Based on these concentration data, the nitrate plume is under control.

The plume has not migrated downgradient to MW-5 or MW-11 because nitrate was not detected at MW-5 or MW-11. Between the previous and current quarters, nitrate concentrations changed slightly in both MW-30 and MW-31. Nitrate in MW-30 decreased from 18.4 mg/L to 17.9 mg/L and nitrate in MW-31 increased from 20.6 mg/L to 23.3 mg/L. Changes in both wells were less than 20% suggesting the changes are within the range typical for sampling and analytical error. Although short-term fluctuations have occurred, nitrate concentrations in MW-30 and MW-31 have been relatively stable, demonstrating that plume migration is minimal or absent.

Chloride has been relatively stable at MW-30 but appears to be increasing at MW-31 (see Tab J and Tab K, discussed in Section 4.2.4). The apparent increase in chloride and stable nitrate at MW-31 suggests a natural attenuation process that is affecting nitrate but not chloride. A likely process that would degrade nitrate but leave chloride unaffected is reduction of nitrate by pyrite. The likelihood of this process in the perched zone is discussed in HGC, December 7 2012; Investigation of Pyrite in the Perched Zone, White Mesa Uranium Mill Site, Blanding, Utah.

#### **4.2.2 Current Nitrate and Chloride Isoconcentration Maps**

Included under Tab I of this Report are current nitrate and chloride iso-concentration maps for the Mill site. Nitrate iso-contours start at 5 mg/L and chloride iso-contours start at 100 mg/L because those values appear to separate the plumes from background. All nitrate and chloride data used to develop these iso-concentration maps are from the current quarter's sampling events.

#### **4.2.3 Comparison of Areal Extent**

Changes in nitrate concentration at wells within the nitrate plume since the last quarter have resulted in a slight shrinkage of the plume area. The northeastern extent of the plume has been reduced, with the plume boundary moving to the west away from TW4-19, TW4-20, and TW4-25, due to decreases in concentrations at these wells and at TW4-22. Concentrations at chloroform pumping wells TW4-19 and TW4-20 decreased from approximately 1.6 mg/L and 7.6 mg/L, respectively, to 1.3 and 6.0 mg/L. Concentrations at nitrate pumping wells TW4-22 and TW4-25 decreased from approximately 54.6 mg/L and 2.1 mg/L, respectively, to 47.2 mg/L and 1.2 mg/L.

The nitrate concentration at TW4-18 decreased for the second consecutive quarter, from 12.8 mg/L to 12.2 mg/L, reversing a previously upward trend, and suggesting stabilization. Last quarter, most of the wells in the vicinity of TW4-18 (directly downgradient of the northern wildlife ponds to the south and south-west) showed slight increases in nitrate concentrations. Changes in this area are expected to result from changes in pumping and from the cessation of water delivery to the northern wildlife ponds. The reduction in low-nitrate recharge from the ponds appeared to be having the anticipated effect of generally increased nitrate concentrations in wells downgradient of the ponds. However, this quarter, most wells in the vicinity of TW4-18 showed slight decreases in nitrate concentrations, suggesting that conditions in this area have stabilized.

Although increases in concentration in the area downgradient of the wildlife ponds have been anticipated as the result of reduced dilution, the magnitude and timing of the increases are difficult to predict due to the measured variations in hydraulic conductivity at the site and other factors. Nitrate in the area directly downgradient (south to south-southwest) of the northern

wildlife ponds is associated with the chloroform plume, is cross-gradient of the nitrate plume as defined in the CAP, and is within the capture zone of the chloroform pumping system (primarily chloroform pumping well MW-26). Perched water flow in the area is to the southwest in the same approximate direction as the main body of the nitrate plume.

Nitrate concentrations at the downgradient edge of the plume (MW-30 and MW-31) continue to be relatively stable, demonstrating that plume migration is minimal or absent. With regard to chloroform, the boundary of the northern portion of the chloroform plume has migrated to the west toward nitrate pumping well TW4-24 since pumping began. More details regarding the chloroform data and interpretation are included in the Quarterly Chloroform Monitoring Report submitted under separate cover.

#### **4.2.4 Nitrate and Chloride Concentration Trend Data and Graphs**

Attached under Tab J is a table summarizing values for nitrate and chloride for each well over time.

Attached under Tab K are graphs showing nitrate and chloride concentration plots in each monitor well over time.

As noted in Section 2.1.1, nitrate wells TWN-05, TWN-08, TWN-09, TWN-10, TWN-11, TWN-12, TWN-13, TWN-15, and TWN-17 were abandoned in accordance with the DRC-approved Well Abandonment Procedure on July 31, 2013. The historic trend data will not be included in future quarterly reports unless requested by DRC.

#### **4.2.5 Interpretation of Analytical Data**

Comparing the nitrate analytical results to those of the previous quarter, as summarized in the tables included under Tab J, the following observations can be made for wells within and immediately surrounding the nitrate plume:

- a) Nitrate concentrations have increased by more than 20% in the following wells compared to last quarter: TW4-16 and TWN-3;
- b) Nitrate concentrations have decreased by more than 20% in the following wells compared to last quarter: MW-26, TW4-20, TW4-25, and TWN-7;
- c) Nitrate concentrations have remained within 20% in the following wells compared to last quarter: MW-27, MW-30, MW-31, TW4-5, TW4-10, TW4-18, TW4-19, TW4-21, TW4-22, TW4-24, TWN-1, TWN-2, TWN-4, and TWN-18; and
- d) MW-11, MW-25, and MW-32 remained non-detect

As indicated, nitrate concentrations for many of the wells with detected nitrate were within 20% of the values reported for the wells during the previous quarter, suggesting that variations are within the range typical for sampling and analytical error. The remaining wells had changes in concentration greater than 20%. The latter includes chloroform pumping wells MW-26 and TW4-20 and nitrate pumping well TW4-25. TW4-16 is located adjacent to chloroform pumping

well MW-26, and TWN-3 is located adjacent to nitrate pumping well TWN-2. Fluctuations in concentrations at pumping wells and wells adjacent to pumping wells likely result in part from the effects of pumping as discussed in Section 4.1.1.

The nitrate concentration in nitrate pumping well TW4-25 decreased from approximately 2.2 mg/L last quarter to 1.2 mg/L this quarter. The nitrate concentrations in chloroform pumping wells MW-26 and TW4-20 decreased from approximately 2.1 mg/L and 7.6 mg/L, respectively, to approximately 0.9 mg/L and 6.0 mg/L. Chloroform concentrations at nitrate pumping wells TW4-22 and TW4-24 increased from 12,100  $\mu\text{g/L}$  to 12,400  $\mu\text{g/L}$  and decreased from 78.5  $\mu\text{g/L}$  to 62.7  $\mu\text{g/L}$ , respectively, this quarter. The decrease at TW4-24 brought the chloroform plume boundary back to the east of TW4-24. Chloroform changes are likely in response to the start-up of nitrate pumping in the first quarter of 2013 and are affected by the presence of historically high chloroform concentrations at adjacent, cross-gradient well TW4-20. MW-27, located west of TWN-2, and TWN-18, located north of TWN-3, bound the nitrate plume to the west and north (See Figure I-1 under Tab I). In addition, the southernmost (downgradient) boundary of the plume remains between MW-30/MW-31 and MW-5/MW-11. Nitrate concentrations at MW-5 (adjacent to MW-11) and MW-11 have historically been low ( $< 1$  mg/L) or non-detect for nitrate (See Table 5). MW-25, MW-26, MW-32, TW4-16, TW4-19, TW4-20, TW4-25, TWN-1, and TWN-4 bound the nitrate plume to the east.

As discussed above, the northeastern extent of the plume has been slightly reduced, with the plume boundary moving to the west away from TW4-19, TW4-20, and TW4-25, primarily due to decreases in concentrations at these wells and TW4-22. Nitrate concentrations outside the nitrate plume exceed 10 mg/L at a few locations: TW4-10 (13.9 mg/L), TW4-12 (17.0 mg/L), TW4-18 (12.2 mg/L), TW4-26 (12.5 mg/L), TW4-27 (31.1 mg/L), and TW4-28 (16.5 mg/L). All these wells are located southeast of the nitrate plume as defined in the CAP and all are separated from the plume by wells having nitrate concentrations that are either non-detect, or, if detected, are less than 10 mg/L. Concentrations at TW4-10, TW4-12, TW4-18, TW4-26, TW4-27 and TW4-28 are within 20% of their concentrations during the previous quarter. Elevated nitrate at TW4-10 and TW4-18 is associated with the chloroform plume and is within the capture zone of the chloroform pumping system. Elevated nitrate at TW4-12, TW4-26, TW4-27, and TW4-28 is likely related to former cattle ranching operations at the site.

Chloride concentrations are measured because elevated chloride (greater than 100 mg/L) is associated with the nitrate plume. Chloride concentrations are within 20% of their respective concentrations during the previous quarter except at six locations within or adjacent to the nitrate plume. Chloride concentrations at chloroform pumping well MW-26 and nitrate pumping well TW4-25 decreased from 70.4 mg/L and 85.7 mg/L last quarter, respectively, to 53.4 mg/L and 51.1 mg/L. Chloride concentrations at nitrate pumping well TW4-24 increased from 809 mg/L last quarter to 1,020 mg/L. Chloride concentration increases also occurred at TW4-5 (40.5 mg/L to 51.4 mg/L), TW4-16 (66.8 mg/L to 80.7 mg/L), and TW4-21 (200 mg/L to 243 mg/L). These three wells are in close proximity to chloroform pumping wells MW-26, TW4-19 and TW4-20. Fluctuations in concentrations at pumping wells and wells adjacent to pumping wells likely result in part from the effects of pumping. TW4-5, TW4-16 and TW4-21 are also located immediately downgradient of the northern wildlife ponds. Increases in concentrations at wells near (and downgradient of) the northern wildlife ponds are anticipated as a result of reduced dilution caused by cessation of water delivery to the northern wildlife ponds.

### 4.3 Estimation of Pumped Nitrate Mass and Residual Nitrate Mass within the Plume

Nitrate mass removed by pumping is summarized in Table 2, and includes mass removed by both chloroform and nitrate pumping wells. Table 3 shows the volume of water pumped at each well and Table 4 provides the details of the nitrate removal for each well. Mass removal calculations begin with the third quarter of 2010 because the second quarter, 2010 data were specified to be used to establish a baseline mass for the nitrate plume. As stated in the CAP, the baseline mass is to be calculated using the second quarter, 2010 concentration and saturated thickness data “within the area of the kriged 10 mg/L plume boundary.” The second quarter, 2010 data set was considered appropriate because “the second quarter, 2010 concentration peak at TWN-2 likely identifies a high concentration zone that still exists but has migrated away from the immediate vicinity of TWN-2.”

As shown in Table 2, a total of approximately 972 lb of nitrate has been removed from the perched zone since the third quarter of 2010. Prior to the first quarter of 2013, all direct nitrate mass removal resulted from operation of chloroform pumping wells MW-4, MW-26, TW4-4, TW4-19, and TW4-20. During the current quarter:

- A total of approximately 102 lb of nitrate was removed by the chloroform pumping wells and by nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2.
- Of the 102 lb removed during the current quarter, approximately 92 lb, (or 90 %), was removed by the nitrate pumping wells.

Baseline mass and current quarter mass estimates (nitrate + nitrite as N) for the nitrate plume are approximately 43,700 lb and 30,620 lbs, respectively. Mass estimates were calculated within the plume boundaries as defined by the kriged 10 mg/L isocon by 1) gridding (kriging) the nitrate concentration data on 50-foot centers; 2) calculating the volume of water in each grid cell based on the saturated thickness and assuming a porosity of 0.18; 3) calculating the mass of nitrate+nitrite as N in each cell based on the concentration and volume of water for each cell; and 4) totaling the mass of all grid cells within the 10 mg/L plume boundary. Data used in these calculations included data from wells listed in Table 3 of the CAP.

The nitrate mass estimate for the current quarter is lower than the baseline estimate by 13,080 lb, and this difference is greater than the amount of nitrate mass removed directly by pumping. Changes in the quarterly mass estimates are expected to result primarily from 1) nitrate mass removed directly by pumping, 2) natural attenuation of nitrate, and 3) changes in nitrate concentrations in wells within the plume as a result of re-distribution of nitrate within the plume and changes in saturated thicknesses. Redistribution of nitrate within the plume and changes in saturated thicknesses will be impacted by changes in pumping and in background conditions such as the decay of the perched water mound associated with the northern wildlife ponds. Cessation of water delivery to the northern wildlife ponds is expected to result in reduced saturated thicknesses and reduced dilution, which in turn is expected to result in increases in concentrations.

The mass estimate during the current quarter (30,620 lb) was smaller than the mass estimate during the previous quarter (31,410 lb) by 790 lb or less than 3%. Part of this difference may

result from slightly lower nitrate concentrations measured in some wells within the plume this quarter compared to last quarter, especially TW4-22, which decreased from approximately 54.6 mg/L to 47.2 mg/L.

Nitrate mass removal by pumping and natural attenuation (expected to result primarily from pyrite oxidation/nitrate reduction) act to lower nitrate mass within the plume. Changes resulting from redistribution of nitrate within the plume are expected to result in both increases and decreases in concentrations at wells within the plume and therefore increases and decreases in mass estimates based on those concentrations, thus generating 'noise' in the mass estimates. Furthermore, because the sum of sampling and analytical error is typically about 20%, changes in the mass estimates from quarter to quarter of up to 20% could result from typical sampling and analytical error alone. Only longer-term analyses of the mass estimates that minimize the impacts of these quarter to quarter variations will provide useful information on plume mass trends. Over the long term, nitrate mass estimates are expected to trend downward as a result of direct removal by pumping and through natural attenuation.

As specified in the CAP, once eight quarters of data have been collected (starting with the first quarter of 2013), a regression trend line will be applied to the quarterly mass estimates and evaluated. The trend line will then be updated quarterly and reevaluated as additional quarters of data are collected. The evaluation will determine whether the mass estimates are increasing, decreasing, or stable.

## **5.0 LONG TERM PUMP TEST AT TWN-02, TW4-22, TW4-24, and TW4-25 OPERATIONS REPORT**

### **5.1 Introduction**

Beginning in January 2013, EFRI began long term pumping of TW4-22, TW4-24, TW4-25, and TWN-02 as required by the Nitrate CAP, dated May 7, 2012 and the SCO dated December 12, 2012.

In addition, as a part of the investigation of chloroform contamination at the Mill site, EFRI has been conducting a Long Term Pump Test on MW-4, TW4-19, MW-26, and TW4-20, and, since January 31, 2010, TW4-4. The purpose of the test is to serve as an interim action that will remove a significant amount of chloroform-contaminated water while gathering additional data on hydraulic properties in the area of investigation.

Because wells MW-4, TW4-19, MW-26, TW4-4 and TW4-20 are pumping wells that may impact the removal of nitrate, they are included in this report and any nitrate removal realized as part of this pumping is calculated and included in the quarterly reports.

The following information documents the operational activities during the quarter.

### **5.2 Pumping Well Data Collection**

Data collected during the quarter included the following:

- Measurement of water levels at MW-4, TW4-19, MW-26, and TW4-20 and, commencing regularly on March 1, 2010, TW4-4, on a weekly basis, and at selected temporary wells and permanent monitoring wells on a monthly basis.
- Measurement of pumping history, including:
  - pumping rates
  - total pumped volume
  - operational and non-operational periods.
- Periodic sampling of pumped water for chloroform and nitrate/nitrite analysis and other constituents
- Measurement of water levels weekly at TW4-22, TW4-24, TW4-25, and TWN-02 commencing January 28, 2013, and on a monthly basis selected temporary wells and permanent monitoring wells.

### **5.3 Water Level Measurements**

Beginning August 16, 2003, water level measurements from chloroform pumping wells MW-4, MW-26, and TW4-19 were conducted weekly. From commencement of pumping TW4-20, and regularly after March 1, 2010 for TW4-4, water levels in these two chloroform pumping wells have been measured weekly. From commencement of pumping in January 2013, water levels in wells TW4-22, TW4-24, TW4-25, and TWN-02 have been measured weekly. Copies of the weekly Depth to Water monitoring sheets for MW-4, MW-26, TW4-19, TW4-20, TW4-4, TW4-22, TW4-24, TW4-25 and TWN-02 are included under Tab C.

Monthly depth to water monitoring is required for all of the chloroform contaminant investigation wells and non-pumping wells MW-27, MW-30, MW-31, TW4-21, TWN-1, TWN-3, TWN-4, TWN-7, and TWN-18. Copies of the monthly depth to Water monitoring sheets are included under Tab C.

### **5.4 Pumping Rates and Volumes**

The pumping wells do not pump continuously, but are on a delay device. The wells purge for a set amount of time and then shut off to allow the well to recharge. Water from the pumping wells is either transferred to the Cell 1 evaporation pond or is used in the Mill process.

The pumped wells are fitted with a flow meter which records the volume of water pumped from the well in gallons. The flow meter readings shown in Tab C are used to calculate the gallons of water pumped from the wells each quarter as required by Section 7.2.2 of the CAP. The average pumping rates and quarterly volumes for each of the pumping wells are shown in Table 3. The cumulative volume of water pumped from each of the wells is shown in Table 4.

On April 28, 2014, EFRI Field Personnel noted that the flow meter in TW4-20 had water in it, making it difficult to read. The flow meter in TW4-20 was replaced on April 29, 2014 with no down time noted. Therefore, no notice to DRC was required.

Except as noted above, no other operational problems were observed with the wells or pumping equipment during the quarter.

## **6.0 CORRECTIVE ACTION REPORT**

There are no corrective actions resulting from the 2nd quarter 2014 nitrate sampling event.

### **6.1 Assessment of Previous Quarter's Corrective Actions**

There were no corrective actions in the 1st quarter 2014 nitrate sampling event.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

As per the CAP, the current quarter is the third quarter that hydraulic capture associated with nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 was evaluated. Water level monitoring indicates that the apparent capture of the combined nitrate and chloroform pumping systems has increased compared to last quarter primarily due to water level declines at nitrate pumping well TW4-25 and chloroform pumping wells MW-26, TW4-19 and TW4-20. Capture associated with nitrate pumping wells is developing and is expected to increase over time as water levels decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Furthermore, the evaluation of the long term interaction between nitrate and chloroform pumping systems will require more data to be collected as part of routine monitoring. Slow development of hydraulic capture by the nitrate pumping system is consistent with, and expected based on the relatively low permeability of the perched zone at the site. Definition of capture associated with the nitrate pumping system will also be influenced by the perched groundwater mound and the apparently anomalously low water level at TWN-7.

Current pumping is likely sufficient to eventually capture the entire nitrate plume upgradient of TW4-22 and TW4-24. Pumping during the current quarter exceeds the estimated pre-pumping ('background') rate of perched water flow through the nitrate plume by a factor between approximately 1.1 and 2.4. Because the pre-pumping flow calculations likely overestimate the new 'background' conditions caused by reduced recharge from the northern wildlife ponds, and because the average plume hydraulic conductivity estimate from the low end of the calculated range is likely to be more representative of actual conditions, nitrate pumping may exceed flow through the plume by a factor greater than 2.4.

First quarter, 2014 nitrate concentrations at many of the wells within and adjacent to the nitrate plume were within 20% of the values reported during the previous quarter, suggesting that variations are within the range typical for sampling and analytical error. Changes in concentration greater than 20% occurred in wells MW-26, TWN-3, TWN-7, TW4-16, TW4-20, and TW4-25,. The concentrations in wells MW-11, MW-25, and MW-32 remained non-detect.

Of the wells showing changes in concentration greater than 20%, MW-26 and TW4-20 are chloroform pumping wells and TW4-25 is a nitrate pumping well. TW4-16 is located adjacent to chloroform pumping well MW-26 and TWN-3 is located adjacent to nitrate pumping well TWN-2. Nitrate concentration fluctuations at pumping wells and adjacent wells likely result in part from the effects of pumping.

The nitrate concentration in nitrate pumping well TW4-25 decreased from approximately 2.2 mg/L last quarter to 1.2 mg/L this quarter. The nitrate concentrations in chloroform pumping

wells MW-26 and TW4-20 decreased from approximately 2.1 mg/L and 7.6 mg/L, respectively, to approximately 0.9 mg/L and 6.0 mg/L. Chloroform concentrations at nitrate pumping wells TW4-22 and TW4-24 increased from 12,100 µg/L to 12,400 µg/L and decreased from 78.5 µg/L to 62.7 µg/L, respectively. The decrease at TW4-24 brought the chloroform plume boundary back to the east of TW4-24. Chloroform changes are likely in response to the start-up of nitrate pumping in the first quarter of 2013 and are affected by the presence of historically high chloroform concentrations at adjacent, cross-gradient well TW4-20

Changes in nitrate concentrations at wells within the nitrate plume since the last quarter have resulted in a slight overall shrinkage of the plume area. The northeastern extent of the plume has been reduced, primarily due to decreases in concentrations at TW4-19, TW4-20, TW4-25 and TW4-22. MW-27, located west of TWN-2, and TWN-18, located north of TWN-3, bound the nitrate plume to the west and north (See Figure I-1 under Tab I). In addition, the southernmost (downgradient) boundary of the plume remains between MW-30/MW-31 and MW-5/MW-11. Nitrate concentrations at MW-5 (adjacent to MW-11) and MW-11 have historically been low (< 1 mg/L) or non-detect for nitrate (See Table 5). MW-25, MW-26, MW-32, TW4-16, TW4-19, TW4-20, TW4-25, TWN-1, and TWN-4 bound the nitrate plume to the east.

Nitrate concentrations at MW-30 and MW-31 continue to be relatively stable, suggesting that plume migration is minimal or absent. Nitrate in MW-30 decreased from 18.4 mg/L to 17.9 mg/L and nitrate in MW-31 increased from 20.6 mg/L to 23.3 mg/L. Changes in both wells were less than 20% suggesting the changes are within the range typical for sampling and analytical error. Based on the concentration data at MW-5, MW-11, MW-30, and MW-31, the nitrate plume is under control.

Chloride has been relatively stable at MW-30 but appears to be increasing at MW-31. The apparent increase in chloride and stable nitrate at MW-31 suggests a natural attenuation process that is affecting nitrate but not chloride. A likely process that would degrade nitrate but leave chloride unaffected is reduction of nitrate by pyrite. The likelihood of this process in the perched zone is discussed in HGC, December 7 2012; Investigation of Pyrite in the Perched Zone, White Mesa Uranium Mill Site, Blanding, Utah.

Nitrate mass removal by pumping and natural attenuation (expected to result primarily from pyrite oxidation/nitrate reduction) act to lower nitrate mass within the plume. Changes resulting from redistribution of nitrate within the plume are expected to result in both increases and decreases in concentrations at wells within the plume and therefore increases and decreases in mass estimates based on those concentrations, thus generating 'noise' in the mass estimates. Furthermore, because the sum of sampling and analytical error is typically about 20%, changes in the mass estimates from quarter to quarter of up to 20% could result from typical sampling and analytical error alone. Only longer-term analyses of the mass estimates that minimize the impact of these quarter to quarter variations will provide useful information on plume mass trends. Over the long term, nitrate mass estimates are expected to trend downward as a result of direct removal by pumping and through natural attenuation.

As specified in the CAP, once eight quarters of data have been collected (starting with the first quarter of 2013), a regression trend line will be applied to the quarterly mass estimates and evaluated. The trend line will then be updated quarterly and reevaluated as additional quarters of

data are collected. The evaluation will determine whether the mass estimates are increasing, decreasing, or stable.

During the current quarter, a total of approximately 102 lb of nitrate was removed by the chloroform pumping wells and by nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2. Of the 102 lb removed during the current quarter, approximately 92 lb, (or 90 %), was removed by the nitrate pumping wells.

The baseline nitrate (nitrate+nitrite as N) plume mass calculated as specified in the CAP (based on second quarter, 2010 data) was approximately 43,700 lb. The nitrate plume mass estimate for the current quarter was calculated as 30,620 lb which was lower than the previous quarter's estimate of 31,410 lb by 790 lb or less than 3%. Part of this difference may result from slightly lower nitrate concentrations measured some wells within the plume this quarter compared to last quarter, especially TW4-22, which decreased from approximately 54.6 mg/L to 47.2 mg/L.

Nitrate concentrations outside the nitrate plume exceed 10 mg/L at a few locations: TW4-10 (13.9 mg/L), TW4-12 (17.0 mg/L), TW4-18 (12.2 mg/L), TW4-26 (12.5 mg/L), TW4-27 (31.1 mg/L), and TW4-28 (16.5 mg/L). All these wells are located southeast of the nitrate plume as defined in the CAP and all are separated from the plume by wells having nitrate concentrations that are either non-detect, or, if detected, are less than 10 mg/L. Concentrations at TW4-10, TW4-12, TW4-18, TW4-26, TW4-27 and TW4-28 are within 20% of their concentrations during the previous quarter. Elevated nitrate at TW4-10 and TW4-18 is associated with the chloroform plume and is within the capture zone of the chloroform pumping system. Elevated nitrate at TW4-12, TW4-26, TW4-27, and TW4-28 is likely related to former cattle ranching operations at the site. Increases in both nitrate and chloride concentrations at wells near the northern wildlife ponds are anticipated as a result of reduced dilution caused by cessation of water delivery to the northern wildlife ponds. An overall decrease in nitrate concentrations at these wells this quarter (after a previously generally increasing trend) suggests that conditions in these areas are stabilizing.

Nitrate mass removal from the perched zone increased substantially by the start-up of nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 during the first quarter of 2013. Continued operation of these wells is therefore recommended. Pumping these wells, regardless of any short term fluctuations in concentrations detected at the wells, helps to reduce downgradient nitrate migration by removing nitrate mass and reducing average hydraulic gradients, thereby allowing natural attenuation to be more effective. Continued operation of the nitrate pumping system is expected to eventually reduce nitrate concentrations within the plume and to further reduce or halt downgradient nitrate migration.

EFRI and its consultants have raised the issues and potential effects associated with cessation of water delivery to the northern wildlife ponds in March, 2012 during discussions with DRC in March 2012 and May 2013. While past recharge from the ponds has helped limit many constituent concentrations within the chloroform and nitrate plumes by dilution, the associated groundwater mounding has increased hydraulic gradients and contributed to plume migration. Since use of the northern wildlife ponds ceased in March 2012, the reduction in recharge and decay of the associated groundwater mound is expected to increase many constituent

concentrations within the plumes while reducing hydraulic gradients and rates of plume migration.

The net impact of reduced wildlife pond recharge is expected to be beneficial even though it is also expected to result in higher concentrations that will persist until continued mass reduction via pumping and natural attenuation ultimately reduce concentrations. Temporary increases in nitrate concentrations are judged less important than reduced nitrate migration rates. The actual impacts of reduced recharge on concentrations and migration rates will be defined by continued monitoring.

## **8.0 ELECTRONIC DATA FILES AND FORMAT**

EFRI has provided to the Director an electronic copy of all laboratory results for groundwater quality monitoring conducted under the nitrate contaminant investigation during the Quarter, in Comma Separated Values (“CSV”) format. A copy of the transmittal e-mail is included under Tab L.

## 9.0 SIGNATURE AND CERTIFICATION

This document was prepared by Energy Fuels Resources (USA) Inc. on August 18, 2014.

Energy Fuels Resources (USA) Inc.

By:

A handwritten signature in black ink, appearing to read 'Frank Filas', written in a cursive style.

Frank Filas, P.E  
Vice President, Permitting and Environmental Affairs

Certification:

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



---

Frank Filas, P.E  
Vice President, Permitting and Environmental Affairs  
Energy Fuels Resources (USA) Inc.

**Table 1**  
**Summary of Well Sampling and Constituents for the Period**

Well	Sample Collection Date	Date of Lab Report
Piezometer 01	5/7/2014	5/20/2014
Piezometer 02	5/7/2014	5/20/2014
Piezometer 03	5/7/2014	5/20/2014
TWN-01	5/6/2014	5/20/2014
<b>TWN-02</b>	<b>5/7/2014</b>	<b>5/20/2014</b>
TWN-03	5/7/2014	5/20/2014
TWN-04	5/6/2014	5/20/2014
TWN-07	5/7/2014	5/20/2014
TWN-07R	5/6/2014	5/20/2014
TWN-18	5/6/2014	5/20/2014
<b>TW4-22</b>	<b>5/19/2014</b>	<b>6/5/2014</b>
<b>TW4-24</b>	<b>5/19/2014</b>	<b>6/5/2014</b>
<b>TW4-25</b>	<b>5/19/2014</b>	<b>6/5/2014</b>
TWN-60	5/8/2014	5/20/2014
TW4-60	5/27/2014	6/5/2014
TWN-65	5/6/2014	5/20/2014

Note: All wells were sampled for Nitrate and Chloride.

TWN-60 is a DI Field Blank.

TWN-65 is a duplicate of TWN-04.

TW4-60 is the chloroform program DI Field Blank.

**Continuously pumped well.**

**Table 2**  
**Nitrate Mass Removal Per Well Per Quarter**

<b>Quarter</b>	<b>MW-4 (lbs.)</b>	<b>MW-26 (lbs.)</b>	<b>TW4-19 (lbs.)</b>	<b>TW4-20 (lbs.)</b>	<b>TW4-4 (lbs.)</b>	<b>TW4-22 (lbs.)</b>	<b>TW4-24 (lbs.)</b>	<b>TW4-25 (lbs.)</b>	<b>TWN-02 (lbs.)</b>	<b>Quarter Totals (lbs.)</b>
Q3 2010	3.2	0.3	5.8	1.7	4.7	NA	NA	NA	NA	15.7
Q4 2010	3.8	0.4	17.3	1.4	5.1	NA	NA	NA	NA	28.0
Q1 2011	2.9	0.2	64.5	1.4	4.3	NA	NA	NA	NA	73.3
Q2 2011	3.5	0.1	15.9	2.7	4.7	NA	NA	NA	NA	27.0
Q3 2011	3.5	0.5	3.5	3.9	5.4	NA	NA	NA	NA	16.8
Q4 2011	3.8	0.8	6.2	2.5	6.4	NA	NA	NA	NA	19.7
Q1 2012	3.6	0.4	0.7	5.0	6.0	NA	NA	NA	NA	15.9
Q2 2012	3.7	0.6	3.4	2.1	5.2	NA	NA	NA	NA	15.0
Q3 2012	3.8	0.5	3.6	2.0	4.7	NA	NA	NA	NA	14.7
Q4 2012	3.2	0.4	5.4	1.8	4.2	NA	NA	NA	NA	14.9
Q1 2013	2.5	0.4	14.1	1.4	3.6	8.1	43.4	7.5	14.8	95.7
Q2 2013	2.5	0.5	5.6	1.7	3.5	10.7	37.1	6.4	23.9	91.7
Q3 2013	3.0	0.4	48.4	1.4	3.8	6.3	72.8	6.9	33.4	176.5
Q4 2013	3.1	0.3	15.8	1.6	3.9	9.4	75.2	6.4	46.3	162.1
Q1 2014	2.7	0.4	4.1	1.2	3.6	11.2	60.4	2.3	17.2	103.1
<b>Q2 2014</b>	<b>2.4</b>	<b>0.3</b>	<b>3.3</b>	<b>0.9</b>	<b>3.0</b>	<b>9.5</b>	<b>63.4</b>	<b>1.3</b>	<b>17.8</b>	<b>101.87</b>
<b>Well Totals (pounds)</b>	<b>51.3</b>	<b>6.6</b>	<b>217.6</b>	<b>32.7</b>	<b>72.1</b>	<b>55.2</b>	<b>352.3</b>	<b>30.9</b>	<b>153.3</b>	<b>972.0</b>

**Table 3 Nitrate Well Pumping Rates and Volumes**

Pumping Well Name	Volume of Water Pumped During the Quarter (gals)	Average Pump Rate (gpm)
MW-4	71,934.9	4.39
MW-26	23,757.5	10.08
TW4-4	60,235.3	7.88
TW4-19	297,660.0	17.67
TW4-20	18,462.4	9.51
TW4-22	24,193.9	18.49
TW4-24	216,984.1	17.78
TW4-25	124,829.8	18.05
TWN-2	47,611.9	18.5

**Table 4**  
**Table 4 Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped**

Quarter	MW-4							MW-26						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination	Total Gallons pumped for the quarter from the Flow Meter data	Concentration from the analytical data	Concentration in mg/LX1000 to convert to ug/L	Total pumped gallons/3.785 to convert to liters	Concentration in ug/L X total liters	Total ug/1000000 to convert to grams	Total grams/453.592 to convert to pounds							
Q3 2010	79859.1	4.8	4800	302266.7	1450880129	1450.9	3.20	63850.0	0.6	600	241672.3	145003350	145	0.32
Q4 2010	90042.2	5	5000	340809.7	1704048635	1704.0	3.76	60180.0	0.7	700	227781.3	159446910	159	0.35
Q1 2011	76247.6	4.6	4600	288597.2	1327546964	1327.5	2.93	55130.0	0.5	500	208667.1	104333525	104	0.23
Q2 2011	85849.3	4.9	4900	324939.6	1592204042	1592.2	3.51	55800.6	0.3	300	211205.3	63361581	63	0.14
Q3 2011	85327.7	4.9	4900	322965.3	1582530188	1582.5	3.49	65618.0	0.9	900	248364.1	223527717	224	0.49
Q4 2011	89735.0	5.1	5100	339647.0	1732199573	1732.2	3.82	50191.3	2	2000	189974.1	379948141	380	0.84
Q1 2012	90376.4	4.8	4800	342074.7	1641958435	1642.0	3.62	31440.1	1.7	1700	119000.8	202301323	202	0.45
Q2 2012	90916.5	4.9	4900	344118.8	1686181940	1686.2	3.72	26701.2	2.5	2500	101064.1	252660294	253	0.56
Q3 2012	91607.0	5	5000	346732.5	1733662475	1733.7	3.82	25246.0	2.6	2600	95556.1	248445886	248	0.55
Q4 2012	78840.0	4.8	4800	298409.4	1432365120	1432.4	3.16	30797.0	1.46	1460	116566.6	170187302	170	0.38
Q1 2013	62943.7	4.78	4780	238241.9	1138796304	1138.8	2.51	22650.7	2.27	2270	85732.9	194613682	195	0.43
Q2 2013	71187.3	4.22	4220	269443.9	1137053387	1137.1	2.51	25343.4	2.11	2110	95924.8	202401263	202	0.45
Q3 2013	72898.8	4.89	4890	275922.0	1349258375	1349.3	2.97	25763.0	1.98	1980	97513.0	193075651	193	0.43
Q4 2013	70340.4	5.25	5250	266238.4	1397751674	1397.8	3.08	24207.6	1.38	1380	91625.8	126443557	126	0.28
Q1 2014	69833.8	4.7	4700	264320.9	1242308385	1242.3	2.74	23263.1	2.12	2120	88050.8	186667767	187	0.41
Q2 2014	71934.9	4.08	4080	272273.6	1110876274	1110.9	2.45	23757.5	1.42	1420	89922.1	127689435	128	0.28

Totals Since Q3  
2010

1277939.65

51.28

609939.5

6.57

Highlighted cells are the total for the current quarter

**Table 4**  
**Table 4 Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped**

Quarter	TW4-19							TW4-20						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
<b>Calculations and Data Origination</b>														
Q3 2010	116899.2	5.9	5900	442463.5	2.611E+09	2611	5.76	39098.3	5.3	5300	147987.1	784331447	784	1.73
Q4 2010	767970.5	2.7	2700	2906768.3	7.848E+09	7848	17.30	36752.5	4.6	4600	139108.2	639897778	640	1.41
Q1 2011	454607.9	17	17000	1720690.9	2.925E+10	29252	64.49	37187.5	4.4	4400	140754.7	619320625	619	1.37
Q2 2011	159238.9	12	12000	602719.2	7.233E+09	7233	15.95	67907.7	4.8	4800	257030.6	1.234E+09	1234	2.72
Q3 2011	141542.6	3	3000	535738.7	1.607E+09	1607	3.54	72311.2	6.5	6500	273697.9	1.779E+09	1779	3.92
Q4 2011	147647.2	5	5000	558844.7	2.794E+09	2794	6.16	72089.3	4.2	4200	272858.0	1.146E+09	1146	2.53
Q1 2012	148747.0	0.6	600	563007.4	337804437	338	0.74	76306.0	7.9	7900	288818.2	2.282E+09	2282	5.03
Q2 2012	172082.0	2.4	2400	651330.5	1.563E+09	1563	3.45	22956.4	11	11000	86890.1	955790963	956	2.11
Q3 2012	171345.0	2.5	2500	648540.8	1.621E+09	1621	3.57	22025.0	10.8	10800	83364.6	900337950	900	1.98
Q4 2012	156653.0	4.1	4100	592931.6	2.431E+09	2431	5.36	20114.0	11	11000	76131.5	837446390	837	1.85
Q1 2013	210908.0	7.99	7990	798286.8	6.378E+09	6378	14.06	18177.0	9.07	9070	68799.9	624015501	624	1.38
Q2 2013	226224.0	2.95	2950	856257.8	2.526E+09	2526	5.57	20252.4	9.76	9760	76655.3	748156060	748	1.65
Q3 2013	329460.1	17.6	17600	1247006.5	2.195E+10	21947	48.39	19731.0	8.65	8650	74681.8	645997873	646	1.42
Q4 2013	403974.0	4.7	4700	1529041.6	7.186E+09	7186	15.84	19280.2	9.64	9640	72975.6	703484369	703	1.55
Q1 2014	304851.0	1.62	1620	1153861.0	1.869E+09	1869	4.12	18781.6	7.56	7560	71088.4	537427971	537	1.18
Q2 2014	297660.0	1.34	1340	1126643.1	1.51E+09	1510	3.33	18462.4	5.95	5950	69880.2	415787095	416	0.92

Totals Since Q3  
2010

4209810.4

217.63

581432.5

32.74

Highlighted cells are the total for the current quarter

**Table 4**  
**Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped**

Quarter	TW4-4							TW4-22						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination														
Q3 2010	76916.8	7.30	7300.00	291130.1	2.1E+09	2125.25	4.69	NA	NA	NA	NA	NA	NA	NA
Q4 2010	86872.1	7.10	7100.00	328810.9	2.3E+09	2334.56	5.15	NA	NA	NA	NA	NA	NA	NA
Q1 2011	73360.0	7.00	7000.00	277667.6	1.9E+09	1943.67	4.29	NA	NA	NA	NA	NA	NA	NA
Q2 2011	80334.6	7.00	7000.00	304066.5	2.1E+09	2128.47	4.69	NA	NA	NA	NA	NA	NA	NA
Q3 2011	97535.0	6.60	6600.00	369170.0	2.4E+09	2436.52	5.37	NA	NA	NA	NA	NA	NA	NA
Q4 2011	109043.5	7.00	7000.00	412729.6	2.9E+09	2889.11	6.37	NA	NA	NA	NA	NA	NA	NA
Q1 2012	101616.8	7.10	7100.00	384619.6	2.7E+09	2730.80	6.02	NA	NA	NA	NA	NA	NA	NA
Q2 2012	87759.1	7.10	7100.00	332168.2	2.4E+09	2358.39	5.20	NA	NA	NA	NA	NA	NA	NA
Q3 2012	80006.0	7.10	7100.00	302822.7	2.2E+09	2150.04	4.74	NA	NA	NA	NA	NA	NA	NA
Q4 2012	71596.0	7.00	7000.00	270990.9	1.9E+09	1896.94	4.18	NA	NA	NA	NA	NA	NA	NA
Q1 2013	58716.8	7.36	7360.00	222243.1	1.6E+09	1635.71	3.61	16677.4	58.0	58000.0	63124.0	3661189622.0	3661.2	8.07
Q2 2013	65603.4	6.30	6300.00	248308.9	1.6E+09	1564.35	3.45	25523.2	50.2	50200.0	96605.3	4849586662.4	4849.6	10.69
Q3 2013	63515.4	7.22	7220.00	240405.8	1.7E+09	1735.73	3.83	25592.9	29.7	29700.0	96869.1	2877013057.1	2877.0	6.34
Q4 2013	60233.6	7.84	7840.00	227984.2	1.8E+09	1787.40	3.94	24952.2	45.2	45200.0	94444.1	4268872280.4	4268.9	9.41
Q1 2014	58992.9	7.28	7280.00	223288.1	1.6E+09	1625.54	3.58	24532.0	54.6	54600.0	92853.6	5069807652.0	5069.8	11.18
Q2 2014	60235.3	5.91	5910.00	227990.6	1.3E+09	1347.42	2.97	24193.9	47.2	47200.0	91573.9	4322288622.8	4322.3	9.53

Totals Since Q3  
2010

1232337.3

72.07

141471.6

55.22

Highlighted cells are the total for the current quarter

**Table 4**  
**Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped**

Quarter	TW4-24							TW4-25						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
<b>Calculations and Data Origination</b>														
Q3 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2013	144842.6	35.9	35900.0	548229.2	19681429751.9	19681.4	43.39	99369.9	9.0	9000.0	376115.1	3385035643.5	3385.0	7.46
Q2 2013	187509.3	23.7	23700.0	709722.7	16820428001.9	16820.4	37.08	147310.4	5.2	5240.0	557569.9	2921666087.4	2921.7	6.44
Q3 2013	267703.5	32.6	32600.0	1013257.7	33032202568.5	33032.2	72.82	145840.9	5.69	5690.0	552007.8	3140924419.0	3140.9	6.92
Q4 2013	260555.3	34.6	34600.0	986201.8	34122582643.3	34122.6	75.23	126576.5	6.10	6100.0	479092.1	2922461520.3	2922.5	6.44
Q1 2014	229063.9	31.6	31600.0	867006.9	27397416823.4	27397.4	60.40	129979.2	2.16	2160.0	491971.3	1062657947.5	1062.7	2.34
Q2 2014	216984.1	35.0	35000.0	821284.8	28744968647.5	28745.0	63.37	124829.8	1.21	1210.0	472480.8	571701759.5	571.7	1.26

Totals Since Q3

2010 1306658.7

352.30 773906.7

30.87

Highlighted cells are the total for the current quarter

**Table 4**  
**Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped**

TWN-02								
Quarter	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Removed by All Wells (pounds)
Calculations and Data Origination								
Q3 2010	NA	NA	NA	NA	NA	NA	NA	15.69
Q4 2010	NA	NA	NA	NA	NA	NA	NA	27.97
Q1 2011	NA	NA	NA	NA	NA	NA	NA	73.30
Q2 2011	NA	NA	NA	NA	NA	NA	NA	27.01
Q3 2011	NA	NA	NA	NA	NA	NA	NA	16.82
Q4 2011	NA	NA	NA	NA	NA	NA	NA	19.71
Q1 2012	NA	NA	NA	NA	NA	NA	NA	15.86
Q2 2012	NA	NA	NA	NA	NA	NA	NA	15.03
Q3 2012	NA	NA	NA	NA	NA	NA	NA	14.67
Q4 2012	NA	NA	NA	NA	NA	NA	NA	14.92
Q1 2013	31009.4	57.3	57300.0	117370.6	6725334176.7	6725.3	14.83	95.73
Q2 2013	49579.3	57.7	57700.0	187657.7	10827846433.9	10827.8	23.87	91.71
Q3 2013	50036.5	80.0	80000.0	189388.2	15151052200.0	15151.1	33.40	176.53
Q4 2013	49979.9	111.0	111000.0	189173.9	20998305286.5	20998.3	46.29	162.07
Q1 2014	48320.4	42.6	42600.0	182892.7	7791229616.4	7791.2	17.18	103.14
Q2 2014	47611.9	44.7	44700.0	180211.0	8055433555.1	8055.4	17.76	101.87

Totals Since Q3  
 2010

276537.4

153.33

972.02

Highlighted cells are the total for the current quarter

**Table 5**  
**Nitrate Data Over Time for MW-30, MW-31, MW-5, and MW-11**

Location	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014
MW-30	15.8	15	16	16	17	16	16	17	16	17	18.5	21.4	18.8	17.6	19.5	18.4	19.4
MW-31	22.5	21	20	21	22	21	21	21	20	21	23.6	19.3	23.8	21.7	23.9	20.6	23.1
MW-5	ND	NS	0.2	NS	0.2	NS	0.2	NS	0.1	NS	ND	NS	ND	NS	0.279	NS	ND
MW-11	ND																

ND = Not detected

NS = Not Sampled

**TABLE 6**  
**Slug Test Results**  
**(Using KGS Solution and Automatically Logged Data)**

Well	K (cm/s)	K (ft/day)
MW-30	1.0E-04	0.28
MW-31	7.1E-05	0.20
TW4-22	1.3E-04	0.36
TW4-24	1.6E-04	0.45
TW4-25	5.8E-05	0.16
TWN-2	1.5E-05	0.042
TWN-3	8.6E-06	0.024
<b>Average 1</b>		0.22
<b>Average 2</b>		0.15
<b>Average 3</b>		0.32
<b>Average 4</b>		0.31

**Notes:**

*Average 1 = arithmetic average of all wells*

*Average 2 = geometric average of all wells*

*Average 3 = arithmetic average of MW-30, MW-31, TW4-22, and TW4-24*

*Average 4 = geometric average of MW-30, MW-31, TW4-22, and TW4-24*

*cm/s = centimeters per second*

*ft/day = feet per day*

*K = hydraulic conductivity*

*KGS = KGS Unconfined Slug Test Solution In Aqtesolve™.*

**TABLE 7**  
**Pre-Pumping Saturated Thicknesses**

<b>Well</b>	<b>Depth to Brushy Basin (ft)</b>	<b>Depth to Water Fourth Quarter, 2012 (ft)</b>	<b>Saturated Thickness Above Brushy Basin (ft)</b>
TW4-22	112	53	58
TW4-24	110	55	55

*Notes:*

*ft = feet*

**TABLE 8**  
**Pre-Pumping Hydraulic Gradients and Flow Calculations**

<b>Pathline Boundaries</b>	<b>Path Length (ft)</b>	<b>Head Change (ft)</b>	<b>Hydraulic Gradient (ft/ft)</b>
TW4-25 to MW-31	2060	48	0.023
TWN-2 to MW-30	2450	67	0.027
		<b>average</b>	0.025
		<b><sup>1</sup> min flow (gpm)</b>	<b>1.31</b>
		<b><sup>2</sup> max flow (gpm)</b>	<b>2.79</b>

**Notes:**

*ft = feet*

*ft/ft = feet per foot*

*gpm = gallons per minute*

<sup>1</sup> assumes width = 1,200 ft; saturated thickness = 56 ft; K = 0.15 ft/day; and gradient = 0.025 ft/ft

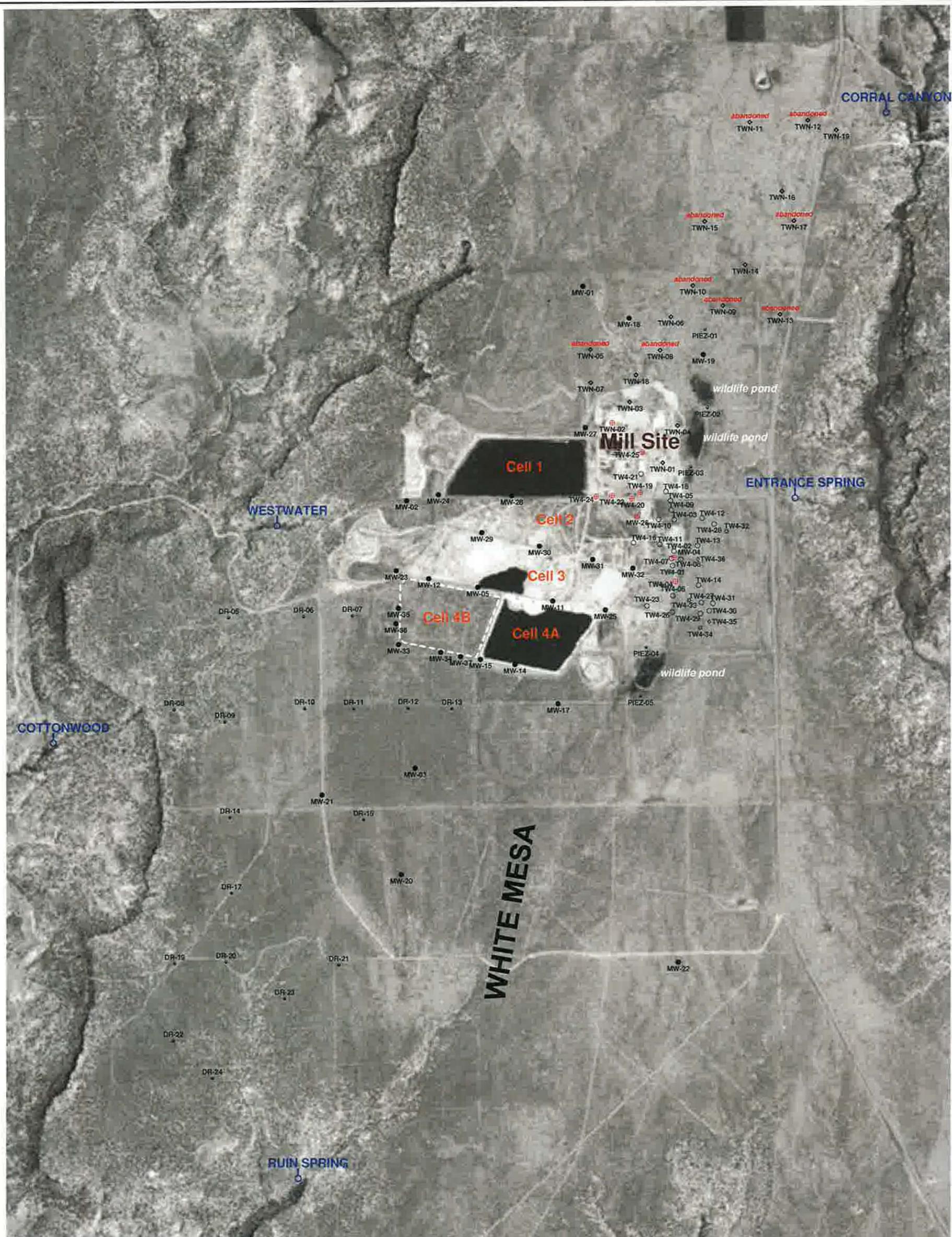
<sup>2</sup> assumes width = 1,200 ft; saturated thickness = 56 ft; K = 0.32 ft/day; and gradient = 0.025 ft/ft

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- Tab A Site Plan and Perched Well Locations White Mesa Site
- Tab B Order of Sampling and Field Data Worksheets
- Tab C Kriged Current Quarter Groundwater Contour Map, Capture Zone Map, Capture Zone Details Map, and Weekly, Monthly and Quarterly Depth to Water Data
- Tab D Kriged Previous Quarter Groundwater Contour Map
- Tab E Hydrographs of Groundwater Elevations Over Time for Nitrate Monitoring Wells
- Tab F Depths to Groundwater and Elevations Over Time for Nitrate Monitoring Wells
- Tab G Laboratory Analytical Reports
- Tab H Quality Assurance and Data Validation Tables
  - H-1 Field Data QA/QC Evaluation
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Tab A

Site Plan and Perched Well Locations White Mesa Site



**EXPLANATION**

- TW4-19  perched chloroform or nitrate pumping well
- MW-5  perched monitoring well
- TW4-12  temporary perched monitoring well
- TWN-7  temporary perched nitrate monitoring well
- PIEZ-1  perched piezometer
- TW4-32  temporary perched monitoring well installed September, 2013
- TW4-35  temporary perched monitoring well installed May, 2014
- RUIN SPRING  seep or spring



1 mile



**HYDRO  
GEO  
CHEM, INC.**

**WHITE MESA SITE PLAN SHOWING LOCATIONS OF PERCHED WELLS AND PIEZOMETERS**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/aug14/Uwelloc0614.srf	A-1

**Tab B**

**Order of Sampling and Field Data Worksheets**

**Nitrate Order**  
~~2nd~~ **1st Quarter 2014**

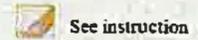
Nitrate Samples					
Name	Nitrate Mg/L Previous Qrt.	Date/Purge	sample	Depth	Total Depth
TWN-7	0.882	5/7/14	0821		105
TWN-4	1.41	5/6/14	0835		125.7
TWN-1	1.47	5/6/14	0955		112.5
TWN-18	2.33	5/6/14	1028		145
TWN-3	19.6	5/7/14	0831		96
TWN-2	42.6	5/7/14	0840		96
Duplicate of Rinsate	<u>TWN-04</u>				
DI Sample	<u>TWN-60</u>	5/8/14	0730		
Piez 1	6.79	5/7/14	0933		
Piez 2	0.169	5/7/14	0838		
Piez 3	1.7	5/7/14	0918		

Rinsate Samples		
Name	Date	Sample
TWN-7R	5/6/14	0737
TWN-4R		
TWN-1R		
TWN-18R		
TWN-3R		
TWN-2R		

Samplers: \_\_\_\_\_  
 \_\_\_\_\_



ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): Piez-01 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: Piez-01\_05072014

Date and Time for Purging: 5/7/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): N/A

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: Piez-03

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/cm Well Depth(0.01ft): 0

Depth to Water Before Purging: 62.90 Casing Volume (V) 4" Well: 0 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 9°

Time 0932 Gal. Purged 0

Conductance 2195 pH 9.47

Temp. °C 13.94

Redox Potential Eh (mV) 189

Turbidity (NTU) 3.9

Time      Gal. Purged     

Conductance      pH     

Temp. °C     

Redox Potential Eh (mV)     

Turbidity (NTU)     

Time      Gal. Purged     

Conductance      pH     

Temp. °C     

Redox Potential Eh (mV)     

Turbidity (NTU)     

Time      Gal. Purged     

Conductance      pH     

Temp. °C     

Redox Potential Eh (mV)     

Turbidity (NTU)     

01-2209-10-350 06-06-12 Rev. 7.2 - Errata Template-[1145] Printed 4/10/2014 3:14 PM from 192.168.1.10

Volume of Water Purged  gallon(s)

**Pumping Rate Calculation**

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

See instruction

**Comment**

Arrived on site at 0930. Turner and Garin present to collect samples. samples collected at 0933. water was mostly clear. Left site at 0939

Do not touch this cell (SheetName)



ATTACHMENT 1-2  
WHITE MESA URANIUM MILL  
FIELD DATA WORKSHEET FOR GROUNDWATER



See instruction

Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): Piez-02 Sampler Name and initials: Tanner Holiday/TH

Field Sample ID Piez-02\_05072014

Date and Time for Purging 5/7/2014 and Sampling (if different) N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet) N/A

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Nitrate Prev. Well Sampled in Sampling Event TWU-02

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 999  $\mu$ MHOS/ cm

Well Depth(0.01ft): 0

Depth to Water Before Purging 34.18

Casing Volume (V) 4" Well: 0 (.653h)  
3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>0857</u>	Gal. Purged	<u>0</u>
Conductance	<u>870</u>	pH	<u>7.37</u>
Temp. °C	<u>12.37</u>		
Redox Potential Eh (mV)	<u>313</u>		
Turbidity (NTU)	<u>1.8</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

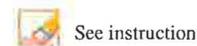
Arrived on site at 0854. Tanner and Garrin present to collect samples. samples bailed and collected at 0858. water was clear. Left site at 0906

Piez-02 05-07-2014

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**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event:

Location (well name):

Sampler Name and initials:

Field Sample ID

Date and Time for Purging

and Sampling (if different)

Well Purging Equip Used:  pump or  bailer

Well Pump (if other than Bennet)

Purging Method Used:  2 casings  3 casings

Sampling Event

Prev. Well Sampled in Sampling Event

pH Buffer 7.0

pH Buffer 4.0

Specific Conductance   $\mu$ MHOS/ cm

Well Depth(0.01ft):

Depth to Water Before Purging

Casing Volume (V) 4" Well:  (.653h)  
 3" Well:  (.367h)

Weather Cond.

