RANGER
ENVIRONMENTAL SERVICES, LLC

REVIEWED
By Mike Buchanan at 2:55 pm, Sep 20, 2024

ANNUAL GROUNDWATER MONITORING REPORT

LATTION PIT (AP-23)
INCIDENT NO. NAUTOFAB000337
UNIT O, SECTION 23, TOWNSHIP 18S, RANGE 26E
EDDY COUNTY, NEW MEXICO
32.729187, -104.349760
RANGER REFERENCE NO. 5375

Review of the Annual Groundwater Monitoring Report (03.26.2024) for Lattion Pit (AP-23): accepted for the record and site is currently under review; a meeting is currently being scheduled between OCD and EOG to discuss a work plan and path forward for the site.

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1.0 SITE LOCATION AND BACKGROUND

The Lattion Pit (Site) is a historic oil and gas production pit formerly located at the Lattion Battery facility and former Lattion #1 well pad, an oil and gas production facility located on private land, approximately 8.25 miles south-southwest of Artesia, within Eddy County, New Mexico. The facility is situated in Unit O, Section 23, T18S-R26E at GPS coordinates 32.729187, -104.349760. In November 2021 operations of the Lattion Battery and were transferred from EOG Resources, Inc. to Silverback Operating II (Silverback). Under the new operator, the Lattion Battery has been decommissioned, the Lattion #1 well has been plugged and abandoned, and all production equipment has been removed for the Site. Based on the site history and transaction history, EOG Resources, Inc. (EOG) maintains environmental responsibility for the impacts to native media at the Site.

The Lattion #1 well and Lattion Battery were historically operated by H&S Oil Company (H&S) and an unlined earthen pit was formerly utilized by H&S for oil and gas fluid storage/impoundment (hereafter referred to as the “former production pit”). Based upon recent review of a historical aerial photograph from 1981 (copy provided in Attachment 4), a former reserve pit is also located at the site to the north of the Lattion #1 well and to the east of the former production pit.

In 1997, Yates Petroleum Corporation (Yates) acquired from H&S the Lattion #1 well and Lattion Battery, as well as the former production pit. While operated by Yates, the former production pit underwent closure, and assessment of the former pit was also conducted. In September 2016, EOG acquired Yates and its associated assets including the Lattion #1 well and Lattion Battery which included the former production pit. The Lattion #1 well was subsequently plugged and abandoned by Silverback in March 2023. In early 2024, the Lattion Battery was decommissioned, and all production equipment was removed from the former Lattion Battery/Lattion #1 facility pad.

The production pit closure and assessment activities completed by Yates documented impacts to the native soil. Groundwater impacts were also documented at the site in the 2002 timeframe. The greatest impacts were observed upgradient of the former production pit (and former reserve pit) and as such the groundwater impacts were not believed to have been caused by the former pit operations and were instead thought to be possibly the result of irrigation seepage from the irrigated fields to the north of the site.

Due to the documented conditions at the Site, coordination with the New Mexico Oil and Gas Division (NMOCD) was initiated. Communication and coordination between the NMOCD and Yates continued until 2005 when a Stage I & II Abatement Plan was submitted to the NMOCD. Based on available information, no response was ever received from the NMOCD regarding this

plan. During the 2005 to 2022 timeframe, a total of 13 groundwater monitoring events were conducted at the Site. In August 2020 and May 2021, additional soil investigation activities were completed at the Site.

EOG has engaged Ranger Environmental Services, LLC (Ranger) to assist in the continuation of the assessment and remediation efforts at the Site as well as to re-establish communications with the NMOCD regarding the Site. In May 2023, Ranger personnel established communications with the NMOCD, and began discussion of the Site with Mr. Nelson Velez of the NMOCD including the steps needed to bring the Site into compliance with the current regulatory criteria and New Mexico Administrative Code (NMAC). Based on Ranger's communications with the NMOCD, on August 9, 2023, a draft comprehensive *Site Chronology and Status Update* report was submitted to the NMOCD to provide the NMOCD with a summary of the Site history and the cumulative soil and groundwater data so that a regulatory path forward can be established. Additionally, Mr. Velez directed that an additional groundwater monitoring event be completed in the fourth quarter of 2024, with an accompanying annual monitoring report documenting the event to be submitted to the NMOCD by April 1, 2024.

On November 16, 2023, Ranger was informed by Mr. Nelson Velez of the NMOCD that Mr. Mike Buchanan of the NMOCD would be assuming responsibility for the oversight of the project. Since no response has been received from the NMOCD to date with regard to the draft *Site Chronology and Status Update* report submitted to the NMOCD in August 2023, the report was formally submitted to the NMOCD on February 15, 2024.

Based upon the above, groundwater monitoring activities were continued at the subject site in 2023, with an annual groundwater monitoring event completed in November 2023. This report has been prepared to document the completion of the 2023 site groundwater monitoring activities.

A *Topographic Map* and *Area Map* noting the location of the subject Site and surrounding areas are attached. A *Site Map* depicting the pertinent site features is also attached.

2.0 SITE CHRONOLOGY

Below is a chronology of the activities undertaken at the Site to date. The information presented below is derived from the proposals, work plans, and other correspondence available to Ranger. All information presented in this section is available via the NMOCD online imaging portal (https://ocdimage.emnrd.nm.gov/imaging/).

2.1 Yates Acquisition and Pit Closure (1997 – 2000)

As previously stated, Yates acquired the Lattion Battery and the former production pit from H&S in 1997. At the time of the acquisition, the former production pit remained open and had dimensions of approximately 45 feet by 50 feet. The former production pit was reported to be of earthen construction with no liner present. Under Yates' direction, an undated "*Pit Closure*" proposal was submitted to the NMOCD to address the former production pit. In June 1998, the NMOCD approved of the proposed closure activities, with conditions of approval that included the vertical delineation of the soil conditions and directives for sample analysis.

In May 1998, Bioremediation Contractors & Consultants, Inc. (BCC) initiated closure of the former production pit. The activities completed by BCC included the removal of bird netting, debris, and fluids within the pit. The pit was then ripped, tilled, sprayed with a BCC microbial product, treated

with nutrients, and were then managed to assist in the bioremedial process. Soil samples were collected in September 1999 and January 2000 and the pit was subsequently backfilled.

In February 2000, a closure report/request was submitted to the NMOCD. In August 2000, the NMOCD denied the closure request citing lack of pertinent closure details, inadequate soil sampling, and lack of soil chloride analyses.

2.2 Additional Assessment Activities and Stage I & II Abatement Plans (2000 – 2005)

In October 2000, Yates contracted Environmental Technology Group, Inc. (ETGI) to perform additional soil delineation activities at the Site. On October 20, 2000, ETGI and a drilling subcontractor installed six soil borings at the Site. Based on information provided in the November 2000, ETGI prepared, *Preliminary Site Investigation Report* two of the completed soil borings were installed in the former production pit (SB-1 and SB-2) and four soil borings were installed in the former reserve pit (SB's 3-6). Unfortunately, location information for the soil borings is limited to a rudimentary map illustrating the approximate locations of the soil borings. A copy of the ETGI prepared *Site Map* is included in the figures section of this report as the *ETGI October 20, 2000 Soil Boring Location Map*.

During the soil boring installation process, multiple soil samples and a groundwater sample (from soil boring SB-2) were collected for laboratory analysis. Additionally, a background soil sample was collected from a location outside of the apparent impacted areas at the Site. Elevated soil chloride concentrations were documented to be present in all six soil borings.

Soil boring SB-2, installed through the former production pit, was documented to contain 7,267 mg/Kg chloride at a depth of 20'-21' below ground surface (bgs). The vertical extent of this elevated soil chloride concentration was not delineated. The groundwater sample collected from soil boring SB-2 was documented to contain elevated chloride concentrations (81,535 mg/L) and a trace concentration (0.004 mg/L) of benzene. However, since this groundwater sample appeared to have been collected from an open soil boring subject to sloughing effects from overlying soils, these results may or may not have been representative of the actual groundwater quality.

The findings of the October 2000 site assessment activities were documented in the ETGI-prepared *Preliminary Site Investigation Report* dated November 2000. In December 2000, Yates submitted the ETGI report and previous BCC report to the NMOCD and petitioned for closure of the Site. On March 7, 2001, the NMOCD denied site closure due to the fact that the groundwater (in soil boring SB-2) contained chloride concentrations in excess of the New Mexico Water Quality Commission (WQCC) standards. The NMOCD directed that an abatement plan for the site be prepared and submitted to the NMOCD.

In July 2001, a *Stage 1 Abatement Plan Proposal* prepared by Harding ESE (Harding) was submitted to the NMOCD. The proposal included provisions for the installation and sampling of three soil borings and the conversion of the soil borings into permanent monitor wells to allow for the collection of representative groundwater samples for laboratory analysis. On September 25, 2001, the NMOCD responded to the proposal with the statement that the plans were "*administratively complete*" and that prior to the NMOCD review of the proposed activities public notification was to be completed.

On October 19, 2001, Yates submitted documentation of the required public notification to the NMOCD with the request that the Harding-prepared *Stage 1 Abatement Plan Proposal* be

reviewed. On February 1, 2002, the NMOCD granted approval of the proposed activities with conditions of approval including the requirement that a Stage I Investigation report be submitted to the NMOCD by April 1, 2002. Due to various reasons, including the transfer of the project from Harding back to ETGI, multiple project timeline extension requests were submitted and approved by the NMOCD.

A June 2003 ETGI-prepared *Preliminary Site Investigation Report* documenting the installation and sampling of four monitor wells (MW's 1-4) was subsequently submitted to the NMOCD. The information provided in the report confirmed that impacts to soil and groundwater were present at the Site. Monitor well MW-4 was reported to have been installed in the approximate center of the pit area. The MW-4 soil analytical data documented an elevated chloride concentration of 2,390 mg/Kg at a depth of 20' bgs which subsequently declined to 213 mg/Kg by a depth of 45 feet where groundwater was encountered thus potentially indicating that the historic pit operations had not affected the underlying groundwater. No soil chloride impacts were documented in MW's 1-3, and none of the soil samples collected from the site were found to contain detectable BTEX or TPH concentrations.

Groundwater samples collected from the installed monitor wells were also documented to contain nondetectable BTEX concentrations. However, groundwater chloride concentrations were documented to be elevated beyond the applicable WQCC standards. Within the report ETGI highlighted that the groundwater sample exhibiting the highest chloride concentration was collected from monitor well MW-1, located upgradient of the former pit location, and that the groundwater sample exhibiting the lowest chloride concentration was collected from monitor well MW-3, located downgradient of the former pit location. Based on this information, ETGI concluded that the former pit area did not appear to be adversely impacting groundwater in the site area. The June 2003 ETGI report proposed that a formal pit closure report be prepared and that the installed monitor wells be plugged and abandoned upon NMOCD approval.

Based on the information presented in the June 2003 ETGI report, the NMOCD issued a response dated October 6, 2004. The NMOCD response stated that the extent of the groundwater impacts at the Site had not been delineated and requested that a groundwater delineation work plan be submitted by December 31, 2004. Prior to the submittal of the NMOCD-directed plan, ETGI was replaced by Safety & Environmental Solutions, Inc. (SESI) who had been retained by Yates to conduct the further site investigative activities. During the transfer of the project from ETGI to SESI, a 45-day extension request was submitted and approved by the NMOCD to allow for the project transition.

In February 2005, an SESI-prepared *Amended Stage 1 Abatement Plan Proposal*, dated February 15, 2005, was submitted to the NMOCD. The amended plan included SESI's review of the previously collected Site data and conditions and proposed additional site investigation activities. The proposed site activities included the resurveying of the existing monitor wells and the installation of a background monitor well in an undisturbed area located upgradient from the former pit areas. The plan also proposed the plugging of monitor well MW-4 located within the footprint of the historic pit and continued groundwater monitoring activities.

On July 18, 2005, the NMOCD responded to SESI's *Amended Stage 1 Abatement Plan Proposal* and denied the proposed activities. The NMOCD response cited a lack of adequate characterization of the impacts at the Site, and insufficient proposed delineation locations. The NMOCD requested submittal of a revised Stage 1 Abatement Plan by August 19, 2005.

As requested by the NMOCD, an *Amended Stage 1 Abatement Plan Proposal*, prepared by SESI and dated August 19, 2005, was subsequently submitted to the NMOCD. The updated plan revisited the information presented in the February 15, 2005 version and proposed additional site activities to address the NMOCD concerns and requests. The plan proposed four soil borings, with the possibility for additional borings, to be installed within the former pit area to assist in the characterization/delineation of the soil impacts. The plan also included provisions for the installation of a minimum of two additional monitor wells. Additional proposed activities included the determination of hydraulic conductivity and transmissivity via groundwater slug tests and the continued monitoring and sampling of the Site monitor wells.

Based on available information, it does not appear that the NMOCD ever replied to SESI's August 19, 2005 *Amended Stage 1 Abatement Plan Proposal*. The final correspondence available via the NMOCD online resources is noted to be a cover letter that appears to have been submitted with the August 19, 2005 amended plan. EOG also conducted an internal review of the project files transferred to them by Yates and an NMOCD response to the August 19, 2005 plan was not discovered.

2.2.1 Clarifications - 2024 File and Historical Aerial Photograph Review

During the preparation of this report, Ranger reviewed historic aerial photographs of the subject site, in particular aerial photographs from 1981 and 1997 (copies provided in Attachment 4). As illustrated in the 1981 photograph, it is apparent that the larger eastern pit at the site was a former reserve pit associated with the Lattion #1 well. The 1997 aerial photograph clearly shows that the smaller western pit noted on the attached *Site Map* was the former production pit.

It was the smaller western pit noted on the attached *Site Map* (i.e. – the former production pit) that was the one closed by BCC, Inc. in the 1999-2000 timeframe. This was also the pit that was the subject of the NMOCD-requested Stage I & II Abatement Plans. As summarized above, on March 7, 2001, the NMOCD denied site closure and directed that an abatement plan be prepared due to the fact that the groundwater at the site contained chloride concentrations in excess of the New Mexico Water Quality Commission (WQCC) standards. The elevated groundwater chloride concentration referenced by the NMOCD as necessitating the abatement plan, was the soil boring SB-2 groundwater chloride concentration of 81,535 mg/L. As reported in the November 2000 ETGI-prepared "*Preliminary Site Investigation Report,*" soil boring SB-2 was advanced in the production pit that was closed by BCC, Inc.

In the June 2003 ETGI-prepared "*Preliminary Site Investigation Report,*" ETGI stated that they "*mobilized a hollow-stem auger drilling rig on 3 September and 4 September 2002 to conduct a preliminary site investigation and determine the nature and extent of dissolved phase benzene and chloride concentrations present in the groundwater in the former pit area*." They also stated that "*Monitor well MW-4 is positioned near the center of the former pit area, as determined from observations made on-site*." Based upon the above-referenced aerial photograph review, it has now become clear that monitor well MW-4 was installed through the former site reserve pit, not the former production pit which was the subject of the NMOCD-requested Stage I & II Abatement Plans.

Ranger would like to clarify that the draft *Site Chronology and Status Update* report submitted to the NMOCD in August 2023, and the final version of this report that was submitted to the NMOCD on February 15, 2024, was prepared based upon the understanding that the former reserve pit was the one which had been closed by BCC, Inc. and which was the subject of the NMOCD-requested Stage I & II Abatement Plans. Based upon the recent aerial photograph review and

additional file review, it has become clear that the September 2002 ETGI site assessment activities did not include further investigation of the former production pit which was the subject of the NMOCD-requested Stage I & II Abatement Plans. Ranger found no documentation indicating why the former reserve pit at the site was investigated instead of the former production pit.

The attached *Site Map* illustrates the locations of the two former pits at the site, as derived from the historic aerial photograph review, and indicates which one is the former reserve pit and which one is the former production pit subject to the NMOCD-requested abatement plans.

2.3 2020-2021 SESI Soil Investigation

In August 2020 and May 2021, additional soil investigation activities were completed at the Site by SESI. SESI installed a total of 63 test excavations, collected a total of 99 samples for field screening, and submitted a total of 18 soil samples to the laboratory for analysis. The test excavations were installed to depths ranging from 4' to 8' bgs in both of the former pits at the site, as well as in the areas surrounding both pits.

As documented by SESI, elevated chloride concentrations above the 19.15.29.12 NMAC Table 1 Closure Criteria for Soils Impacted by a Release (GW < 50') remain present at the site that will require remediation. The extent of the soil chloride exceedances was not, however, defined during the August 2020 and May 2021 soil investigation activities. Additional soil delineation activities will be required to enable development of the site remediation plan. Input will also be needed from the NMOCD as to whether any further soil investigation or remediation will be needed for the former site reserve pit since this pit was not the subject of the NMOCD-requested abatement plans.

Details of this investigation were provided in the *Site Chronology and Status Update* report. The attached *2020-2021 SESI Soil Investigation Map* illustrates the SESI sampling locations and the former pit locations.

2.4 Groundwater Monitoring (2005 through 2022)

Between 2005 and 2022, a total of 13 groundwater monitoring events were conducted at the Site. The site monitoring wells were gauged and sampled during each event. No light nonaqueous phase liquid (LNAPL) was detected in the site monitoring wells and no elevated concentrations of BTEX or TPH were documented. The groundwater analytical data continued to indicate the presence of elevated chloride, sulfate and TDS concentrations, in exceedance of the applicable WQCC standards. Below is a brief summary of the groundwater monitoring results through 2022.

Well Gauging

As summarized above, no LNAPL was found to be present in the site monitoring wells. The depths to groundwater in the site monitoring wells ranged from a minimum of approximately 44.21 feet below top of casing (btoc) in MW-1 to a maximum of approximately 62.22 feet btoc in MW-3. The site groundwater flow direction was documented to consistently flow in a south-southeasterly direction with gradients ranging from approximately 0.03 – 0.1 ft/ft.

Groundwater Anions

Concentrations of chloride above the NMAC 20.6.2.3103 criteria were documented in three of the four site monitoring wells (MW-1, MW-2 & MW-4). The groundwater chloride data were potentially indicative of an upgradient off-site source unrelated to the former site pit operations. Monitor well MW-1, located upgradient of the former pit locations, was consistently found to contain the highest site chloride concentrations and monitor well MW-3, located downgradient of the former pits, was unaffected with chloride concentrations well below the 20.6.2.3103 NMAC criteria.

Concentrations of sulfate above the NMAC 20.6.2.3103 criteria were documented in all four of the site monitoring wells. Similar to the chloride data described above, the groundwater sulfate data were also potentially suggestive of an upgradient off-site source, as well as elevated background sulfate concentrations (based upon the elevated sulfate concentrations in monitor well MW-3 which appears to be an unaffected well).

Relatively minor detections of fluoride above the NMAC 20.6.2.3103 criteria were also documented during multiple sampling events in MW-1 and MW-4, as well as one event in MW-3. The fluoride concentrations in the wells were all relatively similar suggesting potential background conditions.

Dissolved Metals

Based upon available information, groundwater dissolved metals analyses were initiated at the site during the March 2012 sampling event. Exceedances of the NMAC 20.6.2.3103 criteria for manganese were documented in samples collected during six events in MW-1 and from one event in MW-3. Exceedances of the NMAC criteria for iron were documented in one sample collected from MW-1 during the March 21, 2022 sampling event. All exceedances were relatively minor and could potentially be associated with background conditions, although the multiple manganese detections in upgradient monitor well MW-1, which is the most affected site monitoring well, potentially suggest that these detections may be associated with a groundwater impact.

VOCs

No VOCs were detected in the site monitoring wells.

Specific Conductance, pH, Alkalinity, and TDS

Concentrations of TDS above the NMAC 20.6.2.3103 criteria were documented in all four of the site monitoring wells and, similar to the chloride data described above, the groundwater TDS data were also potentially suggestive of an upgradient off-site source.

In the August 2005 *Amended Stage 1 Abatement Plan*, it was noted that the elevated chloride and TDS concentrations at the subject site were suspected to be potentially related to the irrigated agricultural field located upgradient from the former pit areas. The 2005-2022 groundwater monitoring data continued to potentially suggest that affected groundwater may be flowing onto the site from the irrigated agricultural fields to the north. Further investigation of the former production pit will, however, be required to confirm whether this is the case, or whether there is an on-site release source.

3.0 GROUNDWATER MONITORING (2023)

On November 29, 2023, an annual groundwater monitoring event was conducted at the Site. The site monitoring wells were gauged and sampled. Ranger has compiled and attached both current (2023) and cumulative tables of the Site well gauging and groundwater analytical data. Also attached are November 2023 isoconcentration maps for the primary groundwater constituents of concern at the Site (chloride, sulfate and TDS), as well as a copy of the laboratory analytical report for the November 2023 annual groundwater sampling event. Below is a summary of the 2023 annual groundwater monitoring activities and results.

3.1 Groundwater Monitoring Methodologies

Upon arrival at the Site, the monitor wells were opened and allowed to equilibrate for approximately 30 minutes prior to the performance of any well gauging or sampling activities. Prior to sampling the groundwater in each monitor well, the wells were first gauged with a decontaminated interface probe to determine the depth to groundwater in each monitor well, and LNAPL thicknesses, if any. This data was utilized to determine the site groundwater flow direction and gradient.

Groundwater samples were subsequently collected from monitor wells MW-1, MW-2 and MW-4 using low-flow sampling techniques. The wells were purged and sampled using a low flow rate (0.026 to 0.264 gpm) that minimized drawdown. The pump-intake was located in the middle or slightly above the middle of the saturated screened interval. The monitoring wells were purged until the field water quality parameters (i.e., pH, temperature, and conductivity) stabilized. Parameters were considered to have stabilized if, over three consecutive readings, the following criteria were met:

- pH ±0.1 unit
- Temperature within 3%
- Conductivity within 3%

It should be noted that an obstruction was encountered in monitor well MW-3 at the approximate depth of 41.70’ bgs which prohibited placement of the low-flow pump in this well. As such, a new disposable bailer was utilized to collect the sample from this well.

All sample containers were filled with minimal turbulence. Due to sample turbidity, the samples collected for dissolved metals analysis were first field-filtered through a 10-micron pore size filter. Ranger personnel wore new nitrile gloves while handling each sample in order to prevent cross-contamination of samples.

All samples were containerized using properly selected and cleaned containers, which were preserved by the laboratory as needed for the particular analysis to be performed. All VOC sample vials were filled completely to minimize head space. The samples were subsequently sealed in one or more ziplock bags and stored in a sample shuttle containing ice until arrival at the laboratory for chemical analysis. All sample containers were labeled with the project name, sample identification, date of sample collection, samplers’ initials, and time sampled collected. Chain-of-custody forms were completed to document sample transport to the analytical laboratory. The groundwater samples were subsequently analyzed for the following:

- **EPA Method 200.8**: Antimony, arsenic, lead, selenium, thallium and uranium
- **EPA Method 300.0**: Fluoride, chloride, bromide, phosphorus, orthophosphate (as P), sulfate, Nitrogen, Nitrite (As N), and Nitrogen, Nitrate (As N).
- **SM2510B**: Conductivity
- **SM2320B**: Bicarbonate (as CaCO3), carbonate (as CaCO3), and total alkalinity (as CaCO3)
- **SM2540C MOD**: Total dissolved solids
- **SM4500-H+B / 9040C**: pH
- **EPA METHOD 200.7**: Aluminum, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, magnesium, manganese, molybdenum, nickel, potassium, silver, sodium, and zinc
- **EPA METHOD 8260B**: Benzene, toluene, ethylbenzene, and total xylenes (BTEX); naphthalene, 1-methylnaphthalene and 2-methylnaphthalene

A trip blank was included in the sampling cooler to assess the potential cross-contamination of field samples during shipment to, and storage in, the laboratory. The trip blank was analyzed for BTEX, naphthalene, 1-methylnaphthalene and 2-methylnaphthalene using Method 8260. All trip blank results were non-detectable. A temperature blank was also included in the sample shipping container. The temperature blank was received by the laboratory at a temperature below 6°C.

All purge water generated during the well purging process was placed in a sealed and labeled 55-gallon drum and was temporarily stored on-site pending off-site disposal.

3.2 2023 Groundwater Monitoring Results Summary

Well Gauging Results

No LNAPL was documented to be present in the site monitoring wells. The depth to groundwater in the site monitoring wells was documented to range from approximately 52.32' bgs in MW-1 to a maximum of approximately 62.54' bgs in MW-3. As illustrated on the attached groundwater gradient map, the November 29, 2023 site groundwater gradient and flow direction was documented to be approximately 0.03 ft/ft to the southeast, consistent with the historical well gauging results.

Groundwater Analytical Results

- *Groundwater Anions*: Concentrations of chloride above the NMAC 20.6.2.3103 criteria were documented in monitoring wells MW-1, MW-2 and MW-4. Concentrations of sulfate above the NMAC 20.6.2.3103 criteria were documented in all four site monitoring wells. Upgradient monitor well MW-1 was found to contain the highest site chloride (2,000 mg/L) and sulfate (2,000 mg/L) concentrations while monitor well MW-3 (located downgradient of the former pits) was found to contain the lowest site chloride (43 mg/L) and sulfate (890 mg/L) concentrations. Thus, there was an approximate 98% decrease in the site groundwater chloride concentration, and an approximate 55% decrease in the site groundwater sulfate concentration, while flowing beneath the former reserve pit area.

- *Dissolved Metals*: No exceedances of the NMAC 20.6.2.3103 criteria for these constituents were documented in the site monitor wells.

- *VOCs*: There were no groundwater VOC laboratory detections or exceedances of the NMAC 20.6.2.3103 criteria.

- *Specific Conductance, pH, Alkalinity, and TDS*: Elevated TDS concentrations were documented in all four monitor wells at the site. Upgradient monitor well MW-1 was found to contain the highest site TDS concentration (6,400 mg/L) while monitor well MW-3 (located downgradient of the former pits) was found to contain the lowest site TDS concentration (1,610 mg/L). Thus, there was an approximate 75% decrease in the site groundwater TDS concentration while flowing beneath the former reserve pit area.

In summary, the 2023 well gauging and groundwater analytical data were consistent with historic results and are indicative of a stable condition. The groundwater analytical data continue to indicate the presence of elevated chloride, sulfate and TDS concentrations, in exceedance of the applicable WQCC standards. As summarized above, in the August 2005 *Amended Stage 1 Abatement Plan*, it was noted that the elevated chloride and TDS concentrations at the subject site were suspected to be potentially related to the irrigated agricultural field located upgradient from the former pit areas. The 2023 groundwater monitoring data continued to potentially suggest that affected groundwater may be flowing onto the site from the irrigated agricultural fields to the north. Further investigation of the former production pit will, however, be required to confirm whether this is the case, or whether there is an on-site release source.

4.0 CURRENT SITE COMMUNICATIONS AND CORRESPONDENCE

In 2023, EOG engaged Ranger to assist in the continuation of the assessment and remediation efforts at the Site, as well as to re-establish communications with the NMOCD regarding the Site. In May 2023, Ranger personnel established communications with the NMOCD, and began discussion of the Site with Mr. Nelson Velez of the NMOCD including the steps needed to bring the Site into compliance with the current regulatory criteria and New Mexico Administrative Code (NMAC). The call included a review of the Site history, the presentation of data collected since 2005, review of the current status of the Site, and a discussion of the appropriate regulatory path forward.

Based on Ranger's communications with the NMOCD, on August 9, 2023, a draft comprehensive *Site Chronology and Status Update* report was submitted to Mr. Velez to provide the NMOCD with a summary of the Site history and the cumulative soil and groundwater data so that a regulatory path forward could be established. Additional directives included the completion of a fourth quarter groundwater monitoring event and the preparation of an annual report to be submitted by April 1, 2024.

On November 16, 2023, Ranger was informed by Mr. Velez that Mr. Mike Buchanan of the NMOCD would be assuming responsibility for the oversight of the project. Since no response has been received from the NMOCD to date with regard to the draft *Site Chronology and Status Update* report submitted to the NMOCD in August 2023, the report was formally submitted to the NMOCD on February 15, 2024.

Based upon the above, groundwater monitoring activities were continued at the subject site in 2023, with an annual groundwater monitoring event completed in November 2023. On November 21, 2023, EOG provided notice to the NMOCD of the planned annual groundwater monitoring

event. A copy of this notification is attached. No NMOCD representatives were present on the day of sampling.

5.0 REGULATORY GUIDANCE REQUEST

In the *Site Chronology and Status Update* report that was initially submitted as a draft report to the NMOCD in August 2023, and as a final report on February 15, 2024, EOG requested NMOCD guidance regarding the appropriate regulatory reporting/proposal format that will be required for the next phase of site activities.

Based upon the recent determination that the larger eastern pit is a former reserve pit, not the former production pit that was the subject of the NMOCD-requested abatement plans, along with the analytical results of soil samples collected during the installation of MW-4, indicating a separation of soil and groundwater impacts in the area, it is proposed to shift further efforts at the Site to former production pit originally identified as the area of concern.

6.0 CONCLUSIONS AND RECOMMENDATIONS

- As noted in this report, the extensive groundwater analytical data potentially support the earlier project conclusions that affected groundwater may be flowing onto the subject site from the irrigated agricultural fields to the north. Further investigation of the former production pit is, however, needed to confirm whether this is the case, or whether there is an on-site release source. Ranger recommends that an additional monitoring well be installed immediately downgradient (southeast), of the former H&S pit. Ranger also recommends the installation of an additional upgradient well located to the northwest of the former H&S pit along the property line with the northern irrigated agricultural field. A *Proposed Soil Boring/Monitor Well Location Map* is attached which illustrates the proposed monitoring well locations.

- Based upon the recent determination that the larger eastern pit is a former reserve pit, not the former production pit that was subject to the NMOCD-requested abatement plans, Ranger recommends that a soil delineation work plan be prepared to attempt to complete the delineation of the soil impacts at the former production pit. Vertical soil delineation activities will be completed within the former production pit in conjunction with the proposed monitor well installation activities, once the NMOCD has provided guidance for the new monitor well installation. Ranger recommends that two soil borings be installed through the former production pit to finish the vertical delineation of the 7,267 mg/Kg soil chloride impact which was previously documented in soil boring SB-2 at a depth of 20'-21' bgs. The attached *Proposed Soil Boring/Monitor Well Location Map* illustrates the proposed soil boring locations.

- Upon NMOCD determination of the appropriate regulatory mechanism and reporting format for the next phase of site work, Ranger will prepare a detailed work plan for NMOCD review. In the interim, groundwater monitoring activities will be continued along with the submittal of annual groundwater monitoring reports.

- Until such time that the NMOCD provides the requested project guidance and direction, EOG will initiate quarterly groundwater monitoring activities beginning in the second quarter of 2024. Based upon the cumulative site groundwater monitoring results, which have

documented generally stable conditions, Ranger recommends that the site chemicals of concern (COCs) for future groundwater monitoring events be reduced to the following constituents which have been detected in exceedance of the NMAC 20.6.2.3103 criteria on at least one or more occasions:

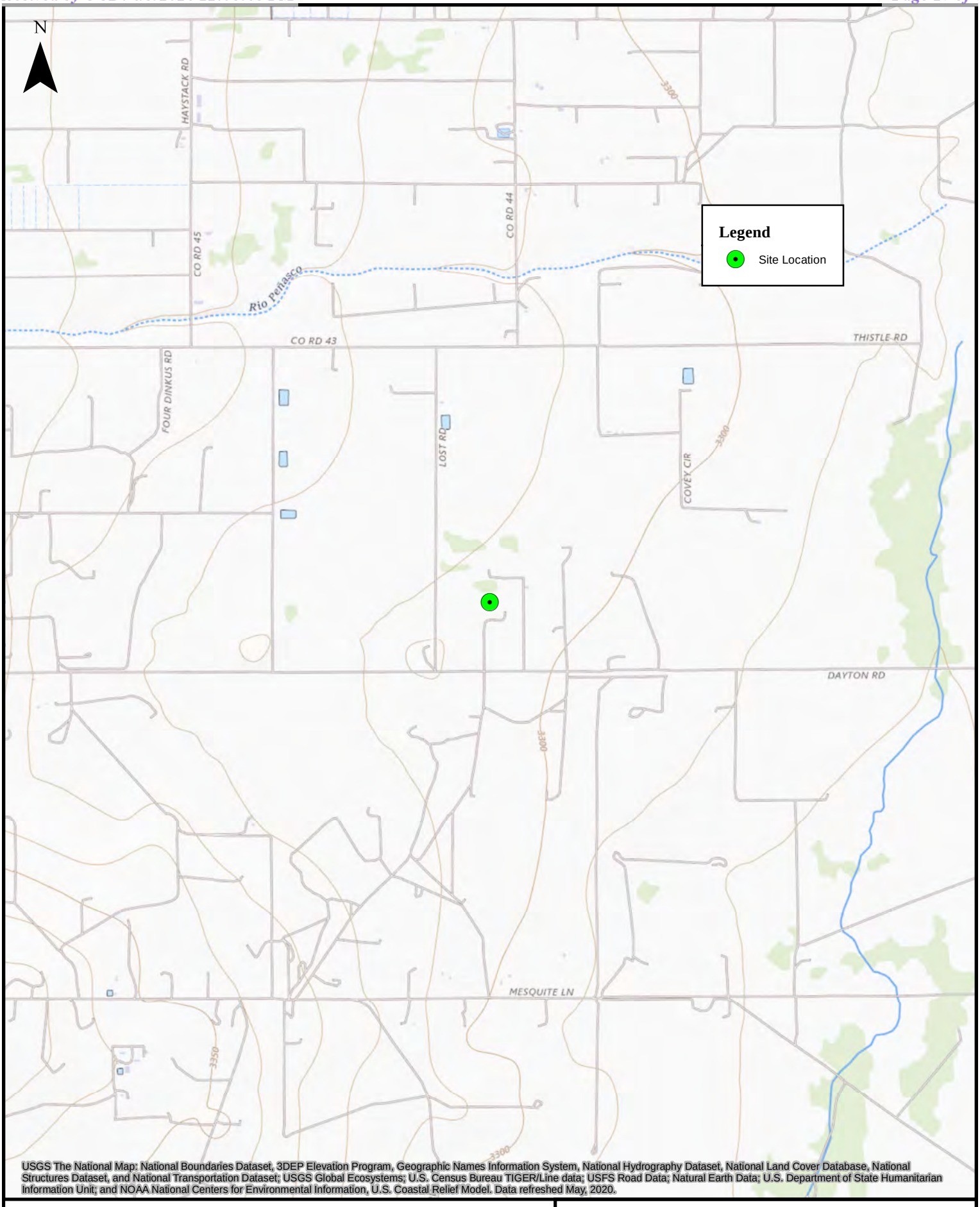
  - Chloride
  - Fluoride
  - Iron
  - Manganese
  - Sulfate
  - Total Dissolved Solids

- Upon NMOCD review of this report and the *Site Chronology and Status Update* report, the above-recommended subset of the site groundwater monitoring COCs will be modified if requested by the NMOCD.