Ext'l Amb. Temp. °C (prior sampling event)

Time	<input type="text" value="0917"/>	Gal. Purged	<input type="text" value="0"/>
Conductance	<input type="text" value="3048"/>	pH	<input type="text" value="11.70"/>
Temp. °C	<input type="text" value="15.76"/>		
Redox Potential Eh (mV)	<input type="text" value="214"/>		
Turbidity (NTU)	<input type="text" value="4.5"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

Arrived on site at 0913. Tanner and Garrin present to collect samples.  
 Samples collected at 0918. Water was mostly clear. Left site at 0925

*Continuous Pumping used*

**Piez-03 05-07-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



See instruction

Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-01 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TWN-01\_05062014

Date and Time for Purging: 5/6/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: TWN-04

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 112.50

Depth to Water Before Purging: 58.39 Casing Volume (V) 4" Well: 35.33 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Cloudy and Windy Ext'l Amb. Temp. °C (prior sampling event) 12°

Time	<u>0952</u>	Gal. Purged	<u>66</u>
Conductance	<u>914</u>	pH	<u>7.20</u>
Temp. °C	<u>14.89</u>		
Redox Potential Eh (mV)	<u>306</u>		
Turbidity (NTU)	<u>25</u>		

Time	<u>0953</u>	Gal. Purged	<u>77</u>
Conductance	<u>914</u>	pH	<u>7.22</u>
Temp. °C	<u>14.89</u>		
Redox Potential Eh (mV)	<u>304</u>		
Turbidity (NTU)	<u>27</u>		

Time	<u>0954</u>	Gal. Purged	<u>88</u>
Conductance	<u>915</u>	pH	<u>7.23</u>
Temp. °C	<u>14.89</u>		
Redox Potential Eh (mV)	<u>302</u>		
Turbidity (NTU)	<u>27</u>		

Time	<u>0955</u>	Gal. Purged	<u>99</u>
Conductance	<u>916</u>	pH	<u>7.25</u>
Temp. °C	<u>14.90</u>		
Redox Potential Eh (mV)	<u>300</u>	300	
Turbidity (NTU)	<u>29</u>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

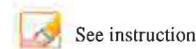
Comment

Arrived on site at 0943 Tanner and Garrin present for purge and sampling event.  
 Purge began at 0946 Purged well for a total of 9 Minutes.  
 Purge ended and samples collected at 0955 water was mostly clear  
 Left site at 0957

**TWN-01 05-06-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-02

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TWN-02\_05072014

Date and Time for Purging 5/7/2014

and Sampling (if different) N/A

Well Purging Equip Used:  pump or  bailer

Well Pump (if other than Bennet) Continuous

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Nitrate

Prev. Well Sampled in Sampling Event TWN-03

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 999  $\mu$ MHOS/ cm

Well Depth(0.01ft): 96.00

Depth to Water Before Purging 29.40

Casing Volume (V) 4" Well: 43.48 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>0839</u>	Gal. Purged	<u>0</u>
Conductance	<u>3182</u>	pH	<u>6.89</u>
Temp. °C	<u>12.82</u>		
Redox Potential Eh (mV)	<u>351</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

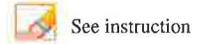
Arrived on site at 0837. Tanner and Garrin present to collect samples  
 Samples collected at 0840. water was clear. Left site at 0842

Continuous Pumping Well

**TWN-02 05-07-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-03 Sampler Name and initials: Tanner Holliday TH

Field Sample ID TWN-03\_05072014

Date and Time for Purging 5/6/2014 and Sampling (if different) 5/7/2014

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet) Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Nitrate Prev. Well Sampled in Sampling Event TWN-18

pH Buffer 7.0 7.0 pH Buffer 4.0 4.0

Specific Conductance 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 96.00

Depth to Water Before Purging 37.50 Casing Volume (V) 4" Well: 38.20 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. cloudy and windy Ext'l Amb. Temp. °C (prior sampling event) 20°

Time	<u>1217</u>	Gal. Purged	<u>49.50</u>
Conductance	<u>2447</u>	pH	<u>6.75</u>
Temp. °C	<u>14.80</u>		
Redox Potential Eh (mV)	<u>312</u>		
Turbidity (NTU)	<u>33</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0831</u>	Gal. Purged	<u>0</u>
Conductance	<u>2402</u>	pH	<u>7.04</u>
Temp. °C	<u>12.73</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0832</u>	Gal. Purged	<u>0</u>
Conductance	<u>2425</u>	pH	<u>7.03</u>
Temp. °C	<u>12.80</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

*Before*

*After*

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth  Sample Time

 See instruction

Comment

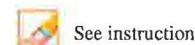
Arrived on site at 1209. Tanner and Garrin present for purge. Purge began at 1213  
 Purged well for a total of 4 minutes and 30 seconds. water was a little murky.  
 Purged well dry! Left site at 1220

Arrived on site at 0827 Tanner and Garrin present to bail and collect samples  
 Depth to water was 37.19 samples bailed at 0831 Left site at 0833

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**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-04

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TWN-04\_05062014

Date and Time for Purging 5/6/2014

and Sampling (if different) N/A

Well Purging Equip Used:  pump or  bailer

Well Pump (if other than Bennet) Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Nitrate

Prev. Well Sampled in Sampling Event MW- TWN-07

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

TWN-07

Specific Conductance 999  $\mu$ MHOS/ cm

Well Depth(0.01ft): 125.70

Depth to Water Before Purging 50.65

Casing Volume (V) 4" Well: 49.00 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. cloudy and windy

Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<u>0832</u>	Gal. Purged	<u>99</u>
Conductance	<u>1075</u>	pH	<u>7.20</u>
Temp. °C	<u>14.73</u>		
Redox Potential Eh (mV)	<u>292</u>		
Turbidity (NTU)	<u>93</u>		

Time	<u>0833</u>	Gal. Purged	<u>110</u>
Conductance	<u>1074</u>	pH	<u>7.15</u>
Temp. °C	<u>14.71</u>		
Redox Potential Eh (mV)	<u>288</u>		
Turbidity (NTU)	<u>94</u>		

Time	<u>0834</u>	Gal. Purged	<u>121</u>
Conductance	<u>1073</u>	pH	<u>7.17</u>
Temp. °C	<u>14.72</u>		
Redox Potential Eh (mV)	<u>287</u>		
Turbidity (NTU)	<u>94</u>		

Time	<u>0835</u>	Gal. Purged	<u>132</u>
Conductance	<u>1072</u>	pH	<u>7.17</u>
Temp. °C	<u>14.72</u>		
Redox Potential Eh (mV)	<u>284</u>		
Turbidity (NTU)	<u>94</u>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

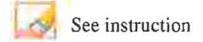
Comment

Arrived on site at 0818 Tanner and Garrin present for purge and sampling event.  
 Purge began at 0823 Purged well for a total of 12 Minutes.  
 Purge ended and samples collected at 0835 water was a little milky white looking  
 Left site at 0839

**TWN-04 05-06-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: Quarterly Nitrate 2014 2nd Quarter

Location (well name): TWN-07 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TWN-07-05072014

Date and Time for Purging: 5/6/2014 and Sampling (if different): 5/7/2014

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: TWN-07R

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 105.00

Depth to Water Before Purging: 86.30 Casing Volume (V) 4" Well: 12.21 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. cloudy and windy Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<u>0758</u>	Gal. Purged	<u>16.50</u>
Conductance	<u>1266</u>	pH	<u>7.15</u>
Temp. °C	<u>15.01</u>		
Redox Potential Eh (mV)	<u>278</u>		
Turbidity (NTU)	<u>21.0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0821</u>	Gal. Purged	<u>0</u>
Conductance	<u>1234</u>	pH	<u>6.98</u>
Temp. °C	<u>12.35</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0822</u>	Gal. Purged	<u>0</u>
Conductance	<u>1239</u>	pH	<u>7.01</u>
Temp. °C	<u>12.40</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

*Before*

*After*

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

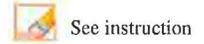
Comment

Arrived on site at 0753. Tanner and Garrin present for purge. Purge began at 0757 Purged well for a total of 1 minute and 30 seconds. Purged well dry. water was mostly clear. Purge ended at 0758. Left site at 0801.  
 Arrived on site at 0817 Tanner and Garrin present to bail and collect samples samples collected at 0821 Left site at 0823  
 Depth to water was 95.14

**TWN-07 05-06-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-07R Sampler Name and initials: Tanner Holliday/AH

Field Sample ID: TWN-07R\_05062014

Date and Time for Purging: 5/6/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: N/A

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/cm Well Depth(0.01ft): 0

Depth to Water Before Purging: 0 Casing Volume (V) 4" Well: 0 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Partly cloudy Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>0736</u>	Gal. Purged	<u>132</u>
Conductance	<u>2.5</u>	pH	<u>8.33</u>
Temp. °C	<u>18.51</u>		
Redox Potential Eh (mV)	<u>221</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

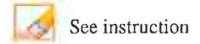
Comment

Arrived on site at 0724. Tanner and Garrin present for Rinsate  
 Rinsate began at 0725. Pumped 50 Gallons of soap water and 100  
 Gallons of DI water. Rinsate ended and samples collected at 0737.  
 Left site at 0739. **DI Rinsate**

**TWN-07R 05-06-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-18 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TWN-18\_05062014

Date and Time for Purging: 5/6/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): T Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: TWN-01

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 145.00

Depth to Water Before Purging: 58.85 Casing Volume (V) 4" Well: 56.25 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Cloudy and Windy Ext'l Amb. Temp. °C (prior sampling event) 16°

Time	<u>1025</u>	Gal. Purged	<u>99</u>
Conductance	<u>2245</u>	pH	<u>6.90</u>
Temp. °C	<u>14.61</u>		
Redox Potential Eh (mV)	<u>304</u>		
Turbidity (NTU)	<u>320</u>		

Time	<u>1026</u>	Gal. Purged	<u>110</u>
Conductance	<u>2249</u>	pH	<u>6.96</u>
Temp. °C	<u>14.60</u>		
Redox Potential Eh (mV)	<u>296</u>		
Turbidity (NTU)	<u>322</u>		

Time	<u>1027</u>	Gal. Purged	<u>121</u>
Conductance	<u>2252</u>	pH	<u>6.98</u>
Temp. °C	<u>14.60</u>		
Redox Potential Eh (mV)	<u>294</u>		
Turbidity (NTU)	<u>321</u>		

Time	<u>1028</u>	Gal. Purged	<u>132</u>
Conductance	<u>2252</u>	pH	<u>7.00</u>
Temp. °C	<u>14.60</u>		
Redox Potential Eh (mV)	<u>290</u>		
Turbidity (NTU)	<u>322</u>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
S/60 =

Time to evacuate two casing volumes (2V)  
T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify  
Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

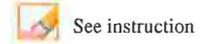
Comment

Arrived on site at 1013 Tanner and Garrin present for purge and sampling event.  
Purge began at 1016 Purged well for a total of 12 Minutes  
Purge ended and samples collected at 1028  
water was Murky  
Left site at 1030

**TWN-18 05-06-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event:

Location (well name):  Sampler Name and initials:

Field Sample ID

Date and Time for Purging  and Sampling (if different)

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet)

Purging Method Used:  2 casings  3 casings

Sampling Event  Prev. Well Sampled in Sampling Event

pH Buffer 7.0  pH Buffer 4.0

Specific Conductance   $\mu$ MHOS/ cm Well Depth(0.01ft):

Depth to Water Before Purging  Casing Volume (V) 4" Well:  (.653h)  
 3" Well:  (.367h)

Weather Cond.  Ext'l Amb. Temp. °C (prior sampling event)

Time	<input type="text" value="0729"/>	Gal. Purged	<input type="text" value="0"/>
Conductance	<input type="text" value="2.4"/>	pH	<input type="text" value="8.31"/>
Temp. °C	<input type="text" value="18.74"/>		
Redox Potential Eh (mV)	<input type="text" value="18"/>	<input type="text" value="182"/>	
Turbidity (NTU)	<input type="text" value="5.7"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

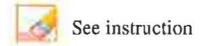
 See instruction

Comment

**TWN-60 05-08-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Nitrate 2014

Location (well name): TWN-65 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TWN-65\_05062014

Date and Time for Purging 5/6/2014 and Sampling (if different) N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet) Grundfos

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Nitrate Prev. Well Sampled in Sampling Event TWN-07

pH Buffer 7.0 7.0 pH Buffer 4.0 4.0

Specific Conductance 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 125.70

Depth to Water Before Purging 50.65 Casing Volume (V) 4" Well: 49.00 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Cloudy and Windy Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify  
 Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

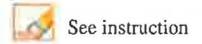
Comment

Duplicate of TWN-04

TWN-65 05-06-2014 Do not touch this cell (SheetName)



ATTACHMENT 1-2  
WHITE MESA URANIUM MILL  
FIELD DATA WORKSHEET FOR GROUNDWATER



Description of Sampling Event: 2nd Quarter Chloroform 2014

Location (well name): TW4-22 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TW4-22\_05192014

Date and Time for Purging: 5/19/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): Continuous

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Chloroform Prev. Well Sampled in Sampling Event: TW4-24

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 994  $\mu$ MHOS/cm Well Depth(0.01ft): 113.50

Depth to Water Before Purging: 59.60 Casing Volume (V) 4" Well: 35.19 (.653h)  
3" Well: 0 (.367h)

Weather Cond. Sunny and Windy Ext'l Amb. Temp. °C (prior sampling event) 24°

Time	<u>1244</u>	Gal. Purged	<u>0</u>
Conductance	<u>6712</u>	pH	<u>6.70</u>
Temp. °C	<u>16.26</u>		
Redox Potential Eh (mV)	<u>212</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

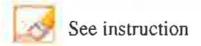
Comment

Arrived on site at 1240. Tanner and Garrin present to collect samples.  
 samples collected at 1245. water was clear  
 Left site at 1248  
  
 Continuous Pumping Well

**TW4-22 05-19-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Chloroform 2014

Location (well name): TW4-24

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TW4-24\_05192014

Date and Time for Purging: 5/19/2014

and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer

Well Pump (if other than Bennet): Continuous

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Chloroform

Prev. Well Sampled in Sampling Event: TW4-25

pH Buffer 7.0: 7.0

pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/cm

Well Depth(0.01ft): 112.50

Depth to Water Before Purging: 67.70

Casing Volume (V) 4" Well: 29.25 (.653h)  
 3" Well: 0 (.367h)

Weather Cond.: Sunny and Windy

Ext'l Amb. Temp. °C (prior sampling event): 24°

Time	<u>1229</u>	Gal. Purged	<u>0</u>
Conductance	<u>8717</u>	pH	<u>6.59</u>
Temp. °C	<u>16.77</u>		
Redox Potential Eh (mV)	<u>226</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	<u>0</u>
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

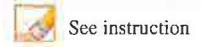
Comment

Arrived on site at 1226. Tanner and Garrin present to collect samples  
 samples collected at 1230 water was clear  
 Left site at 1236  
 Continuous Pumping well

**TW4-24 05-19-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Chloroform 2014

Location (well name): TW4-25

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TW4-25\_05192014

Date and Time for Purging 5/19/2014

and Sampling (if different) N/A

Well Purging Equip Used:  pump or  bailer

Well Pump (if other than Bennet) Continuous

Purging Method Used:  2 casings  3 casings

Sampling Event Quarterly Chloroform

Prev. Well Sampled in Sampling Event TW4-19

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 999  $\mu$ MHOS/ cm

Well Depth(0.01ft): 134.80

Depth to Water Before Purging 118.00

Casing Volume (V) 4" Well: 10.97 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 24°

Time	<u>1214</u>	Gal. Purged	<u>0</u>
Conductance	<u>2613</u>	pH	<u>6.83</u>
Temp. °C	<u>15.02</u>		
Redox Potential Eh (mV)	<u>204</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

**Pumping Rate Calculation**

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

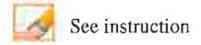
**Comment**

Arrived on site at 1211. Tanner and Garrin present to collect samples.  
 Samples collected at 1215. Left site at 1218  
 water was clear

**TW4-25 05-19-2014** Do not touch this cell (SheetName)



**ATTACHMENT 1-2  
 WHITE MESA URANIUM MILL  
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 2nd Quarter Chloroform 2014

Location (well name): TW4-60 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TW4-60\_05272014

Date and Time for Purging: 5/27/2014 and Sampling (if different): N/A

Well Purging Equip Used:  pump or  bailer Well Pump (if other than Bennet): N/A

Purging Method Used:  2 casings  3 casings

Sampling Event: Quarterly Chloroform Prev. Well Sampled in Sampling Event: TW4-02

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 999  $\mu$ MHOS/ cm Well Depth(0.01ft): 0

Depth to Water Before Purging: 0 Casing Volume (V) 4" Well: 0 (.653h)  
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 22°

Time	<u>1014</u>	Gal. Purged	<u>0</u>
Conductance	<u>5.8</u>	pH	<u>7.58</u>
Temp. °C	<u>21.56</u>		
Redox Potential Eh (mV)	<u>223</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged  gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.  
 S/60 =

Time to evacuate two casing volumes (2V)  
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

**TW4-60 05-27-2014** Do not touch this cell (SheetName)

**Tab C**

**Kriged Current Quarter Groundwater Contour Map, Capture Zone Map, Capture Zone Details Map, and  
Weekly, Monthly and Quarterly Depth to Water Data**

NAME: Clay Most, Garrin Palmer, Tanner Holliday, Mike Palmer

DATE: 6/25/14

TIME	WELL	level	TIME	WELL	Level	TIME	WELL	Level	TIME	WELL	Level
1235	MW-1	64.02	900	MW-4	69.40	1339	PIEZ-1	63.54	NA	DR-1	Abandon
1006	MW-2	109.62	749	TW4-1	66.38	1250	PIEZ-2	34.92	NA	DR-2	Abandon
1303	MW-3	82.70	745	TW4-2	66.73	1310	PIEZ-3	46.06	959	DR-5	83.05
1304	MW-3A	84.70	739	TW4-3	53.71	1244	PIEZ-4	53.21	1003	DR-6	94.31
1313	MW-5	106.50	902	TW4-4	69.88	1247	PIEZ-5	51.73	1018	DR-7	92.08
1239	MW-11	86.40	735	TW4-5	62.59	1333	TWN-1	59.00	948	DR-8	51.16
1311	MW-12	108.25	754	TW4-6	69.93	842	TWN-2	30.89	940	DR-9	86.54
1031	MW-14	103.26	747	TW4-7	66.87	1318	TWN-3	38.16	1008	DR-10	78.06
1027	MW-15	106.11	752	TW4-8	65.84	1313	TWN-4	51.38	1258	DR-11	98.05
1250	MW-17	72.35	737	TW4-9	60.35		TWN-5	Abandon	1256	DR-12	90.12
1258	MW-18	71.07	732	TW4-10	60.13	1253	TWN-6	76.91	1254	DR-13	69.65
1250	MW-19	59.05	744	TW4-11	59.44	1231	TWN-7	86.31	827	DR-14	76.30
847	MW-20	89.45	805	TW4-12	43.20		TWN-8	Abandon	829	DR-15	92.85
818	MW-22	66.79	814	TW4-13	48.15		TWN-9	Abandon	NA	DR-16	Abandon
1010	MW-23	116.20	817	TW4-14	83.56		TWN-10	Abandon	912	DR-17	64.86
1003	MW-24	113.60	847	TW4-15	73.22		TWN-11	Abandon	NA	DR-18	Abandon
1242	MW-25	74.15	1231	TW4-16	64.49		TWN-12	Abandon	919	DR-19	63.05
847	MW-26	73.22	1234	TW4-17	75.08		TWN-13	Abandon	908	DR-20	55.21
1328	MW-27	53.10	1326	TW4-18	63.55	1245	TWN-14	61.79	859	DR-21	100.96
1000	MW-28	75.47	830	TW4-19	69.90		TWN-15	Abandon	925	DR-22	DRY
1321	MW-29	101.21	846	TW4-20	70.55	1241	TWN-16	47.54	902	DR-23	70.58
1324	MW-30	75.10	1324	TW4-21	65.27		TWN-17	Abandon	929	DR-24	44.13
1237	MW-31	67.80	845	TW4-22	59.98	1315	TWN-18	59.22	NA	DR-25	Abandon
1234	MW-32	75.80	757	TW4-23	65.95	740	TWN-19	53.03			
1016	MW-33	DRY	844	TW4-24	64.40						
1023	MW-34	107.70	840	TW4-25	62.47						
1013	MW-35	112.22	800	TW4-26	63.83						
1015	MW-36	110.35	835	TW4-27	80.51						
1025	MW-37	111.52	811	TW4-28	37.79						
			823	TW4-29	72.19						
			829	TW4-30	76.90						
			833	TW4-31	82.26						
			808	TW4-32	49.41						
			838	TW4-33	70.67						
			820	TW4-34	70.02						
			826	TW4-35	74.36						
			815	TW4-36	58.35						

Notes

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## Weekly Inspection Form

Date 4/8/14

Name Garrin Palmer, Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Comments</u>	<u>System Operational (if no note any problems/corrective actions)</u>
1442	MW-4	69.38	Flow 4.4 GPM	(Yes) No
			Meter 348926.98	(Yes) No
1438	MW-26	85.79	Flow 10.3 GPM	(Yes) No
			Meter 411195.57	(Yes) No
1400	TW4-19	69.04	Flow 17.9 GPM	(Yes) No
			Meter 2302425.00	(Yes) No
1434	TW4-20	69.69	Flow 9.5 GPM	(Yes) No
			Meter 632075.84	(Yes) No
1444	TW4-4	70.18	Flow 8.0 GPM	(Yes) No
			Meter 312286.40	(Yes) No
1419	TWN-2	28.60	Flow 18.0 GPM	(Yes) No
			Meter 233242.00	(Yes) No
1429	TW4-22	61.45	Flow 18.1 GPM	(Yes) No
			Meter 119300.01	(Yes) No
1424	TW4-24	68.00	Flow 17.6 GPM	(Yes) No
			Meter 1108609.40	(Yes) No
1415	TW4-25	60.26	Flow 17.4 GPM	(Yes) No
			Meter 660416.90	(Yes) No

Operational Problems (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 4/15/14

Name Garrin Palmer

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1246	MW-4	72.86	Flow 4.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 354320.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1306	MW-26	69.64	Flow 10.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 413453.59	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1400	TW4-19	69.82	Flow 18.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 2323253.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1309	TW4-20	67.55	Flow 10.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 633579.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1250	TW4-4	70.42	Flow 8.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 316789.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1322	TWN-2	30.44	Flow 18.2 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 236620.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1314	TW4-22	59.55	Flow 18.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 121052.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1318	TW4-24	80.40	Flow 17.6 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1125102.80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1415	TW4-25	60.20	Flow 18.1 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 670010.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 4/21/14

Name Garrin Palmer, Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
1427	MW-4	69.51	Flow 4.3 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 359157.09	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1423	MW-26	68.18	Flow 10.1 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 415556.85	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1350	TW4-19	77.89	Flow 18.0 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 2342768.08	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1419	TW4-20	72.60	Flow 9.5 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 635107.13	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1430	TW4-4	74.12	Flow 7.9 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 320718.40	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1408	TWN-2	29.00	Flow 18.5 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 240067.70	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1416	TW4-22	68.12	Flow 18.0 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 122884.60	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1412	TW4-24	69.89	Flow 18.0 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 1139478.80	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1405	TW4-25	60.45	Flow 17.6 GPM	<input checked="" type="radio"/> Yes	<input type="radio"/> No
			Meter 678465.60	<input checked="" type="radio"/> Yes	<input type="radio"/> No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 4/28/14

Name Garcia Palmer, Tamer Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1442	MW-4	69.05	Flow 4.4 GPM Meter 364680.14	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1439	MW-26	85.40	Flow 10.7 GPM Meter 417647.91	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1346	TW4-19	<del>75.12</del> 71.89	Flow 18.1 GPM Meter 2365641.06	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1436	TW4-20	69.90	Flow 10.0 GPM Meter 636323.05	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1446	TW4-4	75.42	Flow 8.0 GPM Meter 325318.90	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1424	TWN-2	28.95	Flow 18.7 GPM Meter 243744.50	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1432	TW4-22	61.58	Flow 18.1 GPM Meter 124771.30	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1428	TW4-24	67.80	Flow 18.0 GPM Meter 1156036.50	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No
1420	TW4-25	60.13	Flow 17.8 GPM Meter 688101.70	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No

Operational Problems (Please list well number): Flow meter on TW4-20 has water in it making it hard to read.

Corrective Action(s) Taken (Please list well number): Replaced meter at 0730 on 4/29/14.

\* Depth is measured to the nearest 0.01 feet.

# Monthly Depth Check Form

Date 4/29/14

Name Garcia Palmer, Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Time</u>	<u>Well</u>	<u>Depth*</u>
<u>1228</u>	MW-4	<u>69.89</u>	<u>1201</u>	TWN-1	<u>58.76</u>
<u>1227</u>	TW4-1	<u>65.89</u>	<u>1153</u>	TWN-2	<u>28.96</u>
<u>1230</u>	TW4-2	<u>66.50</u>	<u>1208</u>	TWN-3	<u>37.91</u>
<u>1223</u>	TW4-3	<u>53.52</u>	<u>1158</u>	TWN-4	<u>51.00</u>
<u>1232</u>	TW4-4	<u>70.01</u>	<u>1213</u>	TWN-7	<u>86.32</u>
<u>1220</u>	TW4-5	<u>62.19</u>	<u>1155</u>	TWN-18	<u>59.29</u>
<u>1233</u>	TW4-6	<u>69.65</u>	<u>1211</u>	MW-27	<u>53.25</u>
<u>1228</u>	TW4-7	<u>66.60</u>	<u>1311</u>	MW-30	<u>75.36</u>
<u>1226</u>	TW4-8	<u>65.70</u>	<u>1309</u>	MW-31	<u>67.98</u> <del>82.87</del>
<u>1222</u>	TW4-9	<u>59.94</u>	<u>1256</u>	TW4-28	<u>37.69</u>
<u>1217</u>	TW4-10	<u>59.74</u>	<u>1249</u>	TW4-29	<u>72.26</u>
<u>1318</u>	TW4-11	<u>59.26</u>	<u>1242</u>	TW4-30	<u>77.10</u>
<u>1258</u>	TW4-12	<u>43.09</u>	<u>1245</u>	TW4-31	<u>82.67</u>
<u>1253</u>	TW4-13	<u>48.25</u>	<u>1258</u>	TW4-32	<u>49.26</u>
<u>1251</u>	TW4-14	<u>83.94</u>	<u>1301</u>	TW4-33	<u>70.71</u>
<u>1315</u>	TW4-15	<u>68.73</u>	<u>1250</u>	TW4-34	<u>70.08</u>
<u>1316</u>	TW4-16	<u>63.95</u>			
<u>1306</u>	TW4-17 (mw-32)	<u>75.00</u>			
<u>1203</u>	TW4-18	<u>63.10</u>			
<u>1101</u>	TW4-19	<u>73.44</u>			
<u>1134</u>	TW4-20	<u>70.18</u>			
<u>1205</u>	TW4-21	<u>64.77</u>			
<u>1132</u>	TW4-22	<u>60.10</u>			
<u>1234</u>	TW4-23	<u>65.70</u>			
<u>1130</u>	TW4-24	<u>68.02</u>			
<u>1150</u>	TW4-25	<u>60.02</u>			
<u>1237</u>	TW4-26	<u>63.75</u>			
<u>1247</u>	TW4-27	<u>80.68</u>			

**Comments: (Please note the well number for any comments)**

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\* Depth is measured to the nearest 0.01 feet

## Weekly Inspection Form

Date 5/5/14

Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1250	MW-4	75.60	Flow 4.4 GPM	<input checked="" type="radio"/> Yes No
			Meter 370051.18	<input checked="" type="radio"/> Yes No
1247	MW-26	70.88	Flow 10.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 419613.38	<input checked="" type="radio"/> Yes No
1310	TW4-19	70.12	Flow 18.1 GPM	<input checked="" type="radio"/> Yes No
			Meter 2387935.00	<input checked="" type="radio"/> Yes No
1244	TW4-20	68.00	Flow 9.1 GPM	<input checked="" type="radio"/> Yes No
			Meter 121348	<input checked="" type="radio"/> Yes No
1253	TW4-4	70.14	Flow 8.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 329827.01	<input checked="" type="radio"/> Yes No
1234	TWN-2	30.20	Flow 18.6 GPM	<input checked="" type="radio"/> Yes No
			Meter 247306.40	<input checked="" type="radio"/> Yes No
1241	TW4-22	59.65	Flow 18.2 GPM	<input checked="" type="radio"/> Yes No
			Meter 126210.40	<input checked="" type="radio"/> Yes No
1238	TW4-24	67.67	Flow 18.2 GPM	<input checked="" type="radio"/> Yes No
			Meter 1172671.60	<input checked="" type="radio"/> Yes No
1230	TW4-25	73.45	Flow 17.8 GPM	<input checked="" type="radio"/> Yes No
			Meter 697978.60	<input checked="" type="radio"/> Yes No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 5/12/14

Name Gerrin Palmer / Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Comments</u>	<u>System Operational (If no note any problems/corrective actions)</u>
1321	MW-4	71.30	Flow 4.4 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 375627.90	<input checked="" type="radio"/> Yes <input type="radio"/> No
1317	MW-26	69.80	Flow 9.8 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 420489.77	<input checked="" type="radio"/> Yes <input type="radio"/> No
1344	TW4-19	68.12	Flow 18.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 2410818.00	<input checked="" type="radio"/> Yes <input type="radio"/> No
1314	TW4-20	68.20	Flow 8.4 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 2538.14	<input checked="" type="radio"/> Yes <input type="radio"/> No
1323	TW4-4	69.84	Flow 8.1 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 334521.90	<input checked="" type="radio"/> Yes <input type="radio"/> No
1304	TWN-2	29.86	Flow 18.4 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 251019.80	<input checked="" type="radio"/> Yes <input type="radio"/> No
1311	TW4-22	59.89	Flow 18.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 128498.10	<input checked="" type="radio"/> Yes <input type="radio"/> No
1308	TW4-24	67.50	Flow 17.1 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 11888.58	<input checked="" type="radio"/> Yes <input type="radio"/> No
1300	TW4-25	62.94	Flow 17.9 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 707351.70	<input checked="" type="radio"/> Yes <input type="radio"/> No

Operational Problems (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 5/19/14

Name Garrin Palmer / Tanner Hallyday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1355	MW-4	69.86	Flow 4.4 GPM Meter 381204.11	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1348	MW-26	69.10	Flow 10.4 GPM Meter 422464.55	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1034	TW4-19	73.68	Flow ↑ 2433791.00 ) Meter 17.9 GPM ↓	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1251	TW4-20	68.30	Flow 9.1 GPM Meter 3861.37	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1404	TW4-4	69.82	Flow 8.0 GPM Meter 339115.00	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1223	TWN-2	32.70	Flow 18.7 GPM Meter 254788.6	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1239	TW4-22	59.60	Flow 18.0 GPM Meter 130384.80	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1229	TW4-24	67.70	Flow 17.7 GPM Meter 1205383.30	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1214	TW4-25	118.00	Flow 18.0 GPM Meter 717096.60	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 5/27/14

Name Garrin Palmer, Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Comments</u>	<u>System Operational (If no note any problems/corrective actions)</u>
1415	MW-4	69.98	Flow 4.4 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 387656.82	<input checked="" type="radio"/> Yes <input type="radio"/> No
1412	MW-26	69.10	Flow 10.2 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 424588.62	<input checked="" type="radio"/> Yes <input type="radio"/> No
1440	TW4-19	67.98	Flow 18.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 2460507.70	<input checked="" type="radio"/> Yes <input type="radio"/> No
1409	TW4-20	77.34	Flow 9.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 54855.63	<input checked="" type="radio"/> Yes <input type="radio"/> No
1418	TW4-4	70.48	Flow 8.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 344491.30	<input checked="" type="radio"/> Yes <input type="radio"/> No
1358	TWN-2	30.42	Flow 18.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 258966.80	<input checked="" type="radio"/> Yes <input type="radio"/> No
1406	TW4-22	81.10	Flow 18.0 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 132909.40	<input checked="" type="radio"/> Yes <input type="radio"/> No
1402	TW4-24	69.20	Flow 17.2 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 1224377.40	<input checked="" type="radio"/> Yes <input type="radio"/> No
1354	TW4-25	60.83	Flow 18.5 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
			Meter 728042.70	<input checked="" type="radio"/> Yes <input type="radio"/> No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Monthly Depth Check Form

**Date** 5/30/14

**Name** Garcia Palmer / Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Time</u>	<u>Well</u>	<u>Depth*</u>
<u>1018</u>	<u>MW-4</u>	<u>71.85</u>	<u>0943</u>	<u>TWN-1</u>	<u>58.80</u>
<u>1015</u>	<u>TW4-1</u>	<u>66.20</u>	<u>0939</u>	<u>TWN-2</u>	<u>31.94</u>
<u>1018</u>	<u>TW4-2</u>	<u>66.55</u>	<u>0932</u>	<u>TWN-3</u>	<u>37.70</u>
<u>1020</u>	<u>TW4-3</u>	<u>53.55</u>	<u>0934</u>	<u>TWN-4</u>	<u>51.07</u>
<u>1014</u>	<u>TW4-4</u>	<u>69.14</u>	<u>1038</u>	<u>TWN-7</u>	<u>86.29</u>
<u>1024</u>	<u>TW4-5</u>	<u>62.45</u>	<u>0937</u>	<u>TWN-18</u>	<u>59.12</u>
<u>1013</u>	<u>TW4-6</u>	<u>69.64</u>	<u>0951</u>	<u>MW-27</u>	<u>53.19</u>
<u>1017</u>	<u>TW4-7</u>	<u>66.67</u>	<u>1011</u>	<u>MW-30</u>	<u>75.18</u>
<u>1020</u>	<u>TW4-8</u>	<u>65.88</u>	<u>1007</u>	<u>MW-31</u>	<u>67.81</u>
<u>1022</u>	<u>TW4-9</u>	<u>60.06</u>	<u>0937</u>	<u>TW4-28</u>	<u>37.74</u>
<u>1026</u>	<u>TW4-10</u>	<u>59.92</u>	<u>0950</u>	<u>TW4-29</u>	<u>72.20</u>
<u>1016</u>	<u>TW4-11</u>	<u>59.40</u>	<u>0957</u>	<u>TW4-30</u>	<u>77.02</u>
<u>0936</u>	<u>TW4-12</u>	<u>43.15</u>	<u>0959</u>	<u>TW4-31</u>	<u>82.42</u>
<u>0942</u>	<u>TW4-13</u>	<u>48.15</u>	<u>0939</u>	<u>TW4-32</u>	<u>49.33</u>
<u>0945</u>	<u>TW4-14</u>	<u>83.75</u>	<u>1004</u>	<u>TW4-33</u>	<u>70.67</u>
<u>1000</u>	<u>TW4-15</u>	<u>70.06</u>	<u>0951</u>	<u>TW4-34</u>	<u>70.00</u>
<u>1002</u>	<u>TW4-16</u>	<u>64.15</u>	<u>0954</u>	<u>TW4-35</u>	<u>74.67</u>
<u>1004</u>	<u>TW4-17</u>	<u>75.04</u>	<u>0943</u>	<u>TW4-36</u>	<u>59.53</u>
<u>0946</u>	<u>TW4-18</u>	<u>63.26</u>			
<u>1033</u>	<u>TW4-19</u>	<u>68.42</u>			
<u>0958</u>	<u>TW4-20</u>	<u>69.60</u>			
<u>0948</u>	<u>TW4-21</u>	<u>64.86</u>			
<u>0956</u>	<u>TW4-22</u>	<u>59.87</u>			
<u>1011</u>	<u>TW4-23</u>	<u>65.85</u>			
<u>0955</u>	<u>TW4-24</u>	<u>67.81</u>			
<u>0941</u>	<u>TW4-25</u>	<u>65.48</u>			
<u>1008</u>	<u>TW4-26</u>	<u>63.76</u>			
<u>0948</u>	<u>TW4-27</u>	<u>80.67</u>			

**Comments: (Please note the well number for any comments)**

Slug test was completed on TW4-35, 36 today so depth may have some variance.

\* Depth is measured to the nearest 0.01 feet

## Weekly Inspection Form

Date 6/2/14

Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1249	MW-4	76.19	Flow 4.4 GPM	(Yes) No
			Meter 392220.80	(Yes) No
1246	MW-26	71.60	Flow 10.3 GPM	(Yes) No
			Meter 426477.28	(Yes) No
1308	TW4-19	77.94	Flow 17.7 GPM	(Yes) No
			Meter 2480553.00	(Yes) No
1243	TW4-20	68.71	Flow 9.8 GPM	(Yes) No
			Meter 6583.59	(Yes) No
1251	TW4-4	69.34	Flow 6.2 GPM	(Yes) No
			Meter 348266.10	(Yes) No
1233	TWN-2	31.42	Flow 18.7 GPM	(Yes) No
			Meter 262094.70	(Yes) No
1240	TW4-22	59.97	Flow 18.3 GPM	(Yes) No
			Meter 134191.60	(Yes) No
1237	TW4-24	67.68	Flow 17.8 GPM	(Yes) No
			Meter 1238101.70	(Yes) No
1229	TW4-25	71.70	Flow 18.0 GPM	(Yes) No
			Meter 736122.50	(Yes) No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 6/9/14

Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1434	MW-4	69.73	Flow 4.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 397974.24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1433	MW-26	85.45	Flow 9.7 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 428322.59	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1310	TW4-19	70.10	Flow 17.8 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 2504875.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1430	TW4-20	70.71	Flow 8.8 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 7828.65	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1438	TW4-4	71.48	Flow 8.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 353081.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1419	TWN-2	30.78	Flow 18.7 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 265624.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1426	TW4-22	62.29	Flow 18.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 135798.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1423	TW4-24	68.29	Flow 17.8 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1254212.80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1416	TW4-25	60.50	Flow 18.5 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 745627.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

# Weekly Inspection Form

Date 6/16/14

Name Garcia Palmer, Tamar Holiday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1234	MW-4	69.34	Flow 4.4 GPM Meter 403471.17	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1231	MW-26	72.45	Flow 9.0 GPM Meter 430600.27	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1256	TW4-19	72.84	Flow 14.1 GPM Meter 2528366.00	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1229	TW4-20	68.82	Flow 9.8 GPM Meter 9142.36	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1237	TW4-4	<del>70.36</del> 70.36	Flow 8.0 GPM Meter 357626.07	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1219	TWN-2	37.64	Flow 18.5 GPM Meter 269243.80	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1226	TW4-22	60.00	Flow 18.2 GPM Meter 137678.40	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1223	TW4-24	67.95	Flow @ 18.0 GPM Meter 1272052.20	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1216	TW4-25	126.79	Flow 18.4 GPM Meter 755180.00	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No

Operational Problems (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 6/24/14

Name Garcia Palmer / Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Comments</u>	<u>System Operational (If no note any problems/corrective actions)</u>
1228	MW-4	69.65	Flow 4.4 GPM	<input checked="" type="radio"/> Yes No
			Meter 409881.44	<input checked="" type="radio"/> Yes No
1231	MW-26	73.05	Flow 10.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 432374.80	<input checked="" type="radio"/> Yes No
1322	TW4-19	78.92	Flow 17.8 GPM	<input checked="" type="radio"/> Yes No
			Meter 2555970.00	<input checked="" type="radio"/> Yes No
1234	TW4-20	69.22	Flow 10.1 GPM	<input checked="" type="radio"/> Yes No
			Meter 10760.40	<input checked="" type="radio"/> Yes No
1225	TW4-4	69.70	Flow 8.1 GPM	<input checked="" type="radio"/> Yes No
			Meter 362974.20	<input checked="" type="radio"/> Yes No
1242	TWN-2	31.43	Flow 18.7 GPM	<input checked="" type="radio"/> Yes No
			Meter 273454.00	<input checked="" type="radio"/> Yes No
1236	TW4-22	60.27	Flow 18.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 139740.30	<input checked="" type="radio"/> Yes No
1238	TW4-24	67.49	Flow 17.8 GPM	<input checked="" type="radio"/> Yes No
			Meter 12191901.00	<input checked="" type="radio"/> Yes No
1245	TW4-25	64.80	Flow 18.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 765051.40	<input checked="" type="radio"/> Yes No

Operational Problems (Please list well number): \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.