FIGURES

Topographic Map
Area Map
Site Map
Groundwater Gradient Map
Groundwater TDS, Chloride, and Sulfate Isoconcentration Maps

ETGI October 20, 2000 Soil Boring Location Map
2020-2021 SESI Soil **Sample Location** Map
Proposed Soil Boring/Monitor Well Location Map



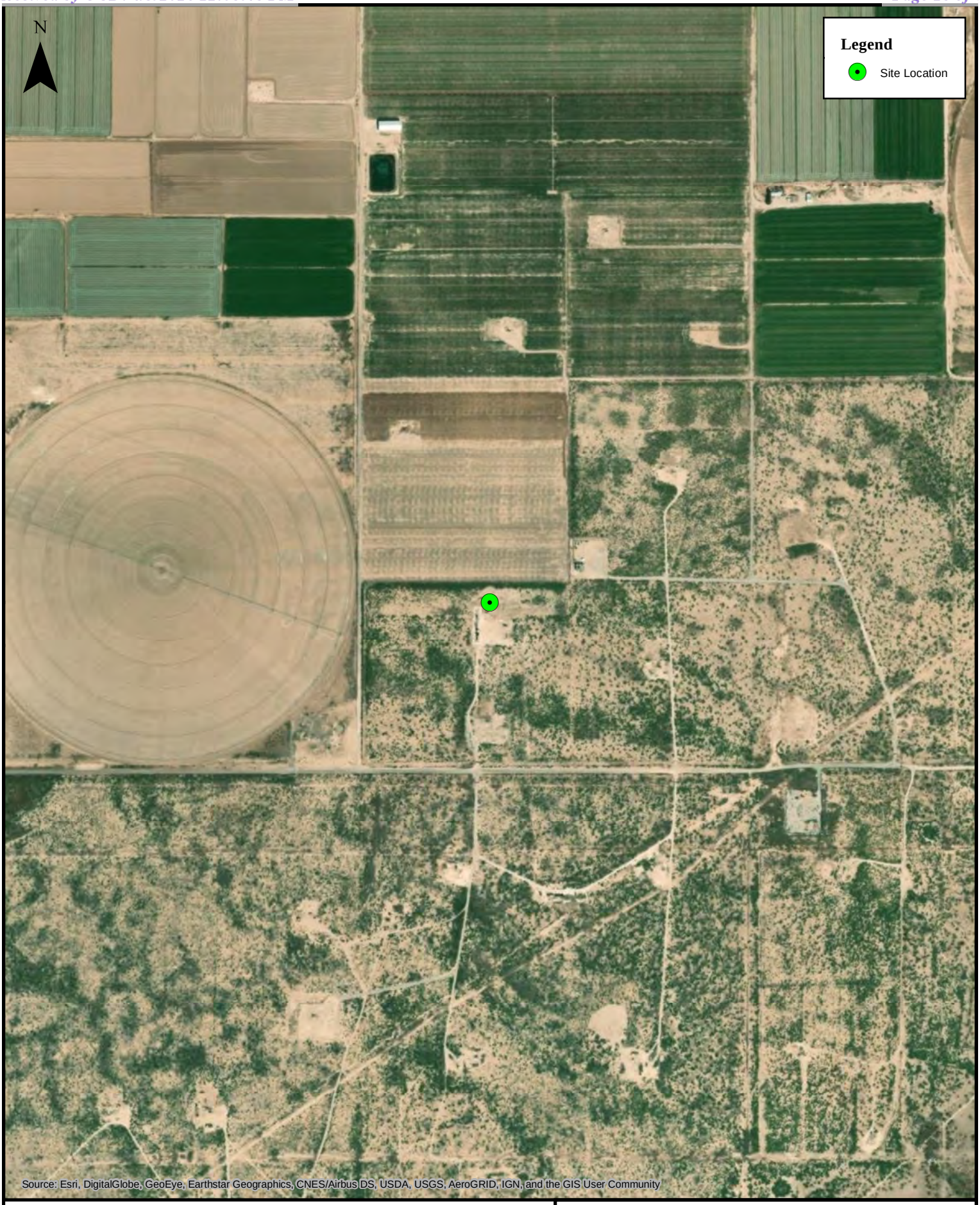
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.

RANGER ENVIRONMENTAL SERVICES, LLC

0 600 1,200 2,400 3,600 4,800 Feet

1:24,000

Topographic Map
Lattion Pit
EOG Resources, Inc.

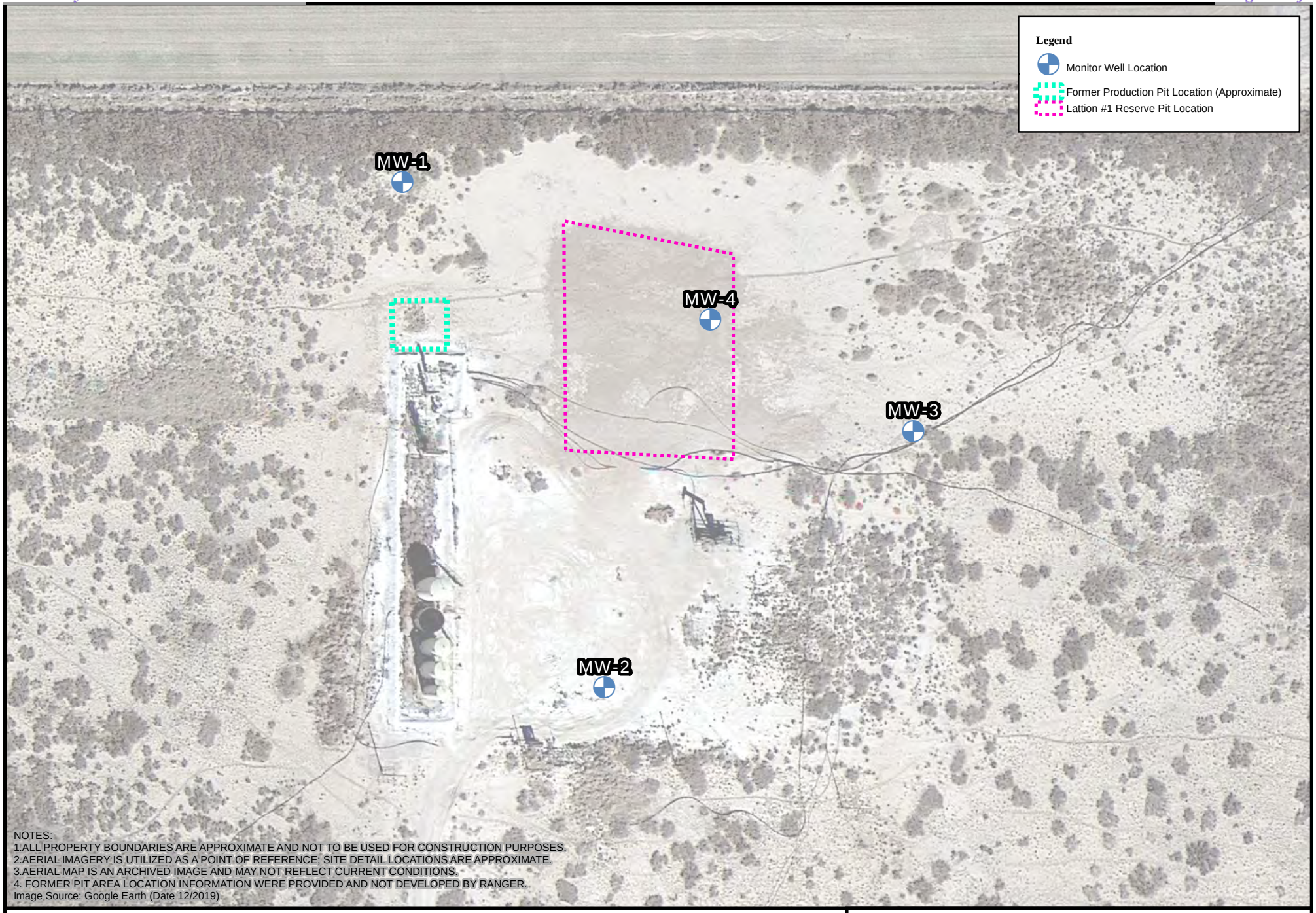


RANGER ENVIRONMENTAL SERVICES, LLC

0 250 500 1,000 1,500 2,000 Feet

1:10,000

Area Map
Lattion Pit
EOG Resources, Inc.



NOTES:
1.ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.
2.AERIAL IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAIL LOCATIONS ARE APPROXIMATE.
3.AERIAL MAP IS AN ARCHIVED IMAGE AND MAY NOT REFLECT CURRENT CONDITIONS.
4. FORMER PIT AREA LOCATION INFORMATION WERE PROVIDED AND NOT DEVELOPED BY RANGER.
Image Source: Google Earth (Date 12/2019)

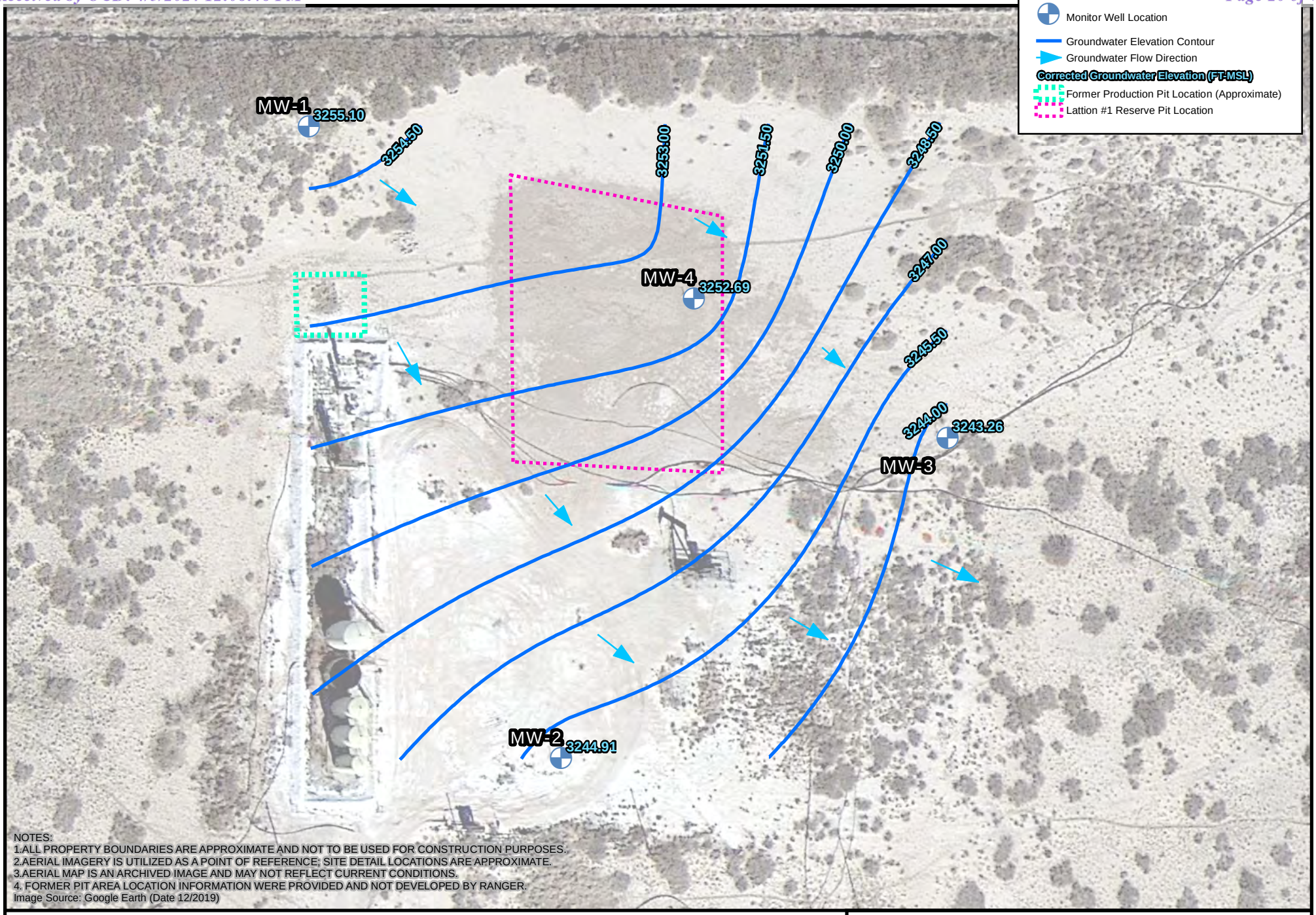
RANGER ENVIRONMENTAL SERVICES, LLC

0 25 50 100 150 200 Feet

1:1,000

N

Site Map
Lattions Pit
EOG Resouces, Inc.



Groundwater Gradient Map
(11/29/2023)
Lattions Pit
EOG Resouces, Inc.

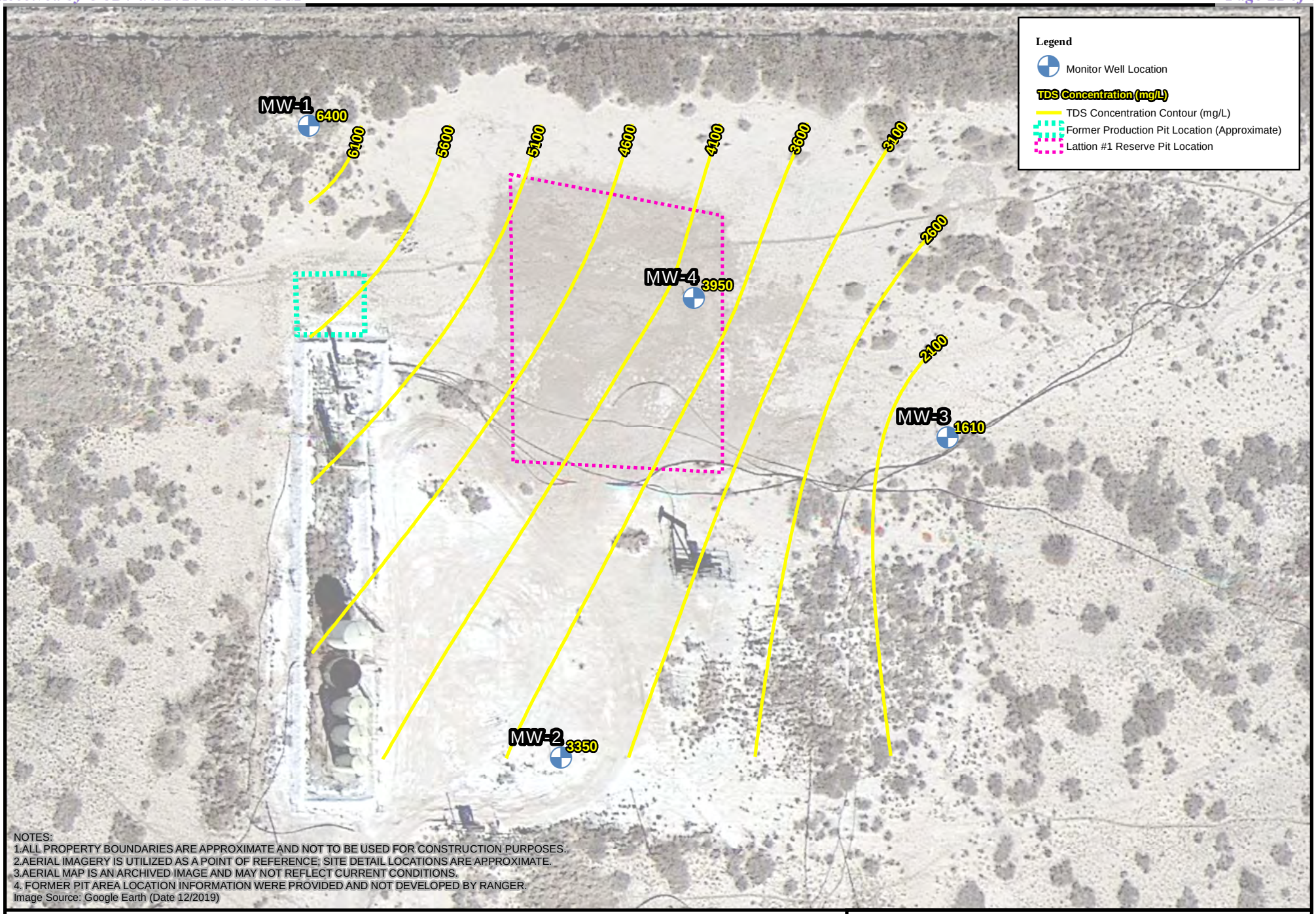


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Image Source: Google Earth (Date 12/2019)

RANGER
ENVIRONMENTAL SERVICES, LLC

0 20 40 80 120 160 Feet

1:800

N

Groundwater TDS Isoconcentration Map
(Sampel Date: 11/29/2023)
Lattions Pit
EOG Resouces, Inc.

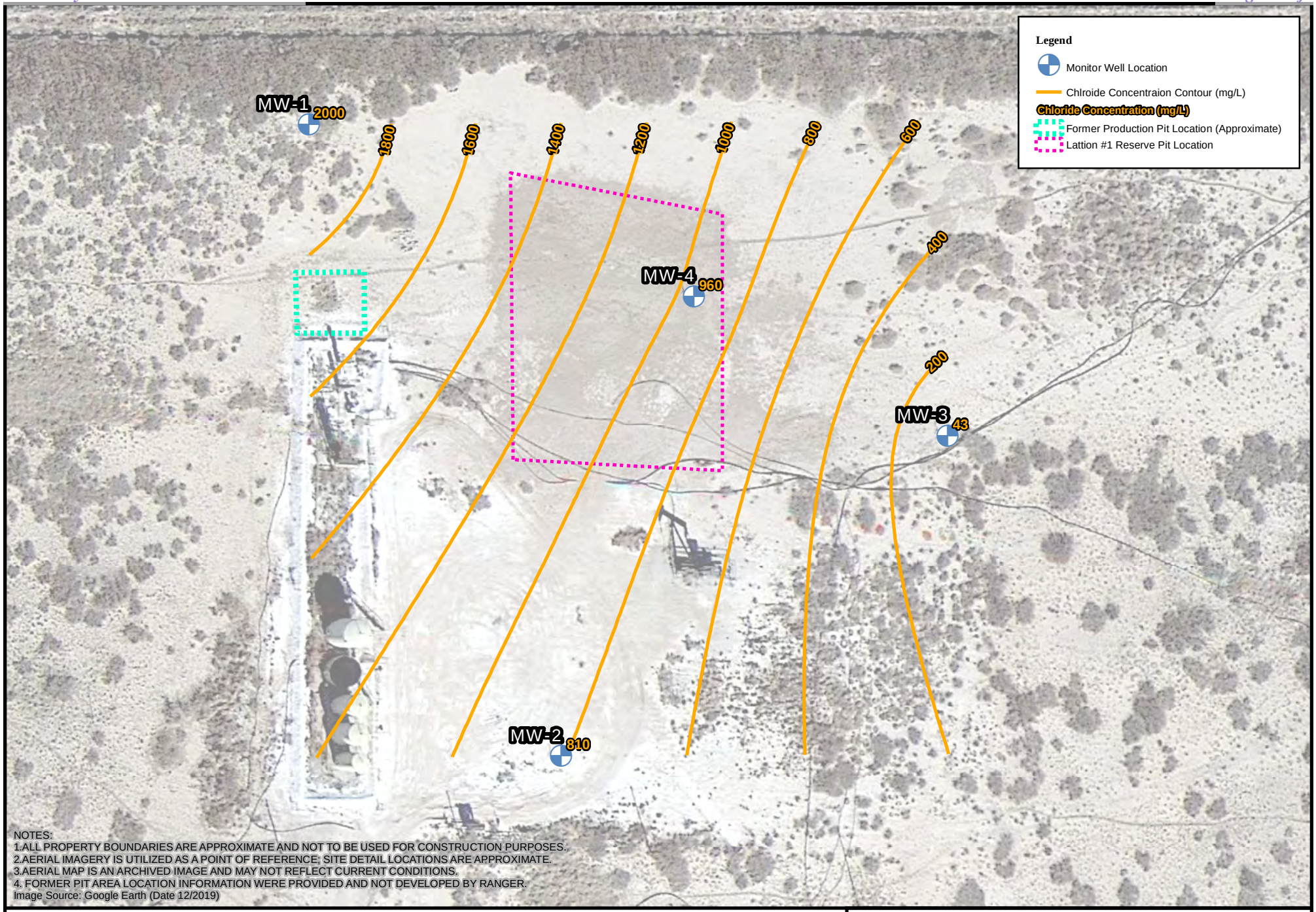

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Image Source: Google Earth (Date 12/2019)

RANGER
ENVIRONMENTAL SERVICES, LLC

0 20 40 80 120 160 Feet

1:800

N

Groundwater Chloride Isoconcentration Map
(Sampel Date: 11/29/2023)
Lattions Pit
EOG Resouces, Inc.

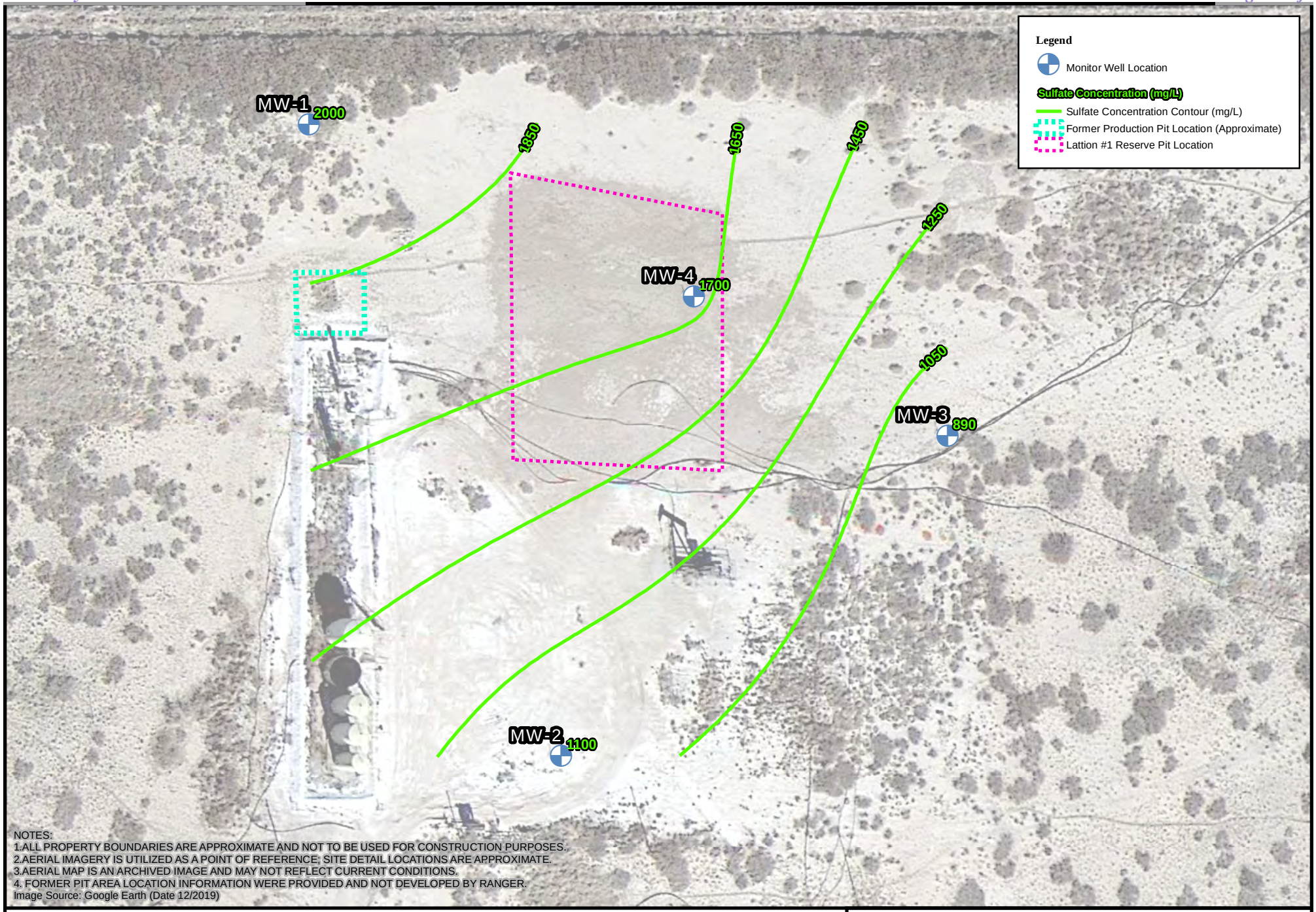

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Image Source: Google Earth (Date 12/2019)

RANGER
ENVIRONMENTAL SERVICES, LLC

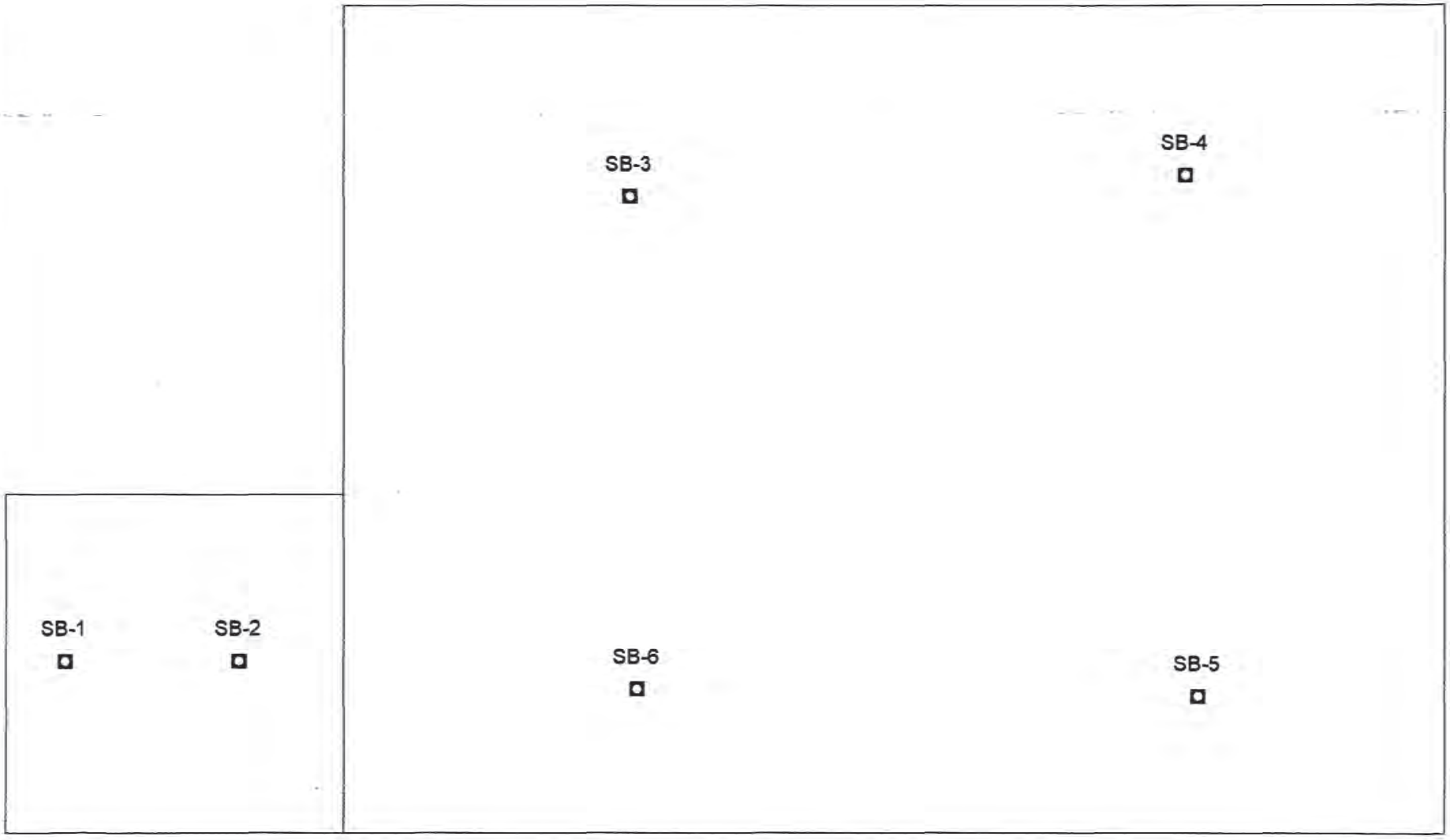
0 20 40 80 120 160 Feet

1:800

N

Groundwater Sulfate Isoconcentration Map
(Sampel Date: 11/29/2023)
Lattions Pit
EOG Resouces, Inc.

**Figure Source: ETGI *Preliminary Site Investigation Report* (Dated November 2000)



LEGEND:

Soil Boring Location

20 10 0 10 20

Distance in Feet

N

ETGI

Figure 2
Site Map

Yates Petroleum Corp.
Lattion Pit
Artesia, NM

Environmental Technology Group, Inc.

Scale: 1" = 20'	Prep By: JDJ	Checked By: JT
November 14, 2000	ETGI Project # YPC 2200D	

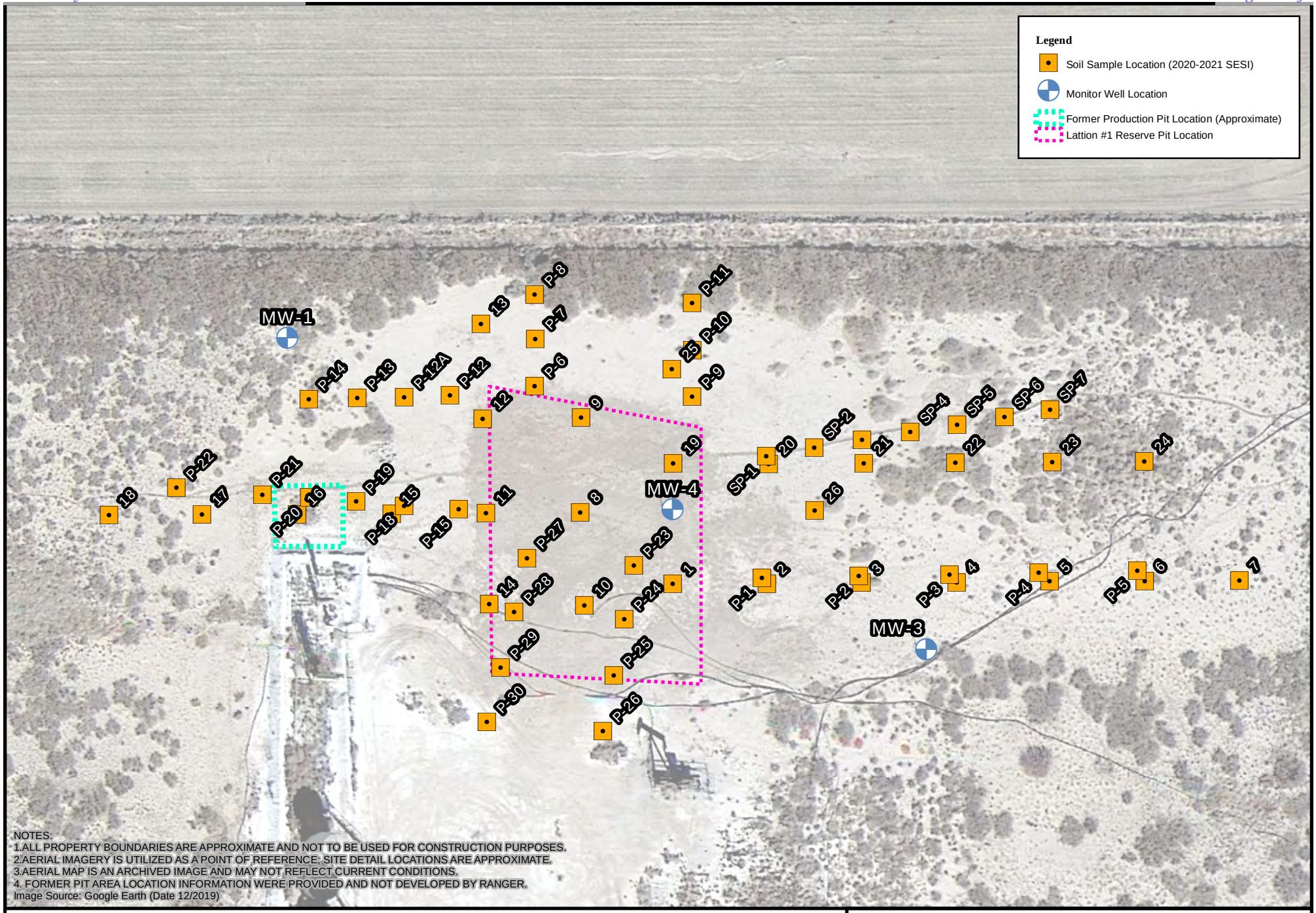


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Image Source: Google Earth (Date 12/2019)

RANGER ENVIRONMENTAL SERVICES, LLC

0 20 40 80 120 160 Feet

1:800

N

2020-2021 Soil Sample Location Map
Lattions Pit
EOG Resouces, Inc.