## Weekly Inspection Form

Date 6/30/14

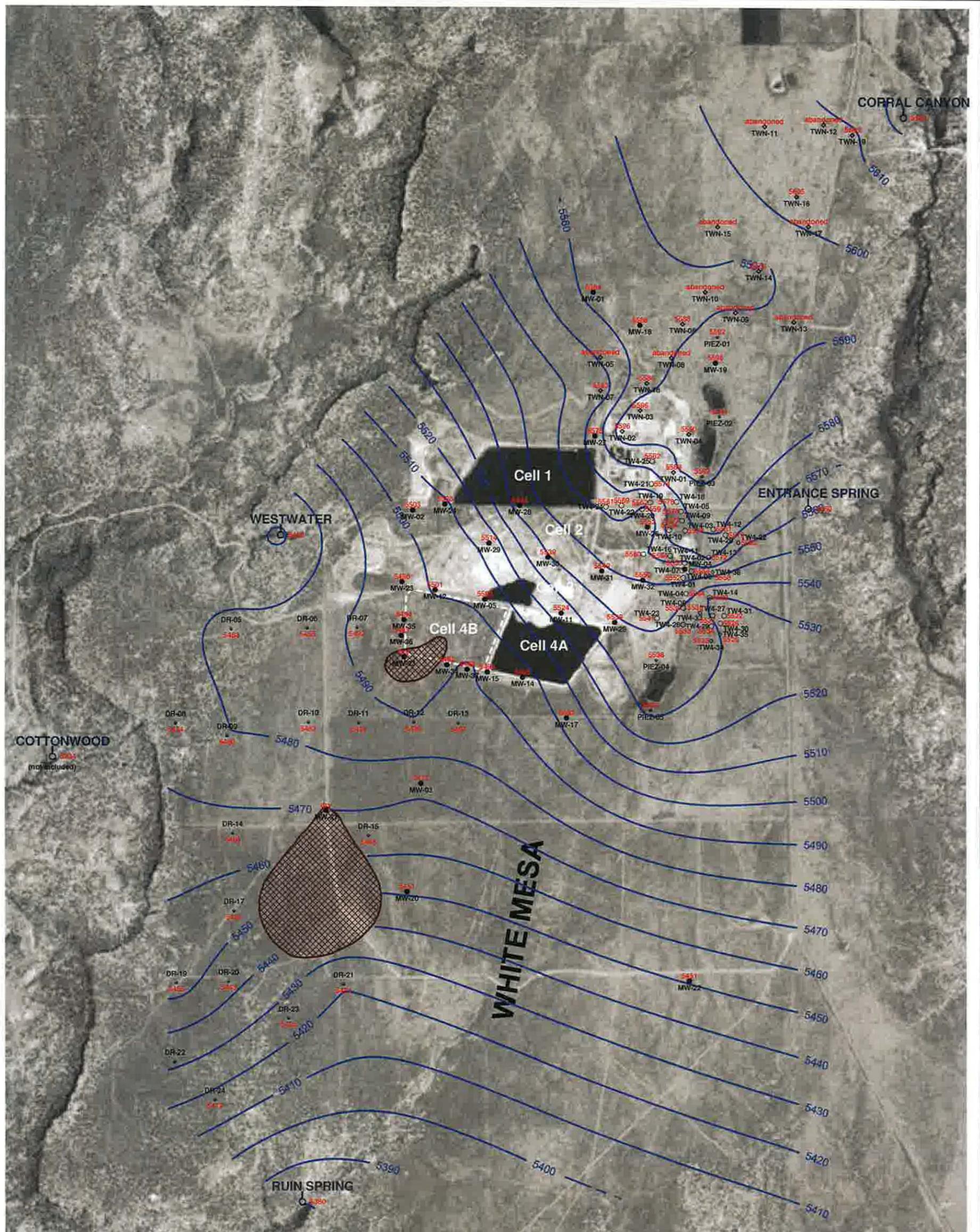
Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1425	MW-4	69.90	Flow 4.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 414701.30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1452	MW-26	77.57	Flow 10.2 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 433552.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1505	TW4-19	66.84	Flow 18.3 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 2576809.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1448	TW4-20	69.74	Flow 10.5 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 11822.37	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1428	TW4-4	69.70	Flow 8.1 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 367297.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1420	TWN-2	30.95	Flow 18.7 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 276537.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1442	TW4-22	60.85	Flow 18.1 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 141461.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1445	TW4-24	68.20	Flow 18.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1306658.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1416	TW4-25	60.64	Flow 18.6 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 773906.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Operational Problems (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action(s) Taken (Please list well number): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Depth is measured to the nearest 0.01 feet.



**EXPLANATION**

-  estimated dry area
-  TW4-35 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl 5526
-  MW-5 perched monitoring well showing elevation in feet amsl 5502
-  TW4-12 temporary perched monitoring well showing elevation in feet amsl 5581
-  TWN-7 temporary perched nitrate monitoring well showing elevation in feet amsl 5563
-  PIEZ-1 perched piezometer showing elevation in feet amsl 5592
-  TW4-32 temporary perched monitoring well installed September, 2013 showing elevation in feet amsl 5562
-  RUIN SPRING seep or spring showing elevation in feet amsl 5380

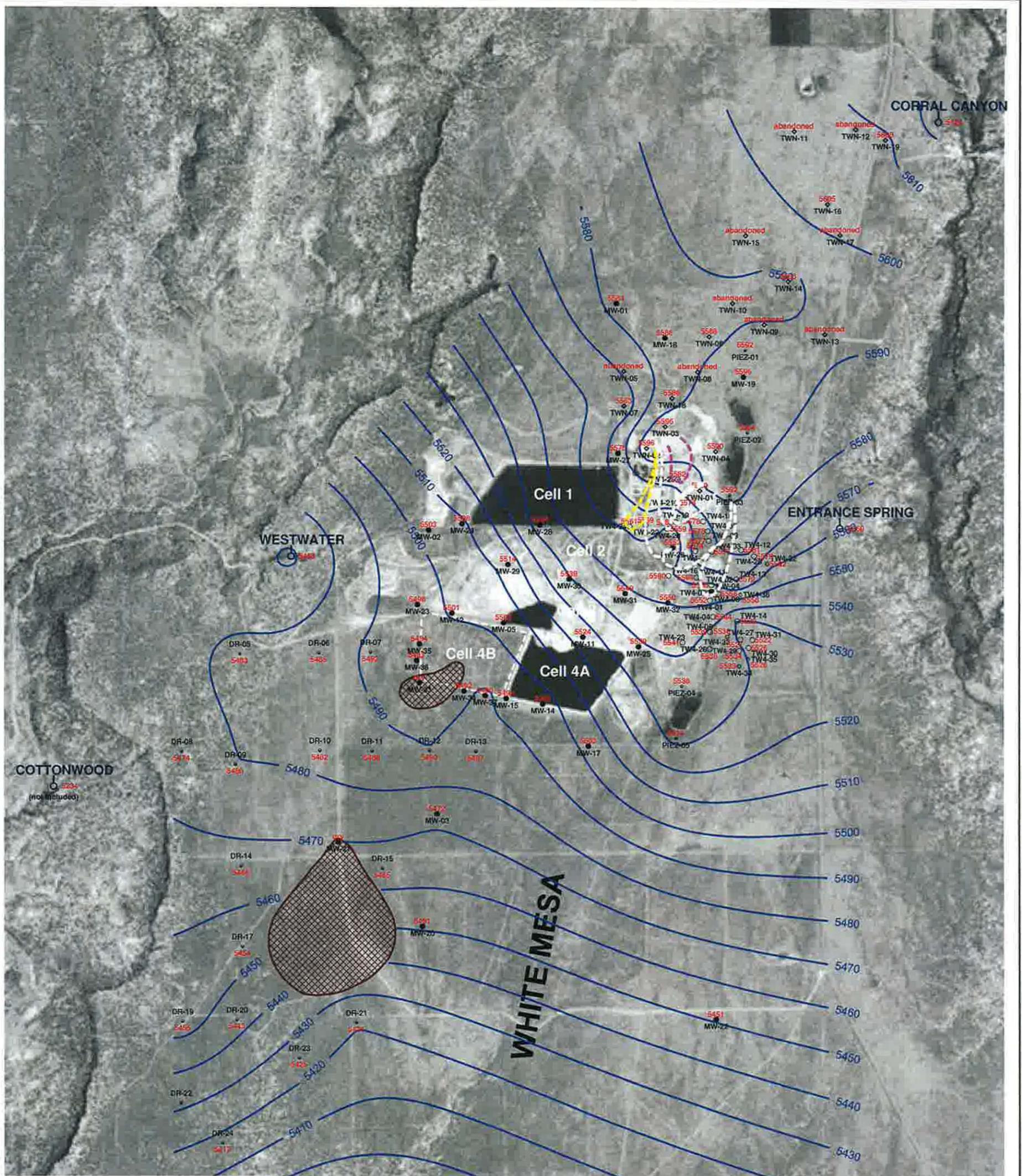
NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO  
GEO  
CHEM, INC.**

**KRIGED 2nd QUARTER, 2014 WATER LEVELS  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/aug14/Uwl0614.srf	C-1



**EXPLANATION**

-  estimated nitrate capture zone boundary stream tubes resulting from pumping
-  estimated chloroform capture zone boundary stream tubes resulting from pumping
-  estimated dry area
-  TW4-35 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl
-  MW-5 perched monitoring well showing elevation in feet amsl
-  TW4-12 temporary perched monitoring well showing elevation in feet amsl
-  TWN-7 temporary perched nitrate monitoring well showing elevation in feet amsl
-  PIEZ-1 perched piezometer showing elevation in feet amsl
-  TW4-32 temporary perched monitoring well installed September, 2013 showing elevation in feet amsl
-  RUIN SPRING seep or spring showing elevation in feet amsl

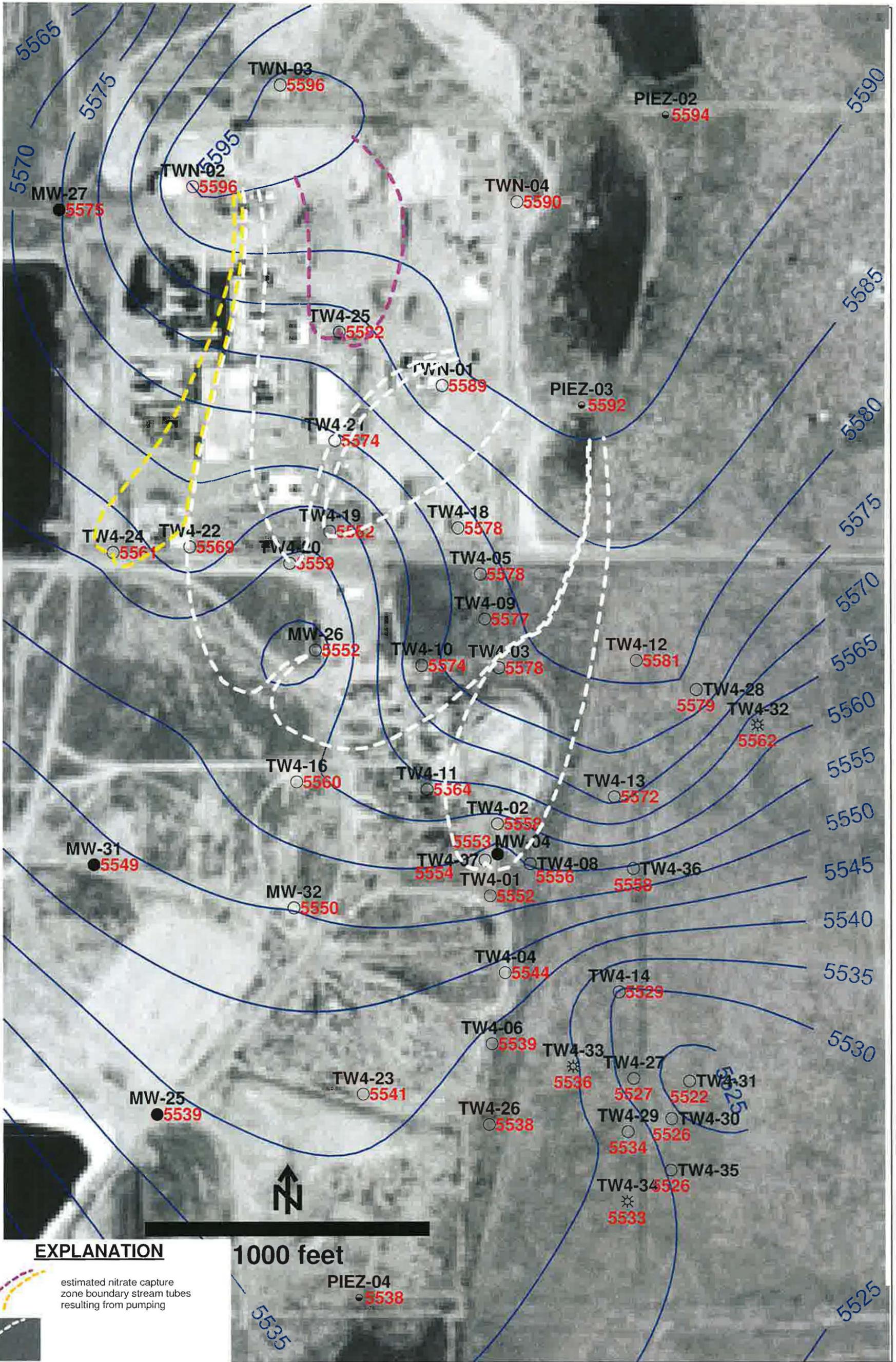
NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO  
GEO  
CHEM, INC.**

**KRIGED 2nd QUARTER, 2014 WATER LEVELS  
AND ESTIMATED CAPTURE ZONES  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	H:718000/ aug14/nitrate/Uwl0614cz2.srf	FIGURE C-2
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**EXPLANATION**

 estimated nitrate capture zone boundary stream tubes resulting from pumping



- MW-4**  
● 5553 perched monitoring well showing elevation in feet amsl
- TW4-1**  
○ 5552 temporary perched monitoring well showing elevation in feet amsl
- PIEZ-2**  
● 5594 perched piezometer showing elevation in feet amsl
- TW4-32**  
⊗ 5562 temporary perched monitoring well installed September, 2013 showing elevation in feet amsl

1000 feet

**PIEZ-04**  
● 5538

NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells;  
TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells

zone boundary stream tubes resulting from pumping



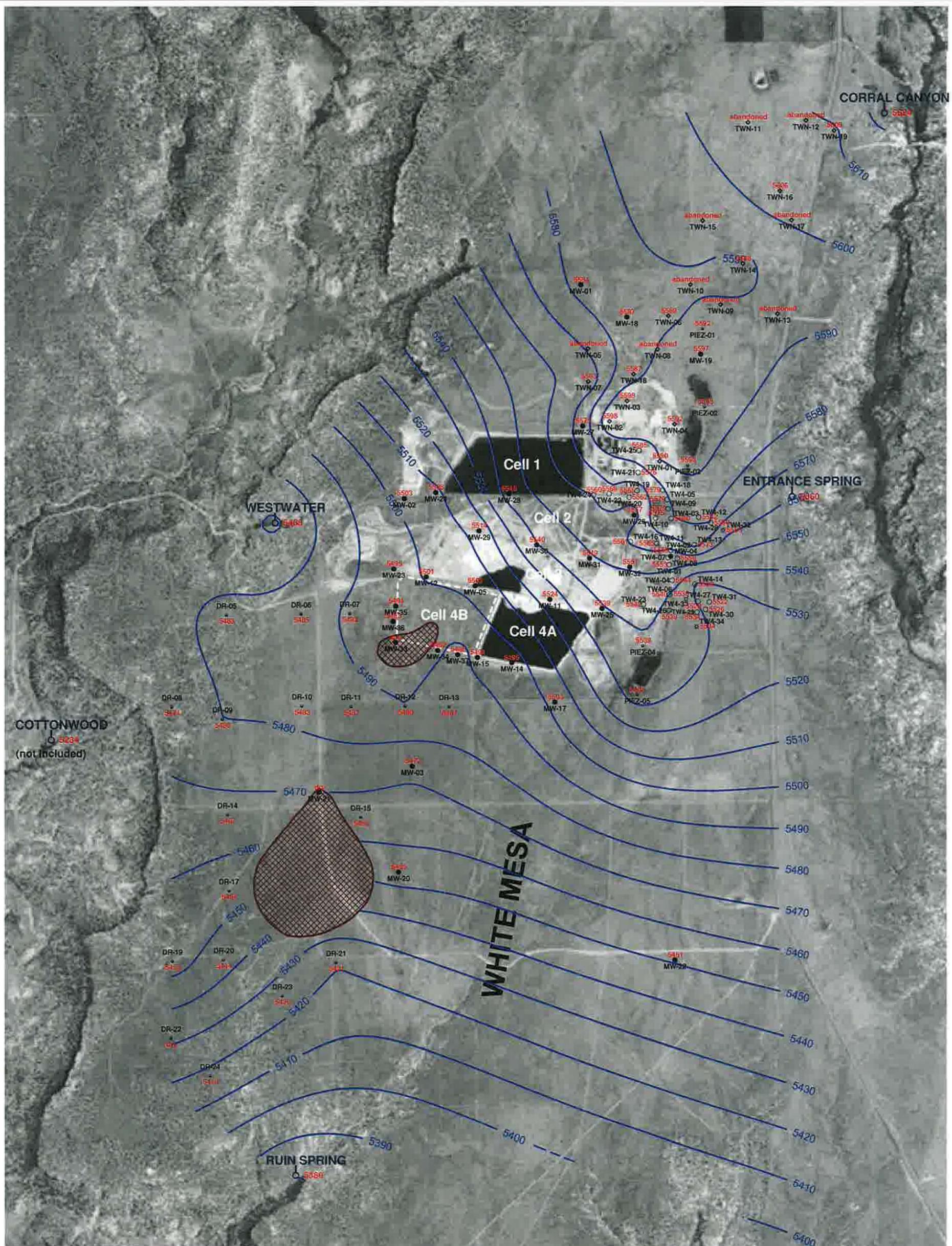
**HYDRO  
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CHEM, INC.**

**KRIGED 2nd QUARTER, 2014 WATER LEVELS  
AND ESTIMATED CAPTURE ZONES  
WHITE MESA SITE  
(detail map)**

APPROVED	DATE	REFERENCE	H:/718000/ aug14/nitrate/Uwl0614ntcz.srf	FIGURE C-3
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Tab D

Kriged Previous Quarter Groundwater Contour Map



**EXPLANATION**

-  estimated dry area
- MW-5**  
 perched monitoring well showing elevation in feet amsl
- TW4-12**  
 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  
 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  
 perched piezometer showing elevation in feet amsl
- TW4-32**  
 temporary perched monitoring well installed September, 2013 showing elevation in feet amsl
- RUIN SPRING**  
 seep or spring showing elevation in feet amsl

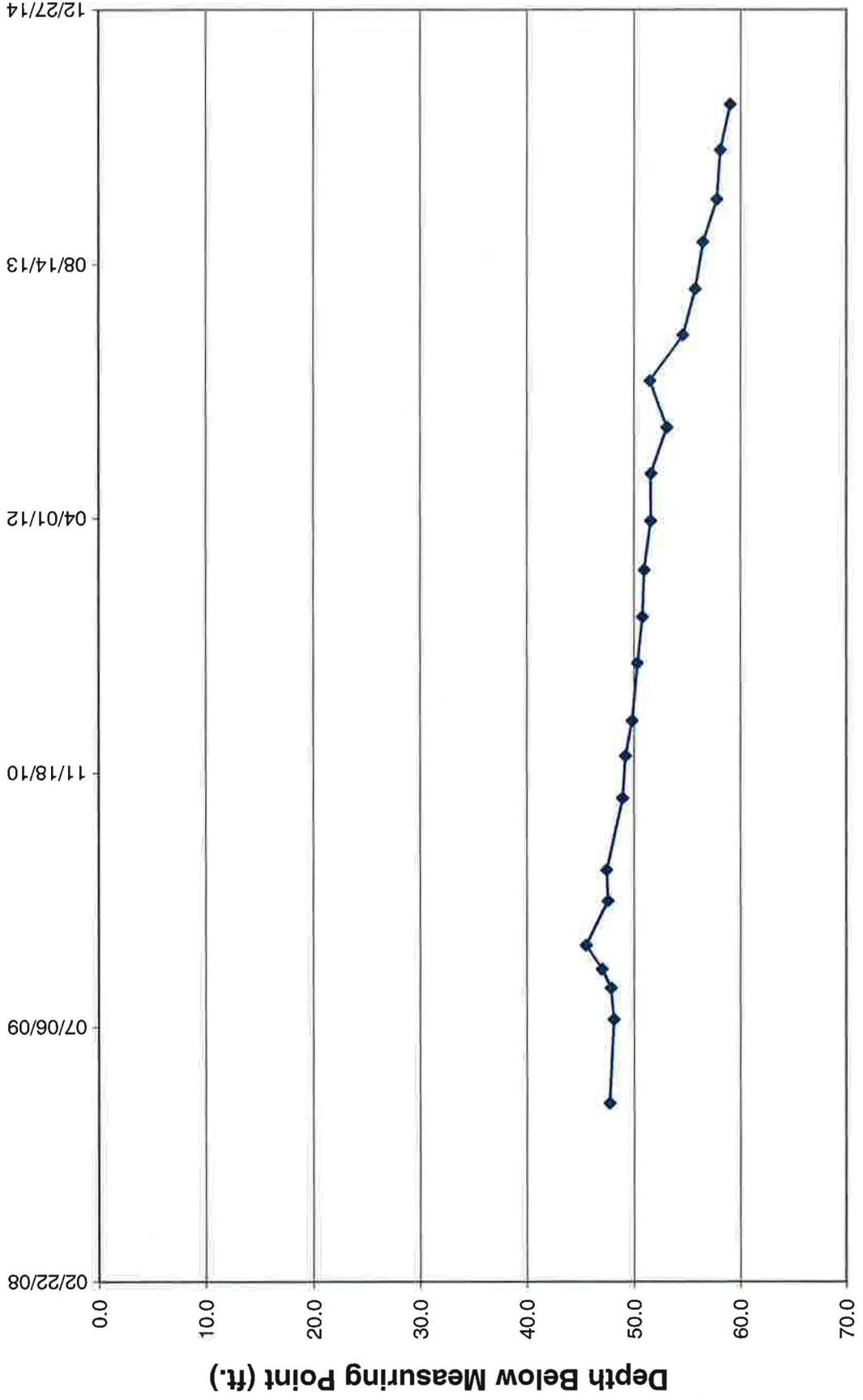
NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells

	<b>HYDRO GEO CHEM, INC.</b>		<b>KRIGED 1st QUARTER, 2014 WATER LEVELS WHITE MESA SITE</b>	
	APPROVED	DATE	REFERENCE	FIGURE
			H:/718000/may14/Uw10314.srf	D-1

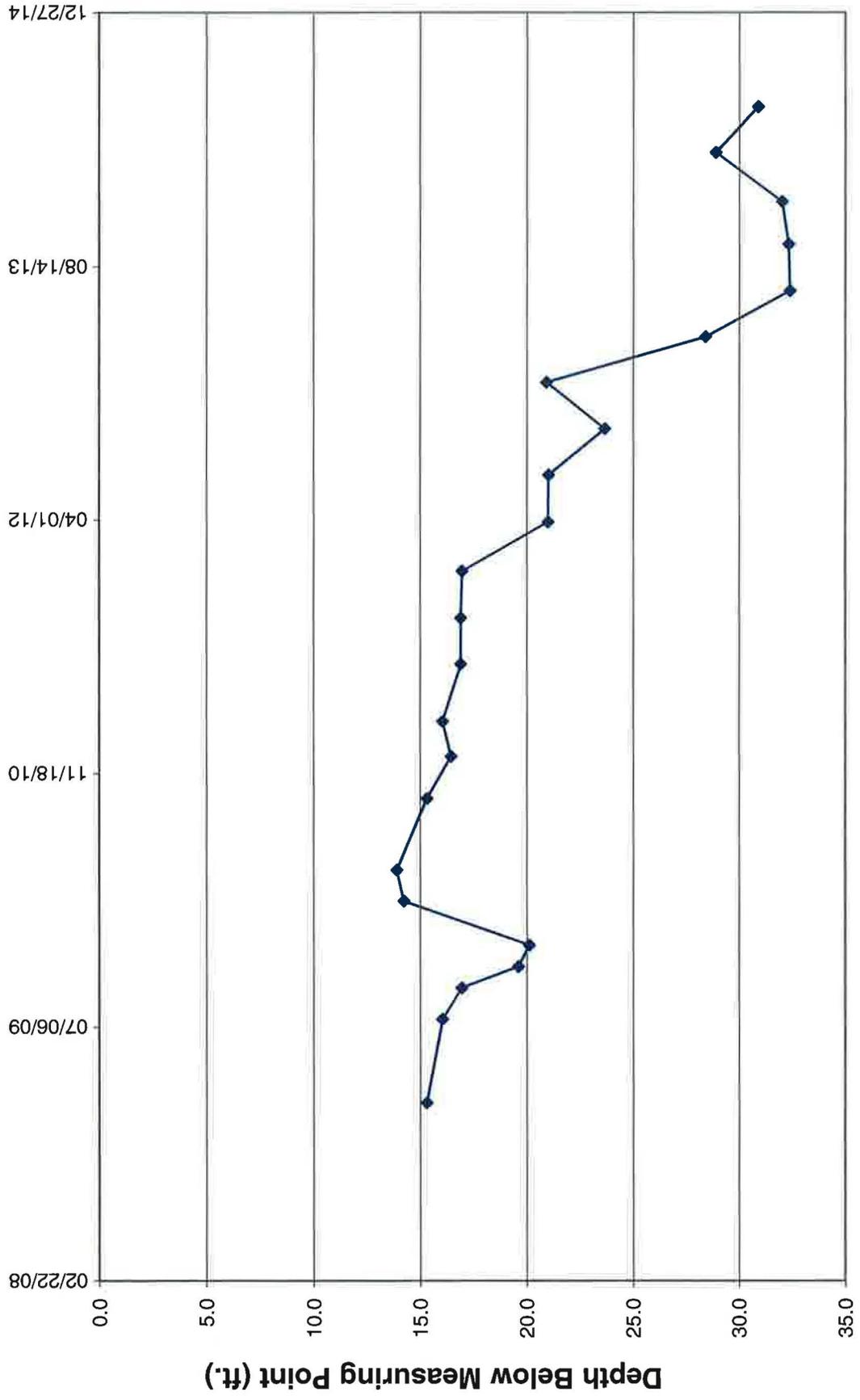
**Tab E**

**Hydrographs of Groundwater Elevations Over Time for Nitrate Monitoring Wells**

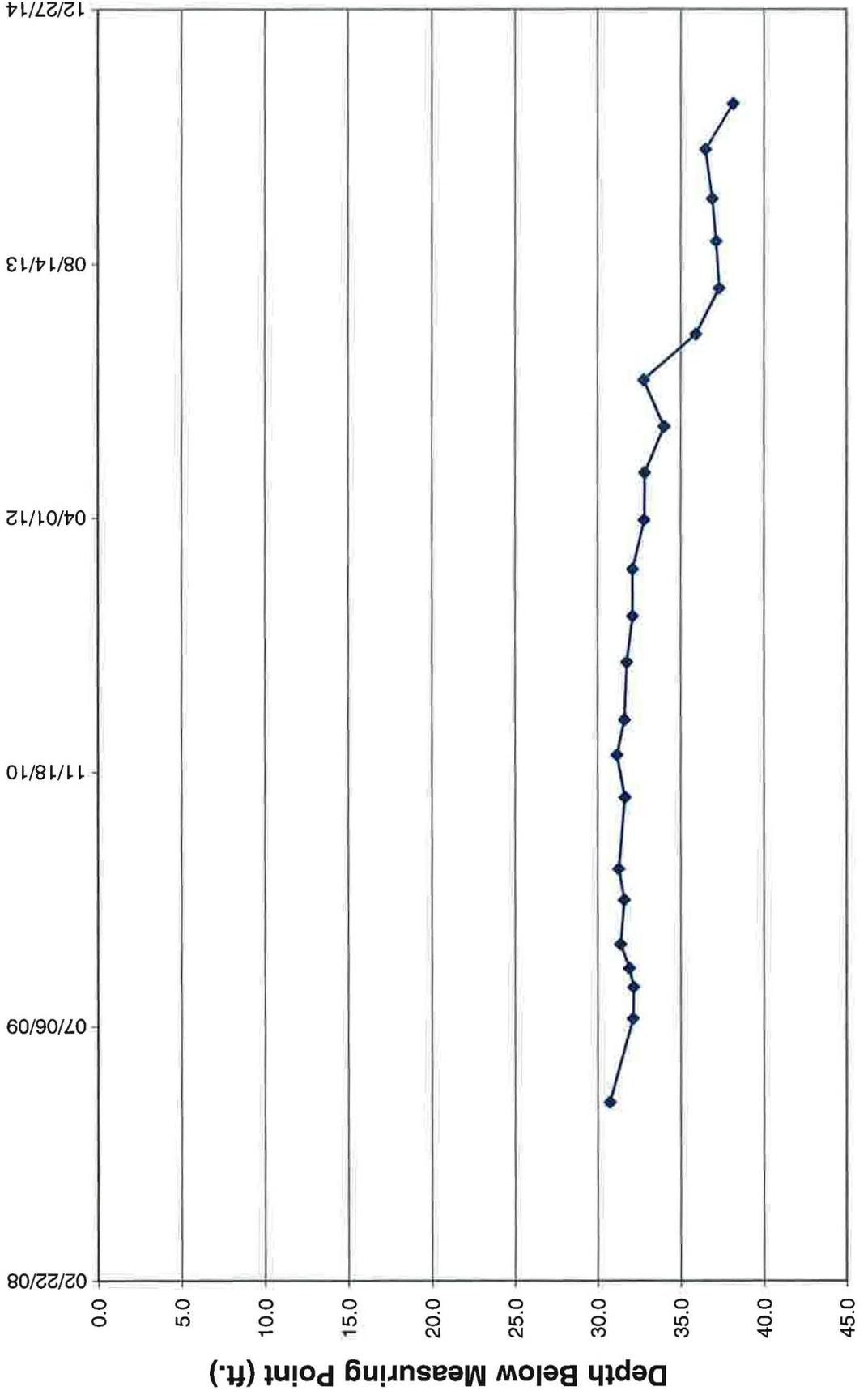
TWN-1 Water Level Over Time (ft. blmp)



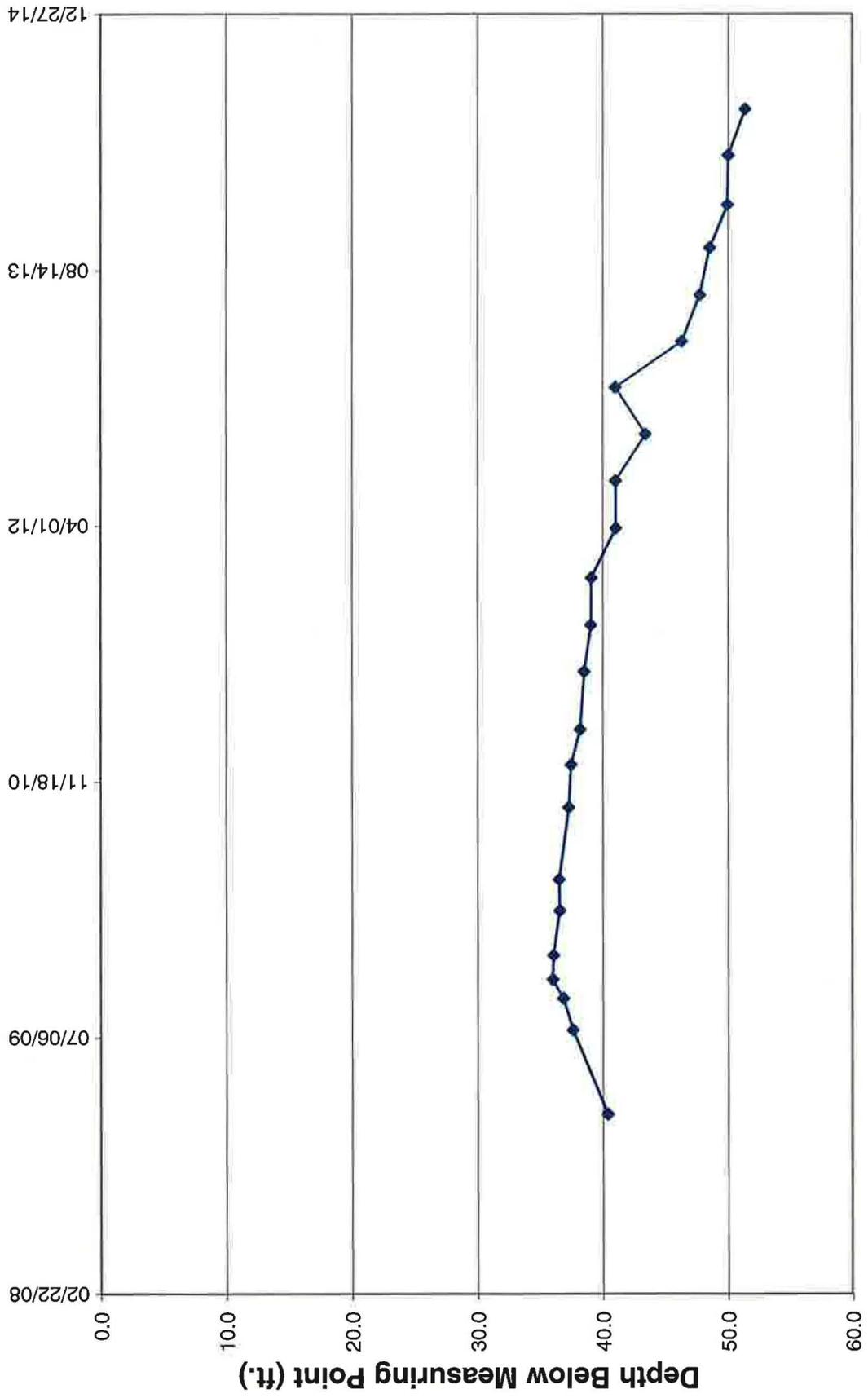
TWN-2 Water Level Over Time (ft. blmp)



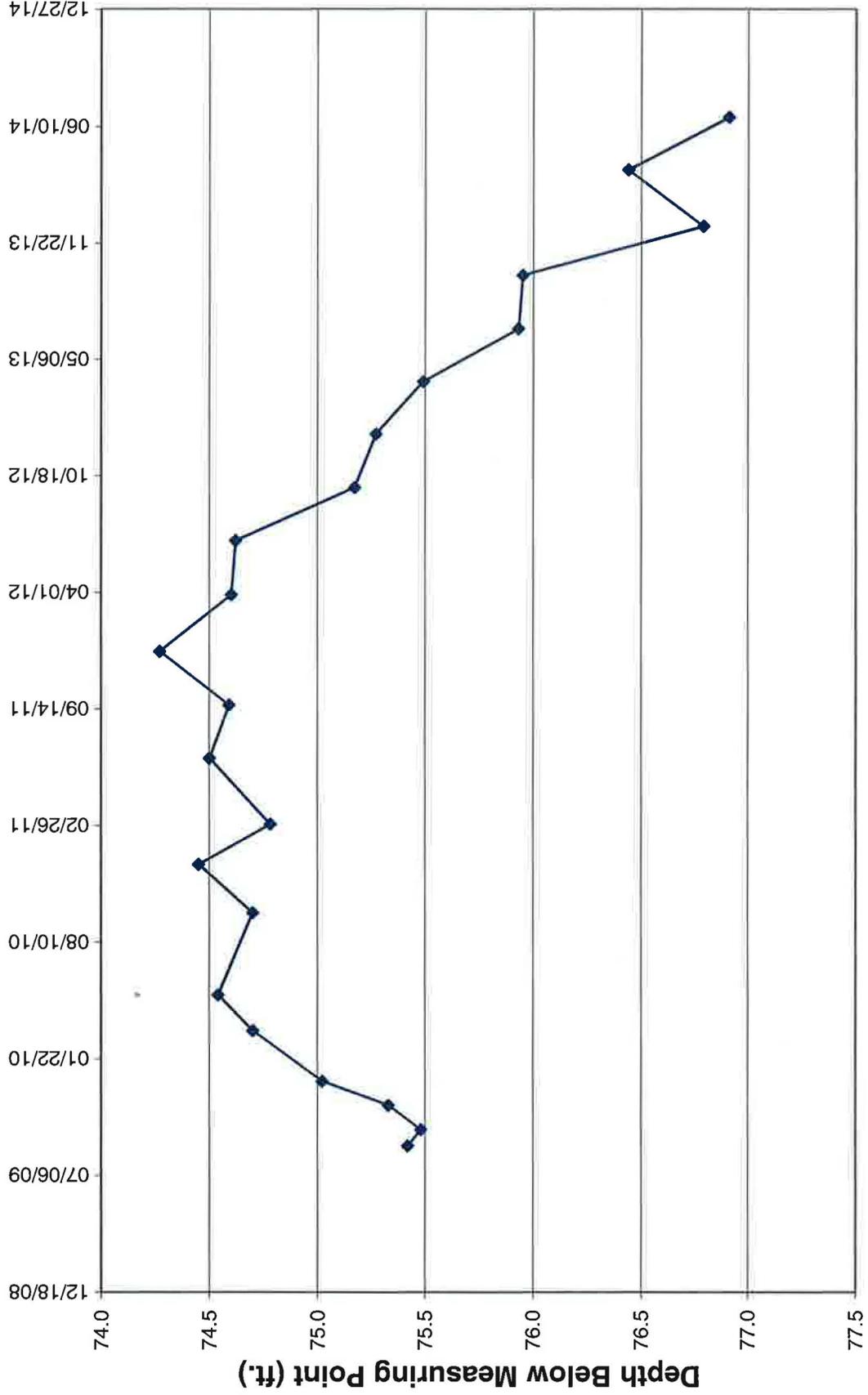
TWN-3 Water Level Over Time (ft. blmp)



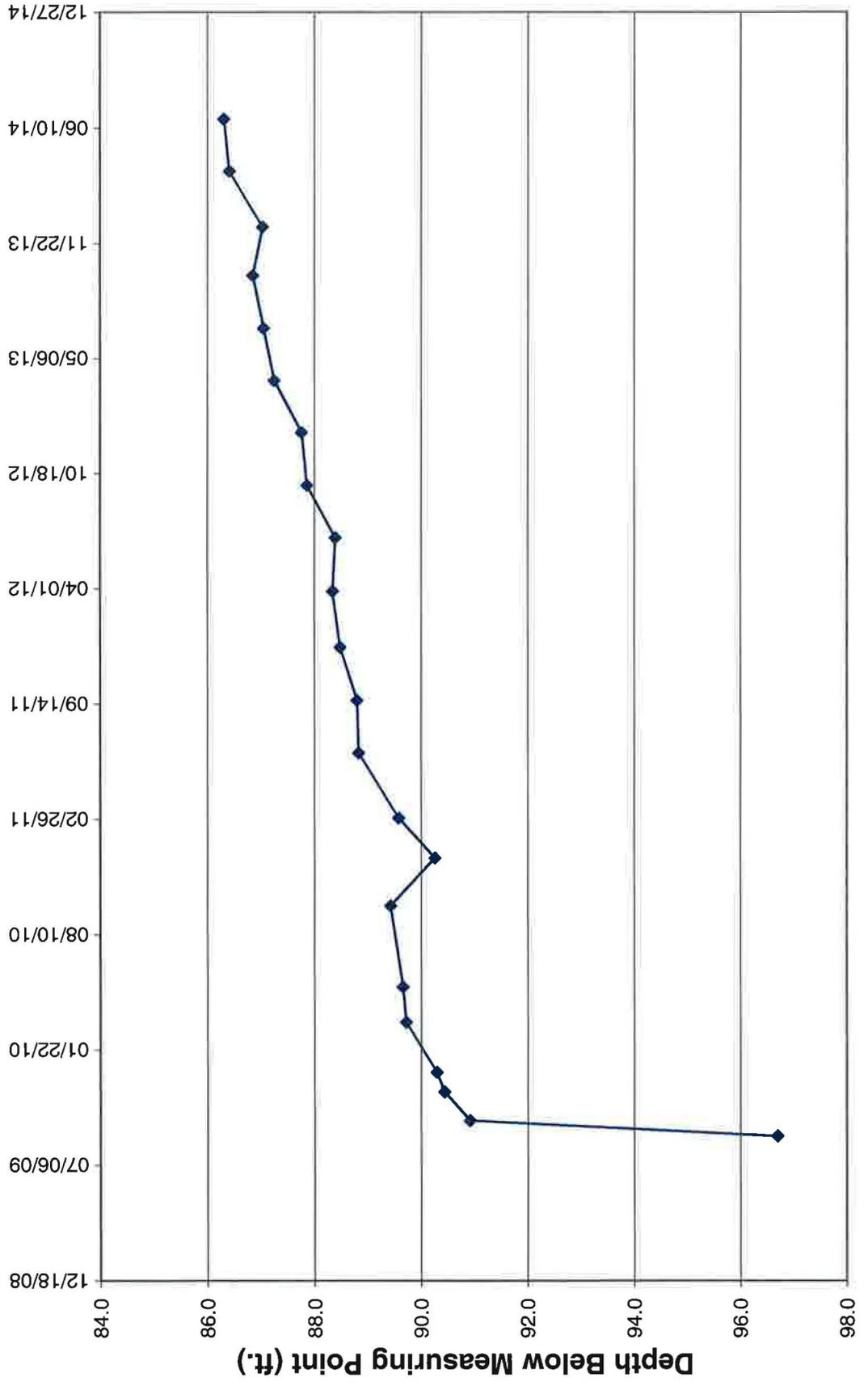
TWN-4 Water Level Over Time (ft. blmp)



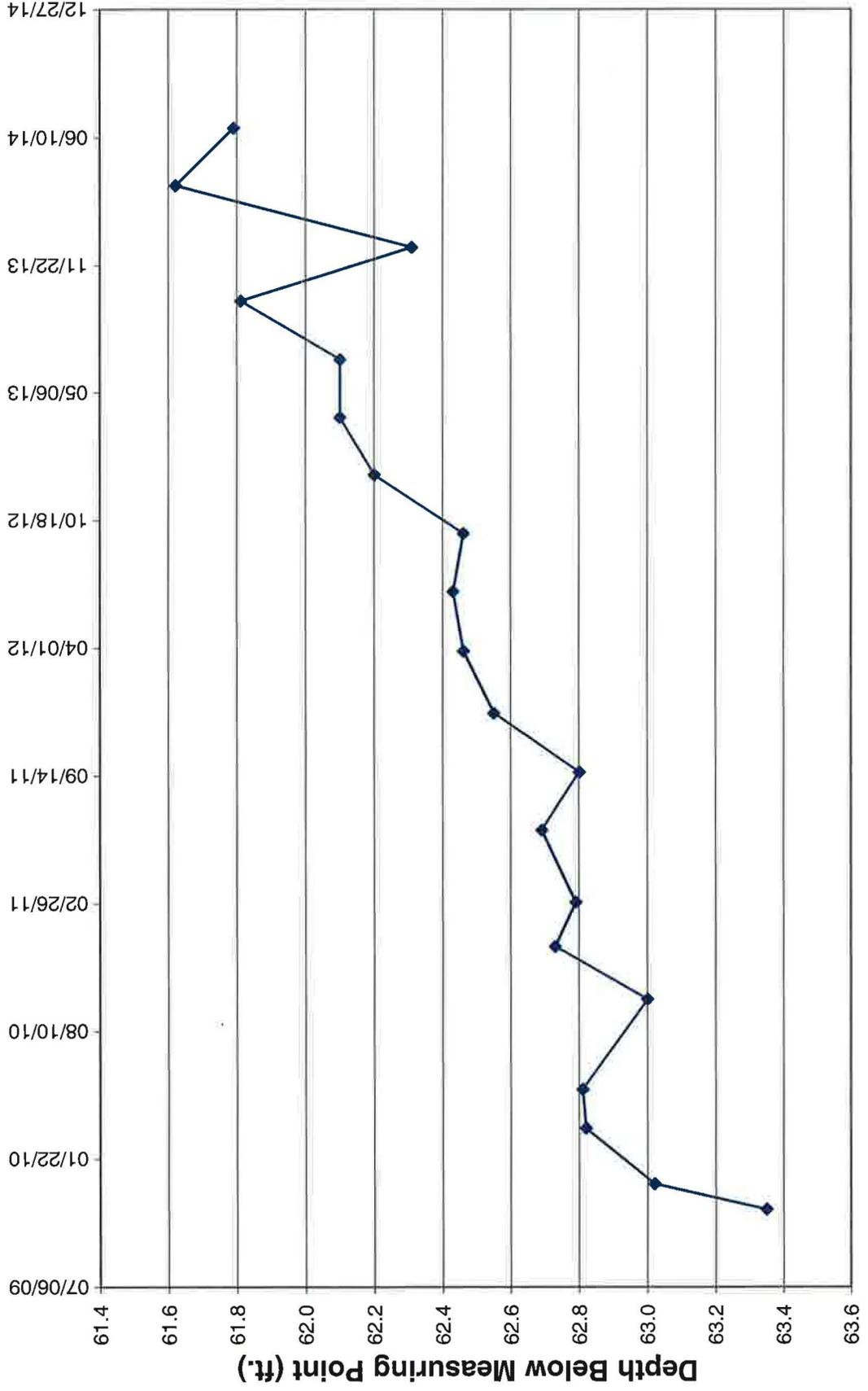
TWN-6 Water Level Over Time (ft. blmp)



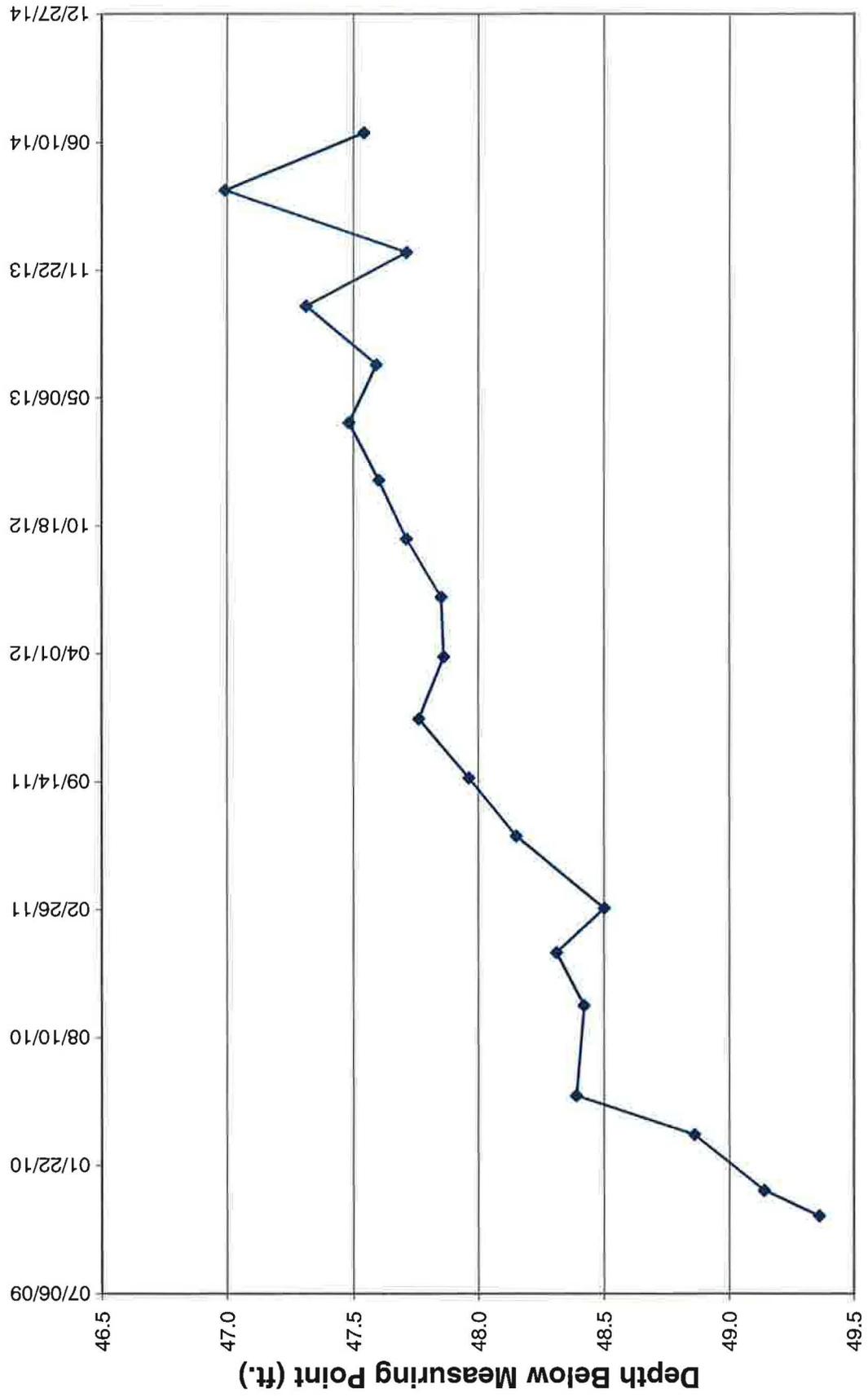
TWN-7 Water Level Over Time (ft. blmp)