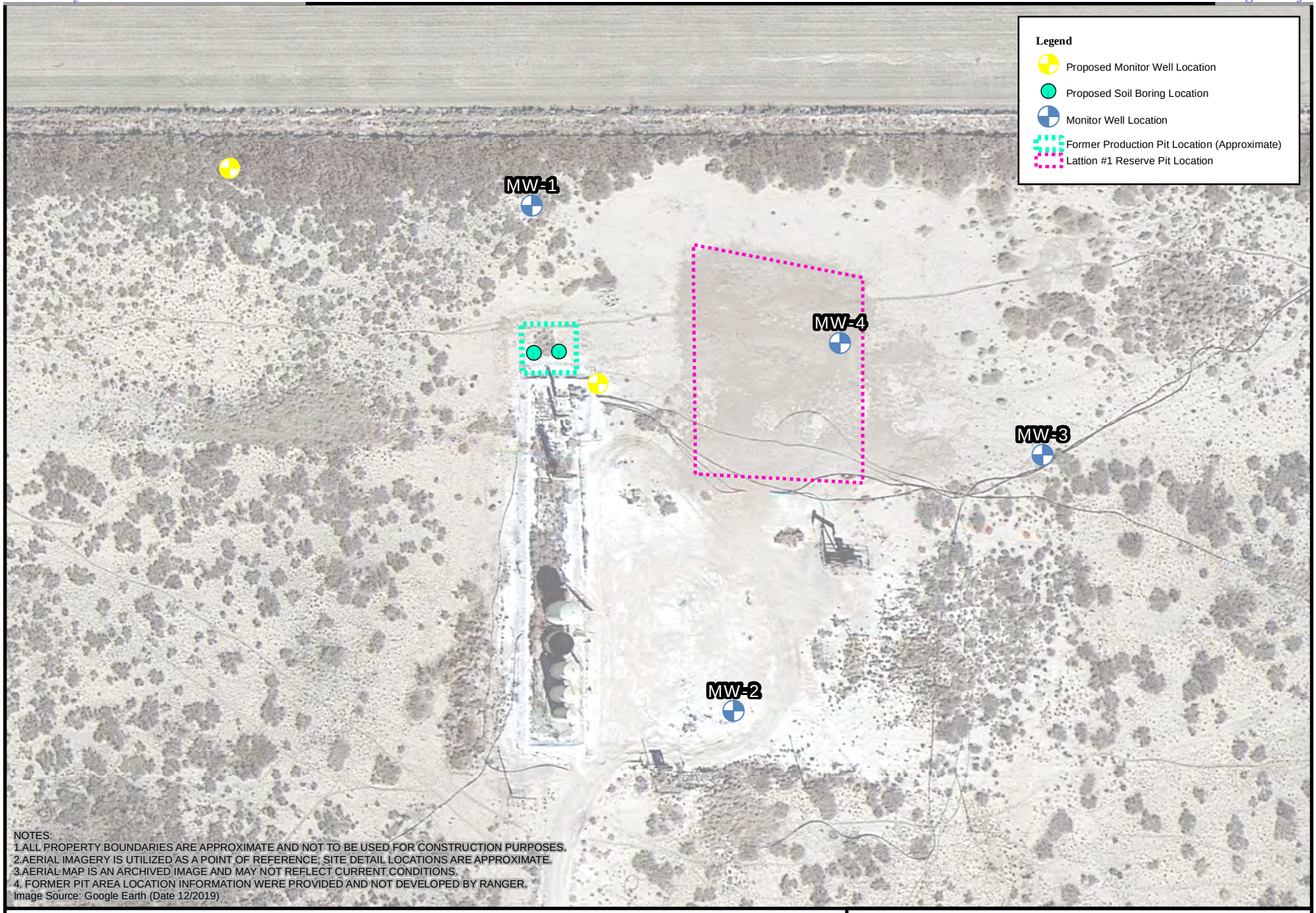

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Image Source: Google Earth (Date 12/2019)

RANGER ENVIRONMENTAL SERVICES, LLC

0 25 50 100 150 200 Feet

1:1,000

N

Proposed Soil Boring/Monitor Well Location Map
Lattions Pit
EOG Resouces, Inc.

TABLES

Current Event Well Gauging Data
Current Event Groundwater EPA Method 300.0: Anions
Current Event Groundwater Dissolved Metals (Table 1 of 2)
Current Event Groundwater Dissolved Metals (Table 2 of 2)
Current Event Groundwater TPH and VOC Data Summary
Current Event Groundwater Specific Conductance, pH, Alkalinity, and TDS

Cumulative Well Gauging Data
Cumulative Groundwater EPA Method 300.0: Anions
Cumulative Groundwater Dissolved Metals (Table 1 of 2)
Cumulative Groundwater Dissolved Metals (Table 2 of 2)
Cumulative Groundwater TPH and VOC Data Summary
Cumulative Groundwater Specific Conductance, pH, Alkalinity, and TDS

CURRENT EVENT TABLES

CURRENT EVENT WELL GAUGING DATA
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

WELL NUMBER	DATE	CASING ELEV. (FT)	DEPTH TO WATER (FT-BTOC)	LNAPL THICKNESS (FT)	GW ELEVATION (FT)	SCREENED INTERVAL (FT-BGS)
MW-1	11/29/2023	3,310.27	55.17	0.00	3255.10	35'-70'
MW-2	11/29/2023	3,309.19	64.28	0.00	3244.91	40'-70'
MW-3	11/29/2023	3309.00	65.74	0.00	3243.26	40'-65'
MW-4	11/29/2023	3308.88	56.19	0.00	3252.69	30'-55'

Notes:

1. Elevations referenced to a temporary on-site benchmark.
2. MW-1 located immediately adjacent to irrigated field.
3. BTOC = below top of casing

CURRENT EVENT GROUNDWATER EPA METHOD 300.0: ANIONS
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Fluoride	Chloride	Bromide	Phosphorus, Orthophosphate (As P)	Sulfate	Nitrogen, Nitrite (As N)	Nitrogen, Nitrate (As N)	Nitrate+Nitrite as N
MW-1	11/29/2023	<2.0	**2,000**	1.1	< 0.50	**2,000**	<2.0	<0.10	---
MW-2	11/29/2023	0.84	**810**	0.67	< 0.50	**1,100**	<2.0	3.0	---
MW-3	11/29/2023	1.3	43	0.14	< 0.50	**890**	<0.10	<0.10	---
MW-4	11/29/2023	1.2	**960**	0.57	< 0.50	**1,700**	<2.0	<0.10	---
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)				**---**	**---**				
A. Human Health Standards		**1.6**					**1**	**10**	**10** [1]
B. Other Standards for Domestic Water Supply			**250**			**600**			
C. Standards for Irrigation Use									

Notes:
1. This standarad is for nitrate. The nitrite standard is 1.0 mg/L.
2. Exceedances of the listed closure criteria are highlighted in bold, red type.

CURRENT EVENT GROUNDWATER DISSOLVED METALS (TABLE 1 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Aluminum	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Iron	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Silver	Sodium	Zinc
MW-1	11/29/2023	< 0.020	0.018	< 0.0020	0.37	< 0.0020	980	< 0.0060	< 0.0060	< 0.020	410	0.077	< 0.0080	< 0.010	5.3	0.023	400	< 0.010
MW-2	11/29/2023	< 0.020	0.010	< 0.0020	0.062	< 0.0020	610	< 0.0060	< 0.0060	< 0.020	200	< 0.0020	< 0.0080	< 0.010	4.7	0.014	110	< 0.010
MW-3	11/29/2023	< 0.020	0.021	< 0.0020	0.11	< 0.0020	280	< 0.0060	< 0.0060	< 0.020	110	0.0074	< 0.0080	< 0.010	2.8	0.0072	33	< 0.010
MW-4	11/29/2023	0.12	0.010	< 0.0020	0.16	< 0.0020	720	< 0.0060	< 0.0060	0.24	290	0.043	< 0.0080	< 0.010	3.8	0.016	140	< 0.010
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)							---				---				---		---	
A. Human Health Standards			**2**	**0.004**		**0.005**		**0.05**								**0.05**		
B. Other Standards for Domestic Water Supply										**1.0**		**0.2**						**10**
C. Standards for Irrigation Use		**5.0**			**0.75**				**0.05**				**1.0**	**0.2**				

Notes:

1. Exceedances of the listed closure criteria are highlighted in bold, red type.

CURRENT EVENT GROUNDWATER DISSOLVED METALS (TABLE 2 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Antimony	Arsenic	Copper	Lead	Mercury	Selenium	Thallium	Uranium
MW-1	11/29/2023	< 0.0050	0.0073	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	0.0028
MW-2	11/29/2023	< 0.0050	0.0044	< 0.0060	0.0051	---	0.020	< 0.0012	0.0055
MW-3	11/29/2023	< 0.0050	0.0030	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
MW-4	11/29/2023	< 0.0050	0.0054	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)									
A. Human Health Standards		**0.006**	**0.01**		**0.015**	**0.002**	**0.05**	**0.002**	**0.03**
B. Other Standards for Domestic Water Supply				**1.0**					
C. Standards for Irrigation Use									

Notes:

1. Exceedances of the listed closure criteria are highlighted in bold, red type.

CURRENT EVENT GROUNDWATER TPH AND VOC DATA SUMMARY
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	TPH TOTAL	TPH GRO	TPH DRO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene
MW-1	11/29/23	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	11/29/23	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	11/29/23	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	11/29/23	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)		**---**	**---**	**---**						**---**	**---**			
A. Human Health Standards						**0.005**	**1**	**0.7**	**0.62**			**0.03** [1]	**0.03** [1]	**0.03** [1]
B. Other Standards for Domestic Water Supply					**0.1**									
C. Standards for Irrigation Use														

Notes:

1. The 0.03 mg/L standard is for total naphthalene plus monomethylnaphthalenes.
2. Exceedances of the listed closure criteria are highlighted in bold, red type.

CURRENT EVENT GROUNDWATER SPECIFIC CONDUCTANCE, pH, ALKALINITY, AND TDS
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Conductivity µmhos/c	pH	Alkalinity (mg/L)			TDS (mg/L)
				Bicarbonate (As CaCO3)	Carbonate (As CaCO3)	Total Alkalinity (as CaCO3)	
MW-1	11/29/2023	8100	7.33	205.2	< 2.000	205.2	**6,400**
MW-2	11/29/2023	4,700	7.37	144.5	< 2.000	144.5	**3,350**
MW-3	11/29/2023	1,900	7.68	194.8	< 2.000	194.8	**1,610**
MW-4	11/29/2023	5,200	7.55	157.5	< 2.000	157.5	**3,950**
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)		---		---	---	---	
A. Human Health Standards							
B. Other Standards for Domestic Water Supply			**6 to 9**				**1,000**
C. Standards for Irrigation Use							

Notes:
1. Exceedances of the listed closure criteria are highlighted in bold, red type.

CUMULATIVE TABLES

CUMULATIVE WELL GAUGING DATA
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

WELL NUMBER	DATE	CASING ELEV. (FT)	DEPTH TO WATER (FT-BTOC)	LNAPL THICKNESS (FT)	GW ELEVATION (FT)	SCREENED INTERVAL (FT-BGS)
MW-1	9/18/2002	3,309.05	34.42	0.00	3274.63	35'-70'
MW-1	9/19/2002	3,309.05	34.54	0.00	3274.51	
MW-1	11/3/2004	3,309.05	28.75	0.00	3280.30	
MW-1	12/2/2004	3,309.05	31.02	0.00	3278.03	
MW-1	12/15/2004	3,309.05	31.94	0.00	3277.11	
MW-1	12/21/2004	3,309.05	31.92	0.00	3277.13	
MW-1	12/30/2004	3,309.05	32.41	0.00	3276.64	
MW-1	3/6/2018	3,309.05	45.66	0.00	3263.39	
MW-1	3/27/2018	3,309.05	44.21	0.00	3264.84	
MW-1	3/21/2019	3,310.27	48.82	0.00	3261.45	
MW-1	10/28/2019	3,310.27	49.59	0.00	3260.68	
MW-1	9/17/2020	3,310.27	52.39	0.00	3257.88	
MW-1	8/17/2021	3,310.27	48.95	0.00	3261.32	
MW-1	11/29/2023	3,310.27	55.17	0.00	3255.10	
MW-2	9/18/2002	3307.92	61.40	0.00	3246.52	40'-70'
MW-2	9/19/2002	3307.92	61.65	0.00	3246.27	
MW-2	11/3/2004	3307.92	62.04	0.00	3245.88	
MW-2	12/2/2004	3307.92	61.67	0.00	3246.25	
MW-2	12/15/2004	3307.92	61.76	0.00	3246.16	
MW-2	12/21/2004	3307.92	61.31	0.00	3246.61	
MW-2	12/30/2004	3307.92	61.13	0.00	3246.79	
MW-2	3/6/2018	3307.92	54.04	0.00	3253.88	
MW-2	3/27/2018	3307.92	53.97	0.00	3253.95	
MW-2	3/21/2019	3,309.19	55.54	0.00	3253.65	
MW-2	10/28/2019	3,309.19	57.90	0.00	3251.29	
MW-2	9/17/2020	3,309.19	58.03	0.00	3251.16	
MW-2	8/17/2021	3,309.19	57.73	0.00	3251.46	
MW-2	11/29/2023	3,309.19	64.28	0.00	3244.91	
MW-3	9/18/2002	3307.90	55.08	0.00	3252.82	40'-65'
MW-3	9/19/2002	3307.90	58.73	0.00	3249.17	
MW-3	11/3/2004	3307.90	51.28	0.00	3256.62	
MW-3	12/2/2004	3307.90	50.38	0.00	3257.52	
MW-3	12/15/2004	3307.90	50.30	0.00	3257.60	
MW-3	12/21/2004	3307.90	50.01	0.00	3257.89	
MW-3	12/30/2004	3307.90	49.91	0.00	3257.99	
MW-3	3/6/2018	3307.90	57.43	0.00	3250.47	
MW-3	3/27/2018	3307.90	57.38	0.00	3250.52	

CUMULATIVE WELL GAUGING DATA
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

WELL NUMBER	DATE	CASING ELEV. (FT)	DEPTH TO WATER (FT-BTOC)	LNAPL THICKNESS (FT)	GW ELEVATION (FT)	SCREENED INTERVAL (FT-BGS)
MW-3	3/21/2019	3309.00	59.13	0.00	3249.87	
MW-3	10/28/2019	3309.00	61.29	0.00	3247.71	
MW-3	9/17/2020	3309.00	61.75	0.00	3247.25	
MW-3	8/17/2021	3309.00	62.22	0.00	3246.78	
MW-3	11/29/2023	3309.00	65.74	0.00	3243.26	
MW-4	9/18/2002	3307.63	38.17	0.00	3269.46	30'-55'
MW-4	9/19/2002	3307.63	38.23	0.00	3269.40	
MW-4	11/3/2004	3307.63	32.95	0.00	3274.68	
MW-4	12/2/2004	3307.63	33.96	0.00	3273.67	
MW-4	12/15/2004	3307.63	34.43	0.00	3273.20	
MW-4	12/21/2004	3307.63	34.32	0.00	3273.31	
MW-4	12/30/2004	3307.63	34.70	0.00	3272.93	
MW-4	3/6/2018	3307.63	47.31	0.00	3260.32	
MW-4	3/27/2018	3307.63	47.47	0.00	3260.16	
MW-4	3/21/2019	3308.88	51.51	0.00	3257.37	
MW-4	10/28/2019	3308.88	51.39	0.00	3257.49	
MW-4	9/17/2020	3308.88	52.58	0.00	3256.30	
MW-4	8/17/2021	3308.88	51.49	0.00	3257.39	
MW-4	11/29/2023	3308.88	56.19	0.00	3252.69	

Notes:
1. Elevations referenced to a temporary on-site benchmark.
2. MW-1 located immediately adjacent to irrigated field.
3. BTOC = below top of casing

CUMULATIVE GROUNDWATER EPA METHOD 300.0: ANIONS
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Fluoride	Chloride	Bromide	Phosphorus, Orthophosphate (As P)	Sulfate	Nitrogen, Nitrite (As N)	Nitrogen, Nitrate (As N)	Nitrate+Nitrite as N
SB-2	10/20/2000	---	**81,535**	---	---	---	---	---	---
MW-1	9/19/2002	---	**1,770**	---	---	---	---	---	---
MW-1	11/3/2004	---	**2,899**	---	---	---	---	---	---
MW-1	3/17/2012	< 2.0	**1,400**	2.5	< 10	**1,900**	---	---	< 1.0
MW-1	6/18/2012	1.3	**1,800**	3.1	< 0.50	**2,000**	---	---	< 1.0
MW-1	9/12/2012	1.1	**1,600**	1.6	< 25	**2,000**	---	---	< 1.0
MW-1	12/6/2012	1	**1,700**	< 2.0	< 0.50	**2,000**	< 2.0	<0.10	---
MW-1	3/12/2013	**1.9**	**1,500**	2.3	< 10	**1,800**	---	---	< 2.0
MW-1	6/27/2013	1.3	**1,400**	2.1	< 0.50	**1,600**	---	---	< 1.0
MW-1	3/27/2018	0.42	**1,700**	2.2	< 0.50	**1,700**	---	---	< 1.0
MW-1	3/21/2019	0.62	**1,500**	2.1	< 0.50	**1,600**	---	---	< 1.0
MW-1	10/28/2019	1	**1,500**	2	< 0.50	**1,600**	<2.0	<0.10	---
MW-1	9/17/2020	1.1	**1,400**	2.3	< 2.5	**1,500**	---	---	< 1.0
MW-1	8/17/2021	**2**	**1,800**	2.5	< 2.5	**1,800**	<2.0	<0.50	---
MW-1	3/21/2022	**2**	**1,600**	2.6	< 10	**1,500**	---	---	< 1.0
MW-1	8/4/2022	**3.2**	**1,500**	3.2	< 10	**1,800**	---	---	< 1.0
MW-1	11/29/2023	<2.0	**2,000**	1.1	< 0.50	**2,000**	<2.0	<0.10	---
MW-2	9/19/2002	---	**709**	---	---	---	---	---	---
MW-2	11/3/2004	---	**740**	---	---	---	---	---	---
MW-2	3/17/2012	1.3	**790**	1	< 0.50	**1,200**	---	---	2.2
MW-2	6/18/2012	1.2	**790**	1.6	< 0.50	**1,200**	---	---	1.5
MW-2	9/12/2012	0.6	**940**	1.2	< 25	**1,300**	---	---	3.2
MW-2	12/6/2012	0.98	**890**	< 2.0	< 0.50	**1,200**	<2.0	4.5	---
MW-2	3/12/2013	0.62	**880**	1.2	< 10	**1,200**	---	---	2.8
MW-2	6/27/2013	0.98	**720**	1.4	< 0.50	**1,000**	---	---	3.2
MW-2	3/27/2018	0.44	**640**	1.1	< 0.50	**980**	---	---	2.4
MW-2	3/21/2019	1	**810**	1.1	< 0.50	**1,100**	---	---	2
MW-2	10/28/2019	0.87	**800**	1.2	< 2.5	**1,000**	<0.50	2.6	---
MW-2	9/17/2020	<0.10	**760**	1.2	< 0.50	**1,000**	---	---	2.4
MW-2	8/17/2021	0.9	**730**	1.1	< 2.5	**1,100**	<0.50	2.3	---
MW-2	3/21/2022	< 2.0	**690**	1	< 10	**1,000**	---	---	2.3
MW-2	8/4/2022	0.75	**890**	1.2	< 0.50	**1,100**	---	---	1.9
MW-2	11/29/2023	0.84	**810**	0.67	< 0.50	**1,100**	<2.0	3.0	---
MW-3	9/19/2002	---	59.1	---	---	---	---	---	---
MW-3	11/3/2004	---	64	---	---	---	---	---	---
MW-3	3/17/2012	< 2.0	42	0.13	< 0.50	**950**	---	---	< 1.0