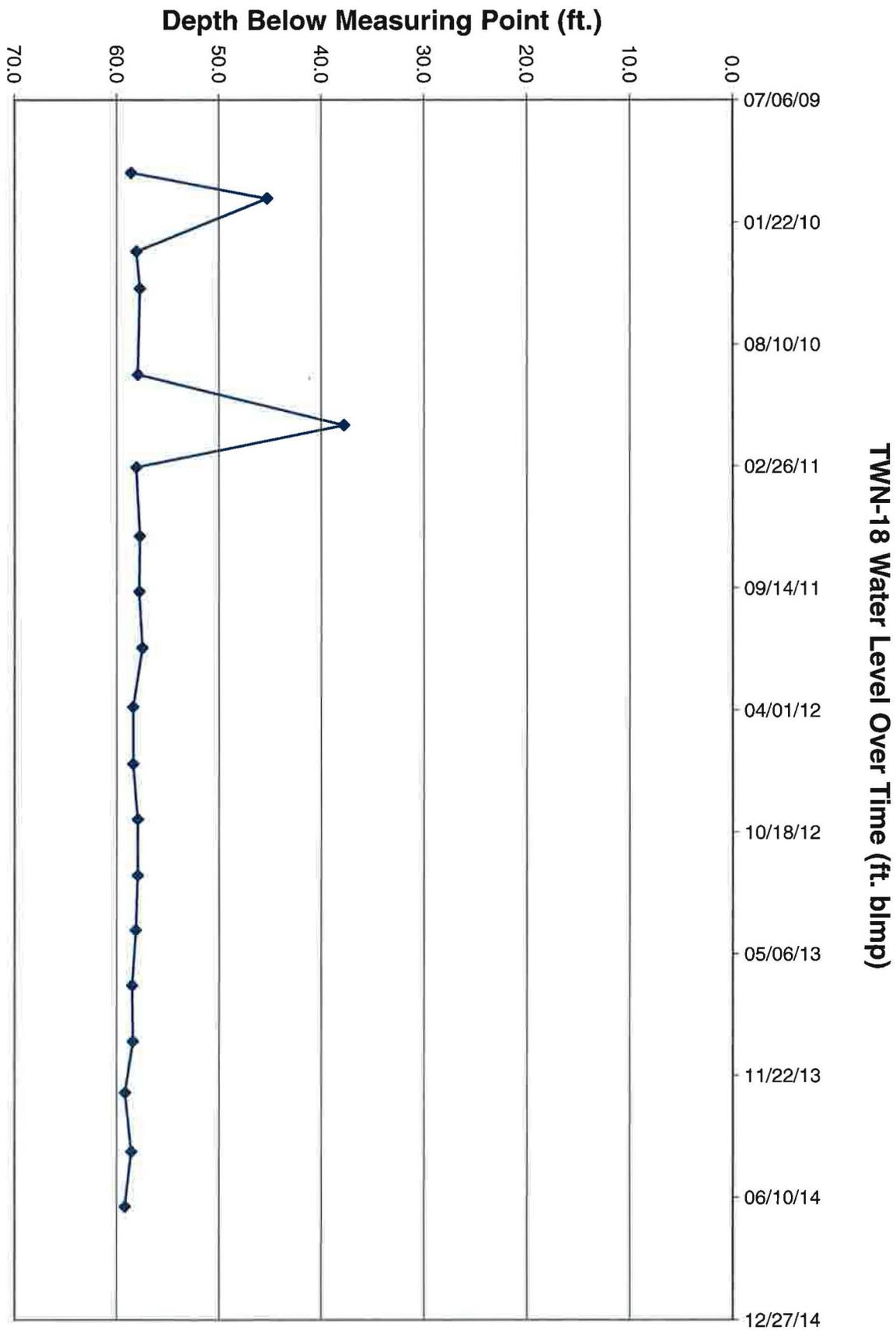


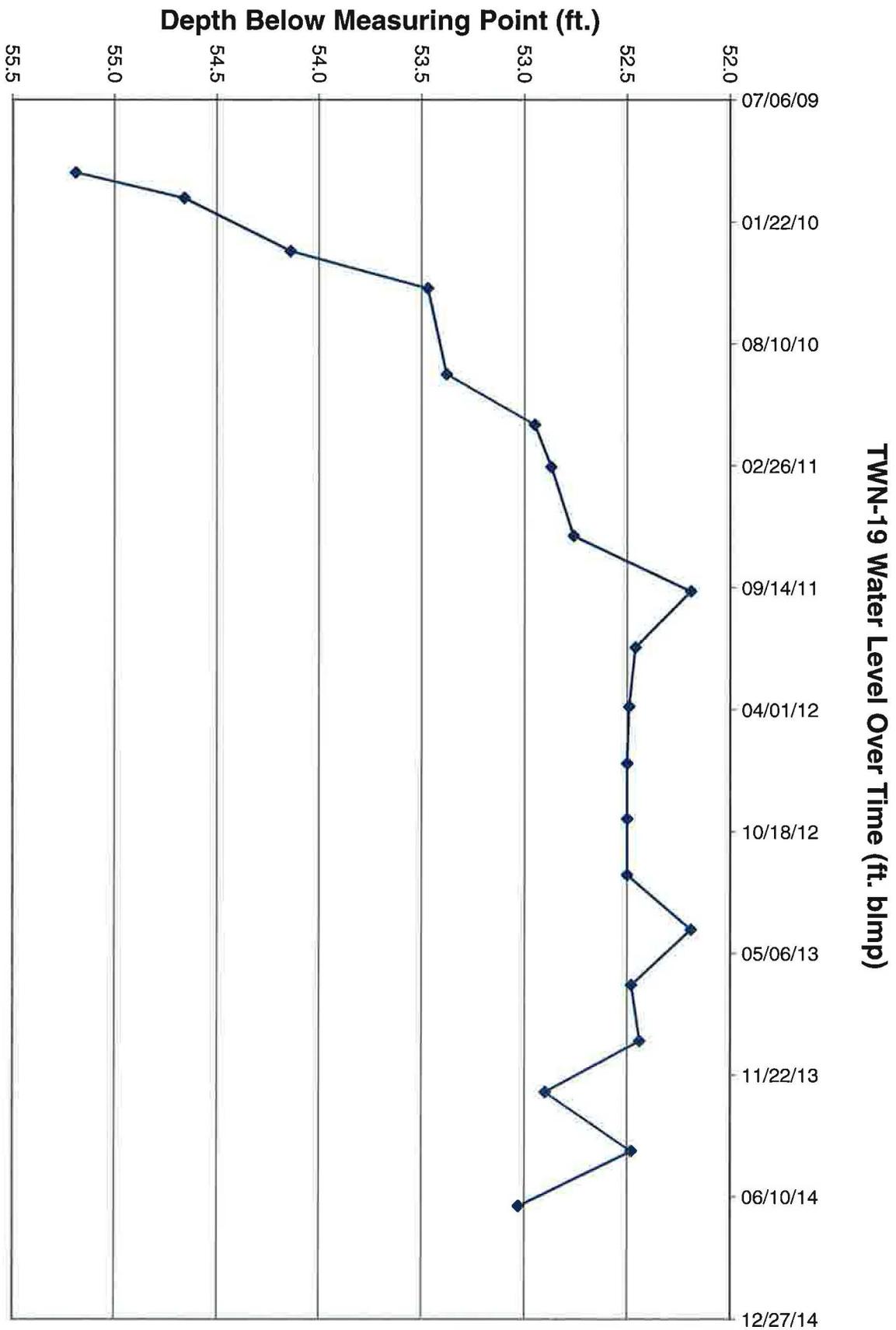
TWN-14 Water Level Over Time (ft. blmp)

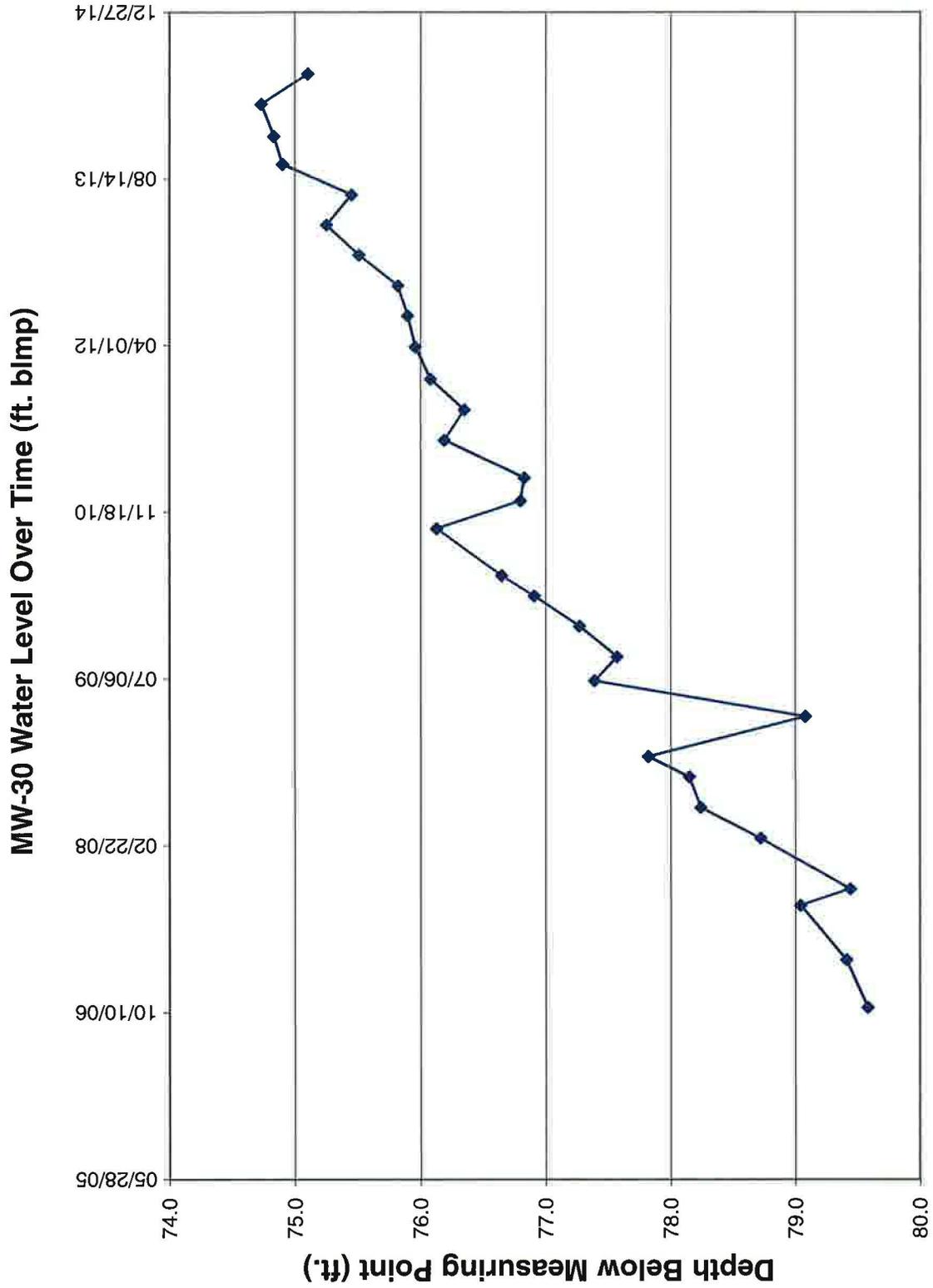


TWN-16 Water Level Over Time (ft. blmp)

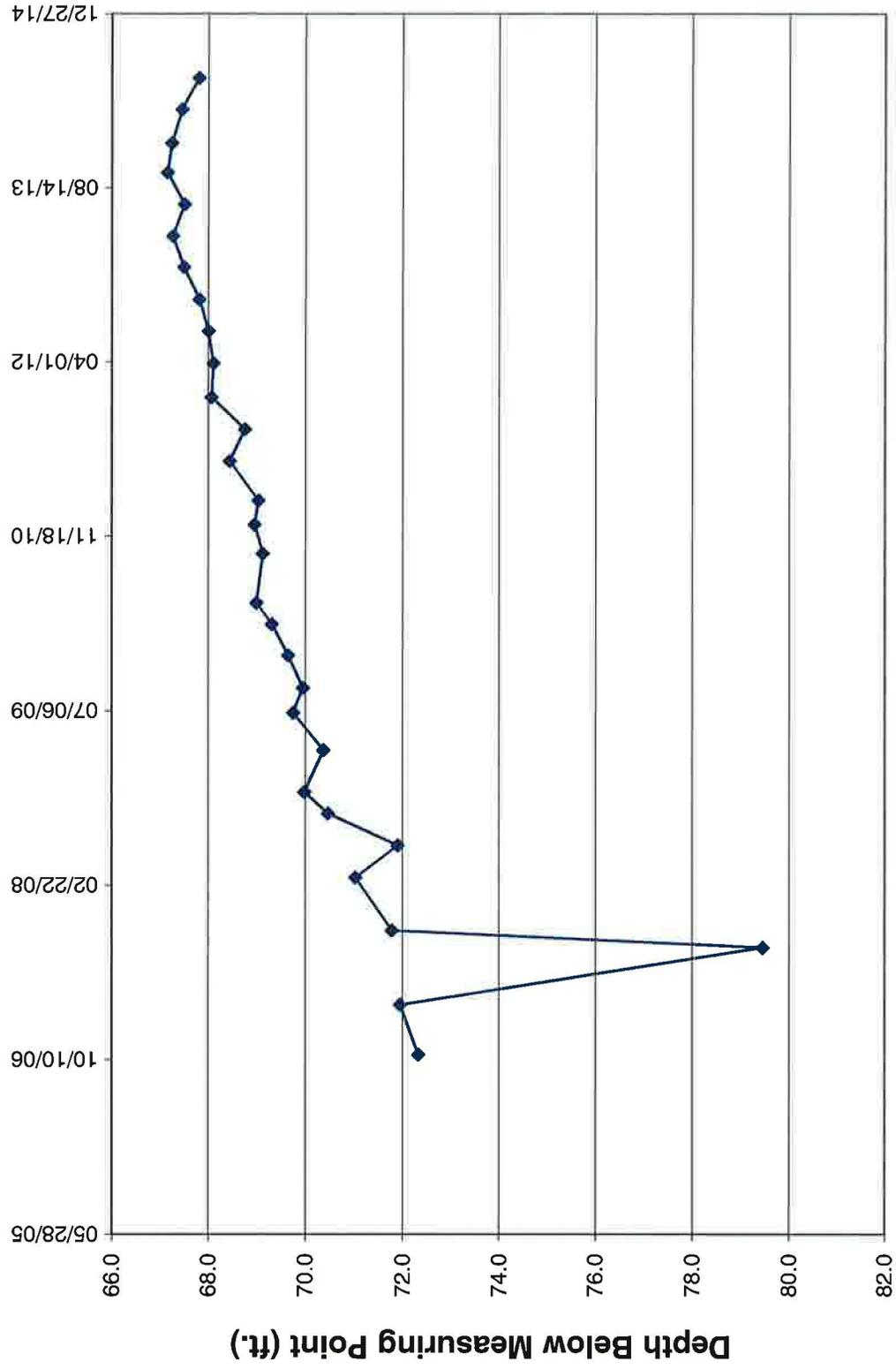








MW-31 Water Level Over Time (ft. blmp)



Tab F

Depths to Groundwater and Elevations Over Time for Nitrate Monitoring Wells

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-1**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,646.96	5,648.09	1.13				112.5
5,600.38				02/06/09	47.71	46.58	
5,599.99				07/21/09	48.10	46.97	
5,600.26				09/21/09	47.83	46.70	
5,601.10				10/28/09	46.99	45.86	
5,602.59				12/14/09	45.50	44.37	
5,600.55				03/11/10	47.54	46.41	
5,600.66				05/11/10	47.43	46.30	
5,599.18				09/29/10	48.91	47.78	
5,598.92				12/21/10	49.17	48.04	
5,598.29				02/28/11	49.80	48.67	
5,597.80				06/21/11	50.29	49.16	
5,597.32				09/20/11	50.77	49.64	
5,597.15				12/21/11	50.94	49.81	
5,596.54				03/27/12	51.55	50.42	
5,596.52				06/28/12	51.57	50.44	
5,595.03				09/27/12	53.06	51.93	
5,596.62				12/28/12	51.47	50.34	
5,593.54				03/28/13	54.55	53.42	
5,592.38				06/27/13	55.71	54.58	
5,591.65				09/27/13	56.44	55.31	
5,590.34				12/20/13	57.75	56.62	
5,590.03				03/27/14	58.06	56.93	
5,589.09				06/25/14	59.00	57.87	

**Water Levels and Data over Time**  
**White Mesa Mill - Well TWN-2**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,625.75	5,626.69	0.94				95
5,611.37				02/06/09	15.32	14.38	
5,610.63				07/21/09	16.06	15.12	
5,609.73				09/21/09	16.96	16.02	
5,607.08				11/02/09	19.61	18.67	
5,606.57				12/14/09	20.12	19.18	
5,612.45				03/11/10	14.24	13.30	
5,612.78				05/11/10	13.91	12.97	
5,611.37				09/29/10	15.32	14.38	
5,610.24				12/21/10	16.45	15.51	
5,610.64				02/28/11	16.05	15.11	
5,609.78				06/21/11	16.91	15.97	
5609.79				09/20/11	16.90	15.96	
5609.72				12/21/11	16.97	16.03	
5,605.69				03/27/12	21.00	20.06	
5,605.67				06/28/12	21.02	20.08	
5,603.03				09/27/12	23.66	22.72	
5,605.76				12/28/12	20.93	19.99	
5,598.28				03/28/13	28.41	27.47	
5,594.32				06/27/13	32.37	31.43	
5,594.38				09/27/13	32.31	31.37	
5,594.68				12/20/13	32.01	31.07	
5,597.79				03/27/14	28.9	27.96	
5,595.80				06/25/14	30.89	29.95	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-3**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,633.64	5,634.50	0.86				110
5,603.77				02/06/09	30.73	29.87	
5,602.37				07/21/09	32.13	31.27	
5,602.34				09/21/09	32.16	31.30	
5,602.60				10/28/09	31.90	31.04	
5,603.12				12/14/09	31.38	30.52	
5,602.90				03/11/10	31.60	30.74	
5,603.23				05/11/10	31.27	30.41	
5,602.86				09/29/10	31.64	30.78	
5,603.35				12/21/10	31.15	30.29	
5,602.89				02/28/11	31.61	30.75	
5,602.75				06/21/11	31.75	30.89	
5,602.40				09/20/11	32.10	31.24	
5,602.40				12/21/11	32.10	31.24	
5,601.70				03/27/12	32.80	31.94	
5,601.67				06/28/12	32.83	31.97	
5,600.50				09/27/12	34.00	33.14	
5,601.74				12/28/12	32.76	31.90	
5,598.60				03/28/13	35.90	35.04	
5,597.18				06/27/13	37.32	36.46	
5,597.36				09/27/13	37.14	36.28	
5,597.60				12/20/13	36.90	36.04	
5,598.00				03/27/14	36.50	35.64	
5,596.34				06/25/14	38.16	37.30	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-4**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,641.04	5,641.87	0.83				136
5,601.47				02/06/09	40.40	39.57	
5,604.26				07/21/09	37.61	36.78	
5,605.02				09/21/09	36.85	36.02	
5,605.87				10/28/09	36.00	35.17	
5,605.81				12/14/09	36.06	35.23	
5,605.31				03/11/10	36.56	35.73	
5,605.36				05/11/10	36.51	35.68	
5,604.59				09/29/10	37.28	36.45	
5,604.42				12/21/10	37.45	36.62	
5,603.69				02/28/11	38.18	37.35	
5,603.36				06/21/11	38.51	37.68	
5,602.82				09/20/11	39.05	38.22	
5,602.79				12/21/11	39.08	38.25	
5,600.82				03/27/12	41.05	40.22	
5,600.84				06/28/12	41.03	40.20	
5,598.47				09/27/12	43.40	42.57	
5,600.86				12/28/12	41.01	40.18	
5,595.57				03/28/13	46.30	45.47	
5,594.12				06/27/13	47.75	46.92	
5,593.33				09/27/13	48.54	47.71	
5,591.92				12/20/13	49.95	49.12	
5,591.85				03/27/14	50.02	49.19	
5,590.49				06/25/14	51.38	50.55	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-6**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,663.03	5,664.94	1.91				135
5,589.52				08/25/09	75.42	73.51	
5,589.46				09/22/09	75.48	73.57	
5,589.61				11/03/09	75.33	73.42	
5,589.92				12/14/09	75.02	73.11	
5,590.24				03/11/10	74.70	72.79	
5,590.40				05/11/10	74.54	72.63	
5,590.24				09/29/10	74.70	72.79	
5,590.49				12/21/10	74.45	72.54	
5,590.16				02/28/11	74.78	72.87	
5,590.44				06/21/11	74.50	72.59	
5,590.35				09/20/11	74.59	72.68	
5,590.67				12/21/11	74.27	72.36	
5,590.34				03/27/12	74.60	72.69	
5,590.32				06/28/12	74.62	72.71	
5,589.77				09/27/12	75.17	73.26	
5,589.67				12/28/12	75.27	73.36	
5,589.45				03/28/13	75.49	73.58	
5,589.01				06/27/13	75.93	74.02	
5,588.99				09/27/13	75.95	74.04	
5,588.15				12/20/13	76.79	74.88	
5,588.50				03/27/14	76.44	74.53	
5,588.03				06/25/14	76.91	75.00	

**Water Levels and Data over Time**  
**White Mesa Mill - Well TWN-7**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,647.39	5,649.26	1.87				120
5,552.56				08/25/09	96.70	94.83	
5,558.34				09/21/09	90.92	89.05	
5,558.82				11/10/09	90.44	88.57	
5,558.96				12/14/09	90.30	88.43	
5,559.54				03/11/10	89.72	87.85	
5,559.60				05/11/10	89.66	87.79	
5,559.83				09/29/10	89.43	87.56	
5,559.00				12/21/10	90.26	88.39	
5,559.68				02/28/11	89.58	87.71	
5,560.43				06/21/11	88.83	86.96	
5,560.46				09/20/11	88.80	86.93	
5,560.78				12/21/11	88.48	86.61	
5,560.92				03/27/12	88.34	86.47	
5,560.87				06/28/12	88.39	86.52	
5,561.40				09/27/12	87.86	85.99	
5,561.50				12/28/12	87.76	85.89	
5,562.01				03/28/13	87.25	85.38	
5,562.21				06/27/13	87.05	85.18	
5,562.41				09/27/13	86.85	84.98	
5,562.23				12/20/13	87.03	85.16	
5,562.85				03/27/14	86.41	84.54	
5,562.95				06/25/14	86.31	84.44	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-14**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,647.80	5,649.53	1.73				135
5,586.18				11/04/09	63.35	61.62	
5,586.51				12/14/09	63.02	61.29	
5,586.71				03/11/10	62.82	61.09	
5,586.72				05/11/10	62.81	61.08	
5,586.53				09/29/10	63.00	61.27	
5,586.80				12/21/10	62.73	61.00	
5,586.74				02/28/11	62.79	61.06	
5,586.84				06/21/11	62.69	60.96	
5,586.73				09/20/11	62.80	61.07	
5,586.98				12/21/11	62.55	60.82	
5,587.07				03/27/12	62.46	60.73	
5,587.10				06/28/12	62.43	60.70	
5,587.07				09/27/12	62.46	60.73	
5,587.33				12/28/12	62.20	60.47	
5,587.43				03/28/13	62.10	60.37	
5,587.43				06/27/13	62.10	60.37	
5,587.72				09/27/13	61.81	60.08	
5,587.22				12/20/13	62.31	60.58	
5,587.91				03/27/14	61.62	59.89	
5,587.74				06/25/14	61.79	60.06	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-16**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,651.07	5,652.70	1.63				100
5,603.34				11/04/09	49.36	47.73	
5,603.56				12/14/09	49.14	47.51	
5,603.84				03/11/10	48.86	47.23	
5,604.31				05/11/10	48.39	46.76	
5,604.28				09/29/10	48.42	46.79	
5,604.39				12/21/10	48.31	46.68	
5,604.20				02/28/11	48.50	46.87	
5,604.55				06/21/11	48.15	46.52	
5,604.74				09/20/11	47.96	46.33	
5,604.94				12/21/11	47.76	46.13	
5,604.84				03/27/12	47.86	46.23	
5,604.85				06/28/12	47.85	46.22	
5,604.99				09/27/12	47.71	46.08	
5,605.10				12/28/12	47.60	45.97	
5,605.22				03/28/13	47.48	45.85	
5,605.11				06/27/13	47.59	45.96	
5,605.39				09/27/13	47.31	45.68	
5,604.99				12/20/13	47.71	46.08	
5,605.71				03/27/14	46.99	45.36	
5,605.16				06/25/14	47.54	45.91	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN -18**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,643.95	5,645.45	1.50				100
5,586.85				11/02/09	58.60	57.10	
5,600.14				12/14/09	45.31	43.81	
5,587.36				03/11/10	58.09	56.59	
5,587.71				05/11/10	57.74	56.24	
5,587.50				09/29/10	57.95	56.45	
5,607.66				12/21/10	37.79	36.29	
5,587.35				02/28/11	58.10	56.60	
5,587.71				06/21/11	57.74	56.24	
5,587.65				09/20/11	57.80	56.30	
5,587.95				12/21/11	57.50	56.00	
5,587.05				03/27/12	58.40	56.90	
5,587.05				06/28/12	58.40	56.90	
5,587.50				09/27/12	57.95	56.45	
5,587.50				12/28/12	57.95	56.45	
5,587.32				03/28/13	58.13	56.63	
5,586.95				06/27/13	58.50	57.00	
5,587.02				09/27/13	58.43	56.93	
5,586.26				12/20/13	59.19	57.69	
5,586.87				03/27/14	58.58	57.08	
5,586.23				06/25/14	59.22	57.72	

**Water Levels and Data over Time  
White Mesa Mill - Well TWN-19**

<b>Water Elevation (WL)</b>	<b>Land Surface (LSD)</b>	<b>Measuring Point Elevation (MP)</b>	<b>Length Of Riser (L)</b>	<b>Date Of Monitoring</b>	<b>Total or Measured Depth to Water (blw.MP)</b>	<b>Total Depth to Water (blw.LSD)</b>	<b>Total Depth Of Well</b>
	5,659.59	5,661.36	1.77				110
5,606.17				11/02/09	55.19	53.42	
5,606.70				12/14/09	54.66	52.89	
5,607.22				03/11/10	54.14	52.37	
5,607.89				05/11/10	53.47	51.70	
5,607.98				09/29/10	53.38	51.61	
5,608.41				12/21/10	52.95	51.18	
5,608.49				02/28/11	52.87	51.10	
5,608.60				06/21/11	52.76	50.99	
5,609.17				09/20/11	52.19	50.42	
5,608.90				12/21/11	52.46	50.69	
5,608.87				03/27/12	52.49	50.72	
5,608.86				06/28/12	52.50	50.73	
5,608.86				09/27/12	52.50	50.73	
5,608.86				12/28/12	52.50	50.73	
5,609.17				03/28/13	52.19	50.42	
5,608.88				06/27/13	52.48	50.71	
5,608.92				09/27/13	52.44	50.67	
5,608.46				12/20/13	52.90	51.13	
5,608.88				03/27/14	52.48	50.71	
5,608.33				06/25/14	53.03	51.26	

**Water Levels and Data over Time  
White Mesa Mill - Well MW-30**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point		Date Of Monitoring	Total or Measured	Total	Total Depth Of Well
		Elevation (MP)	Length Of Riser (L)		Depth to Water (blw.MP)	Depth to Water (blw.LSD)	
	5,613.34	5,614.50	1.16				110
5,534.92				10/24/2006	79.58	78.42	
5,535.09				3/16/2007	79.41	78.25	
5,535.46				8/27/2007	79.04	77.88	
5,535.06				10/15/2007	79.44	78.28	
5,535.78				3/15/2008	78.72	77.56	
5,536.26				6/15/2008	78.24	77.08	
5,536.35				9/15/2008	78.15	76.99	
5,536.68				11/15/2008	77.82	76.66	
5,535.42				3/15/2009	79.08	77.92	
5,537.11				6/30/2009	77.39	76.23	
5,536.93				9/10/2009	77.57	76.41	
5,537.23				12/11/2009	77.27	76.11	
5,537.59				3/11/2010	76.91	75.75	
5,537.85				5/11/2010	76.65	75.49	
5,538.37				9/29/2010	76.13	74.97	
5537.70				12/21/2010	76.8	75.64	
5537.67				2/28/2011	76.83	75.67	
5538.31				6/21/2011	76.19	75.03	
5538.15				9/20/2011	76.35	75.19	
5538.42				12/21/2011	76.08	74.92	
5538.54				3/27/2012	75.96	74.8	
5538.60				6/28/2012	75.9	74.74	
5538.68				9/27/2012	75.82	74.66	
5538.99				12/28/2012	75.51	74.35	
5539.25				3/28/2013	75.25	74.09	
5539.05				6/27/2013	75.45	74.29	
5539.60				9/27/2013	74.90	73.74	
5539.67				12/20/2013	74.83	73.67	
5539.77				3/27/2014	74.73	73.57	
5539.40				6/25/2014	75.10	73.94	

**Water Levels and Data over Time**  
**White Mesa Mill - Well MW-31**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point		Date Of Monitoring	Total or Measured		Total Depth Of Well
		Elevation (MP)	Length Of Riser (L)		Depth to Water (blw.MP)	Depth to Water (blw.LSD)	
	5,615.26	5,616.40	1.14				130
5,544.07				10/24/2006	72.33	71.19	
5,544.45				3/16/2007	71.95	70.81	
5,536.94				8/27/2007	79.46	78.32	
5,544.62				10/15/2007	71.78	70.64	
5,545.37				3/15/2008	71.03	69.89	
5,544.50				6/15/2008	71.90	70.76	
5,545.94				9/15/2008	70.46	69.32	
5,546.42				11/15/2008	69.98	68.84	
5,546.03				3/15/2009	70.37	69.23	
5,546.65				6/30/2009	69.75	68.61	
5,546.45				9/10/2009	69.95	68.81	
5,546.75				12/11/2009	69.65	68.51	
5,547.09				3/11/2010	69.31	68.17	
5,547.41				5/11/2010	68.99	67.85	
5,547.28				9/29/2010	69.12	67.98	
5547.45				12/21/2010	68.95	67.81	
5547.37				2/28/2011	69.03	67.89	
5547.96				6/21/2011	68.44	67.3	
5547.65				9/20/2011	68.75	67.61	
5548.34				12/21/2011	68.06	66.92	
5548.30				3/27/2012	68.10	66.96	
5548.40				6/28/2012	68.00	66.86	
5548.59				9/27/2012	67.81	66.67	
5548.91				12/28/2012	67.49	66.35	
5549.14				3/28/2013	67.26	66.12	
5548.90				6/27/2013	67.50	66.36	
5549.25				9/27/2013	67.15	66.01	
5549.16				12/20/2013	67.24	66.10	
5548.95				3/27/2014	67.45	66.31	
5548.60				6/25/2014	67.80	66.66	

Tab G

Laboratory Analytical Reports



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-010  
**Client Sample ID:** Piez-01\_05072014  
**Collection Date:** 5/7/2014 933h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1453h	SM4500-Cl-E	5.00	<b>52.1</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2130h	E353.2	1.00	<b>7.57</b>	

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Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-011  
**Client Sample ID:** Piez-02\_05072014  
**Collection Date:** 5/7/2014 858h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		5/9/2014 1454h	SM4500-Cl-E	5.00	<b>11.4</b>	
Nitrate/Nitrite (as N)	mg/L		5/16/2014 1807h	E353.2	0.0100	<b>0.736</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-012  
**Client Sample ID:** Piez-03\_05072014  
**Collection Date:** 5/7/2014 918h  
**Received Date:** 5/9/2014 1045h

### **Analytical Results**

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1455h	SM4500-Cl-E	5.00	<b>23.9</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2133h	E353.2	0.100	<b>1.79</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-003  
**Client Sample ID:** TWN-01\_05062014  
**Collection Date:** 5/6/2014 955h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1441h	SM4500-Cl-E	5.00	<b>31.1</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2113h	E353.2	0.100	<b>1.63</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-006  
**Client Sample ID:** TWN-02\_05072014  
**Collection Date:** 5/7/2014 840h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

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<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1444h	SM4500-Cl-E	5.00	<b>84.9</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2117h	E353.2	10.0	<b>44.7</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-005  
**Client Sample ID:** TWN-03\_05072014  
**Collection Date:** 5/7/2014 831h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

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<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1509h	SM4500-Cl-E	25.0	<b>168</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2116h	E353.2	10.0	<b>23.6</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-002  
**Client Sample ID:** TWN-04\_05062014  
**Collection Date:** 5/6/2014 835h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1440h	SM4500-Cl-E	5.00	<b>29.6</b>	†
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2112h	E353.2	0.100	<b>1.55</b>	

† - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-001  
**Client Sample ID:** TWN-07\_05072014  
**Collection Date:** 5/7/2014 821h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

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<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1438h	SM4500-Cl-E	5.00	<b>5.26</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2110h	E353.2	0.100	<b>0.564</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-008  
**Client Sample ID:** TWN-07R\_05062014  
**Collection Date:** 5/6/2014 737h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/16/2014 1643h	E300.0	1.00	< 1.00	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2127h	E353.2	0.100	< 0.100	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-004  
**Client Sample ID:** TWN-18\_05062014  
**Collection Date:** 5/6/2014 1028h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1442h	SM4500-Cl-E	5.00	<b>76.5</b>	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2115h	E353.2	0.500	<b>2.18</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-009  
**Client Sample ID:** TWN-60\_05082014  
**Collection Date:** 5/8/2014 730h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/16/2014 1730h	E300.0	1.00	< 1.00	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2129h	E353.2	0.100	< 0.100	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Sample ID:** 1405196-007  
**Client Sample ID:** TWN-65\_05062014  
**Collection Date:** 5/6/2014 835h  
**Received Date:** 5/9/2014 1045h

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		5/9/2014 1446h	SM4500-Cl-E	5.00	26.6	
Nitrate/Nitrite (as N)	mg/L		5/15/2014 2126h	E353.2	0.100	1.54	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Sample ID:** 1405494-029  
**Client Sample ID:** TW4-22\_05192014  
**Collection Date:** 5/19/2014 1245h  
**Received Date:** 5/23/2014 1015h

**Contact:** Garrin Palmer

### **Analytical Results**

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		6/3/2014 1635h	E300.0	100	<b>614</b>	
Nitrate/Nitrite (as N)	mg/L		5/27/2014 2145h	E353.2	10.0	<b>47.2</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Sample ID:** 1405494-021  
**Client Sample ID:** TW4-24\_05192014  
**Collection Date:** 5/19/2014 1230h  
**Received Date:** 5/23/2014 1015h

**Contact:** Garrin Palmer

### **Analytical Results**

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		6/3/2014 1327h	E300.0	100	<b>1,020</b>	
Nitrate/Nitrite (as N)	mg/L		5/27/2014 2126h	E353.2	5.00	<b>35.0</b>	

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Sample ID:** 1405494-014  
**Client Sample ID:** TW4-25\_05192014  
**Collection Date:** 5/19/2014 1215h  
**Received Date:** 5/23/2014 1015h

**Contact:** Garrin Palmer

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		5/28/2014 038h	E300.0	50.0	51.1	
Nitrate/Nitrite (as N)	mg/L		5/27/2014 2113h	E353.2	0.100	1.21	

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## ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Sample ID:** 1405562-007C  
**Client Sample ID:** TW4-60\_05272014  
**Collection Date:** 5/27/2014 1015h  
**Received Date:** 5/28/2014 940h

**Contact:** Garrin Palmer

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 5/29/2014 1255h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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web: www.awal-labs.com

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	51.4	50.00	103	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	49.9	50.00	99.8	80-128	
Surr: Dibromofluoromethane	1868-53-7	47.7	50.00	95.4	80-124	
Surr: Toluene-d8	2037-26-5	49.0	50.00	97.9	77-129	

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



Garrin Palmer  
Energy Fuels Resources, Inc.  
6425 S. Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 2nd Quarter Nitrate 2014

Dear Garrin Palmer:

Lab Set ID: 1405196

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 12 sample(s) on 5/9/2014 for the analyses presented in the following report.

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web: [www.awal-labs.com](http://www.awal-labs.com)

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by:

Digitally signed by Jose G. Rocha  
DN: cn=Jose G. Rocha,  
o=American West Analytical  
Laboratories, ou=Quality  
Assurance Officer,  
email=jose@awal-labs.com,  
c=US  
Date: 2014.05.20 12:08:46  
-06'00'

Jose G.  
Rocha

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Set ID:** 1405196  
**Date Received:** 5/9/2014 1045h

**Contact:** Garrin Palmer

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Salt Lake City, UT 84115

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405196-001A	TWN-07_05072014	5/7/2014 821h	Aqueous	Chloride, Aqueous
1405196-001B	TWN-07_05072014	5/7/2014 821h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-002A	TWN-04_05062014	5/6/2014 835h	Aqueous	Chloride, Aqueous
1405196-002B	TWN-04_05062014	5/6/2014 835h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-003A	TWN-01_05062014	5/6/2014 955h	Aqueous	Chloride, Aqueous
1405196-003B	TWN-01_05062014	5/6/2014 955h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-004A	TWN-18_05062014	5/6/2014 1028h	Aqueous	Chloride, Aqueous
1405196-004B	TWN-18_05062014	5/6/2014 1028h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-005A	TWN-03_05072014	5/7/2014 831h	Aqueous	Chloride, Aqueous
1405196-005B	TWN-03_05072014	5/7/2014 831h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-006A	TWN-02_05072014	5/7/2014 840h	Aqueous	Chloride, Aqueous
1405196-006B	TWN-02_05072014	5/7/2014 840h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-007A	TWN-65_05062014	5/6/2014 835h	Aqueous	Chloride, Aqueous
1405196-007B	TWN-65_05062014	5/6/2014 835h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-008A	TWN-07R_05062014	5/6/2014 737h	Aqueous	Anions, E300.0
1405196-008B	TWN-07R_05062014	5/6/2014 737h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-009A	TWN-60_05082014	5/8/2014 730h	Aqueous	Anions, E300.0
1405196-009B	TWN-60_05082014	5/8/2014 730h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-010A	Piez-01_05072014	5/7/2014 933h	Aqueous	Chloride, Aqueous
1405196-010B	Piez-01_05072014	5/7/2014 933h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-011A	Piez-02_05072014	5/7/2014 858h	Aqueous	Chloride, Aqueous
1405196-011B	Piez-02_05072014	5/7/2014 858h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405196-012A	Piez-03_05072014	5/7/2014 918h	Aqueous	Chloride, Aqueous
1405196-012B	Piez-03_05072014	5/7/2014 918h	Aqueous	Nitrite/Nitrate (as N), E353.2



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** 2nd Quarter Nitrate 2014  
**Lab Set ID:** 1405196

## Sample Receipt Information:

**Date of Receipt:** 5/9/2014  
**Date(s) of Collection:** 5/6/14 - 5/8/14  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

**Preparation and Analysis Requirements:** The samples were analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, LCSD, MS, MSD, RPD, DUP:

**Method Blanks (MB):** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD):** All LCS and LCSD recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicates (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1405196-002A	Chloride	MS	Sample matrix interference
1405337-006B	Chloride	MS	Sample matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits.

**Corrective Action:** None required.

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Laboratory Director

Jose Rocha  
QA Officer



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405196  
**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> 1405196-011BDUP		Date Analyzed: 05/16/2014 1808h											
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.725	mg/L	E353.2	0.00368	0.0100					0.765	5.37	20	



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.

**Lab Set ID:** 1405196

**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: LCS-R69027</b>		Date Analyzed: 05/16/2014 1350h											
Test Code: 300.0-W													
Chloride	5.21	mg/L	E300.0	0.00623	0.100	5.000	0	104	90 - 110				
<b>Lab Sample ID: LCS-R68640</b>		Date Analyzed: 05/09/2014 1436h											
Test Code: CL-W-4500CLE													
Chloride	24.8	mg/L	SM4500-Cl-E	0.965	5.00	25.00	0	99.3	90 - 110				
<b>Lab Sample ID: LCS-R68938</b>		Date Analyzed: 05/15/2014 2109h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.996	mg/L	E353.2	0.00368	0.100	1.000	0	99.6	90 - 110				
<b>Lab Sample ID: LCS-R69010</b>		Date Analyzed: 05/16/2014 1731h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.01	mg/L	E353.2	0.00368	0.0100	1.000	0	101	90 - 110				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405196  
**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** LCSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> LCSD-R68640		Date Analyzed: 05/09/2014 1437h											
<b>Test Code:</b> CL-W-4500CLE													
Chloride	24.8	mg/L	SM4500-Cl-E	0.965	5.00	25.00	0	99.1	90 - 110	24.8	0.121	10	



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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405196  
**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB-R69027</b> Date Analyzed: 05/16/2014 1334h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
<b>Lab Sample ID: MB-R68640</b> Date Analyzed: 05/09/2014 1435h													
Test Code: CL-W-4500CLE													
Chloride	< 5.00	mg/L	SM4500-Cl-E	0.965	5.00								
<b>Lab Sample ID: MB-R68938</b> Date Analyzed: 05/15/2014 2108h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00368	0.100								
<b>Lab Sample ID: MB-R69010</b> Date Analyzed: 05/16/2014 1729h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00368	0.0100								



**American West**  
ANALYTICAL LABORATORIES

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.

**Lab Set ID:** 1405196

**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1405196-008AMS</b>		Date Analyzed: 05/16/2014 1659h											
Test Code: 300.0-W													
Chloride	4.85	mg/L	E300.0	0.00623	0.100	5.000	0	96.9	90 - 110				
<b>Lab Sample ID: 1405337-006BMS</b>		Date Analyzed: 05/16/2014 1849h											
Test Code: 300.0-W													
Chloride	2,400	mg/L	E300.0	3.12	50.0	2,500	200	88.1	90 - 110				
<b>Lab Sample ID: 1405196-002AMS</b>		Date Analyzed: 05/09/2014 1511h											
Test Code: CL-W-4500CLE													
Chloride	41.1	mg/L	SM4500-Cl-E	0.965	5.00	10.00	29.6	114	90 - 110				
<b>Lab Sample ID: 1405196-001BMS</b>		Date Analyzed: 05/15/2014 2119h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.63	mg/L	E353.2	0.00368	0.100	1.000	0.564	107	90 - 110				

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405196  
**Project:** 2nd Quarter Nitrate 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1405196-008AMSD</b>		Date Analyzed: 05/16/2014 1715h											
Test Code: 300.0-W													
Chloride	5.18	mg/L	E300.0	0.00623	0.100	5.000	0	104	90 - 110	4.85	6.64	20	
<b>Lab Sample ID: 1405337-006BMSD</b>		Date Analyzed: 05/16/2014 1905h											
Test Code: 300.0-W													
Chloride	2,870	mg/L	E300.0	3.12	50.0	2,500	200	107	90 - 110	2400	17.6	20	
<b>Lab Sample ID: 1405196-002AMSD</b>		Date Analyzed: 05/09/2014 1512h											
Test Code: CL-W-4500CLE													
Chloride	39.2	mg/L	SM4500-Cl-E	0.965	5.00	10.00	29.6	95.9	90 - 110	41.1	4.60	10	
<b>Lab Sample ID: 1405196-001BMSD</b>		Date Analyzed: 05/15/2014 2120h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.60	mg/L	E353.2	0.00368	0.100	1.000	0.564	104	90 - 110	1.63	1.64	10	

# American West Analytical Laboratories

**REVISED:** 5/16/2014

UL  
Denison

Samples #8 and #9 moved to 300.0-W to achieve desired  
PQLs. MC

## WORK ORDER Summary

Work Order: **1405196** Page 1 of 2

**Client:** Energy Fuels Resources, Inc.

Due Date: 5/20/2014

**Client ID:** DEN100

**Contact:** Garrin Palmer

**Project:** 2nd Quarter Nitrate 2014

**QC Level:** III

WO Type: Project

**Comments:** PA Rush. QC 3 (Summary/No chromatograms). MUST report project specific DL's: Cl @ 1 mg/L, NO2/NO3 @ 0.1 mg/L. EDD-Denison & LOCUS. Email Group;

AC

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1405196-001A	TWN-07_05072014	5/7/2014 0821h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-001B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-002A	TWN-04_05062014	5/6/2014 0835h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-002B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-003A	TWN-01_05062014	5/6/2014 0955h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-003B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-004A	TWN-18_05062014	5/6/2014 1028h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-004B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-005A	TWN-03_05072014	5/7/2014 0831h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-005B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-006A	TWN-02_05072014	5/7/2014 0840h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-006B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-007A	TWN-65_05062014	5/6/2014 0835h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-007B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-008A	TWN-07R_05062014	5/6/2014 0737h	5/9/2014 1045h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - cl
1405196-008B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: CL</i>							
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-009A	TWN-60_05082014	5/8/2014 0730h	5/9/2014 1045h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - cl
1405196-009B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: CL</i>							
<i>1 SEL Analytes: NO3NO2N</i>							

# WORK ORDER Summary

Work Order: **1405196** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 5/20/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1405196-010A	Piez-01_05072014	5/7/2014 0933h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-010B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-011A	Piez-02_05072014	5/7/2014 0858h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-011B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							
1405196-012A	Piez-03_05072014	5/7/2014 0918h	5/9/2014 1045h	CL-W-4500CLE	Aqueous	<input type="checkbox"/>	df - cl
1405196-012B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3
<i>1 SEL Analytes: NO3NO2N</i>							



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**CHAIN OF CUSTODY**

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

14051914  
AWAL Lab Sample Set #  
Page 1 of 1

Client: **Energy Fuels Resources, Inc.**  
Address: **6425 S. Hwy. 191**  
**Blanding, UT 84511**  
Contact: **Garrin Palmer**  
Phone #: **(435) 678-2221** Cell #:  
Email: **gpalmer@energyfuels.com; kweinel@energyfuels.com; dturk@energyfuels.com**  
Project Name: **2nd Quarter Nitrate 2014**  
Project #:  
PO #:  
Sampler Name: **Tanner Holliday**

QC Level:		Turn Around Time:		Unless other arrangements have been made, signoff reports will be emailed by 5:00 pm on the day they are due.		Due Date:				
3		Standard								
Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	Field Filtered For:	Known Hazards & Sample Comments	Laboratory Use Only	
									1	2
1 TWN-07_05072014	5/7/2014	821	2	w	x	x				Samples Were: 1. Shipped and hand delivered <b>Fed Ex</b> 2. Ambient or chilled 3. Temperature <b>1.6</b> °C 4. Received Broken/Leaking (Improperly Sealed) <b>N</b> 5. Properly Preserved <b>Y</b> Checked at bench <b>Y</b> 6. Received Within Holding Times <b>N</b>
2 TWN-04_05062014	5/6/2014	835	2	w	x	x				GOC Tag Was: 1. Present on Outer Package <b>Y</b> <b>N</b> <b>NA</b> 2. Intact on Outer Package <b>Y</b> <b>N</b> <b>NA</b> 3. Present on Sample <b>Y</b> <b>N</b> <b>NA</b> 4. Unbroken on Sample <b>Y</b> <b>N</b> <b>NA</b>
3 TWN-01_05062014	5/6/2014	955	2	w	x	x				
4 TWN-18_05062014	5/6/2014	1028	2	w	x	x				Discrepancy Between Sample Labels and GOC Record <b>Y</b> <b>N</b>
5 TWN-03_05072014	5/7/2014	831	2	w	x	x				
6 TWN-02_05072014	5/7/2014	840	2	w	x	x				
7 TWN-65_05062014	5/6/2014	835	2	w	x	x				
8 TWN-07R_05062014	5/6/2014	737	2	w	x	x				
9 TWN-60_05082014	5/8/2014	730	2	w	x	x				
10 Piez-01_05072014	5/7/2014	933	2	w	x	x				
11 Piez-02_05072014	5/7/2014	858	2	w	x	x				
12 Piez-03_05072014	5/7/2014	918	2	w	x	x				
Temp Blank			1	w						

Relinquished by: Signature <i>Garrin Palmer</i>	Date: 5/9/14	Received by: Signature <i>Amber Cluff</i>	Date: 5/9/14	Special Instructions:
Print Name: Garrin Palmer	Time: 1200	Print Name: Amber Cluff	Time: 10:45	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Print Name:	Time:	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Print Name:	Time:	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Print Name:	Time:	

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	-001	-002	-003	-004	-005	-006	-007	-008	-009	-010	-011	-012						
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>																		
NO <sub>2</sub> & NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes																	
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH > 9NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		

- Procedure:
- 1) Pour a small amount of sample in the sample lid
  - 2) Pour sample from Lid gently over wide range pH paper
  - 3) **Do Not** dip the pH paper in the sample bottle or lid
  - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
  - 5) Flag COC, notify client if requested
  - 6) Place client conversation on COC
  - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- \* The sample required additional preservative upon receipt.
- + The sample was received unpreserved
- ▲ The Sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix
- The sample pH was unadjustable to a pH > \_\_\_\_ due to the sample matrix interference



Garrin Palmer  
Energy Fuels Resources, Inc.  
6425 S. Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 2nd Quarter Chloroform 2014

Dear Garrin Palmer:

Lab Set ID: 1405494

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 33 sample(s) on 5/23/2014 for the analyses presented in the following report.