CUMULATIVE GROUNDWATER EPA METHOD 300.0: ANIONS
LATTION PIT
EDDY COUNTY, NEW MEXICO
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All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Fluoride	Chloride	Bromide	Phosphorus, Orthophosphate (As P)	Sulfate	Nitrogen, Nitrite (As N)	Nitrogen, Nitrate (As N)	Nitrate+Nitrite as N
MW-3	6/18/2012	1.4	45	0.2	< 0.50	**900**	---	---	< 1.0
MW-3	9/12/2012	1.3	45	0.11	< 10	**990**	---	---	< 1.0
MW-3	12/6/2012	1.3	45	0.1	< 0.50	**1,000**	<0.10	<0.10	---
MW-3	3/12/2013	1.4	43	0.12	< 10	**960**	---	---	< 1.0
MW-3	6/27/2013	1.4	43	0.12	< 0.50	**1,000**	---	---	< 1.0
MW-3	3/27/2018	**1.7**	41	0.15	< 0.50	**880**	---	---	< 1.0
MW-3	3/21/2019	1.6	47	0.12	< 0.50	**900**	---	---	< 1.0
MW-3	10/28/2019	1.6	45	< 0.50	< 2.5	**870**	<0.50	<0.50	---
MW-3	9/17/2020	1.3	45	< 0.50	< 2.5	**920**	---	---	< 1.0
MW-3	8/17/2021	1.5	43	0.13	< 0.50	**880**	<0.10	<0.10	---
MW-3	3/21/2022	1.4	42	0.14	< 0.50	**970**	---	---	< 1.0
MW-3	8/4/2022	1.3	42	0.15	< 0.50	**860**	---	---	< 1.0
MW-3	11/29/2023	1.3	43	0.14	< 0.50	**890**	<0.10	<0.10	---
MW-4	9/19/2002	---	**1,280**	---	---	---	---	---	---
MW-4	11/3/2004	---	**1,899**	---	---	---	---	---	---
MW-4	3/17/2012	< 2.0	**1,200**	< 2.0	< 10	**1,800**	---	---	< 1.0
MW-4	6/18/2012	**1.7**	**1,200**	2.3	< 0.50	**1,800**	---	---	< 1.0
MW-4	9/12/2012	1.3	**1,200**	1.5	< 25	**2,000**	---	---	< 1.0
MW-4	12/6/2012	1.1	**1,200**	< 2.0	< 0.50	**1,800**	<2.0	<0.10	---
MW-4	3/12/2013	**1.9**	**1,100**	1.5	< 10	**1,700**	---	---	< 1.0
MW-4	6/27/2013	1.2	**1,000**	1.7	< 0.50	**1,600**	---	---	< 1.0
MW-4	3/27/2018	0.62	**930**	1.7	< 0.50	**1,400**	---	---	< 1.0
MW-4	3/21/2019	0.87	**1,100**	1.5	< 0.50	**1,700**	---	---	< 1.0
MW-4	10/28/2019	1.2	**990**	1.5	< 0.50	**1,500**	<2.0	<0.10	---
MW-4	9/17/2020	1.2	**960**	1.7	< 2.5	**1,500**	---	---	< 1.0
MW-4	8/17/2021	**2.5**	**1,100**	1.6	< 2.5	**1,800**	<0.50	<0.50	---
MW-4	3/21/2022	< 2.0	**1,100**	1.7	< 10	**1,700**	---	---	< 1.0
MW-4	8/4/2022	**2.2**	**1,000**	1.6	< 0.50	**1,700**	---	---	< 1.0
MW-4	11/28/2023	1.2	**960**	0.57	< 0.50	**1,700**	<2.0	<0.10	---
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)				**---**	**---**				
A. Human Health Standards		**1.6**					**1**	**10**	**10** [1]
B. Other Standards for Domestic Water Supply			**250**			**600**			
C. Standards for Irrigation Use									

Notes:
1. This standarad is for nitrate. The nitrite standard is 1.0 mg/L.
2. Exceedances of the listed closure criteria are highlighted in bold, red type.

CUMULATIVE GROUNDWATER DISSOLVED METALS (TABLE 1 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Aluminum	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Iron	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Silver	Sodium	Zinc
MW-1	3/17/2012	---	0.02	---	---	< 0.0020	880	< 0.0060	---	0.41	350	0.032	---	---	4.8	< 0.0050	290	0.015
MW-1	6/18/2012	---	0.018	---	---	< 0.0020	940	< 0.0060	---	< 0.020	350	0.028	---	---	4.3	< 0.0050	370	0.012
MW-1	9/12/2012	---	0.02	---	---	< 0.0020	830	< 0.0060	---	0.68	320	**0.25**	---	---	4.2	< 0.0050	230	0.017
MW-1	12/6/2012	---	0.022	---	---	< 0.0020	940	< 0.0060	---	< 0.020	370	0.2	---	---	5.5	< 0.0050	310	0.033
MW-1	3/12/2013	---	0.019	---	---	< 0.0020	820	< 0.0060	---	0.2	300	**0.33**	---	---	4.3	< 0.0050	230	< 0.010
MW-1	6/27/2013	---	0.018	---	---	< 0.0020	910	< 0.0060	---	0.031	300	0.16	---	---	4.9	< 0.050	200	0.021
MW-1	3/27/2018	---	0.015	---	---	< 0.0020	910	< 0.0060	---	< 0.020	350	0.14	---	---	4.2	0.031	280	0.02
MW-1	3/21/2019	< 0.020	0.014	< 0.0020	0.32	< 0.0020	940	< 0.0060	< 0.0060	0.048	320	**0.22**	< 0.0080	< 0.010	4.1	0.011	230	0.017
MW-1	10/28/2019	< 0.020	0.018	< 0.0020	0.35	< 0.0020	920	< 0.0060	< 0.0060	< 0.020	330	0.14	< 0.0080	< 0.010	4.3	0.016	230	0.046
MW-1	9/17/2020	<0.10	0.017	< 0.010	0.39	< 0.010	970	< 0.030	< 0.030	<0.10	370	**0.25**	< 0.040	< 0.050	5.1	< 0.025	320	<0.050
MW-1	8/17/2021	< 0.10	0.04	< 0.010	0.36	< 0.010	940	< 0.030	< 0.030	0.3	370	**1.7**	< 0.040	< 0.050	5.3	< 0.025	270	< 0.050
MW-1	3/21/2022	< 0.020	0.027	< 0.0020	0.39	< 0.0020	1,000	< 0.0060	0.0071	**1.2**	340	**0.33**	< 0.0080	< 0.010	6.1	< 0.0050	250	< 0.010
MW-1	8/4/2022	< 0.20	< 0.020	< 0.020	< 0.40	< 0.020	920	< 0.060	< 0.060	< 0.20	330	0.13	< 0.080	< 0.10	< 10	< 0.050	220	0.29
MW-1	11/29/2023	< 0.020	0.018	< 0.0020	0.37	< 0.0020	980	< 0.0060	< 0.0060	< 0.020	410	0.077	< 0.0080	< 0.010	5.3	0.023	400	< 0.010
MW-2	3/17/2012	---	0.014	---	---	< 0.0020	570	< 0.0060	---	0.044	180	0.0027	---	---	4.6	< 0.0050	81	< 0.010
MW-2	6/18/2012	---	0.014	---	---	< 0.0020	550	< 0.0060	---	0.061	180	0.0032	---	---	4.6	< 0.0050	89	0.01
MW-2	9/12/2012	---	0.013	---	---	< 0.0020	570	< 0.0060	---	0.041	180	0.0026	---	---	4.1	< 0.0050	86	0.011
MW-2	12/6/2012	---	0.016	---	---	< 0.0020	600	< 0.0060	---	< 0.020	200	0.0023	---	---	5.1	< 0.0050	100	< 0.010
MW-2	3/12/2013	---	0.012	---	---	< 0.0020	560	< 0.0060	---	0.023	180	0.0021	---	---	4.6	< 0.0050	92	< 0.010
MW-2	6/27/2013	---	0.013	---	---	< 0.0020	610	< 0.0060	---	0.035	170	0.0021	---	---	4.7	< 0.050	87	< 0.010
MW-2	3/27/2018	---	0.013	---	---	< 0.0020	580	< 0.0060	---	0.04	180	0.0023	---	---	4.5	0.021	97	0.028
MW-2	3/21/2019	< 0.020	0.012	< 0.0020	0.067	< 0.0020	570	< 0.0060	< 0.0060	0.025	170	0.0025	< 0.0080	< 0.010	4.2	0.0079	85	0.022
MW-2	10/28/2019	< 0.020	0.012	< 0.0020	0.067	< 0.0020	600	< 0.0060	< 0.0060	0.026	190	< 0.0020	< 0.0080	< 0.010	4.5	0.015	94	0.031
MW-2	9/17/2020	<0.10	0.015	<0.010	<0.20	<0.010	610	<0.030	<0.030	<0.10	200	< 0.010	<0.040	<0.050	5.4	<0.025	100	<0.050
MW-2	8/17/2021	< 0.020	0.012	< 0.0020	0.071	< 0.0020	510	< 0.0060	< 0.0060	0.039	160	0.0029	< 0.0080	< 0.010	4.5	< 0.0050	89	0.015
MW-2	3/21/2022	< 0.020	0.014	< 0.0020	0.083	< 0.0020	520	< 0.0060	< 0.0060	0.027	160	0.0041	< 0.0080	< 0.010	4.3	< 0.0050	100	0.011
MW-2	8/4/2022	< 0.20	< 0.020	< 0.020	< 0.40	< 0.020	570	< 0.060	< 0.060	< 0.20	180	< 0.020	< 0.080	< 0.10	< 10	< 0.050	99	< 0.10
MW-2	11/29/2023	< 0.020	0.010	< 0.0020	0.062	< 0.0020	610	< 0.0060	< 0.0060	< 0.020	200	< 0.0020	< 0.0080	< 0.010	4.7	0.014	110	< 0.010
MW-3	3/17/2012	---	0.019	---	---	< 0.0020	270	< 0.0060	---	< 0.020	100	0.042	---	---	2.7	< 0.0050	34	0.016
MW-3	6/18/2012	---	0.017	---	---	< 0.0020	270	< 0.0060	---	< 0.020	99	0.0029	---	---	2.8	< 0.0050	36	0.026
MW-3	9/12/2012	---	0.017	---	---	< 0.0020	270	< 0.0060	---	< 0.020	97	0.03	---	---	2.3	< 0.0050	33	< 0.010
MW-3	12/6/2012	---	0.019	---	---	< 0.0020	270	< 0.0060	---	< 0.020	110	< 0.0020	---	---	3.2	< 0.0050	39	< 0.010
MW-3	3/12/2013	---	0.018	---	---	< 0.0020	240	< 0.0060	---	0.22	92	0.06	---	---	2.4	< 0.0050	34	< 0.010
MW-3	6/27/2013	---	0.018	---	---	< 0.0020	260	< 0.0060	---	< 0.020	98	0.0034	---	---	2.8	< 0.025	34	< 0.010
MW-3	3/27/2018	---	0.018	---	---	< 0.0020	280	< 0.0060	---	< 0.020	100	0.089	---	---	2.8	0.011	37	0.032
MW-3	3/21/2019	< 0.020	0.018	< 0.0020	0.11	< 0.0020	270	< 0.0060	< 0.0060	< 0.020	95	0.037	0.009	< 0.010	2.5	< 0.0050	34	0.027
MW-3	10/28/2019	< 0.020	0.018	< 0.0020	0.11	< 0.0020	240	< 0.0060	< 0.0060	< 0.020	100	0.012	< 0.0080	< 0.010	2.8	0.0071	34	0.068
MW-3	9/17/2020	<0.10	0.018	<0.010	<0.20	<0.010	290	<0.030	<0.030	<0.10	110	0.011	<0.040	<0.050	<5.0	<0.025	36	<0.050
MW-3	8/17/2021	< 0.020	0.019	< 0.0020	0.12	< 0.0020	280	< 0.0060	< 0.0060	< 0.020	100	< 0.0020	< 0.0080	< 0.010	2.7	< 0.0050	33	0.047
MW-3	3/21/2022	< 0.020	0.024	< 0.0020	0.14	< 0.0020	270	< 0.0060	< 0.0060	< 0.020	100	**0.22**	< 0.0080	< 0.010	3	< 0.0050	40	0.014
MW-3	8/4/2022	< 0.20	0.021	< 0.020	< 0.40	< 0.020	280	< 0.060	< 0.060	< 0.20	110	< 0.020	< 0.080	< 0.10	< 10	< 0.050	34	0.19
MW-3	11/29/2023	< 0.020	0.021	< 0.0020	0.11	< 0.0020	280	< 0.0060	< 0.0060	< 0.020	110	0.0074	< 0.0080	< 0.010	2.8	0.0072	33	< 0.010

CUMULATIVE GROUNDWATER DISSOLVED METALS (TABLE 1 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Aluminum	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Iron	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Silver	Sodium	Zinc
MW-4	3/17/2012	---	0.016	---	---	< 0.0020	780	< 0.0060	---	0.071	310	0.051	---	---	3.6	< 0.0050	200	0.012
MW-4	6/18/2012	---	0.016	---	---	< 0.0020	780	< 0.0060	---	0.14	300	0.073	---	---	3.5	< 0.0050	220	0.043
MW-4	9/12/2012	---	0.013	---	---	< 0.0020	760	< 0.0060	---	0.021	300	0.048	---	---	3.2	< 0.0050	200	< 0.010
MW-4	12/6/2012	---	0.016	---	---	< 0.0020	780	< 0.0060	---	0.086	320	0.076	---	---	4.2	< 0.0050	230	0.02
MW-4	3/12/2013	---	0.013	---	---	< 0.0020	710	< 0.0060	---	0.089	280	0.049	---	---	3.7	< 0.0050	180	0.038
MW-4	6/27/2013	---	0.014	---	---	< 0.0020	750	< 0.0060	---	0.27	280	0.063	---	---	4.3	< 0.050	180	0.019
MW-4	3/27/2018	---	0.011	---	---	< 0.0020	770	< 0.0060	---	0.023	290	0.027	---	---	3.7	0.025	150	0.027
MW-4	3/21/2019	< 0.020	0.011	< 0.0020	0.16	< 0.0020	750	< 0.0060	< 0.0060	< 0.020	280	0.031	< 0.0080	< 0.010	3.5	0.0092	140	0.03
MW-4	10/28/2019	< 0.020	0.012	0.0023	0.17	< 0.0020	720	< 0.0060	< 0.0060	< 0.020	250	0.032	< 0.0080	< 0.010	3.6	0.019	130	0.023
MW-4	9/17/2020	<0.10	0.012	<0.010	<0.20	<0.010	760	<0.030	<0.030	<0.10	300	0.053	<0.040	<0.050	<5.0	<0.025	150	<0.050
MW-4	8/17/2021	< 0.020	0.012	< 0.0020	0.19	< 0.0020	710	< 0.0060	< 0.0060	0.03	280	0.042	< 0.0080	< 0.010	4.2	< 0.0050	140	0.019
MW-4	3/21/2022	< 0.020	0.014	< 0.0020	0.2	< 0.0020	730	< 0.0060	0.0066	< 0.020	300	0.035	< 0.0080	< 0.010	4	< 0.0050	150	< 0.010
MW-4	8/4/2022	< 0.20	< 0.020	< 0.020	< 0.40	< 0.020	720	< 0.060	< 0.060	< 0.20	290	0.036	< 0.080	< 0.10	< 10	< 0.050	120	< 0.10
MW-4	11/29/2023	0.12	0.010	< 0.0020	0.16	< 0.0020	720	< 0.0060	< 0.0060	0.24	290	0.043	< 0.0080	< 0.010	3.8	0.016	140	< 0.010
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)							---				---				---		---	
A. Human Health Standards			**2**	**0.004**		**0.005**		**0.05**								**0.05**		
B. Other Standards for Domestic Water Supply										**1.0**		**0.2**						**10**
C. Standards for Irrigation Use		**5.0**			**0.75**				**0.05**				**1.0**	**0.2**				

Notes:

1. Exceedances of the listed closure criteria are highlighted in bold, red type.

CUMULATIVE GROUNDWATER DISSOLVED METALS (TABLE 2 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Antimony	Arsenic	Copper	Lead	Mercury	Selenium	Thallium	Uranium
MW-1	3/17/2012	---	0.0015	< 0.0060	< 0.0050	< 0.00020	0.0052	---	0.002
MW-1	6/18/2012	---	0.0021	< 0.0060	< 0.0050	< 0.00020	0.0086	---	0.0027
MW-1	9/12/2012	---	0.0023	0.0062	< 0.0010	< 0.00020	0.0083	---	0.0057
MW-1	12/6/2012	---	0.0018	< 0.0060	< 0.0010	< 0.00020	0.0093	---	0.0045
MW-1	3/12/2013	---	0.0025	< 0.0060	< 0.0050	< 0.00020	0.0045	---	0.0027
MW-1	6/27/2013	---	0.0063	< 0.0060	< 0.0050	< 0.00020	0.022	---	< 0.0050
MW-1	3/27/2018	---	< 0.0050	< 0.0050	< 0.0025	< 0.00020	< 0.0050	---	< 0.0025
MW-1	3/21/2019	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.00020	< 0.010	< 0.0025	< 0.0050
MW-1	10/28/2019	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0025	< 0.0025
MW-1	9/17/2020	< 0.010	< 0.010	< 0.030	< 0.0050	---	< 0.010	< 0.0050	< 0.0050
MW-1	8/17/2021	< 0.0010	0.0023	< 0.030	< 0.0025	---	< 0.0010	< 0.0012	< 0.0025
MW-1	3/21/2022	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0012	0.0036
MW-1	8/4/2022	< 0.0010	0.0016	< 0.060	< 0.00050	---	< 0.0010	< 0.00025	0.0009
MW-1	11/29/2023	< 0.0050	0.0073	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	0.0028
MW-2	3/17/2012	---	0.0019	< 0.0060	< 0.0050	< 0.00020	0.025	---	0.0061
MW-2	6/18/2012	---	0.0022	< 0.0060	< 0.0050	< 0.00020	0.024	---	0.0069
MW-2	9/12/2012	---	0.0019	0.0021	< 0.0010	< 0.00020	0.027	---	0.0071
MW-2	12/6/2012	---	0.0018	< 0.0060	< 0.0010	< 0.00020	0.026	---	0.0078
MW-2	3/12/2013	---	0.0017	< 0.0060	0.0060	< 0.00020	0.026	---	0.0068
MW-2	6/27/2013	---	0.0045	< 0.0060	< 0.0050	< 0.00020	0.037	---	0.0069
MW-2	3/27/2018	---	< 0.0050	< 0.0010	< 0.0025	< 0.00020	0.017	---	0.0059
MW-2	3/21/2019	< 0.0010	< 0.0010	< 0.0010	< 0.00050	< 0.00020	0.013	< 0.00050	0.0054
MW-2	10/28/2019	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	0.018	< 0.0025	0.0058
MW-2	9/17/2020	< 0.010	< 0.010	< 0.030	< 0.0050	---	0.013	< 0.0050	0.0052
MW-2	8/17/2021	< 0.0010	< 0.0010	< 0.0060	< 0.00050	---	0.012	< 0.00025	0.0054
MW-2	3/21/2022	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	0.012	< 0.0012	0.0043
MW-2	8/4/2022	< 0.0010	0.0011	< 0.060	< 0.00050	---	0.016	< 0.00025	0.0056
MW-2	11/29/2023	< 0.0050	0.0044	< 0.0060	0.0051	---	0.020	< 0.0012	0.0055
MW-3	3/17/2012	---	0.0012	< 0.0060	< 0.0050	< 0.00020	< 0.0010	---	< 0.0010
MW-3	6/18/2012	---	< 0.0010	< 0.0060	< 0.0050	< 0.00020	< 0.0010	---	< 0.0010
MW-3	9/12/2012	---	0.0012	0.0021	< 0.0010	< 0.00020	< 0.0010	---	< 0.0010
MW-3	12/6/2012	---	< 0.0010	< 0.0060	< 0.0010	< 0.00020	0.001	---	0.0011
MW-3	3/12/2013	---	< 0.0010	< 0.0060	0.0064	< 0.00020	< 0.0010	---	< 0.0010
MW-3	6/27/2013	---	0.0013	< 0.0060	< 0.0050	< 0.00020	0.0027	---	0.0011

CUMULATIVE GROUNDWATER DISSOLVED METALS (TABLE 2 OF 2)
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Antimony	Arsenic	Copper	Lead	Mercury	Selenium	Thallium	Uranium
MW-3	3/27/2018	---	0.0011	< 0.0010	< 0.00050	< 0.00020	< 0.0010	---	0.00057
MW-3	3/21/2019	< 0.0010	< 0.0010	< 0.0010	< 0.00050	< 0.00020	< 0.010	< 0.00050	< 0.0050
MW-3	10/28/2019	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0025	< 0.0025
MW-3	9/17/2020	< 0.010	< 0.010	< 0.030	< 0.0050	---	< 0.010	< 0.0050	< 0.0050
MW-3	8/17/2021	< 0.0010	0.0014	< 0.0060	< 0.00050	---	< 0.0010	< 0.00025	0.00056
MW-3	3/21/2022	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
MW-3	8/4/2022	< 0.0010	0.0024	< 0.060	< 0.00050	---	< 0.0010	< 0.00025	0.00057
MW-3	11/29/2023	< 0.0050	0.0030	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
MW-4	3/17/2012	---	0.0014	< 0.0060	< 0.0050	< 0.00020	0.0042	---	0.0036
MW-4	6/18/2012	---	0.002	< 0.0060	< 0.0050	< 0.00020	0.0058	---	0.0036
MW-4	9/12/2012	---	0.0017	< 0.0050	< 0.0050	< 0.00020	< 0.0050	---	0.0033
MW-4	12/6/2012	---	0.0014	< 0.0060	< 0.0010	< 0.00020	0.0059	---	0.0037
MW-4	3/12/2013	---	0.0012	< 0.0060	< 0.0050	< 0.00020	0.0036	---	0.0028
MW-4	6/27/2013	---	0.0041	< 0.0060	< 0.0050	< 0.00020	0.017	---	0.0025
MW-4	3/27/2018	---	< 0.0050	< 0.0050	< 0.0025	< 0.00020	< 0.0050	---	< 0.0025
MW-4	3/21/2019	< 0.0010	< 0.0010	0.0015	< 0.00050	< 0.00020	< 0.010	< 0.00050	< 0.0050
MW-4	10/28/2019	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0025	< 0.0025
MW-4	9/17/2020	< 0.010	< 0.010	<0.030	< 0.0050	---	< 0.010	< 0.0050	< 0.0050
MW-4	8/17/2021	< 0.0010	0.001	< 0.0060	< 0.0025	---	< 0.0010	< 0.0012	< 0.0025
MW-4	3/21/2022	< 0.0050	< 0.0050	< 0.0050	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
MW-4	8/4/2022	< 0.0010	0.0016	< 0.060	< 0.00050	---	< 0.0010	< 0.00025	0.00096
MW-4	11/29/2023	< 0.0050	0.0054	< 0.0060	< 0.0025	---	< 0.0050	< 0.0012	< 0.0025
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)									
A. Human Health Standards		**0.006**	**0.01**		**0.015**	**0.002**	**0.05**	**0.002**	**0.03**
B. Other Standards for Domestic Water Supply				**1.0**					
C. Standards for Irrigation Use									

Notes:

1. Exceedances of the listed closure criteria are highlighted in bold, red type.

CUMULATIVE GROUNDWATER TPH AND VOC DATA SUMMARY
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	TPH TOTAL	TPH GRO	TPH DRO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene
SB-2	10/20/2000	<1.00	<0.5	<0.5	---	0.004	<0.001	<0.001	<0.002	---	---	---	---	---
MW-1	9/19/2002	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	---	---	---
MW-1	11/3/2004	---	---	---	---	<0.002	<0.002	<0.002	<0.006	---	---	---	---	---
MW-1	3/17/2012	---	---	---	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.004	<0.008	<0.008
MW-1	6/18/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-1	9/12/2012	---	---	---	---	<0.002	<0.002	<0.002	<0.004	---	---	<0.004	---	---
MW-1	12/6/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-1	3/12/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-1	6/27/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-1	3/27/2018	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	3/21/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	---	---
MW-1	10/28/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	9/17/2020	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	8/17/2021	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	3/21/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	8/4/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-1	11/29/2023	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	9/19/2002	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	---	---	---
MW-2	11/3/2004	---	---	---	---	<0.002	<0.002	<0.002	<0.006	---	---	---	---	---
MW-2	3/17/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.004	<0.004
MW-2	6/18/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-2	9/12/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-2	12/6/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-2	3/12/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-2	6/27/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-2	3/27/2018	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	3/21/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	---	---
MW-2	10/28/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	9/17/2020	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	8/17/2021	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	3/21/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	8/4/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-2	11/29/2023	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	9/19/2002	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	---	---	---
MW-3	11/3/2004	---	---	---	---	<0.002	<0.002	<0.002	<0.006	---	---	---	---	---
MW-3	3/17/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.004	<0.004
MW-3	6/18/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-3	9/12/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-3	12/6/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-3	3/12/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-3	6/27/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-3	3/27/2018	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004

CUMULATIVE GROUNDWATER TPH AND VOC DATA SUMMARY
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	TPH TOTAL	TPH GRO	TPH DRO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene
MW-3	3/21/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	---	---
MW-3	10/28/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	9/17/2020	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	8/17/2021	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	3/21/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	8/4/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-3	11/29/2023	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	9/19/2002	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	---	---	---
MW-4	11/3/2004	---	---	---	---	<0.002	<0.002	<0.002	<0.006	---	---	---	---	---
MW-4	3/17/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.004	<0.004
MW-4	6/18/2012	---	---	---	<0.001	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-4	9/12/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-4	12/6/2012	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-4	3/12/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-4	6/27/2013	---	---	---	---	<0.001	<0.001	<0.001	<0.002	---	---	<0.002	---	---
MW-4	3/27/2018	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	3/21/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	---	---
MW-4	10/28/2019	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	9/17/2020	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	8/17/2021	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	3/21/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	8/4/2022	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
MW-4	11/29/2023	---	---	---	---	<0.001	<0.001	<0.001	<0.0015	---	---	<0.002	<0.004	<0.004
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)		**---**	**---**	**---**						**---**	**---**			
A. Human Health Standards						**0.005**	**1**	**0.7**	**0.62**			**0.03** [1]	**0.03** [1]	**0.03** [1]
B. Other Standards for Domestic Water Supply					**0.1**									
C. Standards for Irrigation Use														

Notes:

1. The 0.03 mg/L standard is for total naphthalene plus monomethylnaphthalenes.
2. Exceedances of the listed closure criteria are highlighted in bold, red type.

CUMULATIVE GROUNDWATER SPECIFIC CONDUCTANCE, pH, ALKALINITY, AND TDS
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Conductivity µmhos/c	pH	Alkalinity (mg/L)			TDS (mg/L)
				Bicarbonate (As CaCO3)	Carbonate (As CaCO3)	Total Alkalinity (as CaCO3)	
MW-1	9/19/2002	---	---	---	---	---	6,140
MW-1	11/3/2004	---	---	---	---	---	8,172
MW-1	3/17/2012	6300	7.07	170	< 2.0	170	5,080
MW-1	6/18/2012	6700	7.19	200	< 2.0	200	5,940
MW-1	9/12/2012	6600	---	160	< 2.0	160	5,270
MW-1	12/6/2012	7000	7.13	170	< 2.0	170	5,760
MW-1	3/12/2013	6500	7.38	160	< 2.0	160	5,380
MW-1	6/27/2013	6800	7.28	140	< 2.0	140	5,330
MW-1	3/27/2018	6600	7.48	151.7	< 2.000	151.7	5,460
MW-1	3/21/2019	6400	6.99	177.8	< 2.000	177.8	5,230
MW-1	10/28/2019	6900	7.39	168.6	< 2.000	168.6	5,550
MW-1	9/17/2020	7000	7.41	169.8	< 2.000	169.8	5,650
MW-1	8/17/2021	7500	7.05	186.4	< 2.000	186.4	5,970
MW-1	3/21/2022	7200	7.76	152.8	< 2.000	152.8	6,140
MW-1	8/4/2022	6800	7.53	124.9	< 2.000	124.9	5,990
MW-1	11/29/2023	8100	7.33	205.2	< 2.000	205.2	6,400
MW-2	9/19/2002	---	---	---	---	---	3,420
MW-2	11/3/2004	---	---	---	---	---	3,216
MW-2	3/17/2012	3,800	7.28	150	< 2.0	150	3,090
MW-2	6/18/2012	3,900	7.34	150	< 2.0	150	3,260
MW-2	9/12/2012	4,300	---	140	< 2.0	140	3,370
MW-2	12/6/2012	4,300	7.75	140	< 2.0	140	3,510
MW-2	3/12/2013	4,200	7.48	150	< 2.0	150	3,360
MW-2	6/27/2013	4,300	7.36	150	< 2.0	150	3,380
MW-2	3/27/2018	3,600	7.66	156.9	< 2.000	156.9	2,870
MW-2	3/21/2019	3,900	7.2	146.8	< 2.000	146.8	2,920
MW-2	10/28/2019	4,300	7.52	150.7	< 2.000	150.7	3,110
MW-2	9/17/2020	4,000	7.67	149.2	< 2.000	149.2	3,160
MW-2	8/17/2021	3,800	7.40	152.5	< 2.000	152.5	2,920
MW-2	3/21/2022	3,600	7.83	152.7	< 2.000	152.7	2,840
MW-2	8/4/2022	4,200	7.69	150.4	< 2.000	150.4	3,530
MW-2	11/29/2023	4,700	7.37	144.5	< 2.000	144.5	3,350
MW-3	9/19/2002	---	---	---	---	---	1,700
MW-3	11/3/2004	---	---	---	---	---	1,545
MW-3	3/17/2012	1,800	7.43	180	< 2.0	180	1,590
MW-3	6/18/2012	1,900	7.55	180	< 2.0	180	1,590
MW-3	9/12/2012	1,900	---	180	< 2.0	180	1,580
MW-3	12/6/2012	1,800	7.60	180	< 2.0	180	1,600
MW-3	3/12/2013	1,900	7.70	190	< 2.0	190	1,620
MW-3	6/27/2013	2,000	7.61	190	< 2.0	190	1,630
MW-3	3/27/2018	1,900	7.86	180.8	< 2.000	180.8	1,620
MW-3	3/21/2019	1,900	7.35	175.8	< 2.000	175.8	1,610
MW-3	10/28/2019	1,900	7.73	182.6	< 2.000	182.6	1,590
MW-3	9/17/2020	1,900	7.69	177.7	< 2.000	177.7	1,600
MW-3	8/17/2021	1,900	7.53	176.2	< 2.000	176.2	1,590
MW-3	3/21/2022	1,900	7.85	183	< 2.000	183	1,630
MW-3	8/4/2022	1,900	7.88	195.5	< 2.000	195.5	1,670
MW-3	11/29/2023	1,900	7.68	194.8	< 2.000	194.8	1,610
MW-4	9/19/2002	---	---	---	---	---	5,350
MW-4	11/3/2004	---	---	---	---	---	5,650
MW-4	3/17/2012	5,400	7.16	160	< 2.0	160	4,470
MW-4	6/18/2012	5,500	7.27	160	< 2.0	160	4,880
MW-4	9/12/2012	5,800	---	160	< 2.0	160	4,370
MW-4	12/6/2012	5,700	7.26	160	< 2.0	160	4,550

CUMULATIVE GROUNDWATER SPECIFIC CONDUCTANCE, pH, ALKALINITY, AND TDS
LATTION PIT
EDDY COUNTY, NEW MEXICO
AP-23

All Values Presented in Parts Per Million (mg/L)

SAMPLE ID	DATE	Conductivity µmhos/c	pH	Alkalinity (mg/L)			TDS (mg/L)
				Bicarbonate (As CaCO3)	Carbonate (As CaCO3)	Total Alkalinity (as CaCO3)	
MW-4	3/12/2013	5,600	7.46	160	< 2.0	160	**4,450**
MW-4	6/27/2013	5,800	7.36	160	< 2.0	160	**4,340**
MW-4	3/27/2018	5,400	7.66	146.7	< 2.000	146.7	**4,360**
MW-4	3/21/2019	5,400	7.16	144.7	< 2.000	144.7	**4,170**
MW-4	10/28/2019	5,500	7.46	147.6	< 2.000	147.6	**4,200**
MW-4	9/17/2020	5,300	7.68	141.6	< 2.000	141.6	**4,310**
MW-4	8/17/2021	5,500	7.27	148.2	< 2.000	148.2	**4,200**
MW-4	3/21/2022	5,400	7.74	142.7	< 2.000	142.7	**4,280**
MW-4	8/4/2022	5,400	7.54	140	< 2.000	140	**4,640**
MW-4	11/29/2023	5,200	7.55	157.5	< 2.000	157.5	**3,950**
20.6.2.3103 NMAC GW STANDARDS (<10,000 mg/L)		---		---	---	---	
A. Human Health Standards							
B. Other Standards for Domestic Water Supply			**6 to 9**				**1,000**
C. Standards for Irrigation Use							

Notes:
1. Exceedances of the listed closure criteria are highlighted in bold, red type.

ATTACHMENT 1 –
SITE PHOTOGRAPHS

PHOTOGRAPH NO. 1 – View of former production pit location with monitor well "MW-1" visible. The view is towards the northwest.