Phone: (801) 263-8686  
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American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by:

**Kyle F. Gross**  
Digitally signed by Kyle F. Gross  
DN: cn=Kyle F. Gross, o=AWAL,  
ou=AWAL-Laboratory Director,  
email=kyle@awal-labs.com, c=US  
Date: 2014.08.05 12:59:17 -06'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405494  
**Date Received:** 5/23/2014 1015h

**Contact:** Garrin Palmer

463 West 3600 South  
 Salt Lake City, UT 84115

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405494-001A	TW4-03R_05192014	5/19/2014 1500h	Aqueous	Anions, E300.0
1405494-001B	TW4-03R_05192014	5/19/2014 1500h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-001C	TW4-03R_05192014	5/19/2014 1500h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-002A	TW4-03_05212014	5/21/2014 706h	Aqueous	Anions, E300.0
1405494-002B	TW4-03_05212014	5/21/2014 706h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-002C	TW4-03_05212014	5/21/2014 706h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-003A	TW4-12_05212014	5/21/2014 725h	Aqueous	Anions, E300.0
1405494-003B	TW4-12_05212014	5/21/2014 725h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-003C	TW4-12_05212014	5/21/2014 725h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-004A	TW4-28_05212014	5/21/2014 733h	Aqueous	Anions, E300.0
1405494-004B	TW4-28_05212014	5/21/2014 733h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-004C	TW4-28_05212014	5/21/2014 733h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-005A	TW4-32_05212014	5/21/2014 738h	Aqueous	Anions, E300.0
1405494-005B	TW4-32_05212014	5/21/2014 738h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-005C	TW4-32_05212014	5/21/2014 738h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-006A	TW4-13_05212014	5/21/2014 745h	Aqueous	Anions, E300.0
1405494-006B	TW4-13_05212014	5/21/2014 745h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-006C	TW4-13_05212014	5/21/2014 745h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-007A	TW4-14_05212014	5/21/2014 752h	Aqueous	Anions, E300.0
1405494-007B	TW4-14_05212014	5/21/2014 752h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-007C	TW4-14_05212014	5/21/2014 752h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-008A	TW4-27_05212014	5/21/2014 800h	Aqueous	Anions, E300.0
1405494-008B	TW4-27_05212014	5/21/2014 800h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-008C	TW4-27_05212014	5/21/2014 800h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-009A	TW4-30_05212014	5/21/2014 808h	Aqueous	Anions, E300.0
1405494-009B	TW4-30_05212014	5/21/2014 808h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-009C	TW4-30_05212014	5/21/2014 808h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-010A	TW4-31_05212014	5/21/2014 815h	Aqueous	Anions, E300.0
1405494-010B	TW4-31_05212014	5/21/2014 815h	Aqueous	Nitrite/Nitrate (as N), E353.2



**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405494  
**Date Received:** 5/23/2014 1015h

**Contact:** Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405494-010C	TW4-31_05212014	5/21/2014 815h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-011A	TW4-34_05212014	5/21/2014 823h	Aqueous	Anions, E300.0
1405494-011B	TW4-34_05212014	5/21/2014 823h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-011C	TW4-34_05212014	5/21/2014 823h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-012A	TW4-23_05212014	5/21/2014 831h	Aqueous	Anions, E300.0
1405494-012B	TW4-23_05212014	5/21/2014 831h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-012C	TW4-23_05212014	5/21/2014 831h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-013A	TW4-09_05212014	5/21/2014 841h	Aqueous	Anions, E300.0
1405494-013B	TW4-09_05212014	5/21/2014 841h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-013C	TW4-09_05212014	5/21/2014 841h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-014A	TW4-25_05192014	5/19/2014 1215h	Aqueous	Anions, E300.0
1405494-014B	TW4-25_05192014	5/19/2014 1215h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-014C	TW4-25_05192014	5/19/2014 1215h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-015A	TW4-26_05212014	5/21/2014 900h	Aqueous	Anions, E300.0
1405494-015B	TW4-26_05212014	5/21/2014 900h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-015C	TW4-26_05212014	5/21/2014 900h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-016A	TW4-06_05222014	5/22/2014 655h	Aqueous	Anions, E300.0
1405494-016B	TW4-06_05222014	5/22/2014 655h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-016C	TW4-06_05222014	5/22/2014 655h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-017A	TW4-16_05222014	5/22/2014 713h	Aqueous	Anions, E300.0
1405494-017B	TW4-16_05222014	5/22/2014 713h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-017C	TW4-16_05222014	5/22/2014 713h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-018A	TW4-05_05222014	5/22/2014 720h	Aqueous	Anions, E300.0
1405494-018B	TW4-05_05222014	5/22/2014 720h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-018C	TW4-05_05222014	5/22/2014 720h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-019A	TW4-18_05222014	5/22/2014 727h	Aqueous	Anions, E300.0
1405494-019B	TW4-18_05222014	5/22/2014 727h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-019C	TW4-18_05222014	5/22/2014 727h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-020A	TW4-08_05222014	5/22/2014 750h	Aqueous	Anions, E300.0
1405494-020B	TW4-08_05222014	5/22/2014 750h	Aqueous	Nitrite/Nitrate (as N), E353.2

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405494  
**Date Received:** 5/23/2014 1015h

**Contact:** Garrin Palmer

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405494-020C	TW4-08_05222014	5/22/2014 750h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-021A	TW4-24_05192014	5/19/2014 1230h	Aqueous	Anions, E300.0
1405494-021B	TW4-24_05192014	5/19/2014 1230h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-021C	TW4-24_05192014	5/19/2014 1230h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-022A	TW4-33_05222014	5/22/2014 756h	Aqueous	Anions, E300.0
1405494-022B	TW4-33_05222014	5/22/2014 756h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-022C	TW4-33_05222014	5/22/2014 756h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-023A	TW4-21_05222014	5/22/2014 807h	Aqueous	Anions, E300.0
1405494-023B	TW4-21_05222014	5/22/2014 807h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-023C	TW4-21_05222014	5/22/2014 807h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-024A	TW4-29_05222014	5/22/2014 820h	Aqueous	Anions, E300.0
1405494-024B	TW4-29_05222014	5/22/2014 820h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-024C	TW4-29_05222014	5/22/2014 820h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-025A	TW4-19_05192014	5/19/2014 1035h	Aqueous	Anions, E300.0
1405494-025B	TW4-19_05192014	5/19/2014 1035h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-025C	TW4-19_05192014	5/19/2014 1035h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-026A	TW4-04_05192014	5/19/2014 1410h	Aqueous	Anions, E300.0
1405494-026B	TW4-04_05192014	5/19/2014 1410h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-026C	TW4-04_05192014	5/19/2014 1410h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-027A	MW-04_05192014	5/19/2014 1400h	Aqueous	Anions, E300.0
1405494-027B	MW-04_05192014	5/19/2014 1400h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-027C	MW-04_05192014	5/19/2014 1400h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-028A	MW-26_05192014	5/19/2014 1350h	Aqueous	Anions, E300.0
1405494-028B	MW-26_05192014	5/19/2014 1350h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-028C	MW-26_05192014	5/19/2014 1350h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-029A	TW4-22_05192014	5/19/2014 1245h	Aqueous	Anions, E300.0
1405494-029B	TW4-22_05192014	5/19/2014 1245h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-029C	TW4-22_05192014	5/19/2014 1245h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-030A	TW4-20_05192014	5/19/2014 1255h	Aqueous	Anions, E300.0
1405494-030B	TW4-20_05192014	5/19/2014 1255h	Aqueous	Nitrite/Nitrate (as N), E353.2



**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405494  
**Date Received:** 5/23/2014 1015h

**Contact:** Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405494-030C	TW4-20_05192014	5/19/2014 1255h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-031A	TW4-65_05212014	5/21/2014 725h	Aqueous	Anions, E300.0
1405494-031B	TW4-65_05212014	5/21/2014 725h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-031C	TW4-65_05212014	5/21/2014 725h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-032A	TW4-70_05222014	5/22/2014 713h	Aqueous	Anions, E300.0
1405494-032B	TW4-70_05222014	5/22/2014 713h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405494-032C	TW4-70_05222014	5/22/2014 713h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405494-033A	Trip Blank	5/19/2014	Aqueous	VOA by GC/MS Method 8260C/5030C

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405494

---

### Sample Receipt Information:

**Date of Receipt:** 5/23/2014  
**Date of Collection:** 5/19, 5/21-5/22/2014  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

**Preparation and Analysis Requirements:** The samples were analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD:

**Method Blanks (MB):** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Samples (LCS):** All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicates (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1405494-013B	Nitrate-Nitrite (as N)	MS	Sample matrix interference
1405494-017A	Chloride	MSD	Sample matrix interference
1405494-026A	Chloride	MSD/RPD	Sample non-homogeneity or matrix interference

**Corrective Action:** None required.



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405494  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: LCS-R69475</b> Date Analyzed: 05/27/2014 1547h													
Test Code: 300.0-W													
Chloride	5.18	mg/L	E300.0	0.00623	0.100	5.000	0	104	90 - 110				
<b>Lab Sample ID: LCS-R69740</b> Date Analyzed: 06/03/2014 1136h													
Test Code: 300.0-W													
Chloride	5.18	mg/L	E300.0	0.00623	0.100	5.000	0	104	90 - 110				
<b>Lab Sample ID: LCS-R69801</b> Date Analyzed: 06/04/2014 1339h													
Test Code: 300.0-W													
Chloride	4.89	mg/L	E300.0	0.00623	0.100	5.000	0	97.7	90 - 110				
<b>Lab Sample ID: LCS-R69407</b> Date Analyzed: 05/27/2014 2033h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.968	mg/L	E353.2	0.00368	0.100	1.000	0	96.8	90 - 110				
<b>Lab Sample ID: LCS-R69408</b> Date Analyzed: 05/27/2014 2125h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.910	mg/L	E353.2	0.00368	0.100	1.000	0	91.0	90 - 110				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405494  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB-R69475</b> Date Analyzed: 05/27/2014 1532h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
<b>Lab Sample ID: MB-R69740</b> Date Analyzed: 06/03/2014 1121h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
<b>Lab Sample ID: MB-R69801</b> Date Analyzed: 06/04/2014 1324h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
<b>Lab Sample ID: MB-R69407</b> Date Analyzed: 05/27/2014 2031h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00368	0.100								
<b>Lab Sample ID: MB-R69408</b> Date Analyzed: 05/27/2014 2119h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00368	0.100								



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405494  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1405494-001AMS</b>		Date Analyzed: 05/27/2014 1955h											
Test Code: 300.0-W													
Chloride	5.07	mg/L	E300.0	0.00623	0.100	5.000	0.0434	101	90 - 110				
<b>Lab Sample ID: 1405494-017AMS</b>		Date Analyzed: 06/03/2014 1208h											
Test Code: 300.0-W													
Chloride	617	mg/L	E300.0	0.623	10.0	500.0	80.7	107	90 - 110				
<b>Lab Sample ID: 1405494-026AMS</b>		Date Analyzed: 06/03/2014 1532h											
Test Code: 300.0-W													
Chloride	501	mg/L	E300.0	0.623	10.0	500.0	47.5	90.6	90 - 110				
<b>Lab Sample ID: 1405494-007BMS</b>		Date Analyzed: 05/27/2014 2049h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	15.6	mg/L	E353.2	0.0368	1.00	10.00	4.87	107	90 - 110				
<b>Lab Sample ID: 1405494-013BMS</b>		Date Analyzed: 05/27/2014 2117h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	15.0	mg/L	E353.2	0.0368	1.00	10.00	3.44	116	90 - 110				
<b>Lab Sample ID: 1405494-024BMS</b>		Date Analyzed: 05/27/2014 2136h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.8	mg/L	E353.2	0.0368	1.00	10.00	3.52	93.0	90 - 110				
<b>Lab Sample ID: 1405494-029BMS</b>		Date Analyzed: 05/27/2014 2154h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	152	mg/L	E353.2	0.368	10.0	100.0	47.2	104	90 - 110				

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405494  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1405494-001AMSD</b> Date Analyzed: 05/27/2014 2010h													
Test Code: 300.0-W													
Chloride	4.95	mg/L	E300.0	0.00623	0.100	5.000	0.0434	98.1	90 - 110	5.07	2.55	20	
<b>Lab Sample ID: 1405494-017AMSD</b> Date Analyzed: 06/03/2014 1224h													
Test Code: 300.0-W													
Chloride	637	mg/L	E300.0	0.623	10.0	500.0	80.7	111	90 - 110	617	3.27	20	†
<b>Lab Sample ID: 1405494-026AMSD</b> Date Analyzed: 06/03/2014 1548h													
Test Code: 300.0-W													
Chloride	624	mg/L	E300.0	0.623	10.0	500.0	47.5	115	90 - 110	501	22.0	20	'@
<b>Lab Sample ID: 1405494-007BMSD</b> Date Analyzed: 05/27/2014 2051h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	14.8	mg/L	E353.2	0.0368	1.00	10.00	4.87	99.0	90 - 110	15.6	5.20	10	
<b>Lab Sample ID: 1405494-013BMSD</b> Date Analyzed: 05/27/2014 2118h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	14.2	mg/L	E353.2	0.0368	1.00	10.00	3.44	107	90 - 110	15	5.79	10	
<b>Lab Sample ID: 1405494-024BMSD</b> Date Analyzed: 05/27/2014 2137h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.9	mg/L	E353.2	0.0368	1.00	10.00	3.52	93.8	90 - 110	12.8	0.606	10	
<b>Lab Sample ID: 1405494-029BMSD</b> Date Analyzed: 05/27/2014 2155h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	157	mg/L	E353.2	0.368	10.0	100.0	47.2	110	90 - 110	152	3.59	10	

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

† - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

# American West Analytical Laboratories

UL  
Denison

## WORK ORDER Summary

Work Order: **1405494** Page 1 of 6

**Client:** Energy Fuels Resources, Inc.

Due Date: 6/4/2014

**Client ID:** DEN100

**Contact:** Garrin Palmer

**Project:** 2nd Quarter Chloroform 2014

**QC Level:** III

WO Type: Project

**Comments:** PA Rush. QC 3 (Summary/No chromatograms). RL of 1 ppm for Chloride and VOC and 0.1 ppm for NO2/NO3. Expected levels provided by client - see Jenn. J-flag what we can't meet. EIM Locus and EDD-Denison. Email Group;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405494-001A	TW4-03R_05192014	5/19/2014 1500h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-001B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-001C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-002A	TW4-03_05212014	5/21/2014 0706h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-002B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-002C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-003A	TW4-12_05212014	5/21/2014 0725h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-003B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-003C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-004A	TW4-28_05212014	5/21/2014 0733h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-004B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-004C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-005A	TW4-32_05212014	5/21/2014 0738h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-005B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-005C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-006A	TW4-13_05212014	5/21/2014 0745h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1

# WORK ORDER Summary

Work Order: **1405494** Page 2 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 6/4/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405494-006B	TW4-13_05212014	5/21/2014 0745h	5/23/2014 1015h	NO2/NO3-W-353.2	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3	1
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-006C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-007A	TW4-14_05212014	5/21/2014 0752h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-007B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-007C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-008A	TW4-27_05212014	5/21/2014 0800h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-008B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-008C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-009A	TW4-30_05212014	5/21/2014 0808h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-009B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-009C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-010A	TW4-31_05212014	5/21/2014 0815h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-010B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-010C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-011A	TW4-34_05212014	5/21/2014 0823h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-011B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-011C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-012A	TW4-23_05212014	5/21/2014 0831h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				<i>1 SEL Analytes: CL</i>				
1405494-012B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				

# WORK ORDER Summary

Work Order: **1405494** Page 3 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 6/4/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405494-012C	TW4-23_05212014	5/21/2014 0831h	5/23/2014 1015h	8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1405494-013A	TW4-09_05212014	5/21/2014 0841h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-013B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-013C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-014A	TW4-25_05192014	5/19/2014 1215h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-014B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-014C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-015A	TW4-26_05212014	5/21/2014 0900h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-015B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-015C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-016A	TW4-06_05222014	5/22/2014 0655h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-016B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-016C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-017A	TW4-16_05222014	5/22/2014 0713h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-017B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-017C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-018A	TW4-05_05222014	5/22/2014 0720h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-018B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-018C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3

# WORK ORDER Summary

Work Order: **1405494** Page 4 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 6/4/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage			
1405494-019A	TW4-18_05222014	5/22/2014 0727h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-019B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-019C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-020A	TW4-08_05222014	5/22/2014 0750h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-020B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-020C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-021A	TW4-24_05192014	5/19/2014 1230h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-021B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-021C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-022A	TW4-33_05222014	5/22/2014 0756h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-022B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-022C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-023A	TW4-21_05222014	5/22/2014 0807h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-023B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-023C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-024A	TW4-29_05222014	5/22/2014 0820h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
<i>1 SEL Analytes: CL</i>										
1405494-024B				NO2/NO3-W-353.2			<input checked="" type="checkbox"/>	df - no2/no3		
1405494-024C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3		
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>						
1405494-025A	TW4-19_05192014	5/19/2014 1035h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1		
				<i>1 SEL Analytes: CL</i>						

# WORK ORDER Summary

Work Order: **1405494** Page 5 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 6/4/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405494-025B	TW4-19_05192014	5/19/2014 1035h	5/23/2014 1015h	NO2/NO3-W-353.2	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3	1
1405494-025C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-026A	TW4-04_05192014	5/19/2014 1410h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-026B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-026C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-027A	MW-04_05192014	5/19/2014 1400h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-027B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-027C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-028A	MW-26_05192014	5/19/2014 1350h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-028B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-028C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-029A	TW4-22_05192014	5/19/2014 1245h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-029B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-029C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-030A	TW4-20_05192014	5/19/2014 1255h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-030B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405494-030C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405494-031A	TW4-65_05212014	5/21/2014 0725h	5/23/2014 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-031B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				

# WORK ORDER Summary

Work Order: **1405494** Page 6 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 6/4/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405494-031C	TW4-65_05212014	5/21/2014 0725h	5/23/2014 1015h	8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1405494-032A	TW4-70_05222014	5/22/2014 0713h	5/23/2014 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405494-032B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405494-032C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405494-033A	Trip Blank	5/19/2014	5/23/2014 1015h	8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3



# AMERICAN WEST ANALYTICAL LABORATORIES

463 W. 3600 S. SALT LAKE CITY, UT 84115  
 PHONE # (801) 263-8686 TOLL FREE # (888) 263-8686  
 FAX # (801) 263-8687 EMAIL AWAL@AWAL-LABS.COM  
 WWW.AWAL-LABS.COM

## CHAIN OF CUSTODY

ALL ANALYSIS WILL BE CONDUCTED USING NELAP ACCREDITED METHODS AND ALL DATA WILL BE REPORTED USING AWAL'S STANDARD ANALYTE LISTS AND REPORTING LIMITS (PQL) UNLESS SPECIFICALLY REQUESTED OTHERWISE ON THIS CHAIN OF CUSTODY AND/OR ATTACHED DOCUMENTATION.

1405494  
 AWAL LAB SAMPLE SET #  
 PAGE 1 OF 3

CLIENT: **Energy Fuels Resources, Inc.**  
 ADDRESS: **6425 S. Hwy. 191**  
**Blanding, UT 84511**  
 CONTACT: **Garrin Palmer**  
 PHONE #: **(435) 678-2221** CELL #:  
 EMAIL: **gpalmer@energyfuels.com; KWeinel@energyfuels.com; dturk@energyfuels.com**  
 PROJECT NAME: **2nd Quarter Chloroform 2014**  
 PROJECT #:  
 PO #:  
 SAMPLER NAME: **Tanner Holliday, Garrin Palmer**

QC LEVEL:		TURN AROUND TIME:		UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE, SIGNED REPORTS WILL BE EMAILED BY 5:00 PM ON THE DAY THEY ARE DUE.		DUE DATE:														
3		STANDARD		X INCLUDE EDD: LOCUS UPLOAD EXCEL FIELD FILTERED FOR:																
				FOR COMPLIANCE WITH:		LABORATORY USE ONLY														
				<input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> NON-COMPLIANCE <input type="checkbox"/> OTHER:		SAMPLES WERE Fed X 1 SHIPPED OR HAND DELIVERED 2 AMBIENT OR CHILLED 3 TEMPERATURE 38 °C 4 RECEIVED BROKEN/LEAKING (IMPROPERLY SEALED) Y N 5 PROPERLY PRESERVED Y N 6 RECEIVED WITHIN HOLDING TIMES Y N														
				KNOWN HAZARDS & SAMPLE COMMENTS		COC TAPES WERE:														
						1 PRESENT ON OUTER PACKAGE Y N NA 2 UNBROKEN ON OUTER PACKAGE Y N NA 3 PRESENT ON SAMPLE Y N NA 4 UNBROKEN ON SAMPLE Y N NA														
						DISCREPANCIES BETWEEN SAMPLE LABELS AND COC RECORD?														
						Y N														
1	TW4-03R_05192014	5/19/2014	1500	5	W	X	X	X												
2	TW4-03_05212014	5/21/2014	706	5	W	X	X	X												
3	TW4-12_05212014	5/21/2014	725	5	W	X	X	X												
4	TW4-28_05212014	5/21/2014	733	5	W	X	X	X												
5	TW4-32_05212014	5/21/2014	738	5	W	X	X	X												
6	TW4-13_05212014	5/21/2014	745	5	W	X	X	X												
7	TW4-14_05212014	5/21/2014	752	5	W	X	X	X												
8	TW4-27_05212014	5/21/2014	800	5	W	X	X	X												
9	TW4-30_05212014	5/21/2014	808	5	W	X	X	X												
10	TW4-31_05212014	5/21/2014	815	5	W	X	X	X												
	TW4-34_05212014	5/21/2014	823	5	W	X	X	X												
11	TW4-23_05212014	5/21/2014	831	5	W	X	X	X												
12	TW4-09_05212014	5/21/2014	841	5	W	X	X	X												

RELINQUISHED BY: SIGNATURE: <i>Tanner Holliday</i>	DATE: 5/22/2014	RECEIVED BY: SIGNATURE: <i>[Signature]</i>	DATE:	SPECIAL INSTRUCTIONS:  See the Analytical Scope of Work for Reporting Limits and VOC analyte list. <b>(Please Report to 1.0 PPB)</b>
PRINT NAME: <i>Tanner Holliday</i>	TIME: 1030	PRINT NAME:	TIME:	
RELINQUISHED BY: SIGNATURE:	DATE:	RECEIVED BY: SIGNATURE: <i>[Signature]</i>	DATE: 5/23/14	
PRINT NAME:	TIME:	PRINT NAME: <i>[Signature]</i>	TIME: 1015	
RELINQUISHED BY: SIGNATURE:	DATE:	RECEIVED BY: SIGNATURE:	DATE:	
PRINT NAME:	TIME:	PRINT NAME:	TIME:	
RELINQUISHED BY: SIGNATURE:	DATE:	RECEIVED BY: SIGNATURE:	DATE:	
PRINT NAME:	TIME:	PRINT NAME:	TIME:	





**AMERICAN WEST  
ANALYTICAL LABORATORIES**

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**CHAIN OF CUSTODY**

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1405494  
 AWAL LAB SAMPLE SET #  
 PAGE 3 OF 3

CLIENT: **Energy Fuels Resources, Inc.**  
 ADDRESS: **6425 S. Hwy. 191**  
**Blanding, UT 84511**  
 CONTACT: **Garrin Palmer**  
 PHONE #: **(435) 678-2221** CELL #:  
**gpalmer@energyfuels.com; kweinel@energyfuels.com;**  
 EMAIL: **dturk@energyfuels.com**  
 PROJECT NAME: **2nd Quarter Chloroform 2014**  
 PROJECT #:  
 PO #:  
 SAMPLER NAME: **Tanner Holliday, Garrin Palmer**

QC LEVEL:	TURN AROUND TIME:	UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE, SIGNED REPORTS WILL BE EMAILED BY 5:00 PM ON THE DAY THEY ARE DUE.
3	STANDARD	
		<input checked="" type="checkbox"/> INCLUDE EDD: LOCUS UPLOAD EXCEL FIELD FILTERED FOR:  FOR COMPLIANCE WITH: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> NON-COMPLIANCE <input type="checkbox"/> OTHER:  KNOWN HAZARDS & SAMPLE COMMENTS
# OF CONTAINERS	SAMPLE MATRIX	
	NO2/NO3 (353.2)	
	Cl (4500 or 300.0)	
	VOCs (9260C)	

DUE DATE:
LABORATORY USE ONLY
SAMPLES WITH:
1 SHIPPED OR HAND DELIVERED
2 ACCIDENT OR CHILLED
3 TEMPERATURE 3.5 °C
4 RECEIVED BROKEN/LEAKING (IMPROPERLY SEALED)
5 PROPERLY PRESERVED
6 RECEIVED WITHIN HOLDING TIMES
COG TAPE WAS:
1 PRESENT ON OUTER PACKAGE
2 UNBROKEN ON OUTER PACKAGE
3 PRESENT ON SAMPLE
4 UNBROKEN ON SAMPLE
DISCREPANCIES BETWEEN SAMPLE LABEL AND COG RECORD?

SAMPLE ID:	DATE SAMPLED	TIME SAMPLED	# OF CONTAINERS	SAMPLE MATRIX	NO2/NO3 (353.2)	Cl (4500 or 300.0)	VOCs (9260C)
1 MW-04_05192014	5/19/2014	1400	5	W	X	X	X
2 MW-26_05192014	5/19/2014	1350	5	W	X	X	X
3 TW4-22_05192014	5/19/2014	1245	5	W	X	X	X
4 TW4-20_05192014	5/19/2014	1255	5	W	X	X	X
5 TW4-65_05212014	5/21/2014	725	5	W	X	X	X
6 TW4-70_05222014	5/22/2014	713	5	W	X	X	X
7 TRIP BLANK	5/19/2014		3	W			X
8 TEMP BLANK	5/22/2014		1	W			
9							
10							
11							
12							

RELINQUISHED BY: <i>Tanner Holliday</i> SIGNATURE	DATE: 5/22/2014 TIME: 10:30	RECEIVED BY: <i>[Signature]</i> SIGNATURE	DATE: 5/23/14 TIME: 10:15
PRINT NAME: <i>Tanner Holliday</i>		PRINT NAME: <i>[Name]</i>	
RELINQUISHED BY: <i>[Signature]</i>		RECEIVED BY: <i>[Signature]</i>	
PRINT NAME: <i>[Name]</i>		PRINT NAME: <i>[Name]</i>	
RELINQUISHED BY: <i>[Signature]</i>		RECEIVED BY: <i>[Signature]</i>	
PRINT NAME: <i>[Name]</i>		PRINT NAME: <i>[Name]</i>	

SPECIAL INSTRUCTIONS:  
 See the Analytical Scope of Work for Reporting Limits and VOC analyte list.  
 (Please Report to 1.0 PPB)





Garrin Palmer  
Energy Fuels Resources, Inc.  
6425 S. Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 2nd Quarter Chloroform 2014

Dear Garrin Palmer:

Lab Set ID: 1405562

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 9 sample(s) on 5/28/2014 for the analyses presented in the following report.

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com  
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by:

**Kyle F. Gross**  
Digitally signed by Kyle F. Gross  
DN: cn=Kyle F. Gross, o=AWAL,  
ou=AWAL-Laboratory Director,  
email=kyle@awal-labs.com, c=US  
Date: 2014.06.05 13:54:04 -06'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405562  
**Date Received:** 5/28/2014 940h

**Contact:** Garrin Palmer

463 West 3600 South  
Salt Lake City, UT 84115

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 e-mail: awal@awal-labs.com  
 web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1405562-001A	MW-32_05232014	5/23/2014 1250h	Aqueous	Anions, E300.0
1405562-001B	MW-32_05232014	5/23/2014 1250h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-001C	MW-32_05232014	5/23/2014 1250h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-002A	TW4-11_05232014	5/23/2014 702h	Aqueous	Anions, E300.0
1405562-002B	TW4-11_05232014	5/23/2014 702h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-002C	TW4-11_05232014	5/23/2014 702h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-003A	TW4-07_05232014	5/23/2014 712h	Aqueous	Anions, E300.0
1405562-003B	TW4-07_05232014	5/23/2014 712h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-003C	TW4-07_05232014	5/23/2014 712h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-004A	TW4-01_05232014	5/23/2014 728h	Aqueous	Anions, E300.0
1405562-004B	TW4-01_05232014	5/23/2014 728h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-004C	TW4-01_05232014	5/23/2014 728h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-005A	TW4-10_05232014	5/23/2014 740h	Aqueous	Anions, E300.0
1405562-005B	TW4-10_05232014	5/23/2014 740h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-005C	TW4-10_05232014	5/23/2014 740h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-006A	TW4-02_05232014	5/23/2014 755h	Aqueous	Anions, E300.0
1405562-006B	TW4-02_05232014	5/23/2014 755h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-006C	TW4-02_05232014	5/23/2014 755h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-007A	TW4-60_05272014	5/27/2014 1015h	Aqueous	Anions, E300.0
1405562-007B	TW4-60_05272014	5/27/2014 1015h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-007C	TW4-60_05272014	5/27/2014 1015h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-008A	TW4-11R_05222014	5/22/2014 1022h	Aqueous	Anions, E300.0
1405562-008B	TW4-11R_05222014	5/22/2014 1022h	Aqueous	Nitrite/Nitrate (as N), E353.2
1405562-008C	TW4-11R_05222014	5/22/2014 1022h	Aqueous	VOA by GC/MS Method 8260C/5030C
1405562-009A	Trip Blank	5/22/2014	Aqueous	VOA by GC/MS Method 8260C/5030C



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** 2nd Quarter Chloroform 2014  
**Lab Set ID:** 1405562

463 West 3600 South  
Salt Lake City, UT 84115

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### Sample Receipt Information:

**Date of Receipt:** 5/28/2014  
**Date of Collection:** 5/22-5/23 & 5/27/2014  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

**Preparation and Analysis Requirements:** The samples were analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD:

**Method Blanks (MB):** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Samples (LCS):** All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicates (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1405562-001B	Nitrate-Nitrite (as N)	MS/MSD	Sample matrix interference
1405563-001D	Nitrate-Nitrite (as N)	MS/MSD	Sample matrix interference

**Corrective Action:** None required.



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405562  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: LCS-R69833</b>		Date Analyzed: 06/04/2014 1339h											
Test Code: 300.0-W													
Chloride	4.89	mg/L	E300.0	0.00623	0.100	5.000	0	97.7	90 - 110				
<b>Lab Sample ID: LCS-R69751</b>		Date Analyzed: 06/03/2014 2227h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.952	mg/L	E353.2	0.00368	0.100	1.000	0	95.2	90 - 110				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405562  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB-R69833</b>													
Date Analyzed: 06/04/2014 1324h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
<b>Lab Sample ID: MB-R69751</b>													
Date Analyzed: 06/03/2014 2226h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00368	0.100								



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405562  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> 1405563-001BMS		Date Analyzed: 06/04/2014 1910h											
<b>Test Code:</b> 300.0-W													
Chloride	25,200	mg/L	E300.0	31.2	500	25,000	39.9	100	90 - 110				
<b>Lab Sample ID:</b> 1405562-007AMS		Date Analyzed: 06/04/2014 2306h											
<b>Test Code:</b> 300.0-W													
Chloride	4.90	mg/L	E300.0	0.00623	0.100	5.000	0.0161	97.7	90 - 110				
<b>Lab Sample ID:</b> 1405562-001BMS		Date Analyzed: 06/03/2014 2247h											
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.794	mg/L	E353.2	0.00368	0.100	1.000	0	79.4	90 - 110				
<b>Lab Sample ID:</b> 1405563-001DMS		Date Analyzed: 06/03/2014 2253h											
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.817	mg/L	E353.2	0.00368	0.100	1.000	0	81.7	90 - 110				

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1405562  
**Project:** 2nd Quarter Chloroform 2014

**Contact:** Garrin Palmer  
**Dept:** WC  
**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1405563-001BMSD</b>		Date Analyzed: 06/04/2014 1926h											
Test Code: 300.0-W													
Chloride	25,000	mg/L	E300.0	31.2	500	25,000	39.9	99.8	90 - 110	25200	0.691	20	
<b>Lab Sample ID: 1405562-007AMSD</b>		Date Analyzed: 06/04/2014 2322h											
Test Code: 300.0-W													
Chloride	5.46	mg/L	E300.0	0.00623	0.100	5.000	0.0161	109	90 - 110	4.9	10.9	20	
<b>Lab Sample ID: 1405562-001BMSD</b>		Date Analyzed: 06/03/2014 2248h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.842	mg/L	E353.2	0.00368	0.100	1.000	0	84.2	90 - 110	0.794	5.81	10	1
<b>Lab Sample ID: 1405563-001DMSD</b>		Date Analyzed: 06/03/2014 2254h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.839	mg/L	E353.2	0.00368	0.100	1.000	0	83.9	90 - 110	0.817	2.63	10	1

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

**WORK ORDER Summary**

Work Order: **1405562** Page 1 of 2

**Client:** Energy Fuels Resources, Inc.

Due Date: 6/6/2014

**Client ID:** DEN100

**Contact:** Garrin Palmer

**Project:** 2nd Quarter Chloroform 2014

**QC Level:** III

**WO Type:** Project

**Comments:** PA Rush. QC 3 (Summary/No chromatograms). RL of 1 ppm for Chloride and VOC and 0.1 ppm for NO2/NO3. Expected levels provided by client - see Jenn. J-flag what we can't meet. EIM Locus and EDD-Denison. Email Group. el

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405562-001A	MW-32_05232014	5/23/2014 1250h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-001B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405562-001C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405562-002A	TW4-11_05232014	5/23/2014 0702h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-002B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405562-002C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405562-003A	TW4-07_05232014	5/23/2014 0712h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-003B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405562-003C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405562-004A	TW4-01_05232014	5/23/2014 0728h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-004B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405562-004C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405562-005A	TW4-10_05232014	5/23/2014 0740h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-005B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1405562-005C				8260-W <i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1405562-006A	TW4-02_05232014	5/23/2014 0755h	5/28/2014 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1

# WORK ORDER Summary

Work Order: **1405562** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 6/6/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1405562-006B	TW4-02_05232014	5/23/2014 0755h	5/28/2014 0940h	NO2/NO3-W-353.2	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3	1
1405562-006C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405562-007A	TW4-60_05272014	5/27/2014 1015h	5/28/2014 0940h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-007B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405562-007C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405562-008A	TW4-11R_05222014	5/22/2014 1022h	5/28/2014 0940h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1405562-008B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1405562-008C				8260-W		<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				
1405562-009A	Trip Blank	5/22/2014	5/28/2014 0940h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 4 / # of Surr: 4</i>				



# American West Analytical Laboratories

463 W. 3600 S. Salt Lake City, UT 84115  
 Phone # (801) 263-8686 Toll Free # (888) 263-8686  
 Fax # (801) 263-8687 Email [awal@awal-labs.com](mailto:awal@awal-labs.com)  
[www.awal-labs.com](http://www.awal-labs.com)

## CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1405502  
 AWAL Lab Sample Set #  
 Page 1 of 1

Client: **Energy Fuels Resources, Inc.**  
 Address: **6425 S. Hwy. 191**  
**Blanding, UT 84511**  
 Contact: **Garrin Palmer**  
 Phone #: **(435) 678-2221** Cell #  
**gpalmer@energyfuels.com; KWeinel@energyfuels.com;**  
 Email: **dturk@energyfuels.com**  
 Project Name: **2nd Quarter Chloroform 2014**  
 Project #:  
 PO #:  
 Sampler Name: **Tanner Holliday**

QC Level:		Turn Around Time:		Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		Due Date:						
3		Standard										
Sample ID	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	VOCs (8260C)	Field Filtered For:	For Compliance With:	Known Hazards & Sample Comments	Laboratory Use Only	
											Sampled	Time
1 MW-32_05232014	5/23/2014	1250	5	w	x	x	x		<input checked="" type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> Non-Compliance <input type="checkbox"/> Other:		1 Shipped or hand delivered: <input checked="" type="checkbox"/> <i>MS</i>	
2 TW4-11_05232014	5/23/2014	702	5	w	x	x	x				2 Ambient or Chilled: <input checked="" type="checkbox"/> <i>3.0</i>	
3 TW4-07_05232014	5/23/2014	712	5	w	x	x	x				3 Temperature: <input checked="" type="checkbox"/> <i>3.0</i>	
4 TW4-01_05232014	5/23/2014	728	5	w	x	x	x				4 Received Broken/Leaking (Improperly Sealed): <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
5 TW4-10_05232014	5/23/2014	740	5	w	x	x	x				5 Properly Preserved: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
6 TW4-02_05232014	5/23/2014	755	5	w	x	x	x				6 Checked at bench: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
7 TW4-60_05272014	5/27/2014	1015	5	w	x	x	x				7 Received Within Holding Times: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
8 TW4-11R_05222014	5/22/2014	1022	5	ww	x	x	x					
9 Trip Blank	5/22/2014		3	w			x					
10 Temp Blank			1	w								
11												
12												

Relinquished by: Signature <i>Garrin Palmer</i>	Date: 5/27/14	Received by: Signature <i>Elmer Hayes</i>	Date: 5/28/14	Special Instructions:  See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: Garrin Palmer	Time: 1230	Received by: Signature <i>Elmer Hayes</i>	Time: 940	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Received by: Signature	Time:	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Received by: Signature	Time:	
Relinquished by: Signature	Date:	Received by: Signature	Date:	
Print Name:	Time:	Received by: Signature	Time:	

COC Tied Was:  
 1 Present on Outer Package:  Y  N  
 2 Broken on Outer Package:  Y  N  
 3 Present on Sample:  Y  N  
 4 Broken on Sample:  Y  N

Discrepancies Between Sample Labels and COC Record?  
 Y  N

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6	7	8									
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Cyanide	pH >12 NaOH																	
Metals	pH <2 HNO <sub>3</sub>																	
NO <sub>2</sub> & NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes																
O & G	pH <2 HCL																	
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Sulfide	pH > 9NaOH, Zn Acetate																	
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																	

- Procedure:
- 1) Pour a small amount of sample in the sample lid
  - 2) Pour sample from Lid gently over wide range pH paper
  - 3) **Do Not** dip the pH paper in the sample bottle or lid
  - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
  - 5) Flag COC, notify client if requested
  - 6) Place client conversation on COC
  - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- \* The sample required additional preservative upon receipt.
- + The sample was received unpreserved
- ▲ The Sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix
- The sample pH was unadjustable to a pH > \_\_\_\_ due to the sample matrix interference

**Tab H**

**Quality Assurance and Data Validation Tables**

H-1 Field Data QA/QC Evaluation

Location	Casing Volume	2x Casing Volume	Volume Pumped	Volume Check	Conductivity		RPD	pH		RPD	Temp		RPD	Redox Potential		RPD	Turbidity		RPD
Piezometer 1			--		2195		NC	9.47		NC	13.94		NC	189		NC	3.9		NC
Piezometer 2			--		870		NC	7.37		NC	12.37		NC	313		NC	1.8		NC
Piezometer 3			--		3048		NC	11.70		NC	13.76		NC	214		NC	4.5		NC
TWN-1	35.33	70.66	99.00	OK	915.0	916.0	0.11	7.23	7.25	0.28	14.89	14.90	0.07	302	300	0.66	27	29	7.14
TWN-2	NA	Continuously Pumped Well			3182		NC	6.84		NC	12.82		NC	337		NC	0		NC
TWN-3	38.20	76.40	49.50	Pumped Dry	2402.0	2425.0	0.95	7.04	7.03	0.14	12.73	12.80	0.55	NM		NC	NM		NC
TWN-4	49.00	98.00	132.00	OK	1073.0	1072.0	0.09	7.17	7.17	0.00	14.72	14.72	0.00	287	284	1.05	94.0	94.0	0.00
TWN-7	12.21	24.42	16.50	Pumped Dry	1234.0	1239.0	0.40	6.98	7.01	0.43	12.35	12.40	0.40	NM		NC	NM		NC
TWN-18	56.25	112.50	132.00	OK	2252.0	2252.0	0.00	6.98	7.00	0.29	14.60	14.60	0.00	294	290	1.37	321.0	322.0	0.31
TW4-22	NA	Continuously pumped well			6712		NC	6.70		NC	16.26		NC	212		NC	0		NC
TW4-24	NA	Continuously pumped well			8717		NC	6.59		NC	16.77		NC	226		NC	0		NC
TW4-25	NA	Continuously pumped well			2613		NC	6.83		NC	15.02		NC	204		NC	0		NC

NC = Not Calculated

TWN-2 , TW4-22, TW4-24, and TW4-25 are continuously pumping wells.

Piezometers 1, 2, and 3 were not pumped, only one set of parameters were taken.

TWN-3 and TWN-7 were pumped dry and sampled after recovery.

The QAP states that turbidity should be less than 5 Nephelometric Turbidity Units ("NTU") prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP does not require that turbidity measurements be less than 5 NTU prior to sampling. As such, the noted observations regarding turbidity measurements less than 5 NTU below are included for information purposes only.

NM = Not Measured. The QAP does not require the measurement of redox potential or turbidity in wells that were purged to dryness.

## H-2: Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
PIEZ-01	Chloride	5/7/2014	5/9/2014	2	28	OK
PIEZ-01	Nitrate/Nitrite (as N)	5/7/2014	5/15/2014	8	28	OK
PIEZ-02	Chloride	5/7/2014	5/9/2014	2	28	OK
PIEZ-02	Nitrate/Nitrite (as N)	5/7/2014	5/16/2014	9	28	OK
PIEZ-03	Chloride	5/7/2014	5/9/2014	2	28	OK
PIEZ-03	Nitrate/Nitrite (as N)	5/7/2014	5/15/2014	8	28	OK
TWN-01	Chloride	5/6/2014	5/9/2014	3	28	OK
TWN-01	Nitrate/Nitrite (as N)	5/6/2014	5/15/2014	9	28	OK
TWN-02	Chloride	5/7/2014	5/9/2014	2	28	OK
TWN-02	Nitrate/Nitrite (as N)	5/7/2014	5/15/2014	8	28	OK
TWN-03	Chloride	5/7/2014	5/9/2014	2	28	OK
TWN-03	Nitrate/Nitrite (as N)	5/7/2014	5/15/2014	8	28	OK
TWN-04	Chloride	5/6/2014	5/9/2014	3	28	OK
TWN-04	Nitrate/Nitrite (as N)	5/6/2014	5/15/2014	9	28	OK
TWN-07	Chloride	5/7/2014	5/9/2014	2	28	OK
TWN-07	Nitrate/Nitrite (as N)	5/7/2014	5/15/2014	8	28	OK
TWN-07R	Chloride	5/6/2014	5/16/2014	10	28	OK
TWN-07R	Nitrate/Nitrite (as N)	5/6/2014	5/15/2014	9	28	OK
TWN-18	Chloride	5/6/2014	5/9/2014	3	28	OK
TWN-18	Nitrate/Nitrite (as N)	5/6/2014	5/15/2014	9	28	OK
TW4-22	Chloride	5/19/14	6/3/14	15	28	OK
TW4-22	Nitrate/Nitrite (as N)	5/19/14	5/27/14	8	28	OK
TW4-24	Chloride	5/19/14	6/3/14	15	28	OK
TW4-24	Nitrate/Nitrite (as N)	5/19/14	5/27/14	8	28	OK
TW4-25	Chloride	5/19/14	5/28/14	9	28	OK
TW4-25	Nitrate/Nitrite (as N)	5/19/14	5/27/14	8	28	OK
TW4-60	Chloride	5/27/2014	6/4/2014	8	28	OK
TW4-60	Nitrate/Nitrite (as N)	5/27/2014	6/3/2014	7	28	OK
TWN-60	Chloride	5/8/2014	5/16/2014	8	28	OK
TWN-60	Nitrate/Nitrite (as N)	5/8/2014	5/15/2014	7	28	OK
TWN-65	Chloride	5/6/2014	5/9/2014	3	28	OK
TWN-65	Nitrate/Nitrite (as N)	5/6/2014	5/15/2014	9	28	OK

H-3: Analytical Method Check

<b>Parameter</b>	<b>Method</b>	<b>Method Used by Lab</b>
Nitrate	E353.1 or E353.2	E353.2
Chloride	A4500-Cl B or A4500-Cl E or E300.0	A4500-Cl-E or E300.0

Both Nitrate and Chloride were analyzed with the correct analytical method.

H-4 Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Required Reporting Limit	Units	RL Check
PIEZ-01	Chloride	5	mg/L		1	mg/L	OK
PIEZ-01	Nitrate/Nitrite (as N)	1	mg/L		0.1	mg/L	OK
PIEZ-02	Chloride	5	mg/L		1	mg/L	OK
PIEZ-02	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	mg/L	OK
PIEZ-03	Chloride	5	mg/L		1	mg/L	OK
PIEZ-03	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK
TWN-01	Chloride	5	mg/L		1	mg/L	OK
TWN-01	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK
TWN-02	Chloride	5	mg/L		1	mg/L	OK
TWN-02	Nitrate/Nitrite (as N)	10	mg/L		0.1	mg/L	OK
TWN-03	Chloride	25	mg/L		1	mg/L	OK
TWN-03	Nitrate/Nitrite (as N)	10	mg/L		0.1	mg/L	OK
TWN-04	Chloride	5	mg/L		1	mg/L	OK
TWN-04	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK
TWN-07	Chloride	5	mg/L		1	mg/L	OK
TWN-07	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK
TWN-07R	Chloride	1	mg/L	U	1	mg/L	OK
TWN-07R	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	mg/L	OK
TWN-18	Chloride	5	mg/L		1	mg/L	OK
TWN-18	Nitrate/Nitrite (as N)	0.5	mg/L		0.1	mg/L	OK
TW4-22	Chloride	100	mg/L		1	mg/L	OK
TW4-22	Nitrate/Nitrite (as N)	10	mg/L		0.1	mg/L	OK
TW4-24	Chloride	100	mg/L		1	mg/L	OK
TW4-24	Nitrate/Nitrite (as N)	5	mg/L		0.1	mg/L	OK
TW4-25	Chloride	50	mg/L		1	mg/L	OK
TW4-25	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK
TW4-60	Chloride	1	mg/L	U	1	mg/L	OK
TW4-60	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	mg/L	OK
TWN-60	Chloride	1	mg/L	U	1	mg/L	OK
TWN-60	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	mg/L	OK
TWN-65	Chloride	5	mg/L		1	mg/L	OK
TWN-65	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	mg/L	OK

U = Value was reported by the laboratory as nondetect.

H-5 QA/QC Evaluation for Sample Duplicates

Constituent	TWN-04	TWN-65	%RPD
Chloride	29.6	26.6	10.68
Nitrogen	1.55	1.54	0.65

#### H-6 QC Control Limits for Analysis and Blanks

#### Method Blank Detections

All Method Blanks for the quarter were non-detect.

#### Matrix Spike % Recovery Comparison

Lab Report	Lab Sample ID	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD
1405196	1405337-006BMS	N/A	Chloride	88.1	107	90 - 110	17.6
1405196	1405196-002AMS	TWN-04	Chloride	114	95.9	90 - 110	4.6
1405494	1405494-013BMS	TW4-09	Nitrate	116	107	90 - 110	5.79
1405494	1405494-017BMS	TW4-16	Chloride	107	111	90 - 110	3.27
1405494	1405494-026AMS	TW4-04	Chloride	90.6	115	90 - 110	22.0
1405562	1405562-001BMS	MW-32	Nitrate	79.4	84.2	90 - 110	5.81
1405562	1405563-001DMS	N/A	Nitrate	81.7	83.9	90 - 110	2.63

N/A: QC was not performed on an EFRI sample.

#### Laboratory Control Sample

All Laboratory Control Samples were within acceptance limits for the quarter.

H-7 Receipt Temperature Evaluation

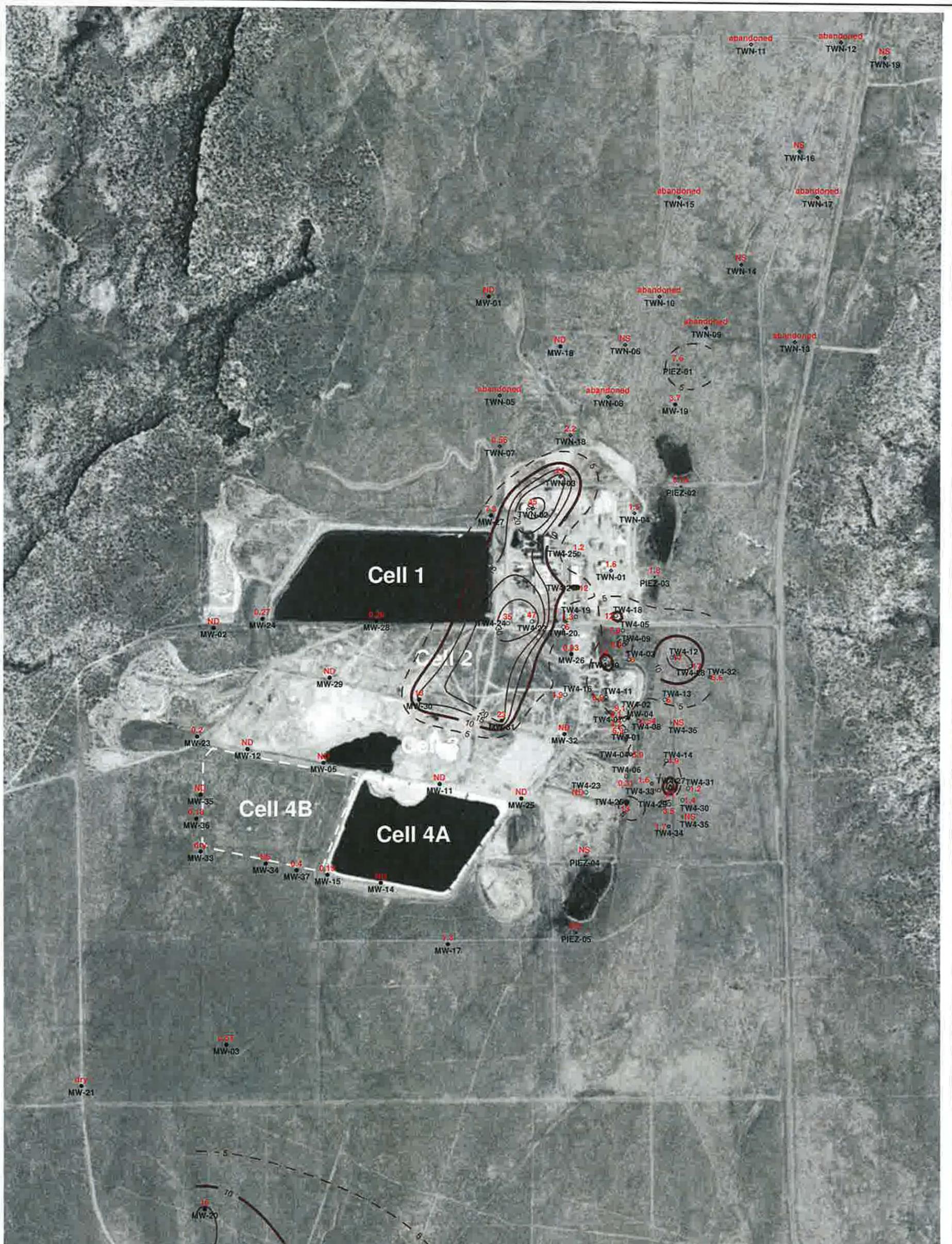
Sample Batch	Wells in Batch	Temperature
1405196	Piezometer 1, Piezometer 2, Piezometer 3, TWN-1, TWN-2, TWN-3, TWN-4, TWN-7, TWN-07R, TWN-18, TWN-60, TWN-65	1.6 °C
1405494	TW4-22, TW4-24, TW4-25	3.8 °C
1405562	TW4-60	3.6 °C

## H-8 Rinsate Evaluation

All Rinsate and DI Blank samples were non-detect for the quarter.

**Tab I**

**Kriged Current Quarter Isoconcentration Maps**



**EXPLANATION**

- NS = not sampled; ND = not detected
- 10 kriged nitrate isocon and label
- MW-4 ● 4.1 perched monitoring well showing concentration in mg/L
- TW4-1 ○ 6.9 temporary perched monitoring well showing concentration in mg/L
- TWN-1 ◇ 1.6 temporary perched nitrate monitoring well showing concentration in mg/L
- PIEZ-1 ○ 7.6 perched piezometer showing concentration in mg/L
- TW4-32 ✱ 5.6 temporary perched monitoring well installed September, 2013 showing concentration in mg/L
- TW4-36 ♀ NS temporary perched monitoring well installed May, 2014 (not sampled)

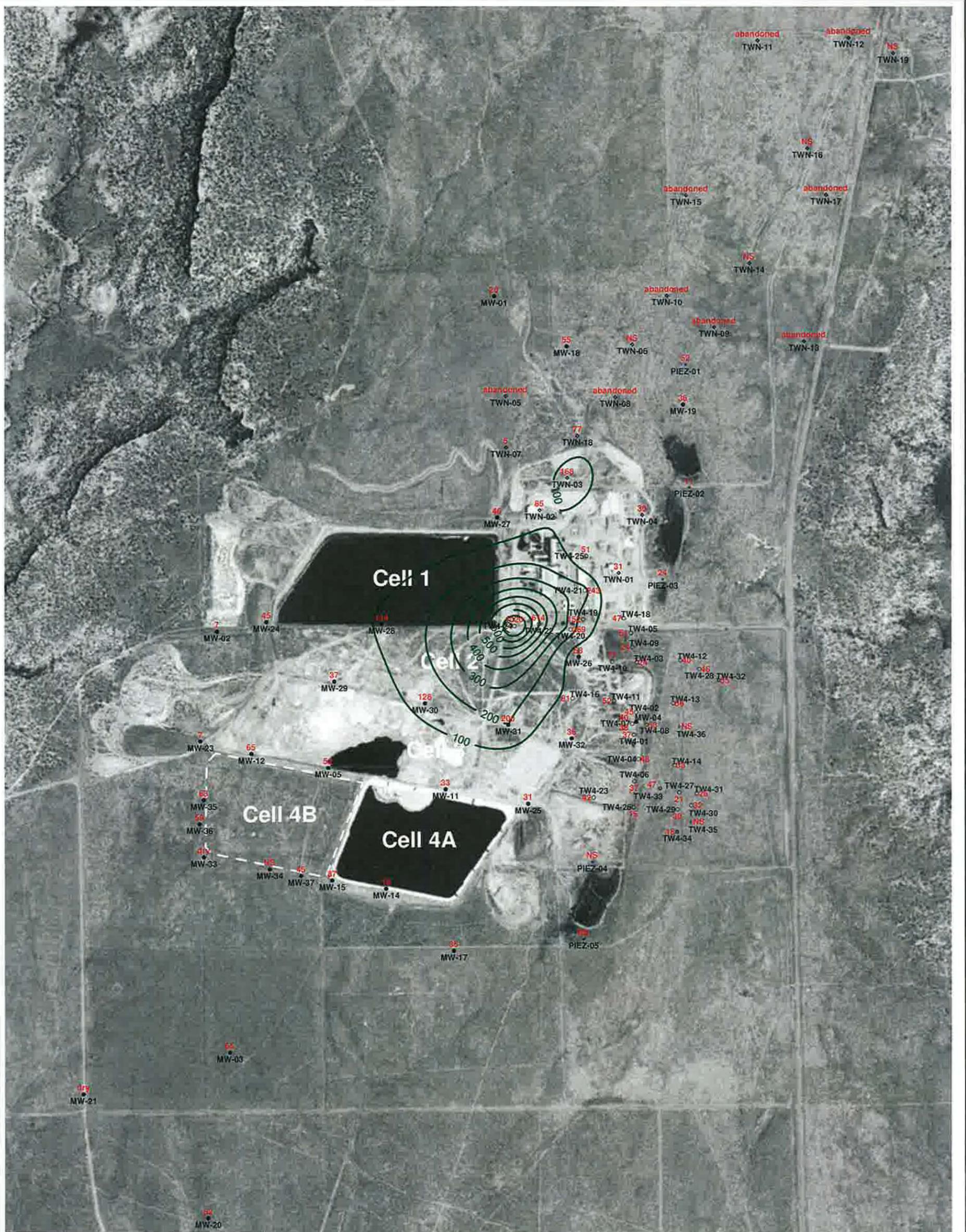
NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO  
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**KRIGED 2nd QUARTER, 2014 NITRATE (mg/L)  
(NITRATE + NITRITE AS N)  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
	07/16/14	H:/718000/aug14/nitrate/Unt0614.srf	I - 1



**EXPLANATION**

NS = not sampled; ND = not detected

-  100 kriged chloride isocon and label
-  MW-4 perched monitoring well showing concentration in mg/L
-  TW4-1 temporary perched monitoring well showing concentration in mg/L
-  TWN-1 temporary perched nitrate monitoring well showing concentration in mg/L
-  PIEZ-1 perched piezometer showing concentration in mg/L
-  TW4-32 temporary perched monitoring well installed September, 2013 showing concentration in mg/L
-  TW4-36 temporary perched monitoring well installed May, 2014 (not sampled)

NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO  
GEO  
CHEM, INC.**

**KRIGED 2nd QUARTER, 2014 CHLORIDE (mg/L)  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
	07/26/14	H:/718000/aug14/chloride/Ucl0614.srf	I - 2

Tab J

Analyte Concentrations Over Time

Piezometer 1

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	6.8	NA
7/14/2009	6.8	60
9/22/2009	7.3	78
10/27/2009	7.4	61
6/2/2010	7.2	52
7/19/2010	6.8	52
12/10/2010	6.5	60
1/31/2011	7	60
4/25/2011	6.8	58
7/25/2011	7	53
10/19/2011	6.6	55
1/11/2012	7.1	78
4/20/2012	6.6	58
7/27/2012	7.2	56
10/17/2012	7.66	55
2/18/2013	8.11	56.7
4/24/2013	8.88	53.3
8/28/2013	7.83	55.1
10/16/2013	6.68	54.1
1/13/2014	6.79	56.2
5/7/2014	7.57	52.1

Piezometer 2

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	0.5	NA
7/14/2009	0.5	7
9/22/2009	0.5	17
10/27/2009	0.6	7
6/2/2010	0.6	8
7/19/2010	0.6	8
12/10/2010	0.2	6
1/31/2011	0.3	9
4/25/2011	0.3	8
7/25/2011	0.1	9
10/19/2011	0.1	8
1/11/2012	0.1	9
4/20/2012	0.2	8
7/27/2012	0.2	9
10/17/2012	0.192	9.5
2/19/2013	0.218	9.67
4/24/2013	0.172	10.3
8/28/2013	0.198	9.66
10/16/2013	0.364	9.22
1/13/2014	0.169	11.4
5/7/2014	0.736	11.4

Piezometer 3

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	0.7	NA
7/14/2009	0.8	12
9/22/2009	0.8	24
10/27/2009	1.2	19
3/24/2010	1.7	116
6/2/2010	1.6	36
7/19/2010	1.6	35
12/10/2010	1.8	25
1/31/2011	1.8	40
4/25/2011	1.7	35
7/25/2011	1.8	61
10/19/2011	1.7	12
1/11/2012	1.8	20
4/20/2012	1.7	53
7/27/2012	1.8	21
10/17/2012	2.75	20.1
2/19/2013	1.85	21
4/24/2013	1.83	21.2
8/28/2013	1.81	22.4
10/16/2013	1.80	23.5
1/13/2014	1.70	26.0
5/7/2014	1.79	23.9

## TWN-1

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	0.7	19
7/21/2009	0.4	17
9/21/2009	0.4	19
10/28/2009	0.5	18
3/17/2010	0.5	17
5/26/2010	0.6	20
9/27/2010	0.6	19
12/7/2010	0.6	14
1/26/2011	0.5	17
4/20/2011	0.5	19
7/26/2011	0.5	14
10/17/2011	0.5	10
1/9/2012	0.6	15
4/18/2012	0.6	17
7/24/2012	0.6	17
10/15/2012	0.432	17.5
2/18/2013	0.681	17.6
4/23/2013	0.84	17.4
8/27/2013	1.24	24.1
10/16/2013	1.61	26.8
1/14/2014	1.47	29.2
5/6/2014	1.63	31.1

TWN-2

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	25.4	29
7/21/2009	25	25
9/21/2009	22.6	17
11/2/2009	20.8	55
3/24/2010	62.1	85
6/2/2010	69	97
9/29/2010	69	104
12/9/2010	48	93
2/1/2011	43	93
4/28/2011	40	85
7/28/2011	33	74
10/20/2011	33	76
1/12/2012	31	86
4/20/2012	48	103
7/31/2012	54	93
10/17/2012	22.1	79
2/19/2013	57.3	80.5
4/24/2013	57.7	82.1
8/27/2013	80	75.9
10/16/2013	111	70.4
1/13/2014	42.6	72.4
5/7/2014	44.7	84.9

TWN-3

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	23.6	96
7/21/2009	25.3	96
9/21/2009	27.1	99
11/2/2009	29	106
3/25/2010	25.3	111
6/3/2010	26	118
7/15/2010	27	106
12/10/2010	24	117
2/1/2011	24	138
4/28/2011	26	128
7/29/2011	25	134
10/20/2011	25	129
1/12/2012	25	143
4/20/2012	24	152
7/31/2012	27	158
10/17/2012	12.1	149
2/19/2013	22.2	157
4/24/2013	27.2	158
8/28/2013	20.9	171
10/17/2013	23.5	163
1/15/2014	19.6	160
5/7/2014	23.6	168

## TWN-4

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	1	13
7/21/2009	0.05	12
9/21/2009	0.4	13
10/28/2009	0.4	11
3/16/2010	0.9	22
5/27/2010	1.0	22
9/27/2010	0.9	19
12/8/2010	1	21
1/25/2011	0.9	21
4/20/2011	0.9	21
7/26/2011	1.1	35
10/18/2011	0.9	20
1/9/2012	0.9	20
4/18/2012	1.1	24
7/25/2012	1.4	25
10/15/2012	1.45	26.4
2/18/2013	1.51	25.3
4/23/2013	1.63	24.4
8/27/2013	1.58	27.2
10/16/2013	1.69	29.4
1/14/2014	1.41	28.4
5/6/2014	1.55	29.6

## TWN-7

Date	Nitrate (mg/l)	Chloride (mg/l)
8/25/2009	ND	11
9/21/2009	ND	7
11/10/2009	0.1	7
3/17/2010	0.8	6
5/28/2010	1.2	6
7/14/2010	1.6	7
12/10/2010	1	4
1/27/2011	1.3	6
4/21/2011	1.7	6
7/29/2011	0.7	5
10/19/2011	2.2	6
1/11/2012	2.3	5
4/20/2012	1.2	6
7/26/2012	0.9	6
10/16/2012	0.641	5.67
2/19/2013	0.591	5.68
4/24/2013	1.16	5.88
8/28/2013	0.835	6.96
10/16/2013	0.986	5.70
1/15/2014	0.882	5.75
5/7/2014	0.564	5.26

TWN-18

Date	Nitrate (mg/l)	Chloride (mg/l)
11/2/2009	1.3	57
3/17/2010	1.6	42
6/1/2010	1.8	63
9/27/2010	1.8	64
12/9/2010	1.6	59
1/27/2011	1.4	61
4/26/2011	1.8	67
7/28/2011	1.8	65
10/18/2011	1.9	60
1/10/2012	1.9	64
4/19/2012	2.1	64
7/26/2012	2.3	67
10/16/2012	1.95	67.5
2/18/2013	2.27	68.7
4/23/2013	2.32	64.3
8/27/2013	2.04	70.4
10/16/2013	2.15	67.3
1/14/2014	2.33	68.4
5/6/2014	2.18	76.5

## TW4-19

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
7/22/2002	42.80	12/7/2005	81
9/12/2002	47.60	3/9/2006	86
3/28/2003	61.40	7/20/2006	123
6/23/2003	11.40	11/9/2006	134
7/15/2003	6.80	2/28/2007	133
8/15/2003	4.00	8/15/2007	129
9/12/2003	5.70	10/10/2007	132
9/25/2003	9.20	3/26/2008	131
10/29/2003	7.70	6/25/2008	128
11/9/2003	4.80	9/10/2008	113
8/16/2004	9.91	10/15/2008	124
9/17/2004	4.50	3/4/2009	127
3/16/2005	5.30	6/23/2009	132
6/7/2005	5.70	9/14/2009	43
8/31/2005	4.60	12/14/2009	124
12/1/2005	0.10	2/17/2010	144
3/9/2006	4.00	6/9/2010	132
6/14/2006	5.20	8/16/2010	142
7/20/2006	4.30	10/11/2010	146
11/9/2006	4.60	2/17/2011	135
2/28/2007	4.00	6/7/2011	148
8/15/2007	4.10	8/17/2011	148
10/10/2007	4.00	11/17/2011	148
3/26/2008	2.20	1/23/2012	138
6/25/2008	2.81	6/6/2012	149
9/10/2008	36.20	9/5/2012	149
10/15/2008	47.80	10/3/2012	150
3/4/2009	3.20	2/11/2013	164
6/23/2009	2.40	6/5/2013	148
9/14/2009	0.10	9/3/2013	179
12/14/2009	26.70	10/29/2013	206
2/17/2010	2.00	1/27/2014	134
6/9/2010	4.40	5/19/2014	152
8/16/2010	5.90		
10/11/2010	2.70		
2/17/2011	17.00		
6/7/2011	12.00		
8/17/2011	3.00		
11/17/2011	5.00		
1/23/2012	0.60		
6/6/2012	2.40		
9/5/2012	2.50		
10/3/2012	4.10		
2/11/2013	7.99		
6/5/2013	2.95		
9/3/2013	17.60		
10/29/2013	4.70		
1/27/2014	1.62		
5/19/2014	1.34		

The sampling program for TW4-19 was updated in the fourth quarter of 2005 to include analysis for chloride as well as nitrate. This change accounts for the different number of data points represented above.

## TW4-21

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
5/25/2005	14.6	12/7/2005	353
8/31/2005	10.1	3/9/2006	347
11/30/2005	9.6	7/20/2006	357
3/9/2006	8.5	11/8/2006	296
6/14/2006	10.2	2/28/2007	306
7/20/2006	8.9	6/27/2007	327
11/8/2006	8.7	8/15/2007	300
2/28/2007	8.7	10/10/2007	288
6/27/2007	8.6	3/26/2008	331
8/15/2007	8.6	6/25/2008	271
10/10/2007	8.3	9/10/2008	244
3/26/2008	14.3	10/15/2008	284
6/25/2008	8.8	3/11/2009	279
9/10/2008	7.6	6/24/2009	291
10/15/2008	8.0	9/15/2009	281
3/11/2009	8.3	12/22/2009	256
6/24/2009	8.1	2/25/2010	228
9/15/2009	9.2	6/10/2010	266
12/22/2009	8.4	8/12/2010	278
2/25/2010	8.4	10/13/2010	210
6/10/2010	12.0	2/22/2011	303
8/12/2010	14.0	6/1/2011	297
10/13/2010	7.0	8/17/2011	287
2/22/2011	9.0	11/16/2011	276
6/1/2011	13.0	1/19/2012	228
8/17/2011	14.0	6/13/2012	285
11/16/2011	13.0	9/13/2012	142
1/19/2012	15.0	10/4/2012	270
6/13/2012	11.0	2/13/2013	221
9/13/2012	13.0	6/18/2013	243
10/4/2012	14.0	9/12/2013	207
2/13/2013	11.8	11/13/2013	206
6/18/2013	13.8	2/5/2014	200
9/12/2013	10.3	5/22/2014	243
11/13/2013	9.0		
2/5/2014	11.4		
5/22/2014	11.5		

The sampling program for TW4-21 was updated in the fourth quarter of 2005 to include analysis for chloride as well as nitrate. This change accounts for the different number of data points represented above.

TW4-22

Date	Nitrate (mg/l)	Chloride (mg/l)
2/28/2007	20.9	347
6/27/2007	19.3	273
8/15/2007	19.3	259
10/10/2007	18.8	238
3/26/2008	39.1	519
6/25/2008	41.9	271
9/10/2008	38.7	524
10/15/2008	36.3	539
3/11/2009	20.7	177
6/24/2009	20.6	177
9/15/2009	40.3	391
12/29/2009	17.8	175
3/3/2010	36.6	427
6/15/2010	19	134
8/12/2010	18	127
8/24/2010	15	130
10/13/2010	16	134
2/23/2011	18	114
6/1/2011	17	138
8/17/2011	15	120
11/16/2011	19	174
1/19/2012	14	36
6/13/2012	12.8	35
9/12/2012	7	121
10/4/2012	14	130
2/11/2013	58	635
6/5/2013	50.2	586
9/3/2013	29.7	487
10/29/2013	45.2	501
1/27/2014	54.6	598
5/19/2014	47.2	614

## TW4-24

Date	Nitrate (mg/l)	Chloride (mg/l)
6/27/2007	26.1	770
8/15/2007	29	791
10/10/2007	24.7	692
3/26/2008	24.4	740
6/25/2008	45.3	834
9/10/2008	38.4	1180
10/15/2008	44.6	1130
3/4/2009	30.5	1010
6/24/2009	30.4	759
9/15/2009	30.7	618
12/17/2009	28.3	1080
2/25/2010	33.1	896
6/9/2010	30	639
8/11/2010	32	556
8/24/2010	31	587
10/6/2010	31	522
2/17/2011	31	1100
5/26/2011	35	1110
8/17/2011	34	967
11/16/2011	35	608
1/18/2012	37	373
6/6/2012	37	355
8/30/2012	37	489
10/3/2012	38	405
2/11/2013	35.9	1260
6/5/2013	23.7	916
9/3/2013	32.6	998
10/29/2013	34.6	1030
1/27/2014	31.6	809
5/19/2014	35	1020

## TW4-25

Date	Nitrate (mg/l)	Chloride (mg/l)
6/27/2007	17.1	395
8/15/2007	16.7	382
10/10/2007	17	356
3/26/2008	18.7	374
6/25/2008	22.1	344
9/10/2008	18.8	333
10/15/2008	21.3	366
3/4/2009	15.3	332
6/24/2009	15.3	328
9/15/2009	3.3	328
12/16/2009	14.2	371
2/23/2010	14.4	296
6/8/2010	16	306
8/10/2010	14	250
10/5/2010	15	312
2/16/2011	15	315
5/25/2011	16	321
8/16/2011	16	276
11/15/2011	16	294
1/18/2012	16	304
5/31/2012	16	287
9/11/2012	17	334
10/3/2012	17	338
2/11/2013	9.04	190
6/5/2013	5.24	136
9/3/2013	5.69	119
10/29/2013	6.10	88.6
1/27/2014	2.16	85.7
5/19/2014	1.21	51.1

## MW-30

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/22/2005	12.4	6/22/2005	125
9/22/2005	12.8	9/22/2005	125
12/14/2005	13.6	12/14/2005	128
3/22/2006	13.8	3/22/2006	125
6/21/2006	14.5	6/21/2006	124
9/13/2006	14.1	9/13/2006	118
10/25/2006	14.6	10/25/2006	124
3/15/2007	14.4	3/15/2007	125
8/22/2007	14.6	8/22/2007	126
10/24/2007	14.9	10/24/2007	122
3/19/2008	14.8	3/19/2008	118
6/3/2008	18.7	6/3/2008	125
8/4/2008	17.3	8/4/2008	121
11/5/2008	15.6	11/5/2008	162
2/3/2009	15.3	2/3/2009	113
5/13/2009	15.1	5/13/2009	122
8/24/2009	20.9	8/24/2009	118
10/14/2009	15.0	10/14/2009	129
1/20/2010	15.4	1/20/2010	106
2/9/2010	16.1	2/9/2010	127
4/27/2010	15.8	4/27/2010	97
5/24/2010	17.0	9/14/2010	111
6/15/2010	15.3	11/9/2010	126
8/24/2010	16.0	2/1/2011	134
9/14/2010	15.0	4/11/2011	134
10/19/2010	15.0	5/10/2011	128
11/9/2010	15.0	6/20/2011	127
12/14/2010	16.0	7/5/2011	127
1/10/2011	15.0	8/3/2011	126
2/1/2011	16.0	9/7/2011	145
3/14/2011	17.0	10/4/2011	129
4/11/2011	16.0	11/8/2011	122
5/10/2011	16.0	12/12/2011	124
6/20/2011	17.0	1/24/2012	124
7/5/2011	17.0	2/14/2012	126
8/3/2011	14.0	3/14/2012	128
9/7/2011	16.0	4/10/2012	128
10/4/2011	16.0	5/2/2012	124
11/8/2011	16.0	6/18/2012	131
12/12/2011	16.0	7/10/2012	128
1/24/2012	17.0	8/7/2012	139
2/14/2012	17.0	9/19/2012	130
3/14/2012	18.0	10/23/2012	135
4/10/2012	17.0	11/13/2012	114
5/2/2012	16.0	12/26/2012	122

MW-30

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/18/2012	15.0	1/23/2013	128
7/10/2012	17.0	2/26/2013	129
8/7/2012	18.0	3/20/2013	126
9/19/2012	16.0	4/17/2013	117
10/23/2012	16.2	5/15/2013	119
11/13/2012	18.5	6/25/2013	127
12/26/2012	17.2	7/10/2013	130
1/23/2013	19.2	8/20/2013	126
2/26/2013	21.4	9/18/2013	131
3/20/2013	14.3	10/22/2013	128
4/17/2013	16.8	11/20/2013	124
5/15/2013	18.8	12/18/2013	134
6/25/2013	16.1	1/8/2014	131
7/10/2013	17.6	2/25/2014	135
8/20/2013	16.4	3/11/2014	144
9/18/2013	16.9	6/3/2014	128
10/22/2013	19.7		
11/20/2013	19.5		
12/18/2013	20.7		
1/8/2014	24.0		
2/25/2014	18.4		
3/11/2014	21.3		
6/3/2014	19.4		

Under the groundwater sampling program, accelerated monitoring for nitrate began in MW-30 prior to when the accelerated monitoring for chloride began. This difference accounts for the different number of data points represented above.

## MW-31

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/22/2005	24.2	6/22/2005	139
9/22/2005	22.4	9/22/2005	136
12/14/2005	23.8	12/14/2005	135
3/22/2006	24.1	3/22/2006	133
6/21/2006	25.3	6/21/2006	138
9/13/2006	24.6	9/13/2006	131
10/25/2006	25.1	10/25/2006	127
3/15/2007	23.2	3/15/2007	132
3/15/2007	22.0	3/15/2007	132
8/27/2007	23.3	8/27/2007	136
10/24/2007	24.6	10/24/2007	122
3/19/2008	25.0	3/19/2008	124
6/3/2008	29.3	6/3/2008	128
8/4/2008	28.7	8/4/2008	124
11/11/2008	29.9	11/11/2008	119
2/3/2009	23.4	2/3/2009	115
5/13/2009	22.4	5/13/2009	124
8/24/2009	15.4	8/24/2009	122
10/14/2009	22.6	10/14/2009	138
2/9/2010	21.7	2/9/2010	128
4/20/2010	22.5	4/20/2010	128
5/21/2010	23.0	9/13/2010	139
6/15/2010	21.1	11/9/2010	138
8/24/2010	22.0	2/1/2011	145
9/13/2010	21.0	4/1/2011	143
10/19/2010	20.0	5/10/2011	143
11/9/2010	20.0	6/20/2011	145
12/14/2010	20.0	7/5/2011	148
1/10/2011	19.0	8/2/2011	148
2/1/2011	21.0	9/6/2011	148
3/14/2011	22.0	10/3/2011	145
4/1/2011	21.0	11/8/2011	145
5/10/2011	20.0	12/12/2011	148
6/20/2011	22.0	1/24/2012	155
7/5/2011	22.0	2/13/2012	150
8/2/2011	20.0	3/13/2012	152
9/6/2011	21.0	4/9/2012	160
10/3/2011	21.0	5/2/2012	151
11/8/2011	21.0	6/18/2012	138
12/12/2011	21.0	7/9/2012	161
1/24/2012	21.0	8/6/2012	175
2/13/2012	21.0	9/18/2012	172
3/13/2012	22.0	10/22/2012	157
4/9/2012	21.0	11/6/2012	189
5/2/2012	20.0	12/18/2012	170

MW-31

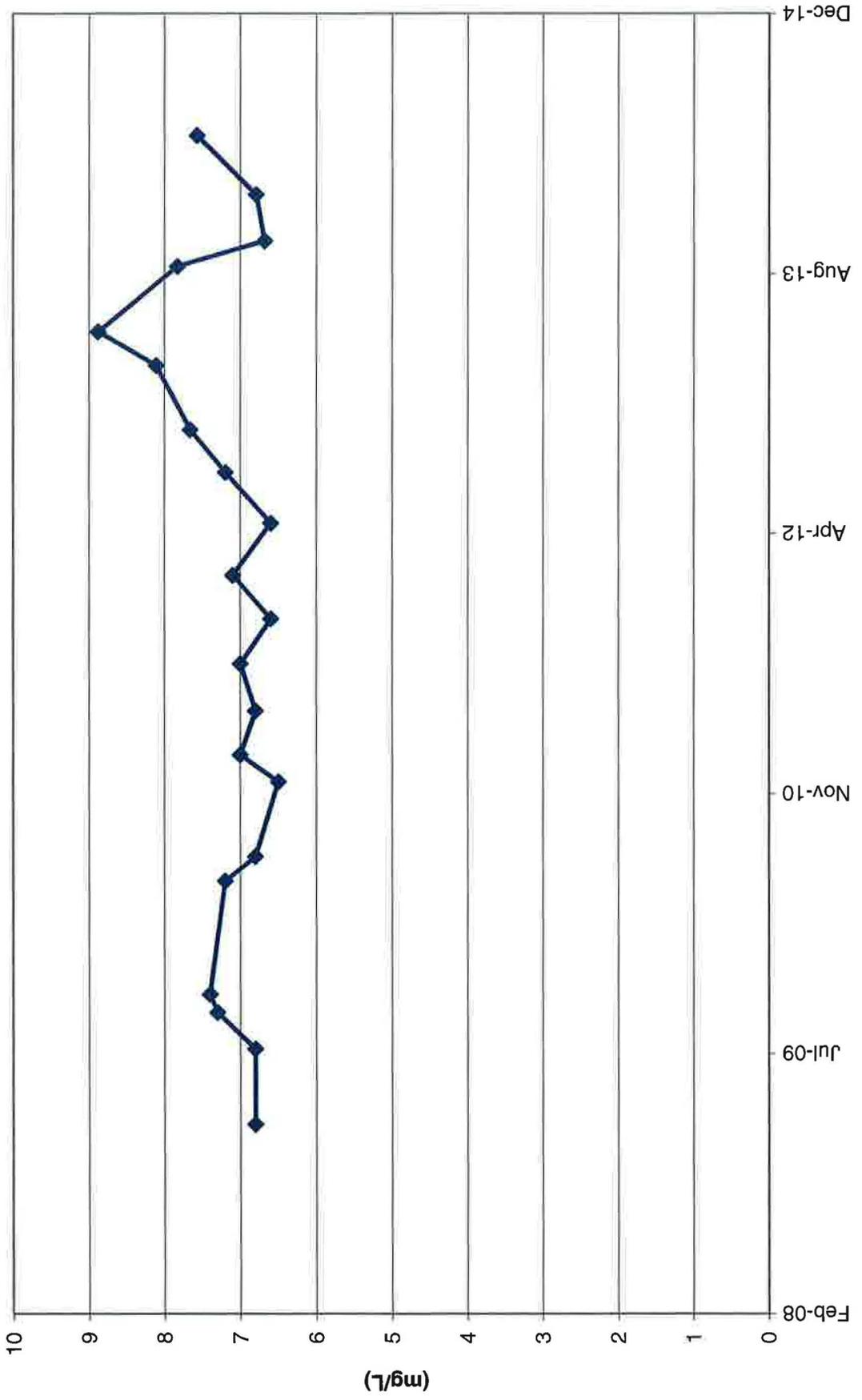
Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/18/2012	21.6	1/22/2013	176
7/9/2012	21.0	2/19/2013	174
8/6/2012	21.0	3/19/2013	168
9/18/2012	21.0	4/16/2013	171
10/22/2012	18.0	5/13/2013	169
11/6/2012	23.6	6/24/2013	179
12/18/2012	22.2	7/9/2013	182
1/22/2013	22.8	8/19/2013	183
2/19/2013	19.3	9/17/2013	193
3/19/2013	19.1	10/23/2013	188
4/16/2013	18.8	11/18/2013	174
5/13/2013	23.8	12/17/2013	203
6/24/2013	20.0	1/7/2014	194
7/9/2013	21.7	2/17/2014	197
8/19/2013	16.0	3/10/2014	230
9/17/2013	21.2	6/2/2014	173
10/23/2013	21.2		
11/18/2013	23.9		
12/17/2013	24.2		
1/7/2014	24.0		
2/17/2014	20.6		
3/10/2014	26.2		
6/2/2014	23.1		

Under the groundwater sampling program, accelerated monitoring for nitrate began in MW-31 prior to when the accelerated monitoring for chloride began. This difference accounts for the different number of data points represented above.

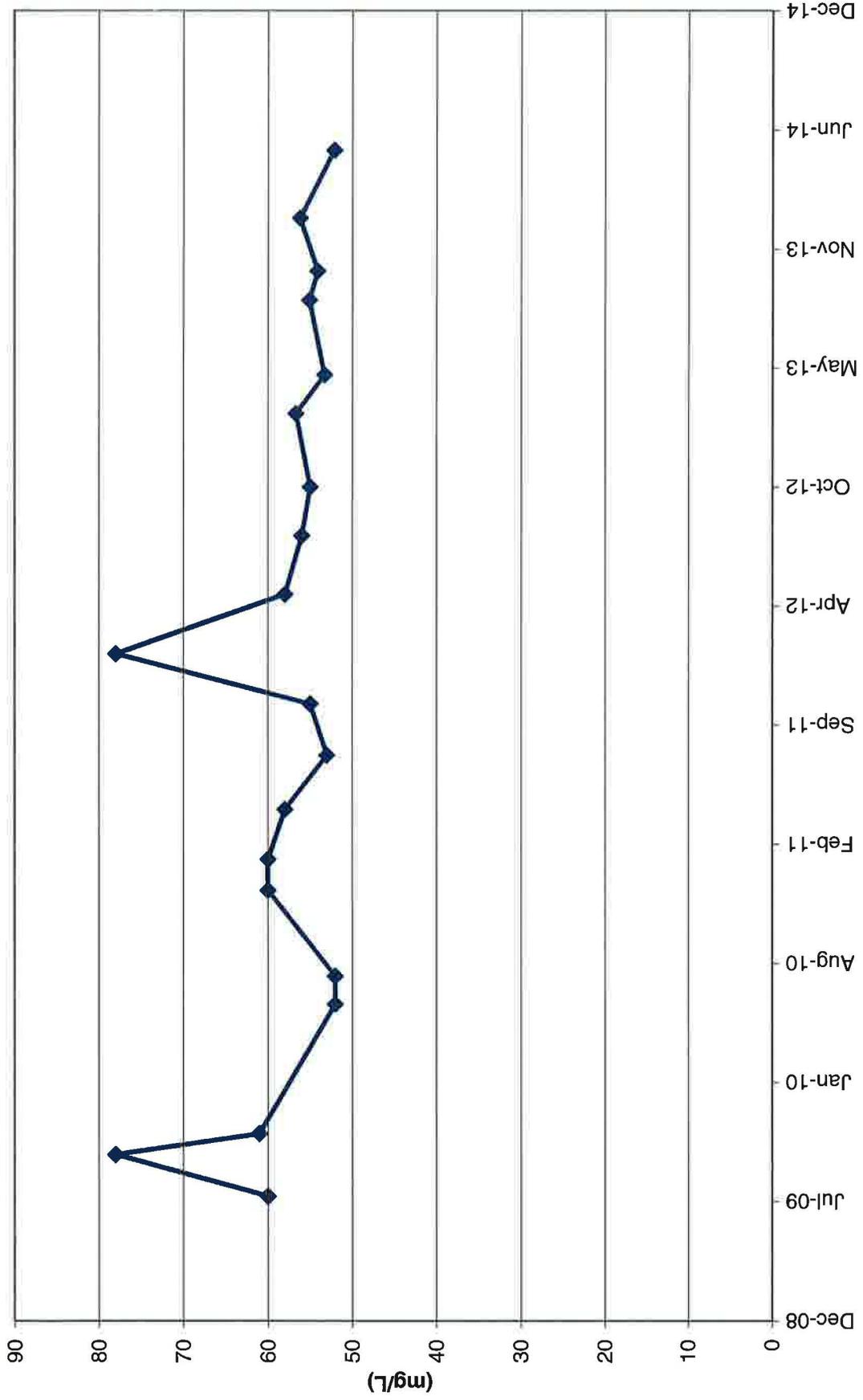
Tab K

Concentration Trend Graphs

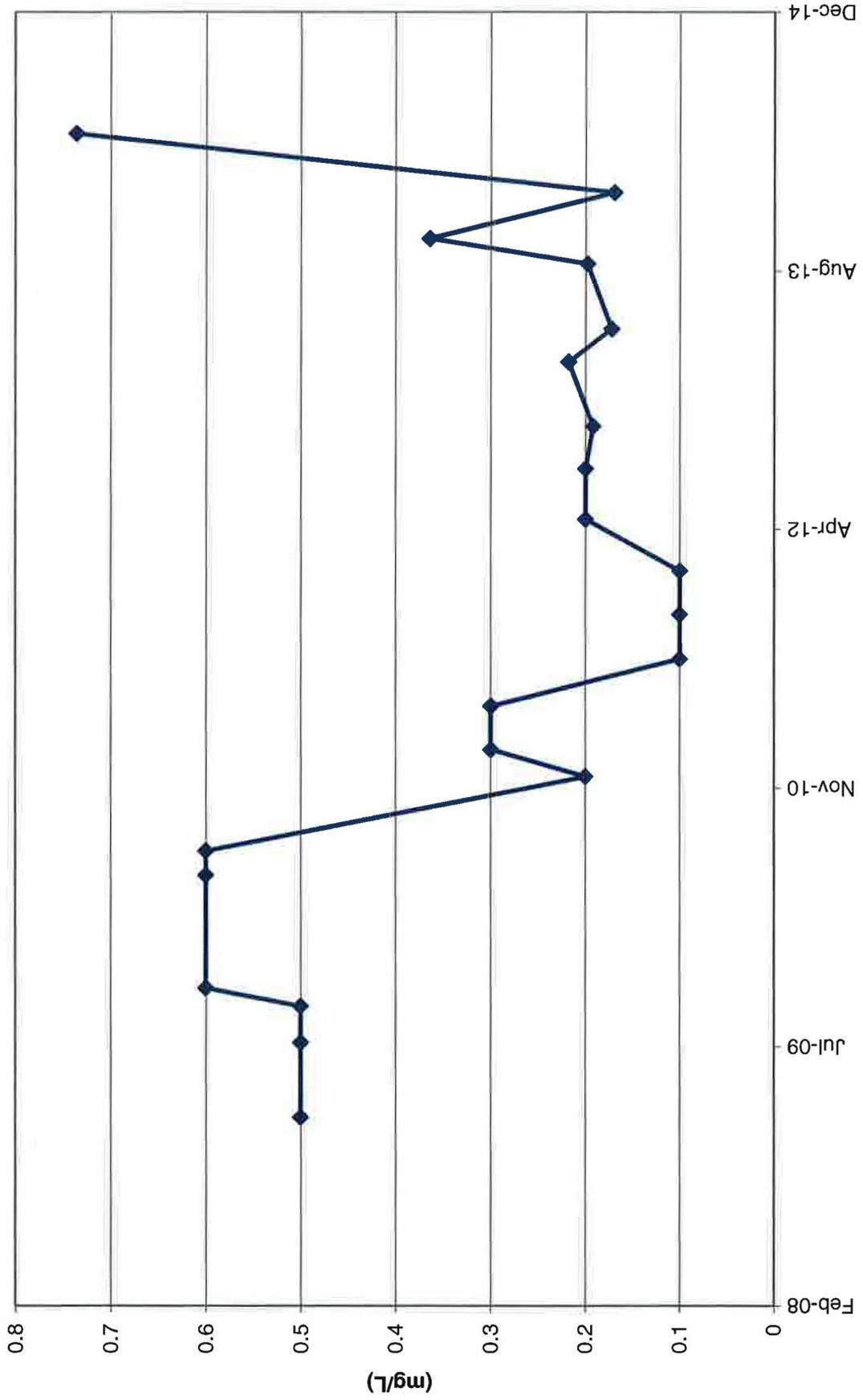
Piezometer 1 Nitrate Concentrations



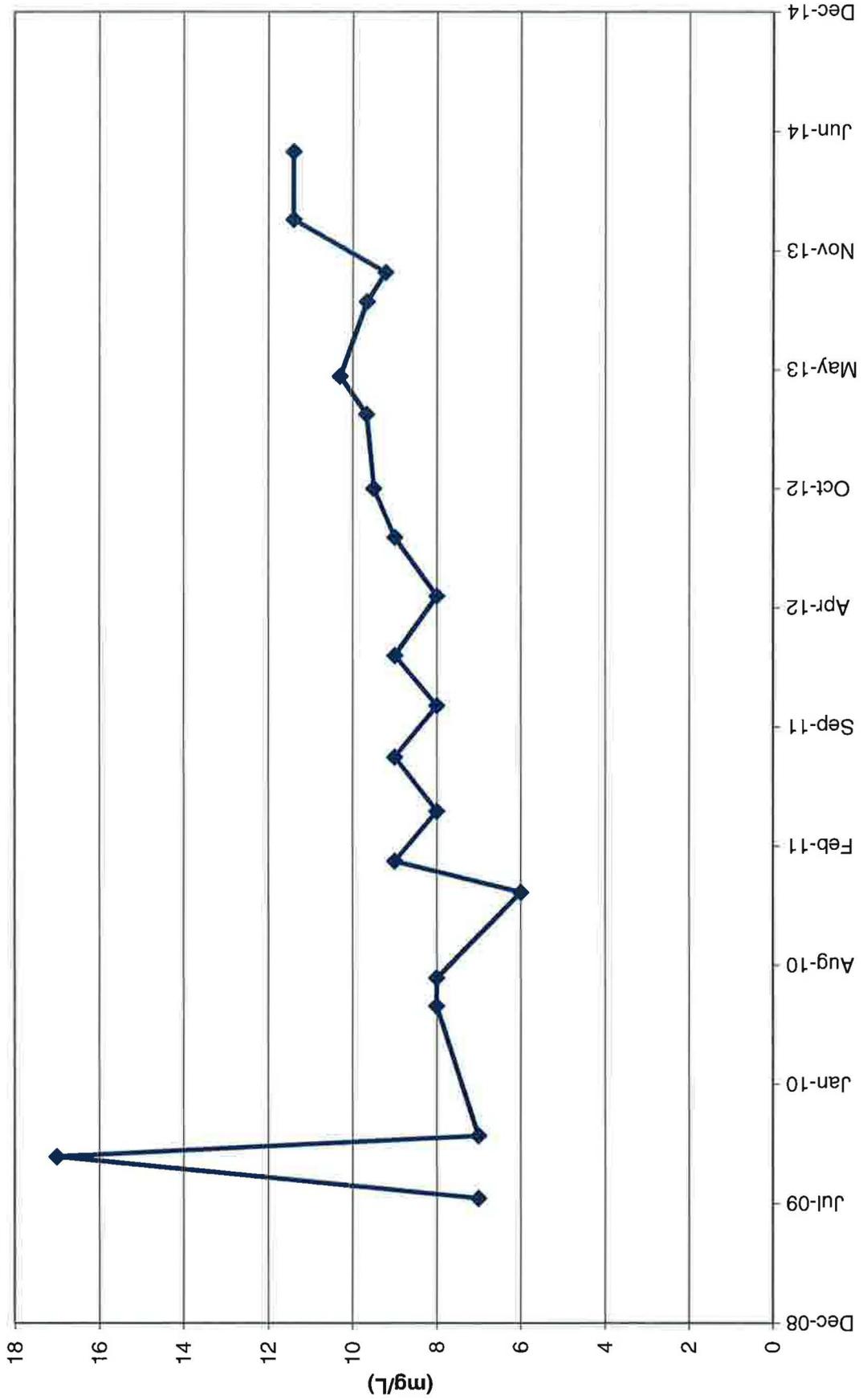
# Piezometer 1 Chloride Concentrations



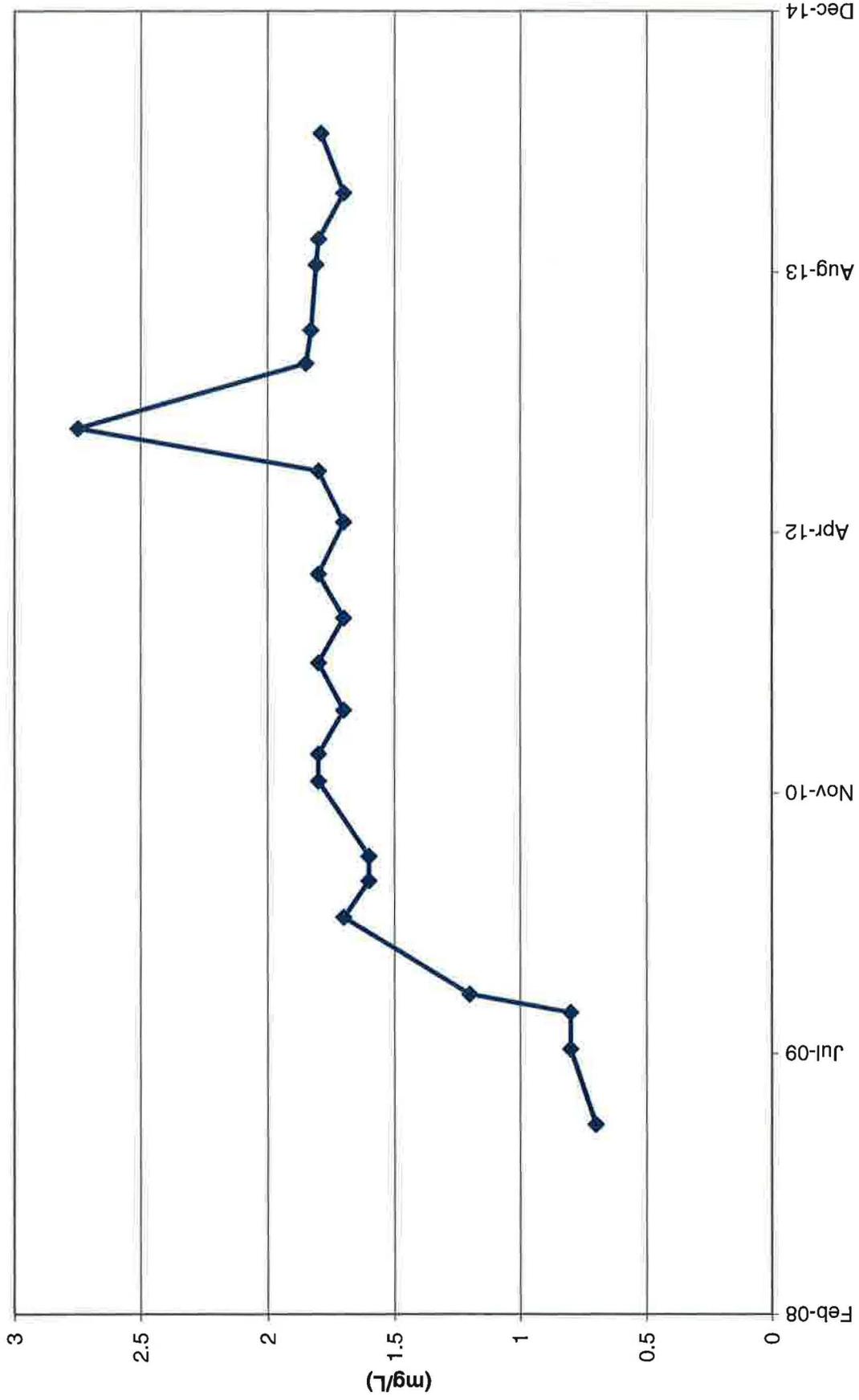
### Piezometer 2 Nitrate Concentrations



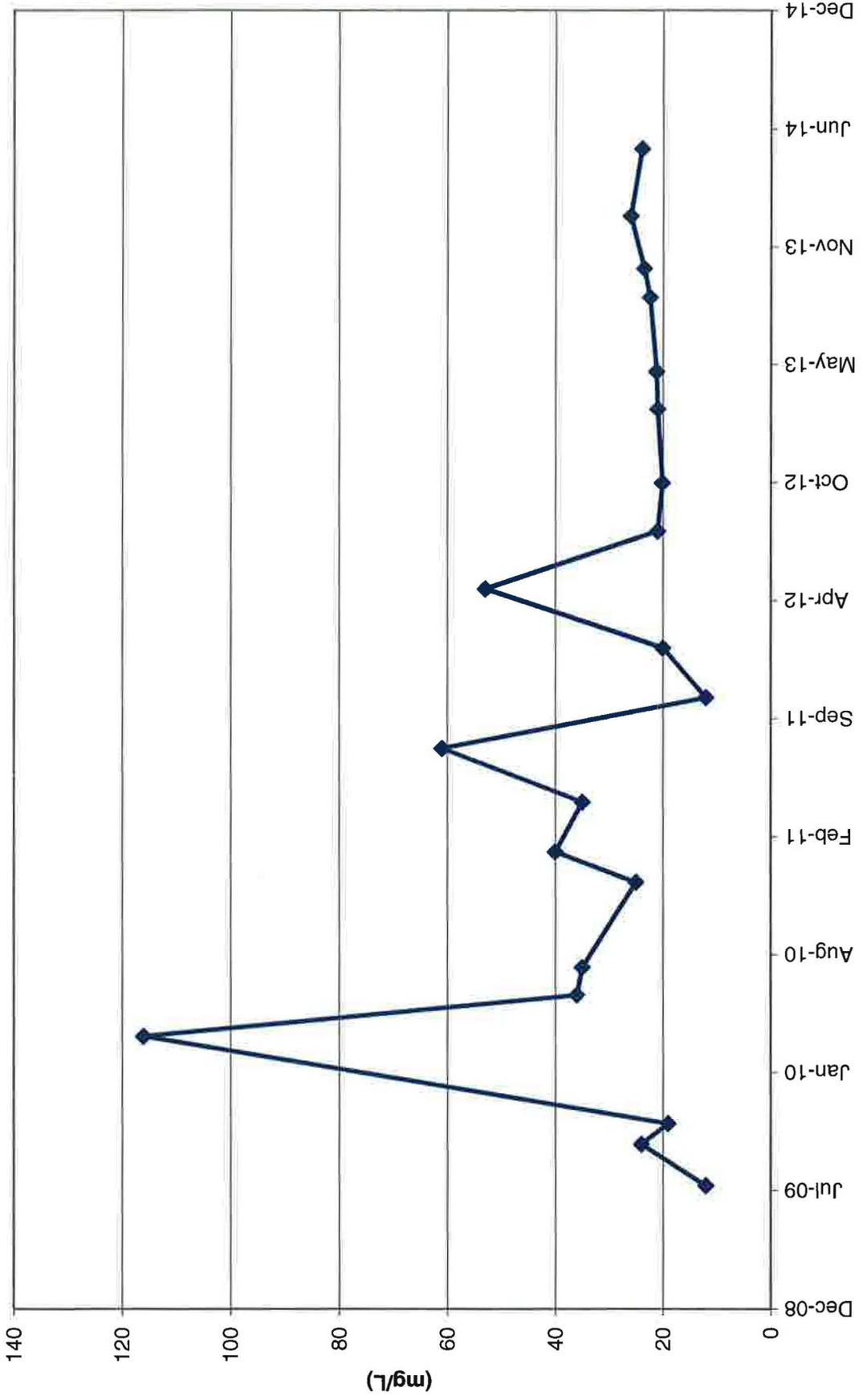
# Piezometer 2 Chloride Concentrations



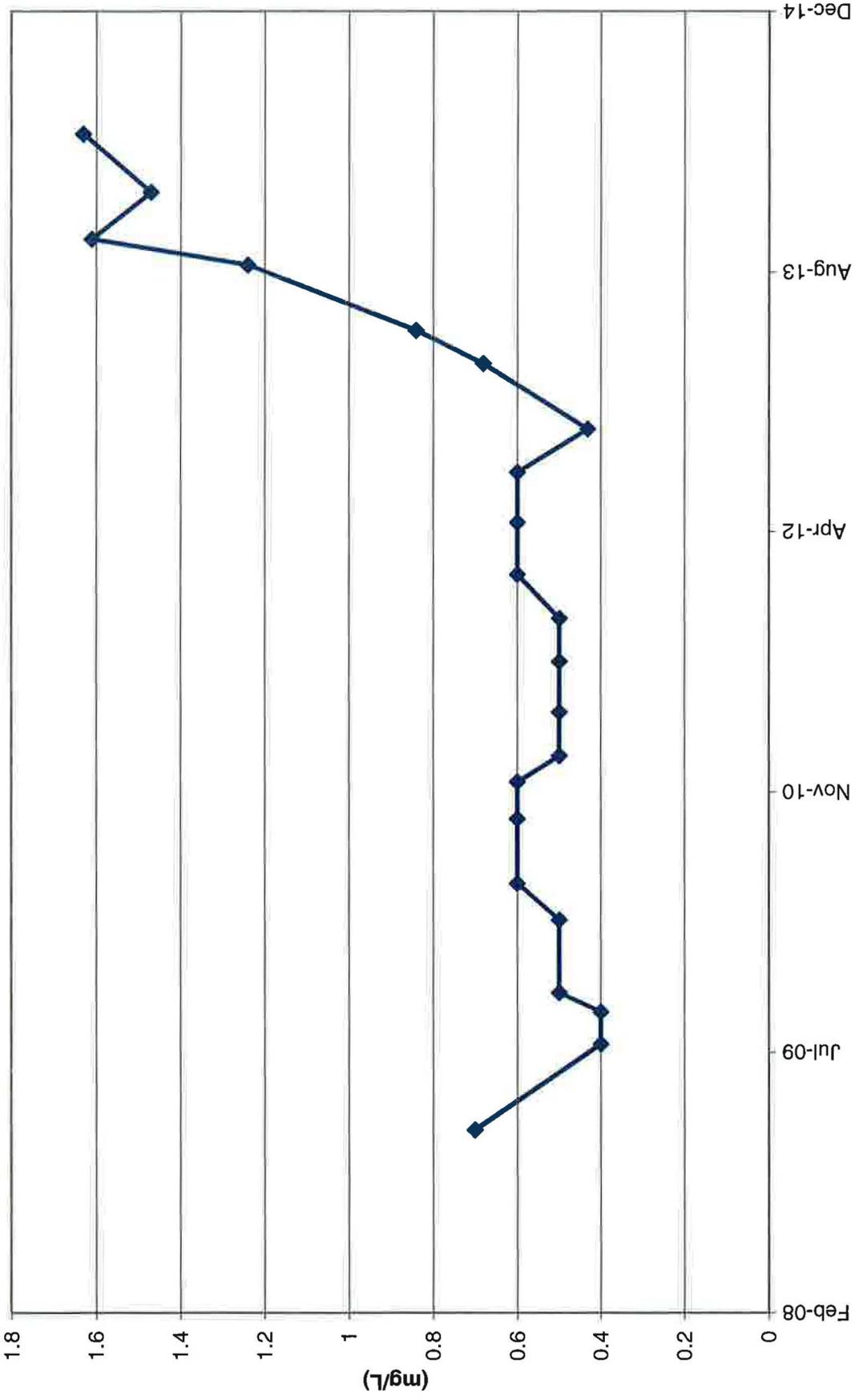
Piezometer 3 Nitrate Concentrations



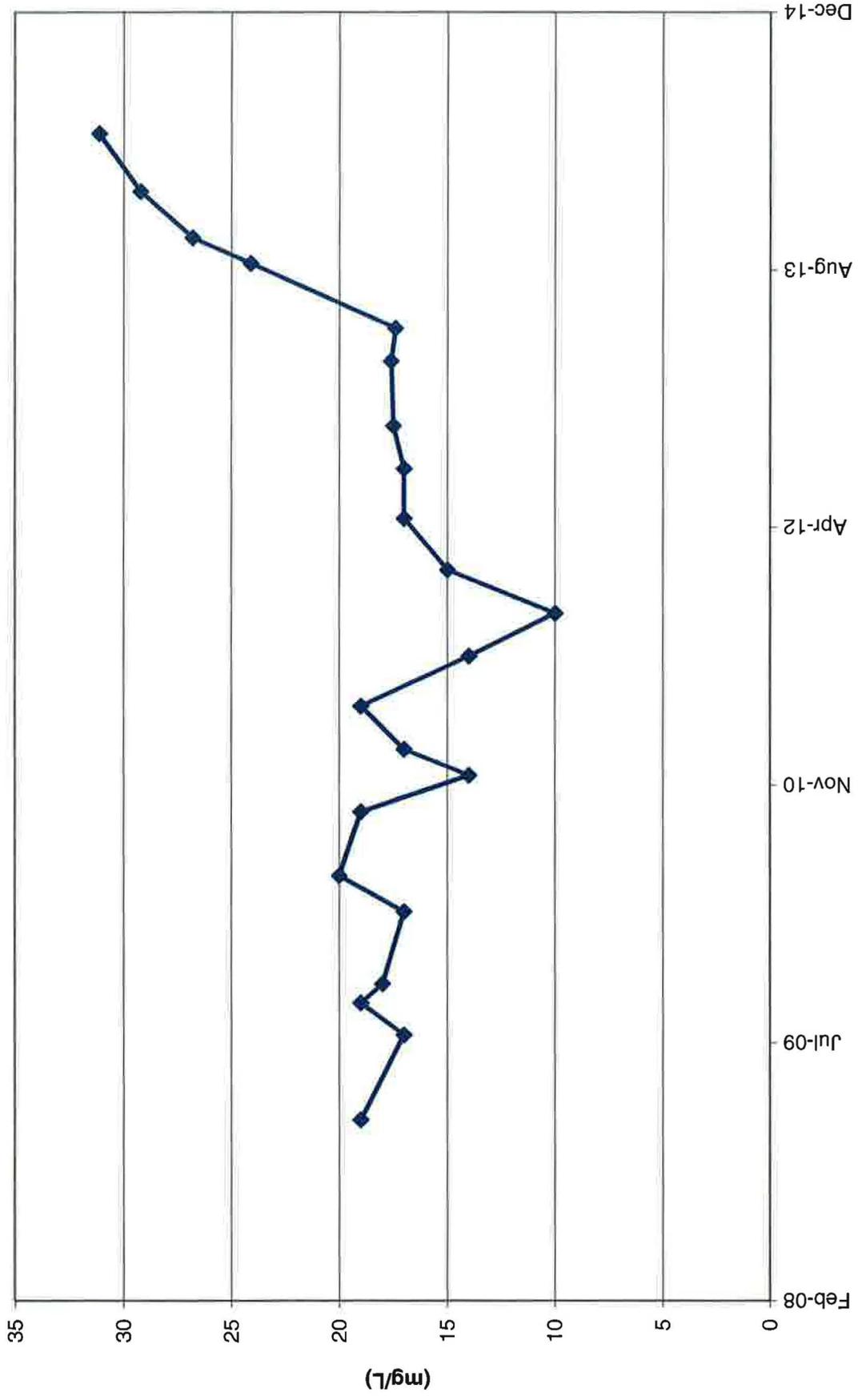
# Piezometer 3 Chloride Concentrations



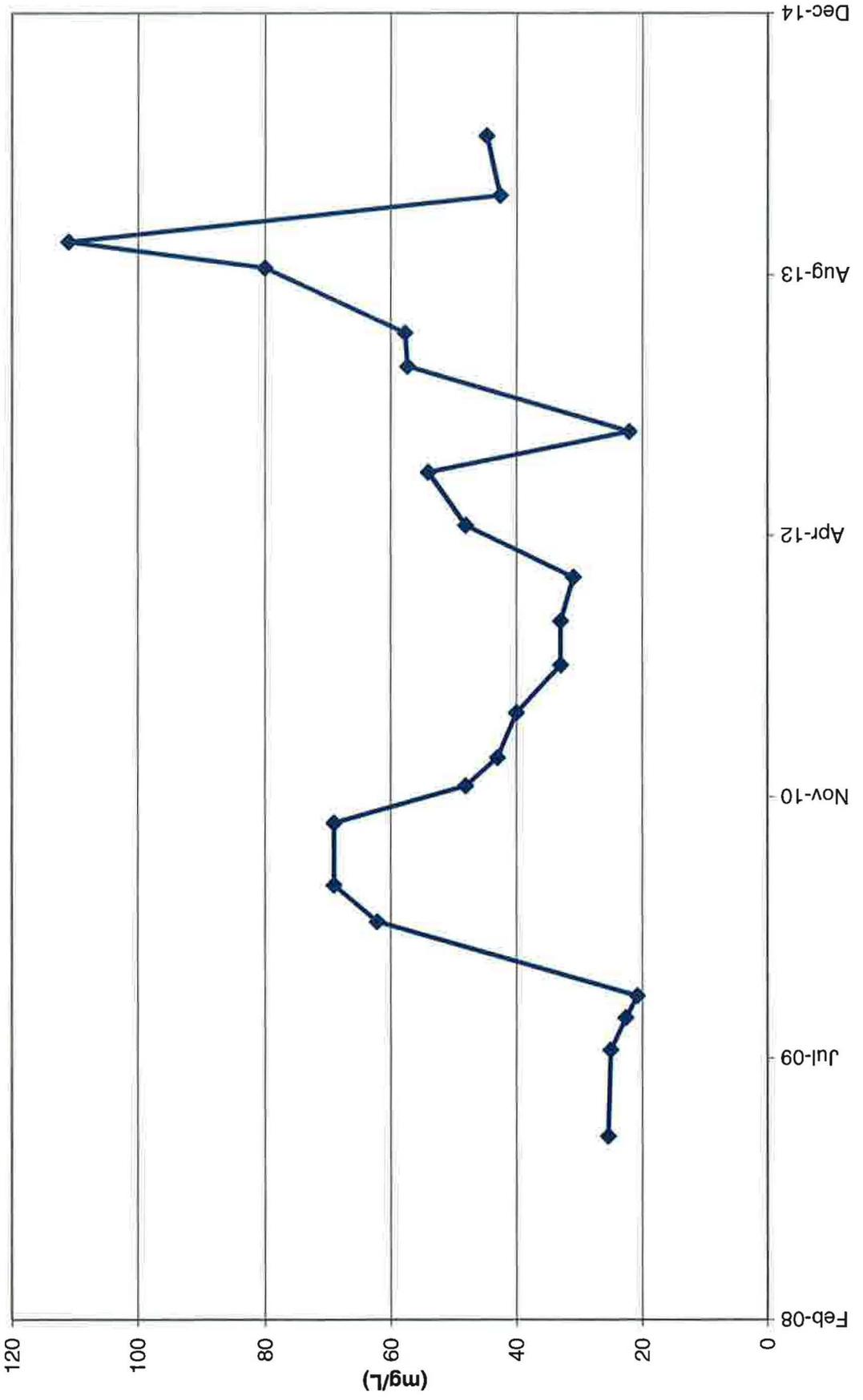
### TWN-1 Nitrate Concentrations



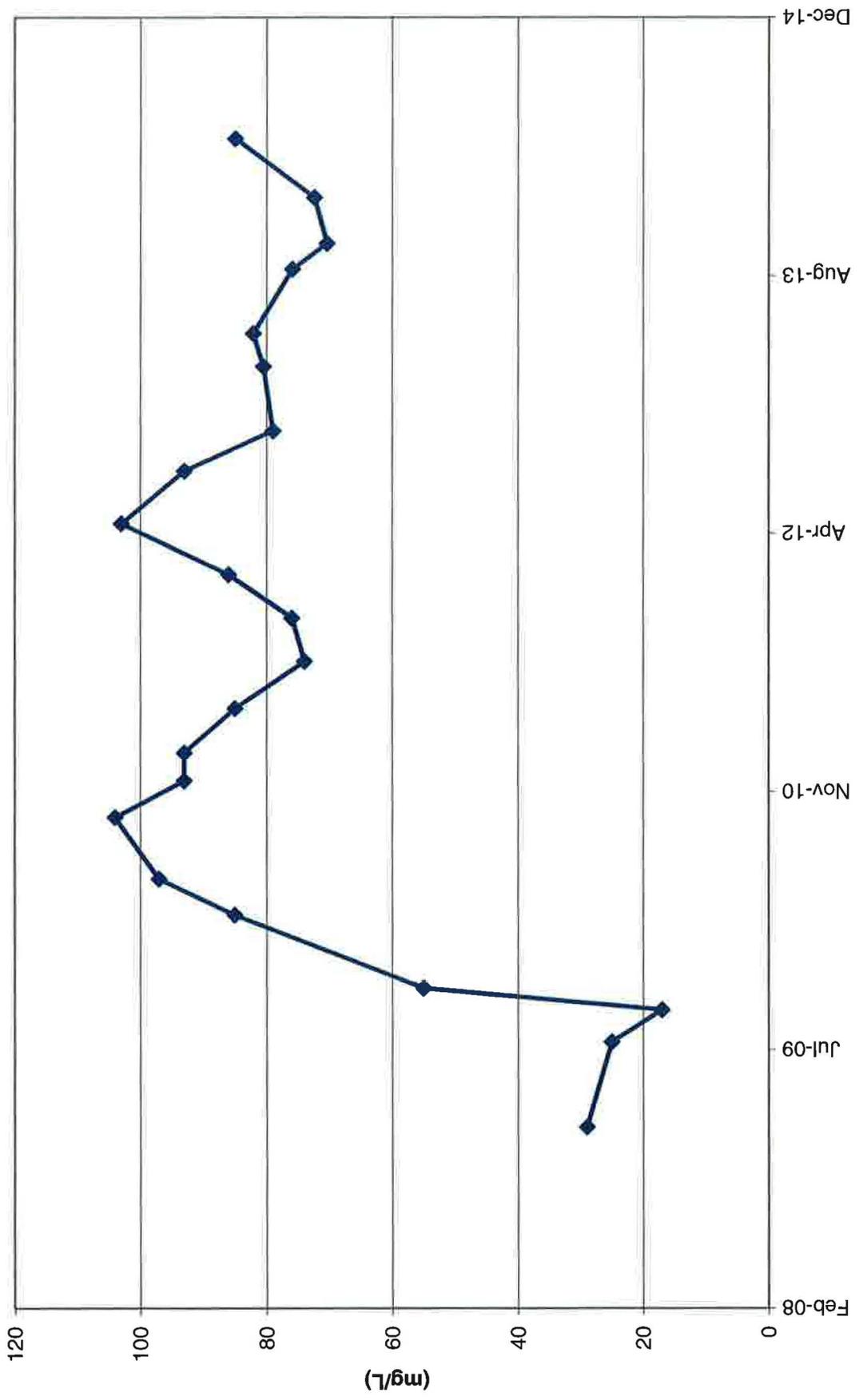
# TWN-1 Chloride Concentrations



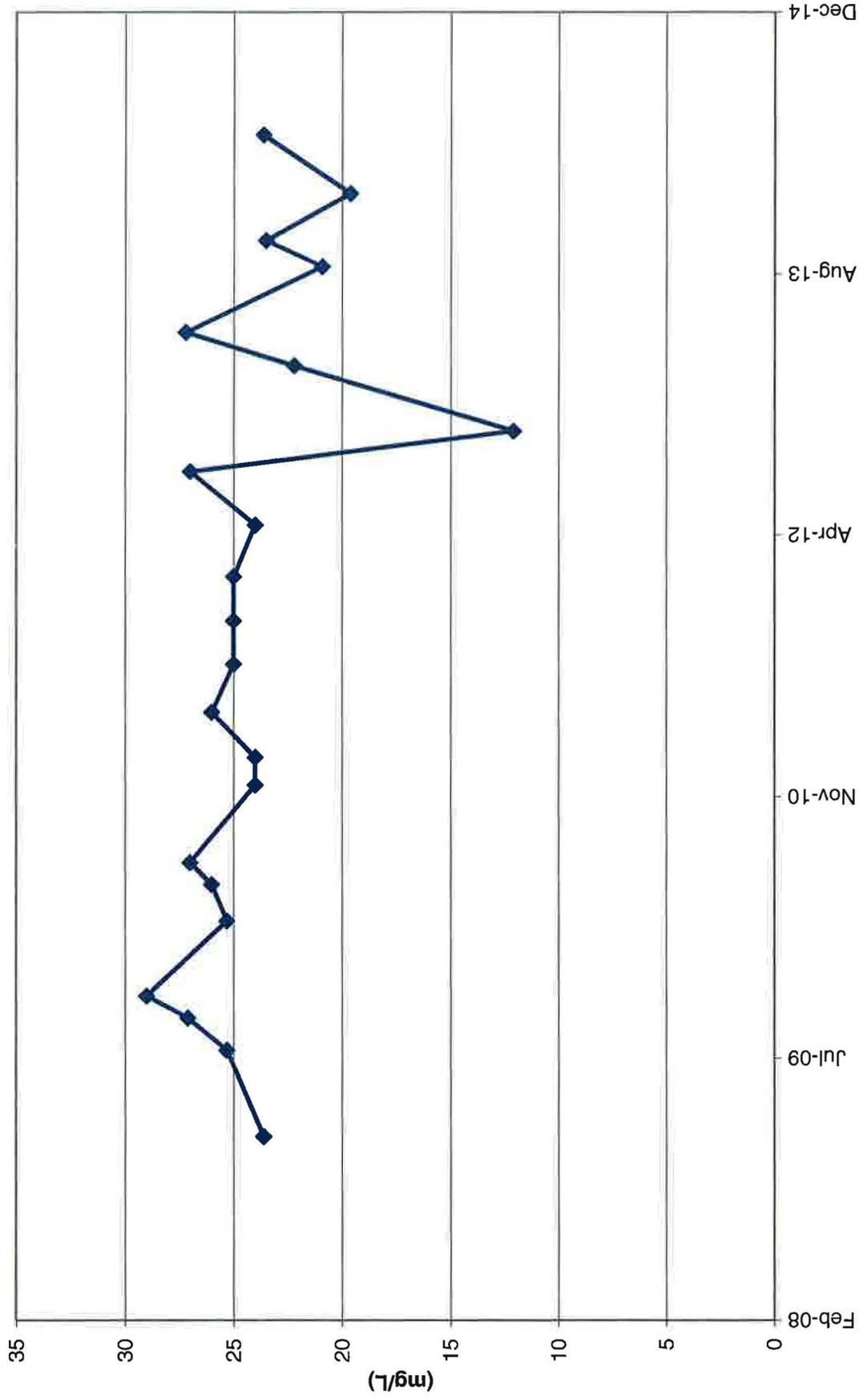
# TWN-2 Nitrate Concentrations



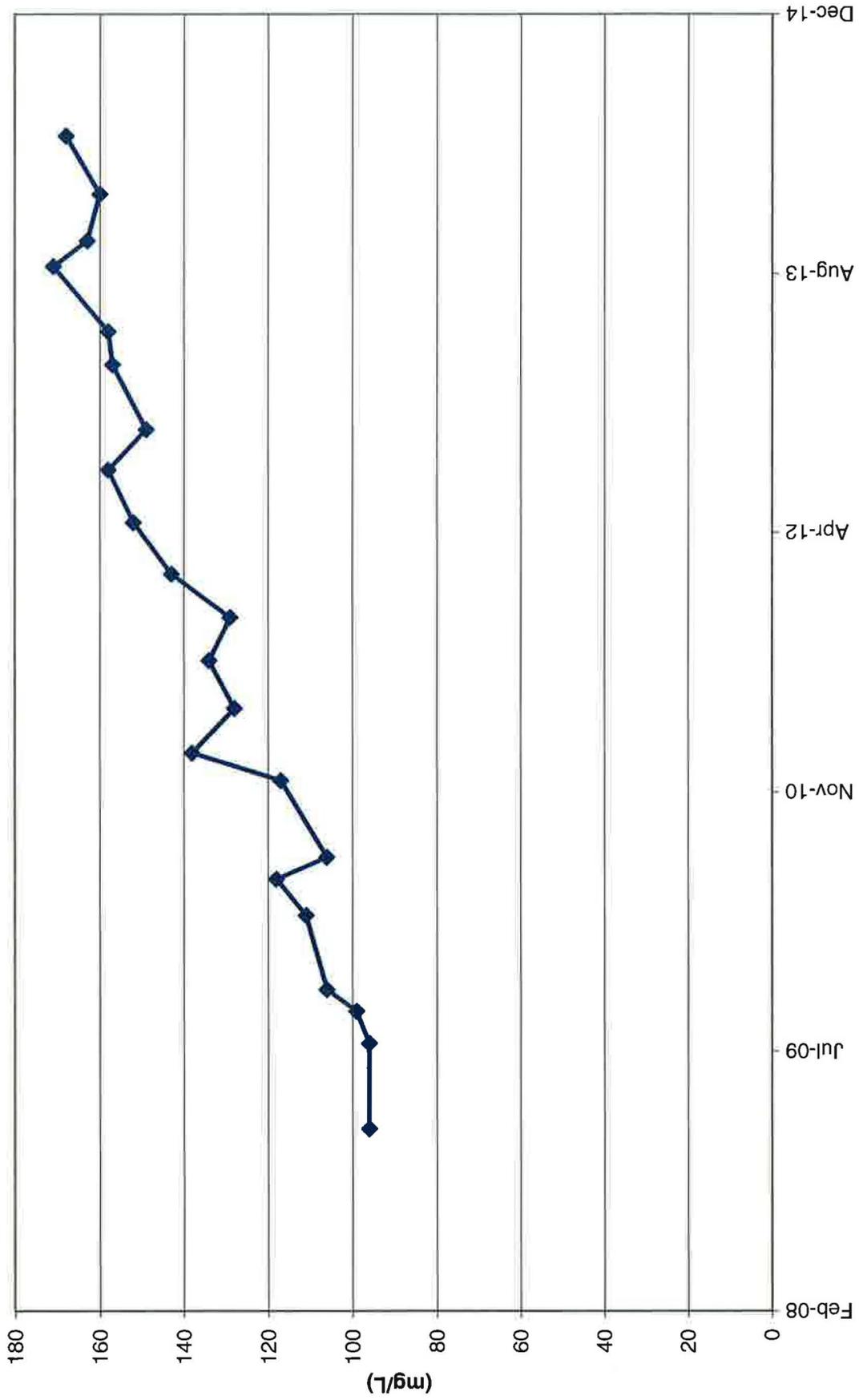
# TWN-2 Chloride Concentrations



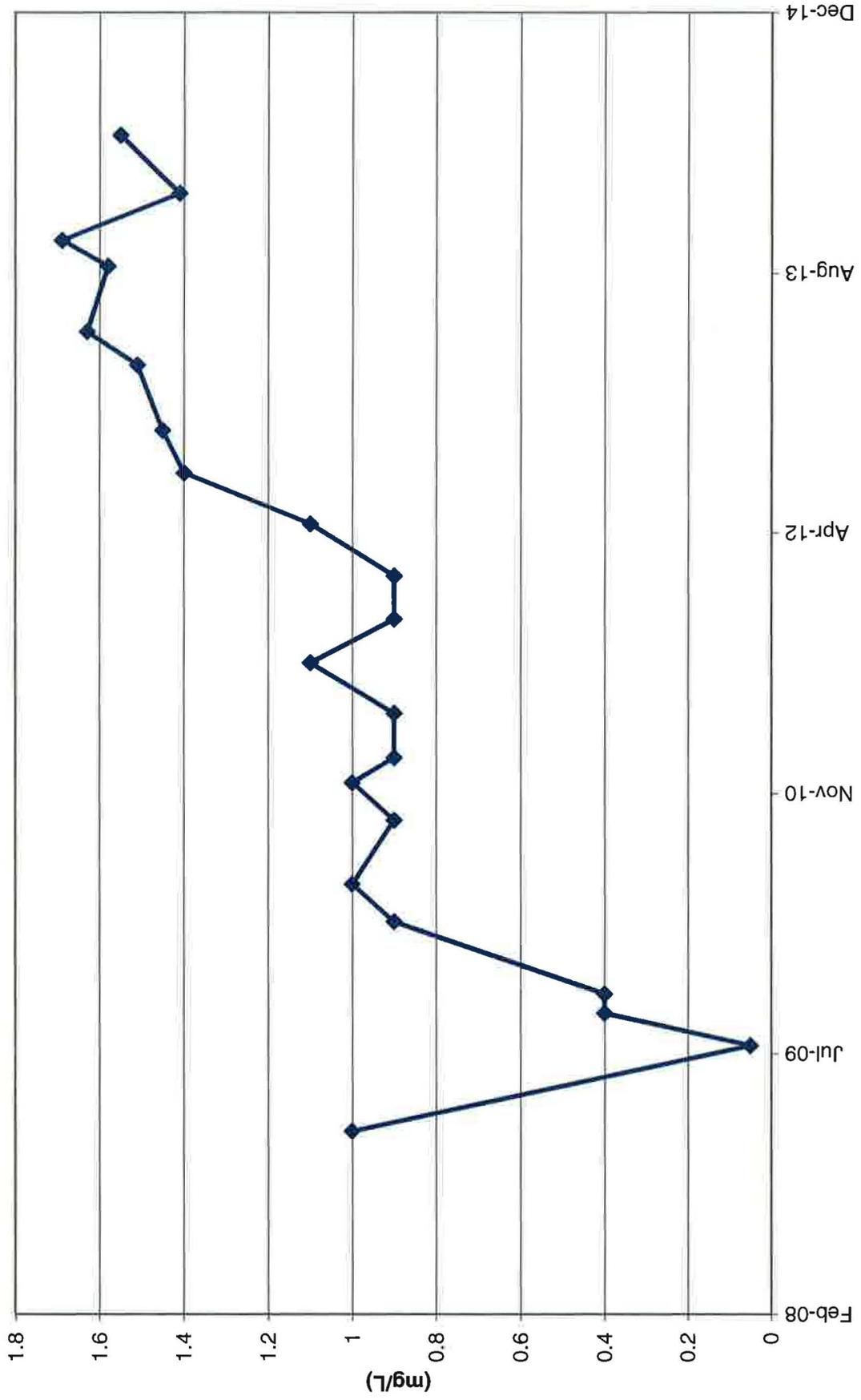
### TWN-3 Nitrate Concentrations



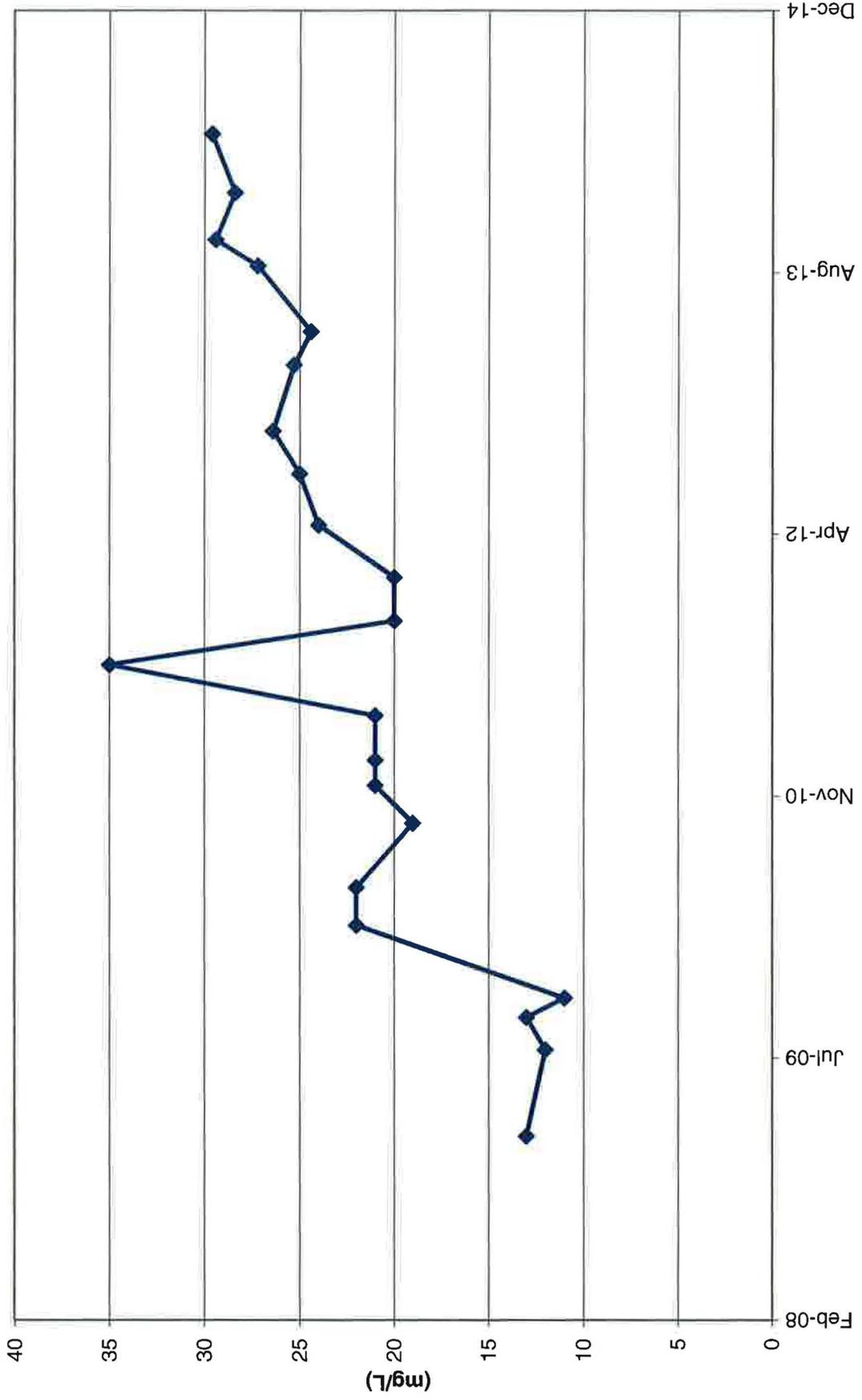
### TWN-3 Chloride Concentrations



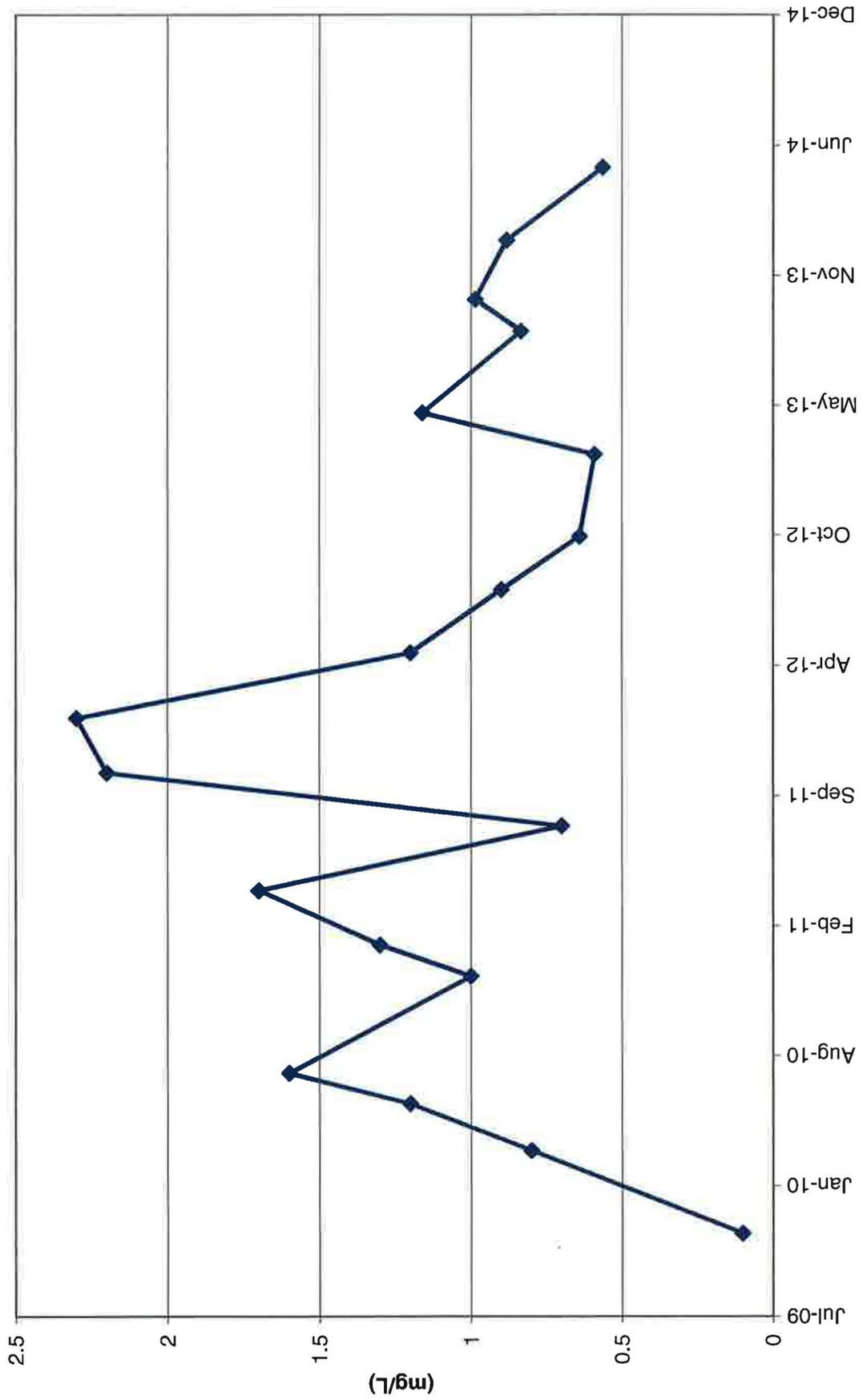
# TWN-4 Nitrate Concentrations



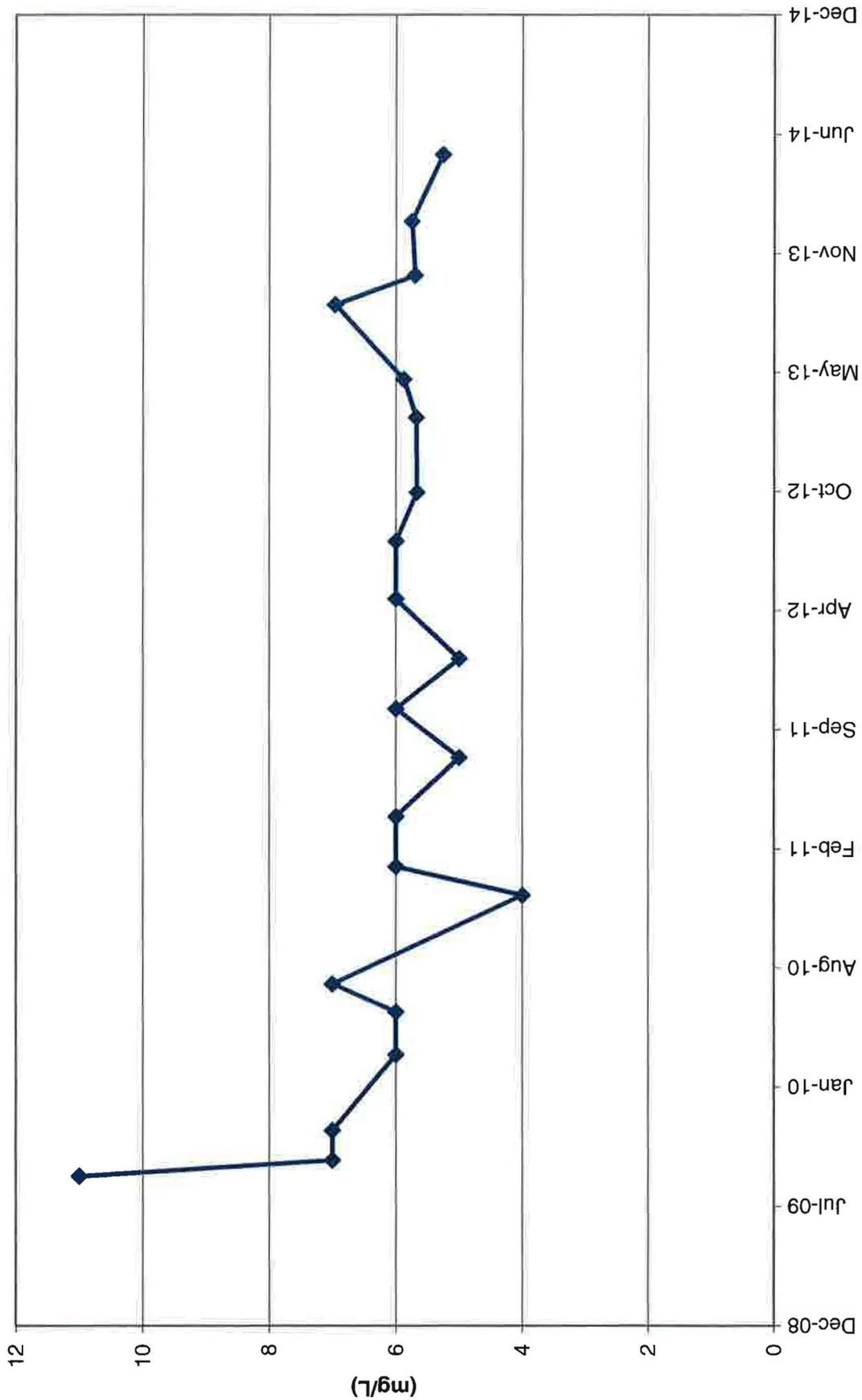
# TWN-4 Chloride Concentrations



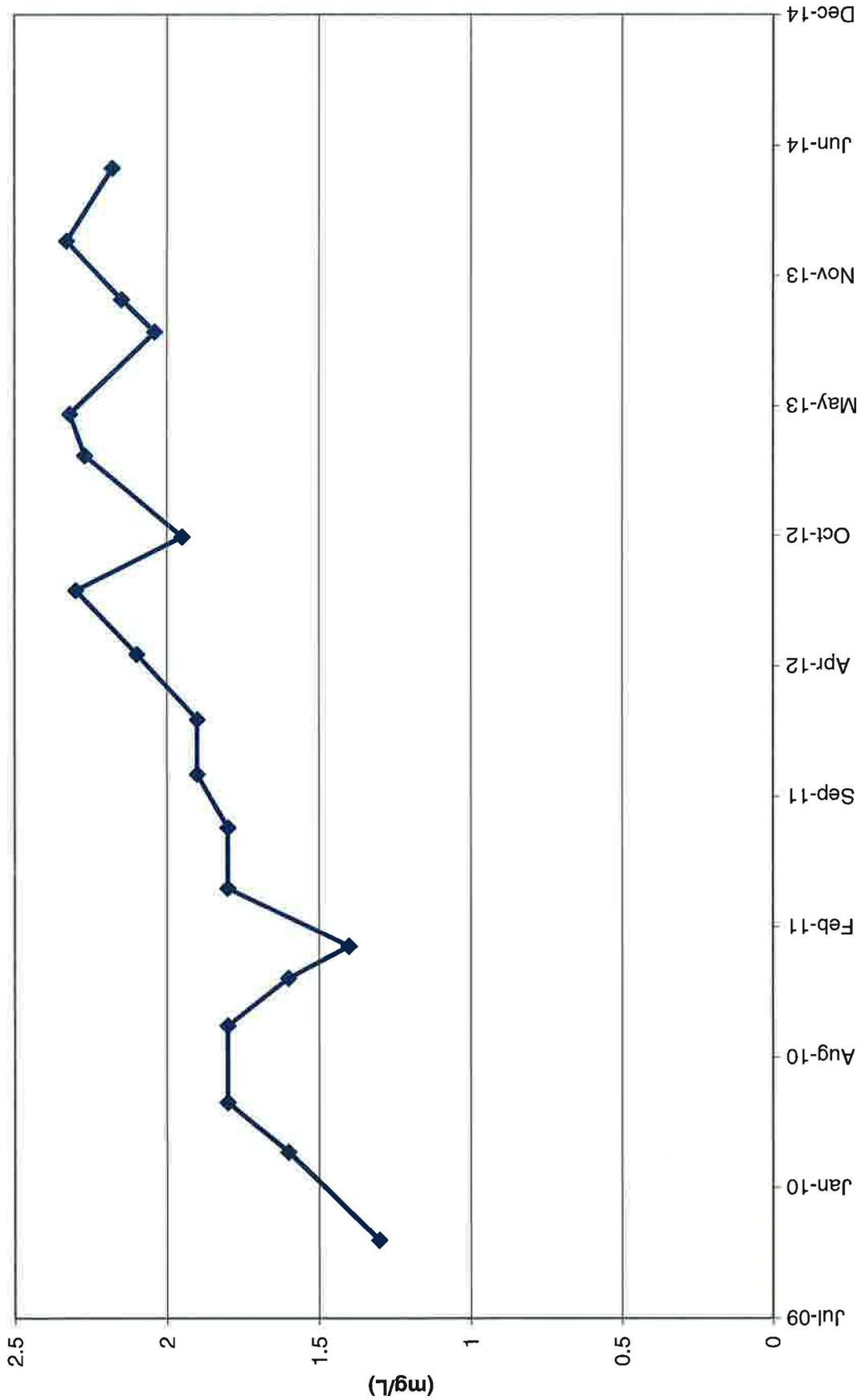
# TWN-7 Nitrate Concentrations



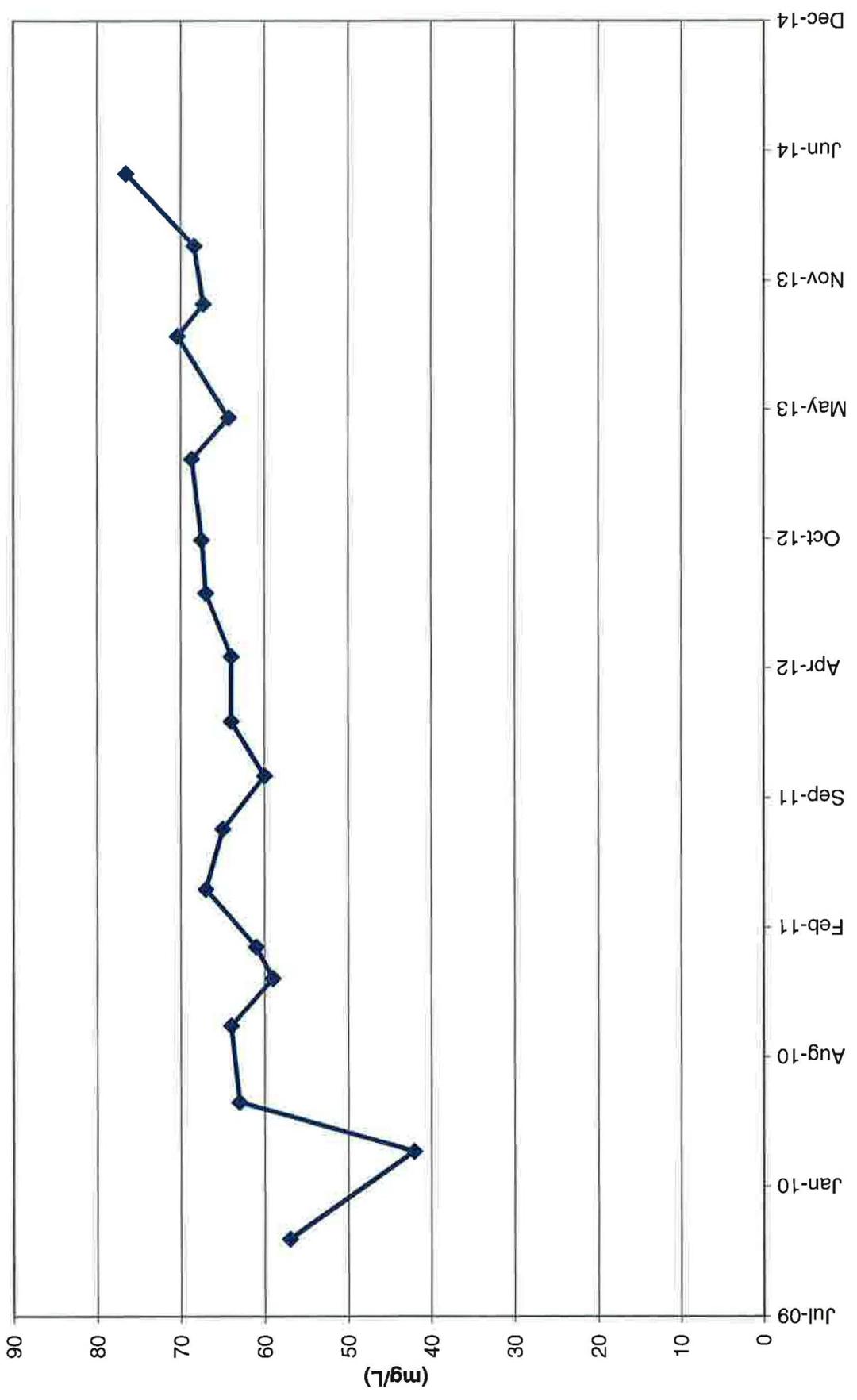
# TWN-7 Chloride Concentrations



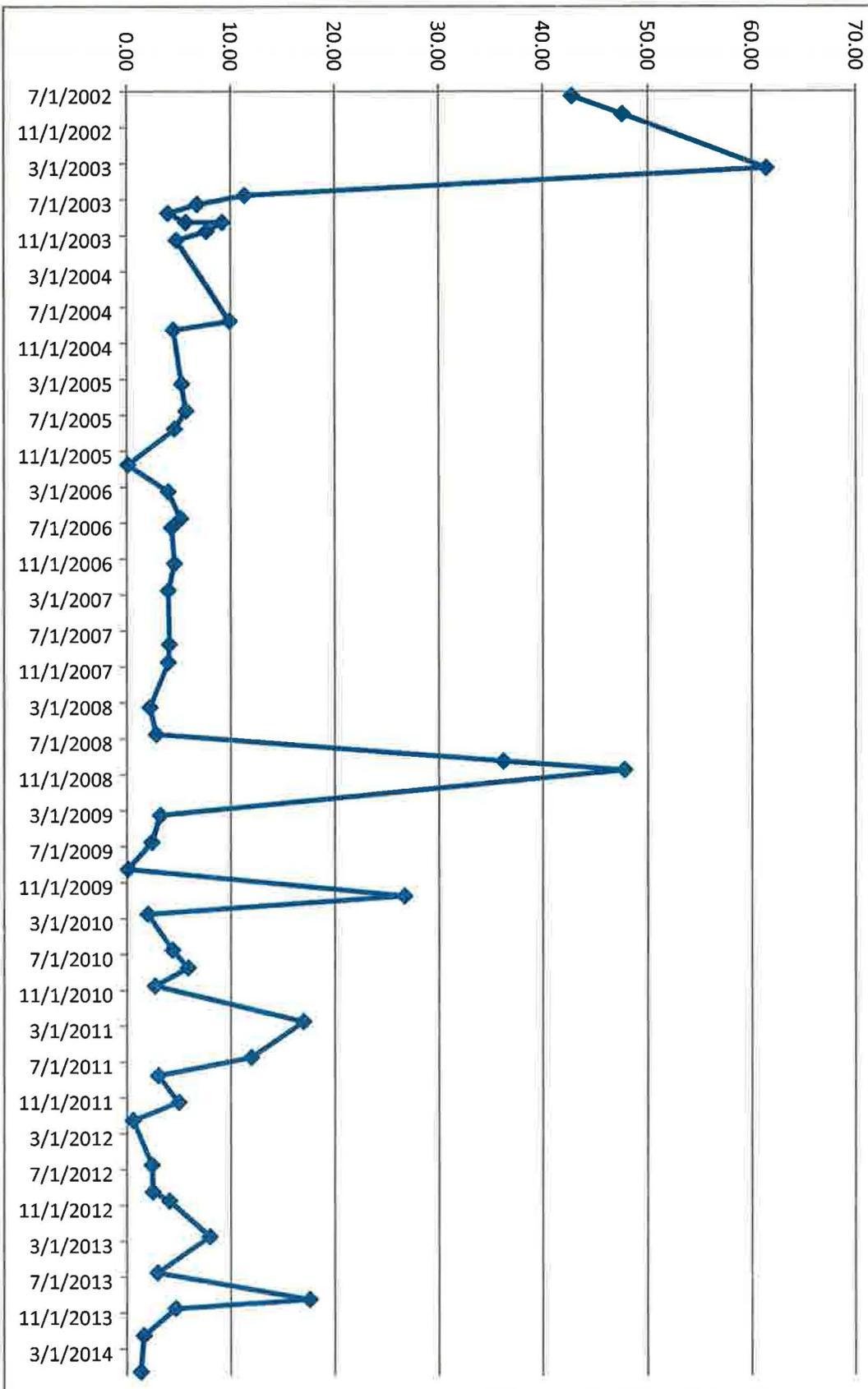
### TWN-18 Nitrate Concentrations



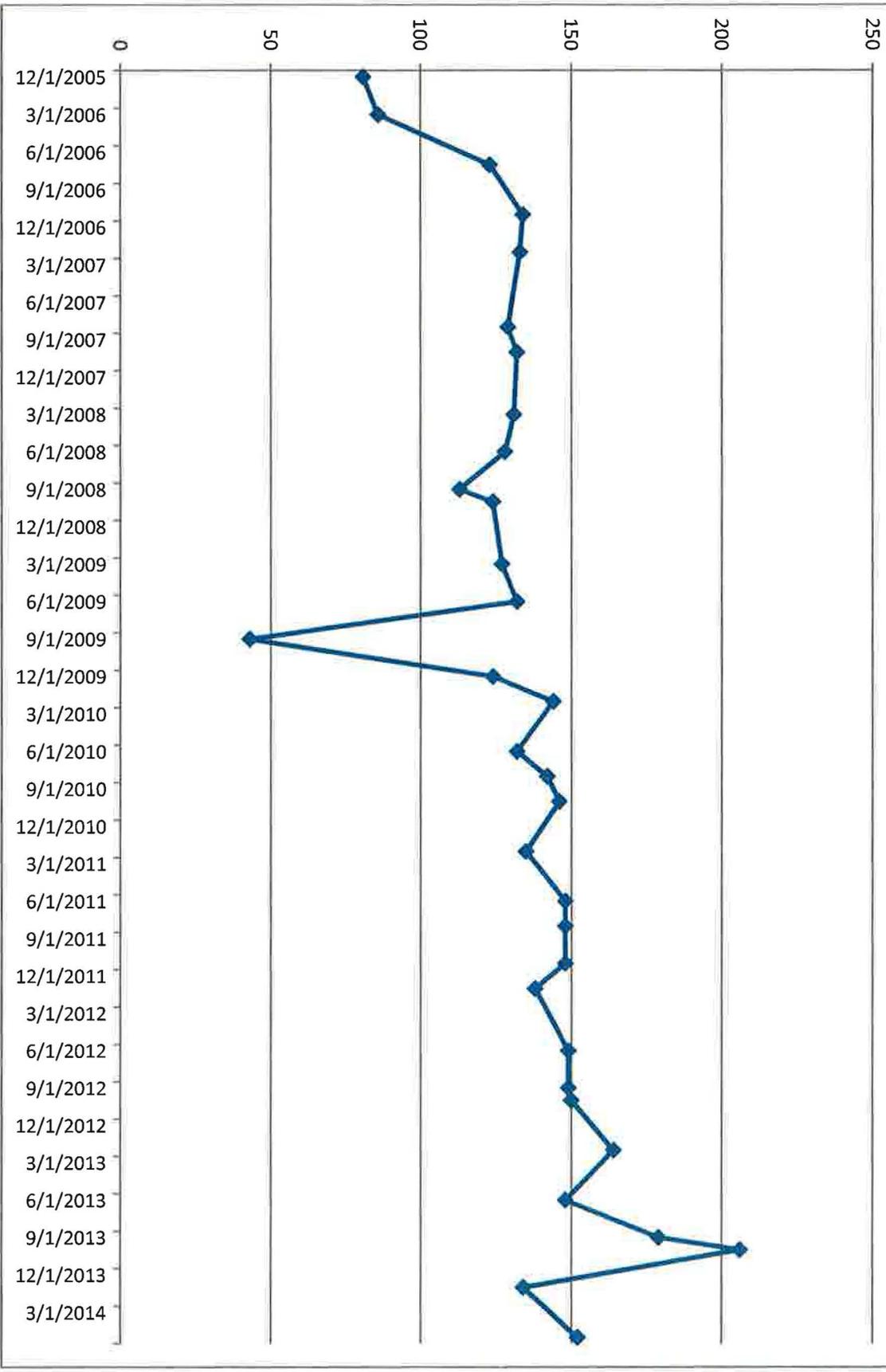
### TWN-18 Chloride Concentrations



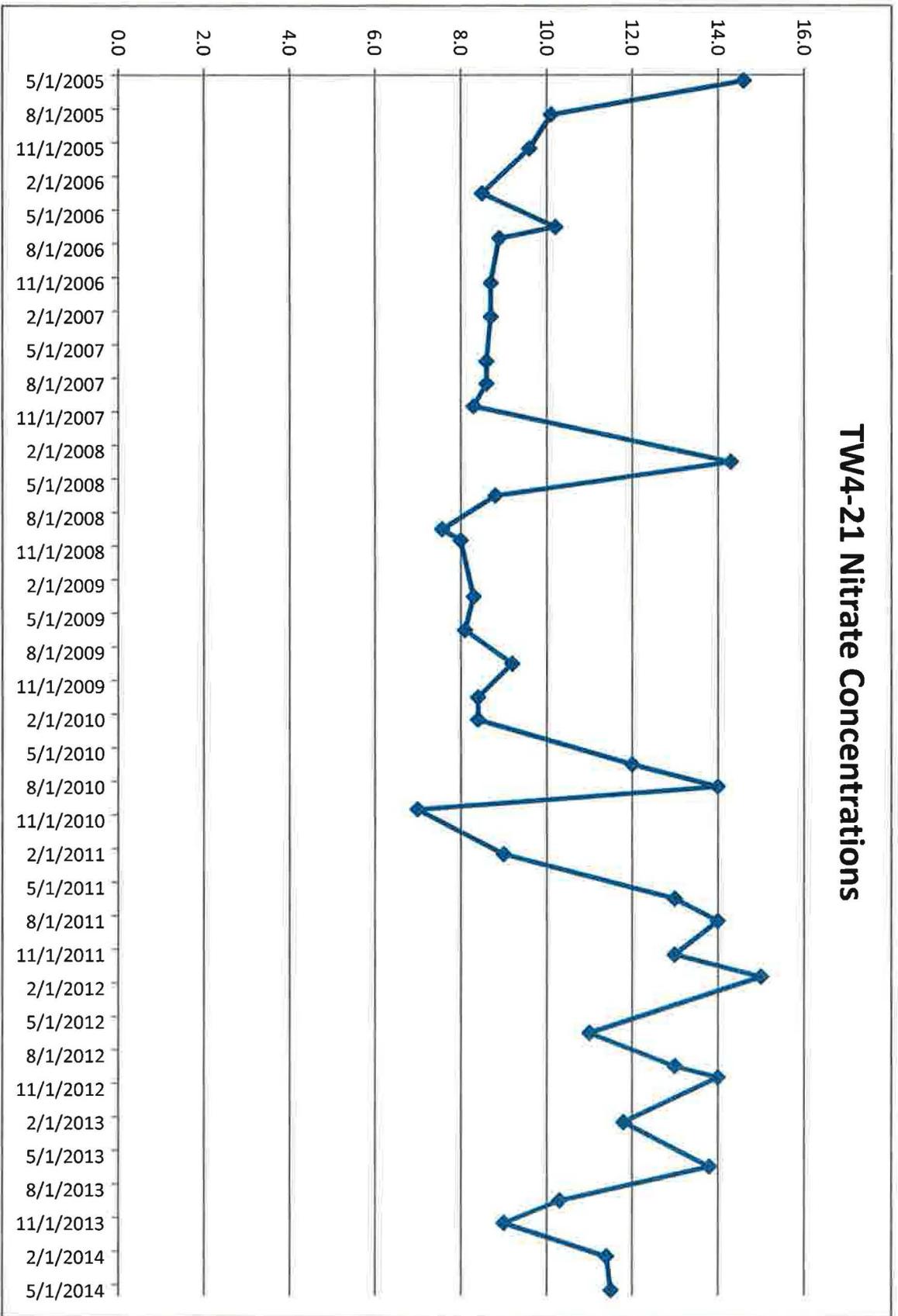
# TW4-19 Nitrate Concentrations



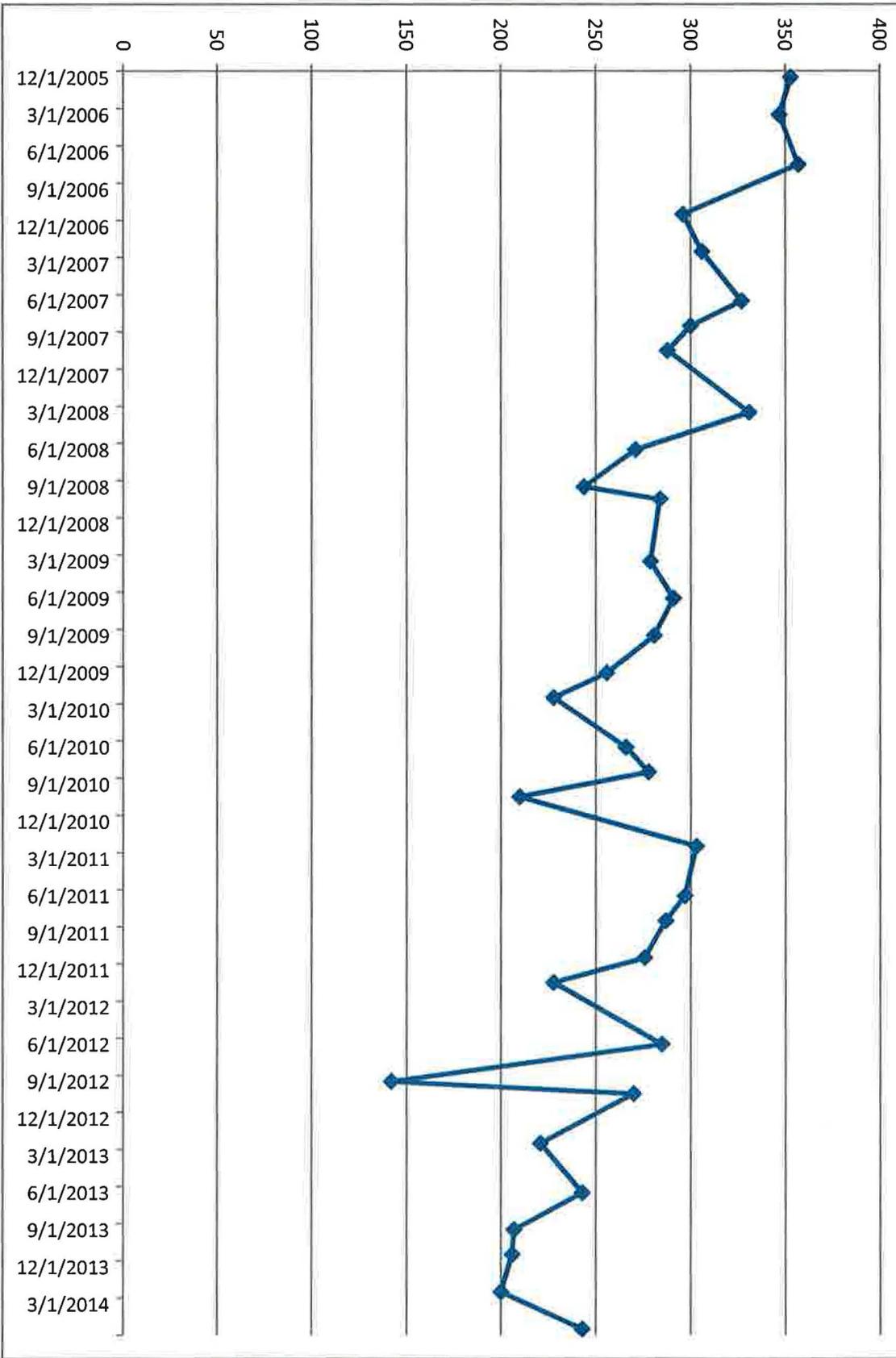
# TW4-19 Chloride Concentrations



# TW4-21 Nitrate Concentrations

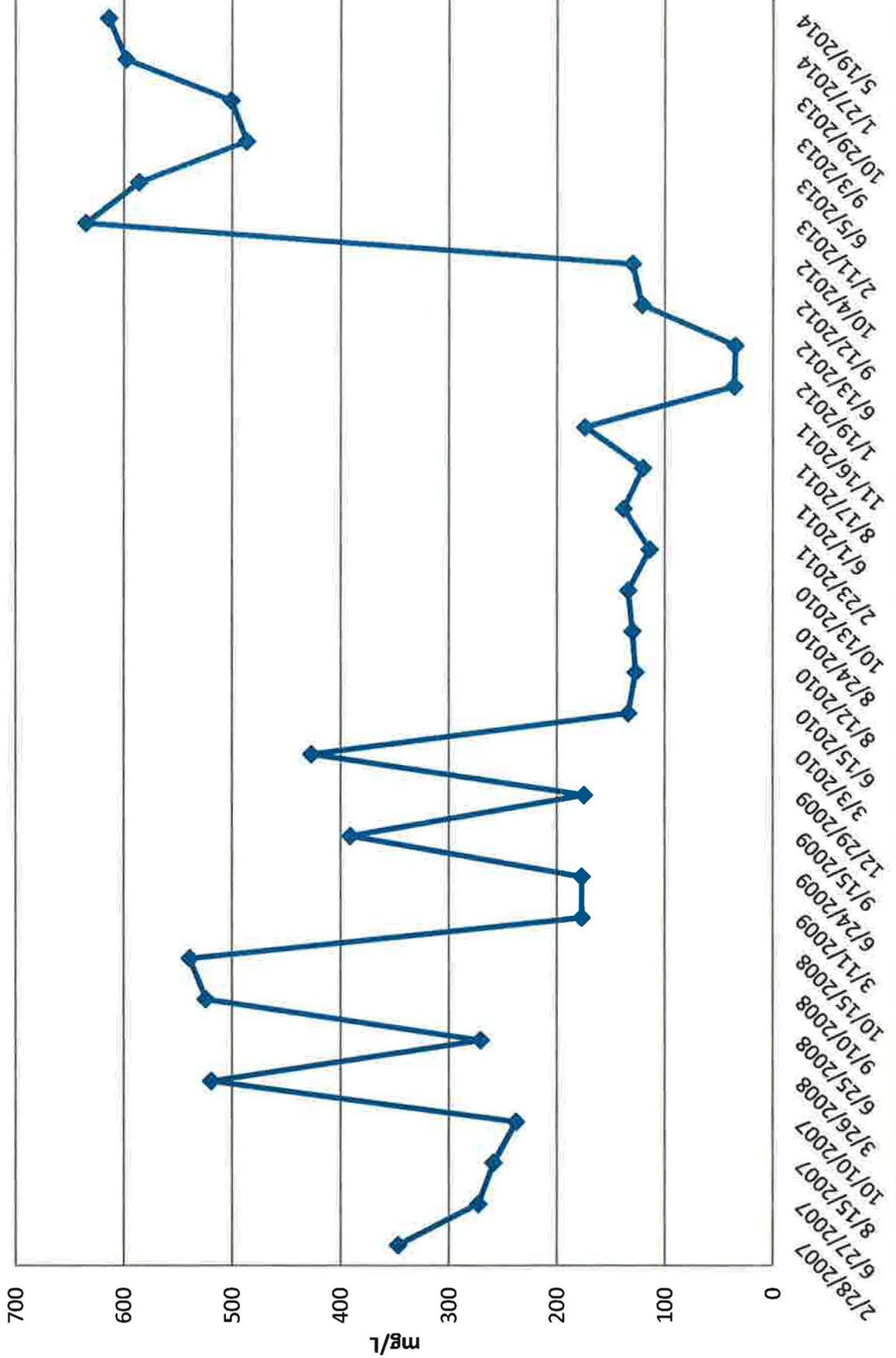


# TW4-21 Chloride Concentrations

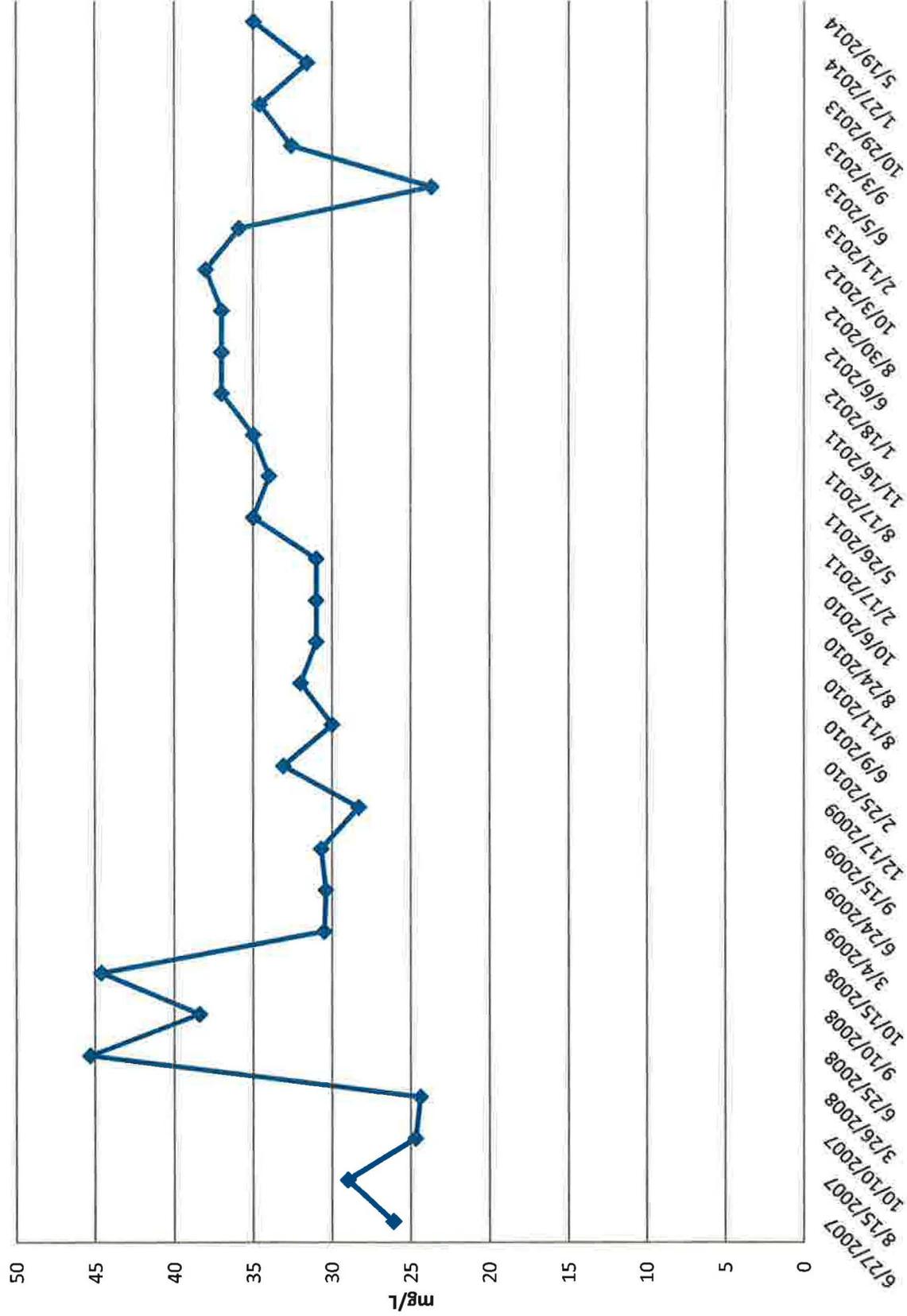




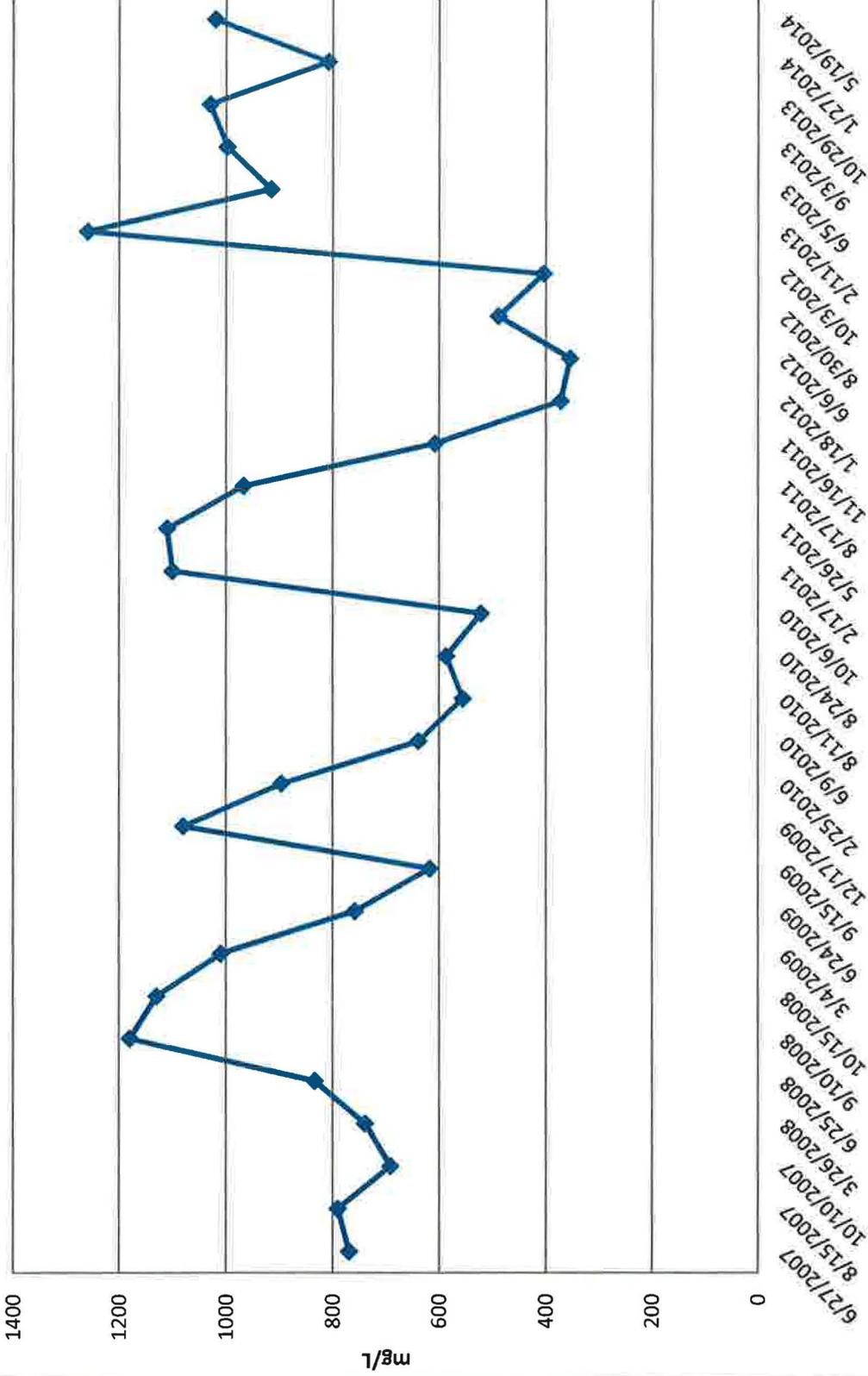
# TW4-22 Chloride Concentrations



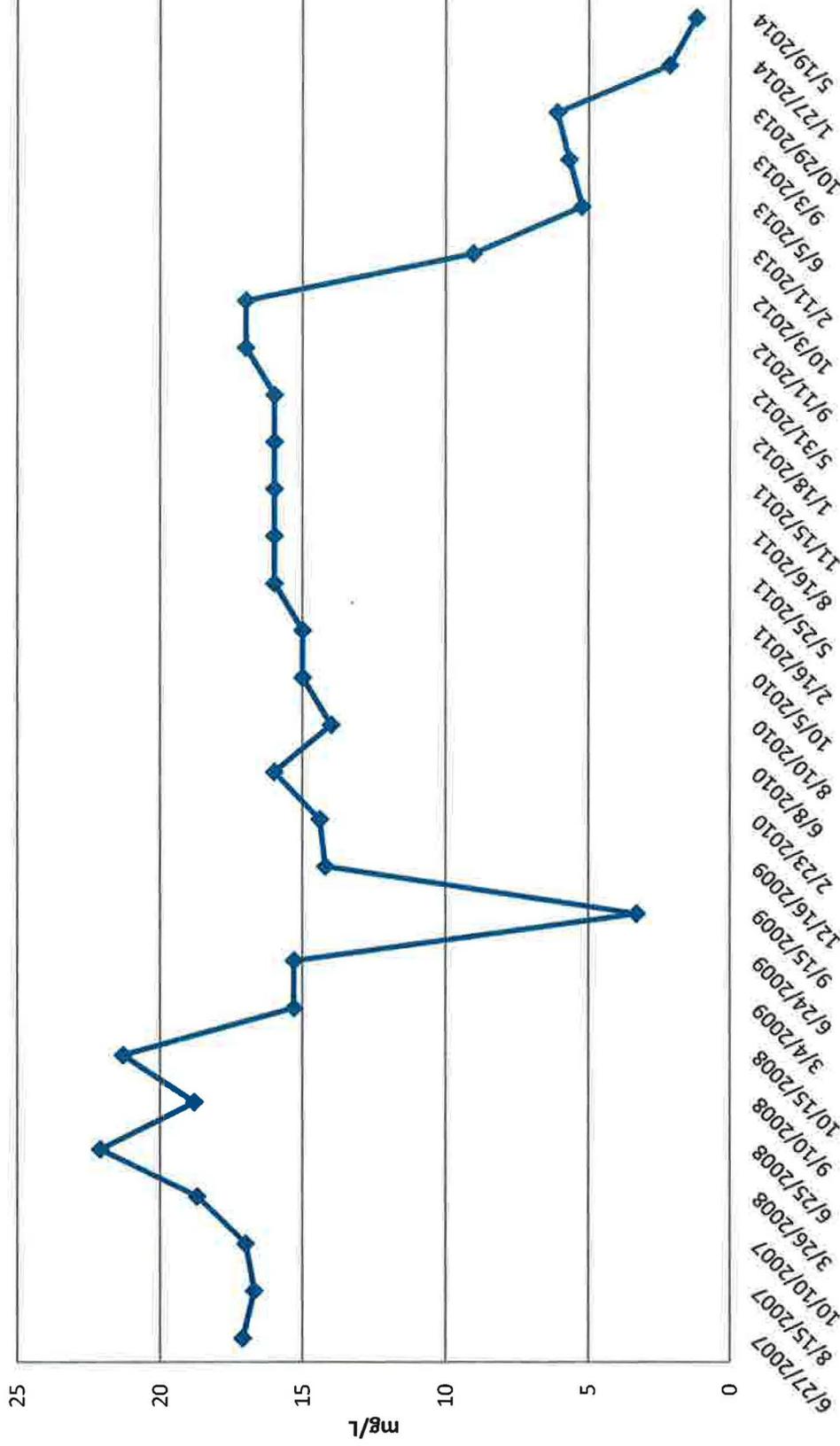
# TW4-24 Nitrate Concentrations



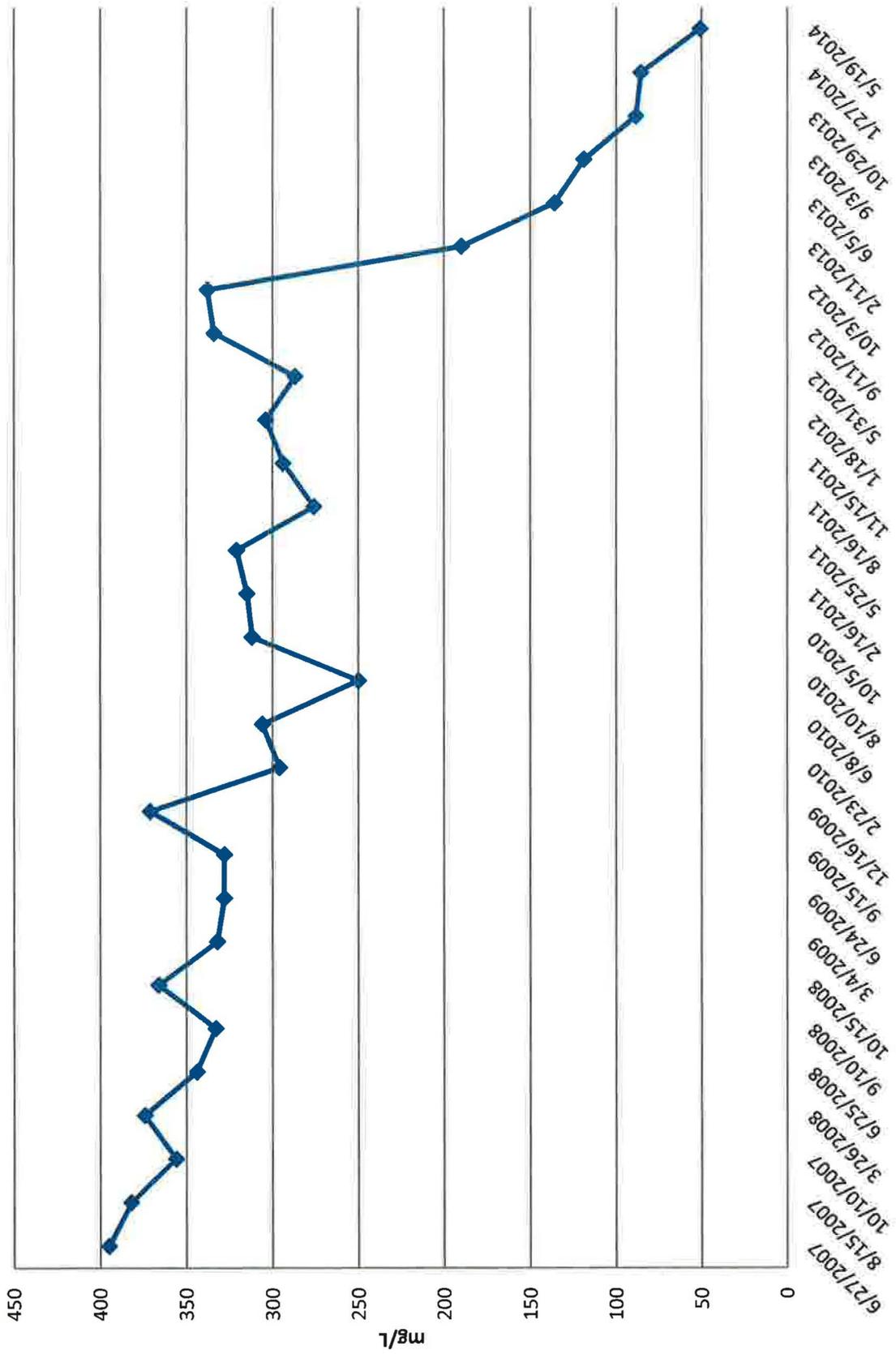
# TW4-24 Chloride Concentrations



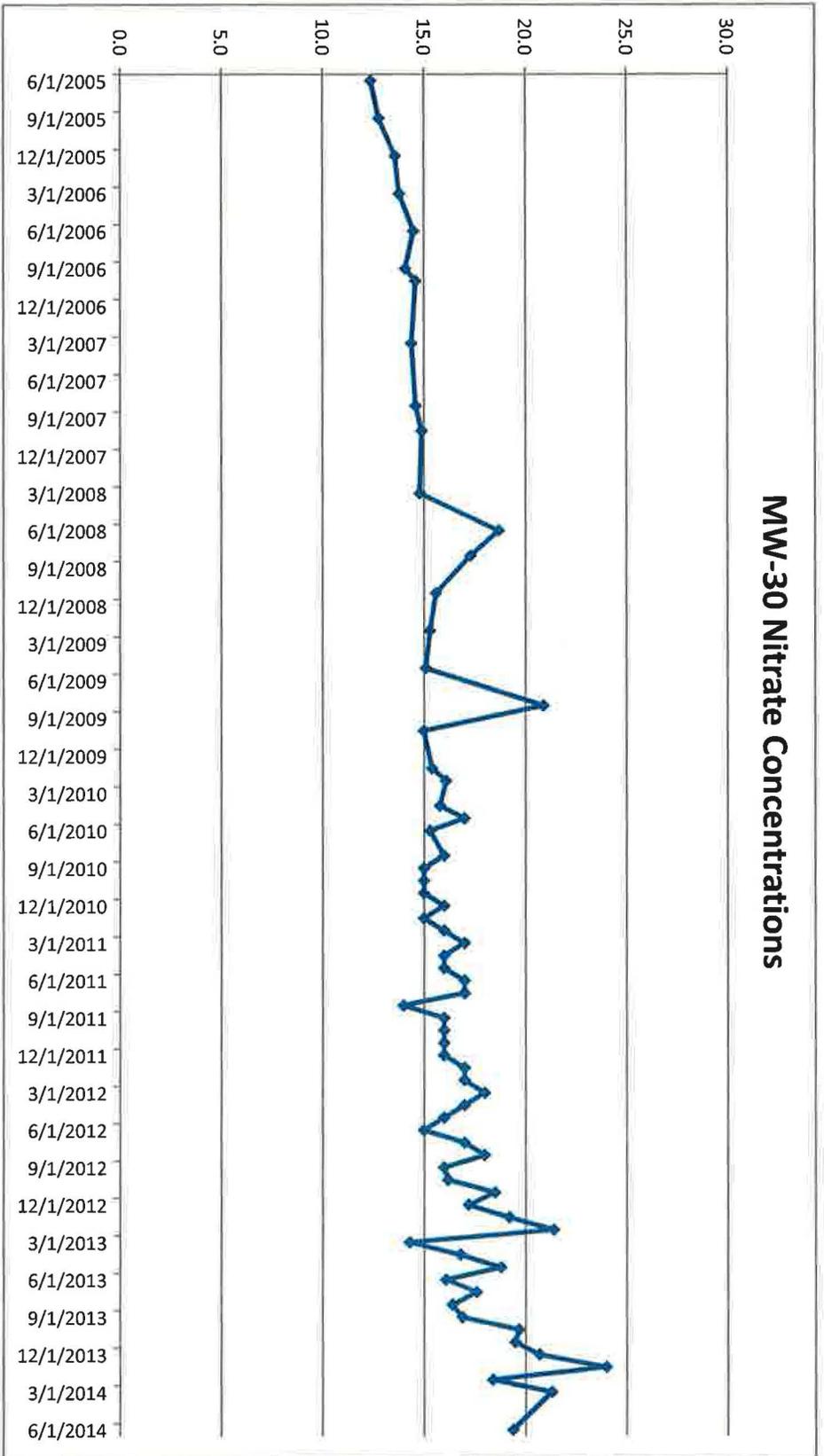
# TW4-25 Nitrate Concentrations



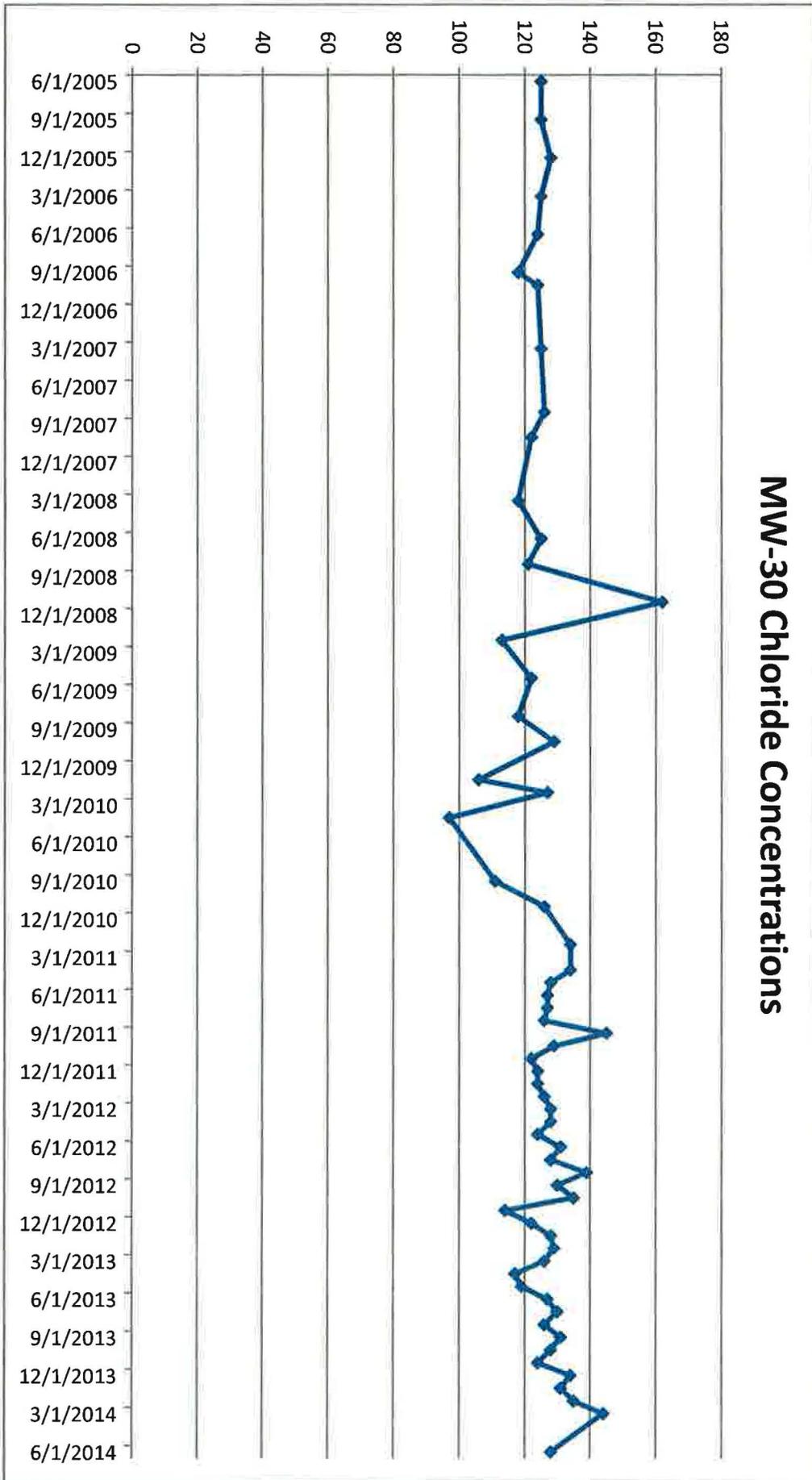
# TW4-25 Chloride Concentrations



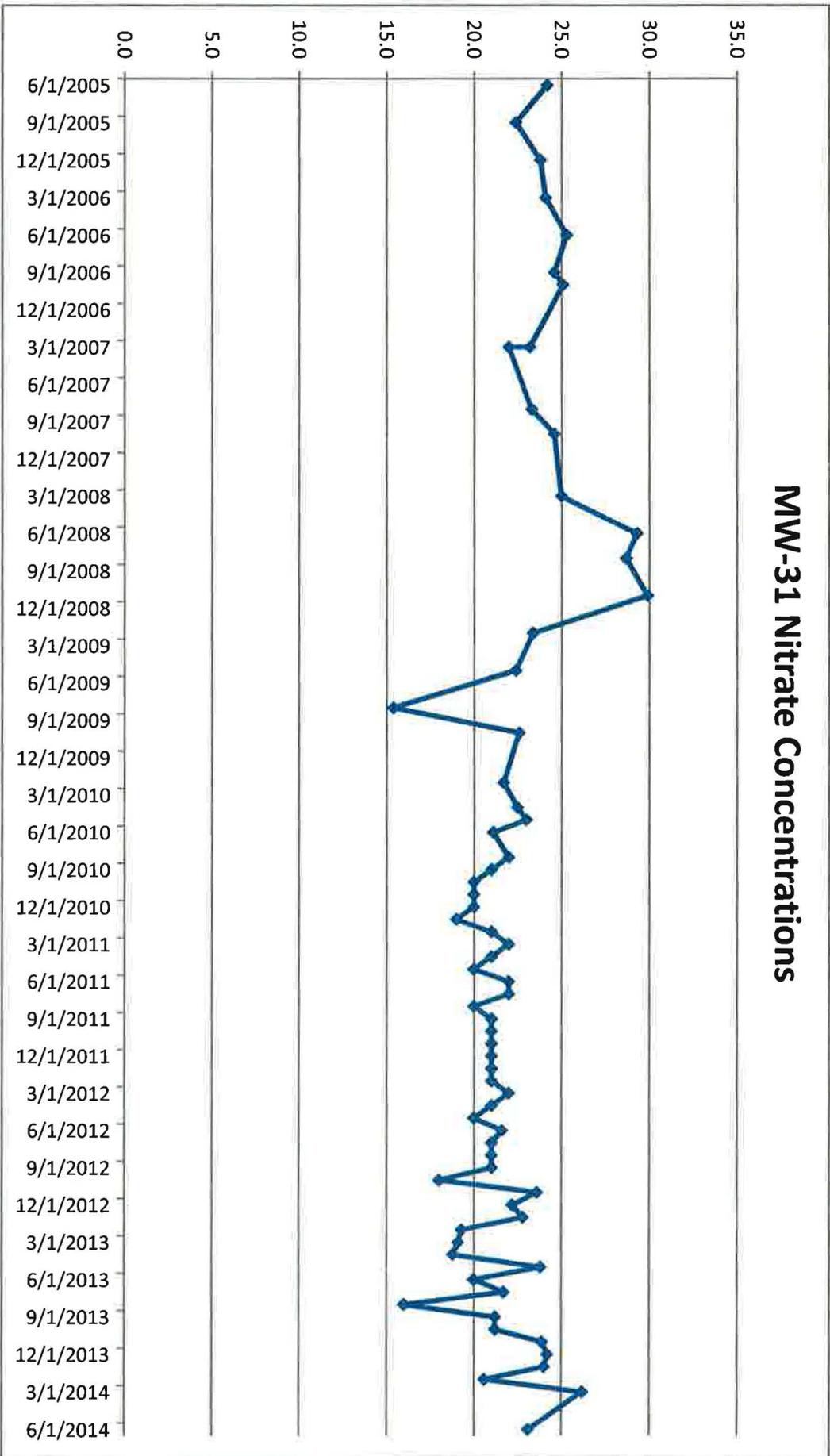
# MW-30 Nitrate Concentrations



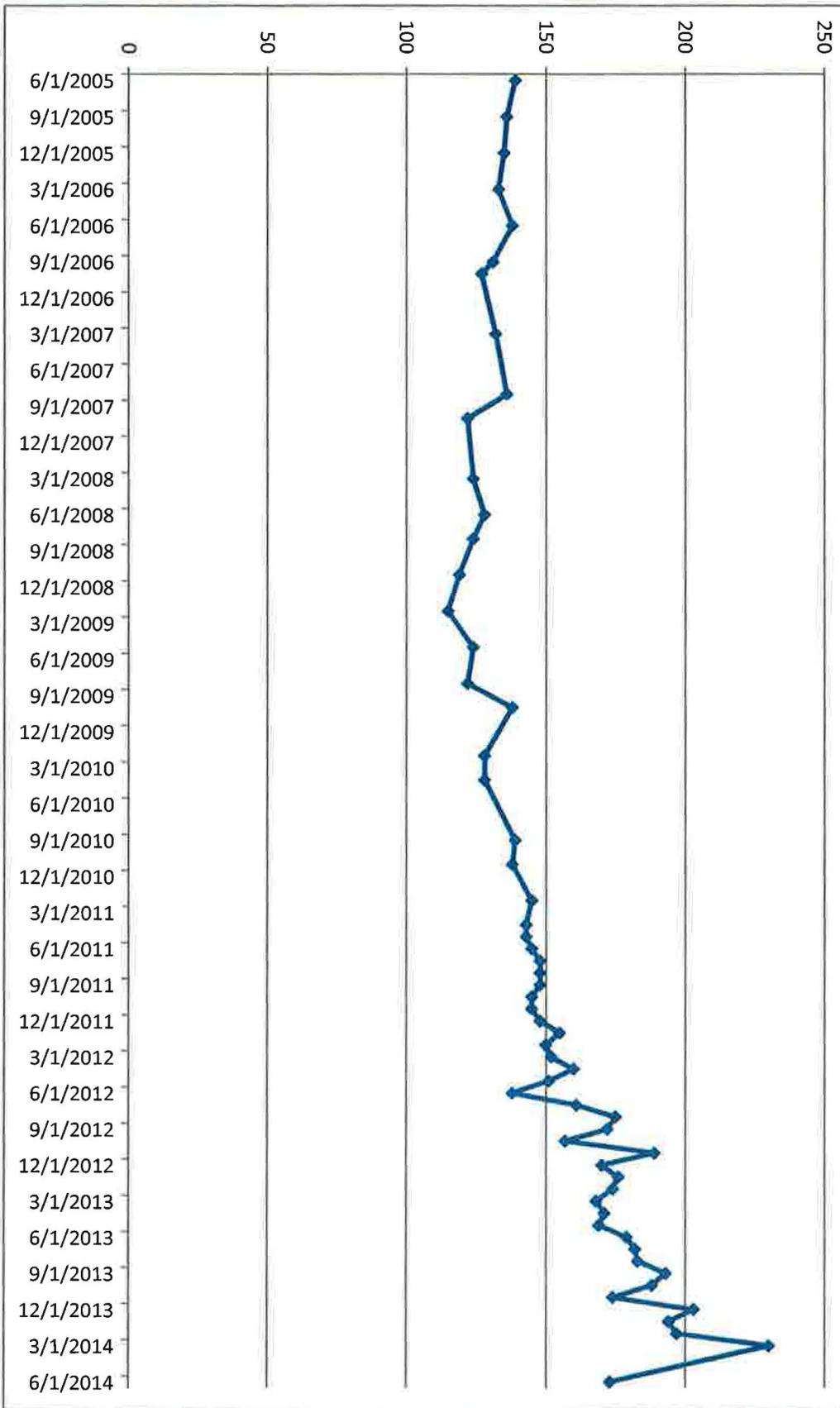
# MW-30 Chloride Concentrations



# MW-31 Nitrate Concentrations



# MW-31 Chloride Concentrations



**Tab L**

**CSV Transmittal Letter**

## Kathy Weinel

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**From:** Kathy Weinel  
**Sent:** Monday, August 18, 2014 10:47 AM  
**To:** Rusty Lundberg  
**Cc:** 'Phil Goble'; 'Dean Henderson'; Harold Roberts; David Frydenlund; Frank Filas, P.E; Scott Bakken; David Turk; Jaime Massey; Dan Hillsten  
**Subject:** Transmittal of CSV Files White Mesa Mill 2014 Q2 Nitrate Monitoring  
**Attachments:** 1405196-EDD.csv

Dear Mr. Lundberg,

Attached to this e-mail is an electronic copy of laboratory results for nitrate monitoring conducted at the White Mesa Mill during the second quarter of 2014, in Comma Separated Value (CSV) format.

Please contact me at 303-389-4134 if you have any questions on this transmittal.

Yours Truly

Kathy Weinel