(Approximate GPS: 32.729102,-104.349881)

PHOTOGRAPH NO. 2 – A view of the approximate former reserve pit area and monitor wells "MW-4" and "MW-3". The view is towards the northeast. *(Approximate GPS: 32.728827, -104.349882)*

ATTACHMENT 2 – LABORATORY ANALYTICAL REPORT

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 18, 2024

Will Kierdorf
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX:

RE: Lattions Pit OrderNo.: 2312013

Dear Will Kierdorf:

Eurofins Environment Testing South Central, LLC received 5 sample(s) on 12/1/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** Trip Blank
Project: Lattions Pit **Collection Date:**
Lab ID: 2312013-001 **Matrix:** TRIP BLANK **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
Toluene	ND	1.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
Ethylbenzene	ND	1.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
Naphthalene	ND	2.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
1-Methylnaphthalene	ND	4.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
2-Methylnaphthalene	ND	4.0		µg/L	1	12/5/2023 11:31:00 PM	R101602
Xylenes, Total	ND	1.5		µg/L	1	12/5/2023 11:31:00 PM	R101602
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/5/2023 11:31:00 PM	R101602
Surr: Toluene-d8	91.7	70-130		%Rec	1	12/5/2023 11:31:00 PM	R101602

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-1
Project: Lattions Pit **Collection Date:** 11/29/2023 1:37:00 PM
Lab ID: 2312013-002 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Antimony	ND	0.0050		mg/L	5	12/4/2023 5:10:20 PM	D101582
Arsenic	0.0073	0.0025		mg/L	5	12/4/2023 5:10:20 PM	D101582
Lead	ND	0.0025		mg/L	5	12/4/2023 5:10:20 PM	D101582
Selenium	ND	0.0050		mg/L	5	12/4/2023 5:10:20 PM	D101582
Thallium	ND	0.0012		mg/L	5	12/4/2023 5:10:20 PM	D101582
Uranium	0.0028	0.0025		mg/L	5	12/4/2023 5:10:20 PM	D101582
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Fluoride	ND	2.0		mg/L	20	12/1/2023 12:15:59 PM	R101552
Chloride	2000	100	*	mg/L	200	12/15/2023 9:35:31 AM	R101873
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	12/1/2023 12:15:59 PM	R101552
Bromide	1.1	0.10		mg/L	1	12/1/2023 12:01:16 PM	R101552
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	12/1/2023 12:01:16 PM	R101552
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/1/2023 12:01:16 PM	R101552
Sulfate	2000	100	*	mg/L	200	12/15/2023 9:35:31 AM	R101873
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MCA**	
Conductivity	8100	10		µmhos/c	1	12/12/2023 1:11:24 PM	R101791
SM2320B: ALKALINITY						Analyst: **MCA**	
Bicarbonate (As CaCO3)	205.2	20.00		mg/L Ca	1	12/6/2023 6:28:16 PM	R101661
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/6/2023 6:28:16 PM	R101661
Total Alkalinity (as CaCO3)	205.2	20.00		mg/L Ca	1	12/6/2023 6:28:16 PM	R101661
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	6400	250	*D	mg/L	1	12/7/2023 4:14:00 PM	79174
SM4500-H+B / 9040C: PH						Analyst: **MCA**	
pH	7.33		H	pH units	1	12/6/2023 6:28:16 PM	R101661
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	12/11/2023 4:38:10 PM	D101749
Barium	0.018	0.0030		mg/L	1	12/12/2023 9:46:15 AM	A101766
Beryllium	ND	0.0020		mg/L	1	12/12/2023 9:46:15 AM	A101766
Boron	0.37	0.040		mg/L	1	12/12/2023 9:46:15 AM	A101766
Cadmium	ND	0.0020		mg/L	1	12/12/2023 9:46:15 AM	A101766
Calcium	980	10		mg/L	10	12/12/2023 12:29:10 PM	A101766
Chromium	ND	0.0060		mg/L	1	12/12/2023 9:46:15 AM	A101766
Cobalt	ND	0.0060		mg/L	1	12/12/2023 9:46:15 AM	A101766
Copper	ND	0.0060		mg/L	1	12/12/2023 9:46:15 AM	A101766
Iron	ND	0.020		mg/L	1	12/12/2023 9:46:15 AM	A101766
Magnesium	410	5.0		mg/L	5	12/12/2023 9:49:43 AM	A101766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-1
Project: Lattions Pit **Collection Date:** 11/29/2023 1:37:00 PM
Lab ID: 2312013-002 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Manganese	0.077	0.0020	*	mg/L	1	12/12/2023 9:46:15 AM	A101766
Molybdenum	ND	0.0080		mg/L	1	12/12/2023 9:46:15 AM	A101766
Nickel	ND	0.010		mg/L	1	12/12/2023 9:46:15 AM	A101766
Potassium	5.3	1.0		mg/L	1	12/12/2023 9:46:15 AM	A101766
Silver	0.023	0.0050		mg/L	1	12/12/2023 9:46:15 AM	A101766
Sodium	400	5.0		mg/L	5	12/12/2023 9:49:43 AM	A101766
Zinc	ND	0.010		mg/L	1	12/12/2023 9:46:15 AM	A101766
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
Toluene	ND	1.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
Ethylbenzene	ND	1.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
Naphthalene	ND	2.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
1-Methylnaphthalene	ND	4.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
2-Methylnaphthalene	ND	4.0		µg/L	1	12/5/2023 11:55:00 PM	R101602
Xylenes, Total	ND	1.5		µg/L	1	12/5/2023 11:55:00 PM	R101602
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/5/2023 11:55:00 PM	R101602
Surr: Toluene-d8	91.8	70-130		%Rec	1	12/5/2023 11:55:00 PM	R101602

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-2
Project: Lattions Pit **Collection Date:** 11/29/2023 4:15:00 PM
Lab ID: 2312013-003 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Antimony	ND	0.0050		mg/L	5	12/4/2023 5:12:37 PM	D101582
Arsenic	0.0044	0.0025		mg/L	5	12/4/2023 5:12:37 PM	D101582
Lead	0.0051	0.0025		mg/L	5	12/4/2023 5:12:37 PM	D101582
Selenium	0.020	0.0050		mg/L	5	12/4/2023 5:12:37 PM	D101582
Thallium	ND	0.0012		mg/L	5	12/4/2023 5:12:37 PM	D101582
Uranium	0.0055	0.0025		mg/L	5	12/4/2023 5:12:37 PM	D101582
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Fluoride	0.84	0.10		mg/L	1	12/1/2023 12:31:09 PM	R101552
Chloride	810	50	*	mg/L	100	12/15/2023 9:48:23 AM	R101873
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	12/1/2023 12:46:19 PM	R101552
Bromide	0.67	0.10		mg/L	1	12/1/2023 12:31:09 PM	R101552
Nitrogen, Nitrate (As N)	3.0	2.0		mg/L	20	12/1/2023 12:46:19 PM	R101552
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/1/2023 12:31:09 PM	R101552
Sulfate	1100	50	*	mg/L	100	12/15/2023 9:48:23 AM	R101873
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MCA**	
Conductivity	4700	10	H	µmhos/c	1	1/9/2024 2:39:00 PM	R102332
SM2320B: ALKALINITY						Analyst: **MCA**	
Bicarbonate (As CaCO3)	144.5	20.00		mg/L Ca	1	12/6/2023 7:11:29 PM	R101661
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/6/2023 7:11:29 PM	R101661
Total Alkalinity (as CaCO3)	144.5	20.00		mg/L Ca	1	12/6/2023 7:11:29 PM	R101661
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	3350	50.0	*	mg/L	1	12/7/2023 4:14:00 PM	79174
SM4500-H+B / 9040C: PH						Analyst: **MCA**	
pH	7.37		H	pH units	1	12/6/2023 7:11:29 PM	R101661
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	12/11/2023 4:40:12 PM	D101749
Barium	0.010	0.0030		mg/L	1	12/12/2023 9:53:13 AM	A101766
Beryllium	ND	0.0020		mg/L	1	12/12/2023 9:53:13 AM	A101766
Boron	0.062	0.040		mg/L	1	12/12/2023 9:53:13 AM	A101766
Cadmium	ND	0.0020		mg/L	1	12/12/2023 9:53:13 AM	A101766
Calcium	610	10		mg/L	10	12/12/2023 12:32:19 PM	A101766
Chromium	ND	0.0060		mg/L	1	12/12/2023 9:53:13 AM	A101766
Cobalt	ND	0.0060		mg/L	1	12/12/2023 9:53:13 AM	A101766
Copper	ND	0.0060		mg/L	1	12/12/2023 9:53:13 AM	A101766
Iron	ND	0.020		mg/L	1	12/12/2023 9:53:13 AM	A101766
Magnesium	200	5.0		mg/L	5	12/12/2023 9:56:58 AM	A101766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-2
Project: Lattions Pit **Collection Date:** 11/29/2023 4:15:00 PM
Lab ID: 2312013-003 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Manganese	ND	0.0020		mg/L	1	12/12/2023 9:53:13 AM	A101766
Molybdenum	ND	0.0080		mg/L	1	12/12/2023 9:53:13 AM	A101766
Nickel	ND	0.010		mg/L	1	12/12/2023 9:53:13 AM	A101766
Potassium	4.7	1.0		mg/L	1	12/12/2023 9:53:13 AM	A101766
Silver	0.014	0.0050		mg/L	1	12/12/2023 9:53:13 AM	A101766
Sodium	110	5.0		mg/L	5	12/12/2023 9:56:58 AM	A101766
Zinc	ND	0.010		mg/L	1	12/12/2023 9:53:13 AM	A101766
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
Toluene	ND	1.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
Ethylbenzene	ND	1.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
Naphthalene	ND	2.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
1-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
2-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 12:20:00 AM	R101602
Xylenes, Total	ND	1.5		µg/L	1	12/6/2023 12:20:00 AM	R101602
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/6/2023 12:20:00 AM	R101602
Surr: Toluene-d8	93.1	70-130		%Rec	1	12/6/2023 12:20:00 AM	R101602

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-3
Project: Lattions Pit **Collection Date:** 11/29/2023 3:35:00 PM
Lab ID: 2312013-004 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Antimony	ND	0.0050		mg/L	5	12/4/2023 5:14:55 PM	D101582
Arsenic	0.0030	0.0025		mg/L	5	12/4/2023 5:14:55 PM	D101582
Lead	ND	0.0025		mg/L	5	12/4/2023 5:14:55 PM	D101582
Selenium	ND	0.0050		mg/L	5	12/4/2023 5:14:55 PM	D101582
Thallium	ND	0.0012		mg/L	5	12/4/2023 5:14:55 PM	D101582
Uranium	ND	0.0025		mg/L	5	12/4/2023 5:14:55 PM	D101582
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Fluoride	1.3	0.10		mg/L	1	12/1/2023 1:01:28 PM	R101552
Chloride	43	25		mg/L	50	12/15/2023 10:01:15 AM	R101873
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	12/1/2023 1:01:28 PM	R101552
Bromide	0.14	0.10		mg/L	1	12/1/2023 1:01:28 PM	R101552
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	12/1/2023 1:01:28 PM	R101552
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/1/2023 1:01:28 PM	R101552
Sulfate	890	25	*	mg/L	50	12/15/2023 10:01:15 AM	R101873
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MCA**	
Conductivity	1900	10	H	µmhos/c	1	1/11/2024 3:06:04 PM	R102414
SM2320B: ALKALINITY						Analyst: **MCA**	
Bicarbonate (As CaCO3)	194.8	20.00		mg/L Ca	1	12/6/2023 7:21:41 PM	R101661
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/6/2023 7:21:41 PM	R101661
Total Alkalinity (as CaCO3)	194.8	20.00		mg/L Ca	1	12/6/2023 7:21:41 PM	R101661
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1610	50.0	*	mg/L	1	12/7/2023 4:14:00 PM	79174
SM4500-H+B / 9040C: PH						Analyst: **MCA**	
pH	7.68		H	pH units	1	12/6/2023 7:21:41 PM	R101661
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	12/11/2023 4:47:40 PM	D101749
Barium	0.021	0.0030		mg/L	1	12/12/2023 10:08:14 AM	A101766
Beryllium	ND	0.0020		mg/L	1	12/12/2023 10:08:14 AM	A101766
Boron	0.11	0.040		mg/L	1	12/12/2023 10:08:14 AM	A101766
Cadmium	ND	0.0020		mg/L	1	12/12/2023 10:08:14 AM	A101766
Calcium	280	5.0		mg/L	5	12/12/2023 10:11:45 AM	A101766
Chromium	ND	0.0060		mg/L	1	12/12/2023 10:08:14 AM	A101766
Cobalt	ND	0.0060		mg/L	1	12/12/2023 10:08:14 AM	A101766
Copper	ND	0.0060		mg/L	1	12/12/2023 10:08:14 AM	A101766
Iron	ND	0.020		mg/L	1	12/12/2023 10:08:14 AM	A101766
Magnesium	110	5.0		mg/L	5	12/12/2023 10:11:45 AM	A101766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-3
Project: Lattions Pit **Collection Date:** 11/29/2023 3:35:00 PM
Lab ID: 2312013-004 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Manganese	0.0074	0.0020		mg/L	1	12/12/2023 10:08:14 AM	A101766
Molybdenum	ND	0.0080		mg/L	1	12/12/2023 10:08:14 AM	A101766
Nickel	ND	0.010		mg/L	1	12/12/2023 10:08:14 AM	A101766
Potassium	2.8	1.0		mg/L	1	12/12/2023 10:08:14 AM	A101766
Silver	0.0072	0.0050		mg/L	1	12/12/2023 10:08:14 AM	A101766
Sodium	33	1.0		mg/L	1	12/12/2023 10:08:14 AM	A101766
Zinc	ND	0.010		mg/L	1	12/12/2023 10:08:14 AM	A101766
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
Toluene	ND	1.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
Ethylbenzene	ND	1.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
Naphthalene	ND	2.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
1-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
2-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 12:44:00 AM	R101602
Xylenes, Total	ND	1.5		µg/L	1	12/6/2023 12:44:00 AM	R101602
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/6/2023 12:44:00 AM	R101602
Surr: Toluene-d8	91.8	70-130		%Rec	1	12/6/2023 12:44:00 AM	R101602

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-4
Project: Lattions Pit **Collection Date:** 11/29/2023 2:32:00 PM
Lab ID: 2312013-005 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Antimony	ND	0.0050		mg/L	5	12/4/2023 5:17:13 PM	D101582
Arsenic	0.0054	0.0025		mg/L	5	12/4/2023 5:17:13 PM	D101582
Lead	ND	0.0025		mg/L	5	12/4/2023 5:17:13 PM	D101582
Selenium	ND	0.0050		mg/L	5	12/4/2023 5:17:13 PM	D101582
Thallium	ND	0.0012		mg/L	5	12/4/2023 5:17:13 PM	D101582
Uranium	ND	0.0025		mg/L	5	12/4/2023 5:17:13 PM	D101582
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Fluoride	1.2	0.10		mg/L	1	12/1/2023 1:31:46 PM	R101552
Chloride	960	50	*	mg/L	100	12/15/2023 10:39:47 AM	R101873
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	12/1/2023 1:46:55 PM	R101552
Bromide	0.57	0.10		mg/L	1	12/1/2023 1:31:46 PM	R101552
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	12/1/2023 1:31:46 PM	R101552
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	12/1/2023 1:31:46 PM	R101552
Sulfate	1700	50	*	mg/L	100	12/15/2023 10:39:47 AM	R101873
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MCA**	
Conductivity	5200	10	H	µmhos/c	1	1/11/2024 3:08:55 PM	R102414
SM2320B: ALKALINITY						Analyst: **MCA**	
Bicarbonate (As CaCO3)	157.5	20.00		mg/L Ca	1	12/6/2023 7:32:30 PM	R101661
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/6/2023 7:32:30 PM	R101661
Total Alkalinity (as CaCO3)	157.5	20.00		mg/L Ca	1	12/6/2023 7:32:30 PM	R101661
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	3950	100	*D	mg/L	1	12/7/2023 4:14:00 PM	79174
SM4500-H+B / 9040C: PH						Analyst: **MCA**	
pH	7.55		H	pH units	1	12/6/2023 7:32:30 PM	R101661
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Aluminum	0.12	0.020		mg/L	1	12/11/2023 4:49:47 PM	D101749
Barium	0.010	0.0030		mg/L	1	12/12/2023 10:14:42 AM	A101766
Beryllium	ND	0.0020		mg/L	1	12/12/2023 10:14:42 AM	A101766
Boron	0.16	0.040		mg/L	1	12/12/2023 10:14:42 AM	A101766
Cadmium	ND	0.0020		mg/L	1	12/12/2023 10:14:42 AM	A101766
Calcium	720	10		mg/L	10	12/12/2023 12:35:19 PM	A101766
Chromium	ND	0.0060		mg/L	1	12/12/2023 10:14:42 AM	A101766
Cobalt	ND	0.0060		mg/L	1	12/12/2023 10:14:42 AM	A101766
Copper	ND	0.0060		mg/L	1	12/12/2023 10:14:42 AM	A101766
Iron	0.24	0.020		mg/L	1	12/12/2023 10:14:42 AM	A101766
Magnesium	290	5.0		mg/L	5	12/12/2023 10:18:27 AM	A101766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2312013**
Date Reported: **1/18/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG **Client Sample ID:** MW-4
Project: Lattions Pit **Collection Date:** 11/29/2023 2:32:00 PM
Lab ID: 2312013-005 **Matrix:** AQUEOUS **Received Date:** 12/1/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Manganese	0.043	0.0020		mg/L	1	12/12/2023 10:14:42 AM	A101766
Molybdenum	ND	0.0080		mg/L	1	12/12/2023 10:14:42 AM	A101766
Nickel	ND	0.010		mg/L	1	12/12/2023 10:14:42 AM	A101766
Potassium	3.8	1.0		mg/L	1	12/12/2023 10:14:42 AM	A101766
Silver	0.016	0.0050		mg/L	1	12/12/2023 10:14:42 AM	A101766
Sodium	140	5.0		mg/L	5	12/12/2023 10:18:27 AM	A101766
Zinc	ND	0.010		mg/L	1	12/12/2023 10:14:42 AM	A101766
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
Toluene	ND	1.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
Ethylbenzene	ND	1.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
Naphthalene	ND	2.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
1-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
2-Methylnaphthalene	ND	4.0		µg/L	1	12/6/2023 1:08:00 AM	R101602
Xylenes, Total	ND	1.5		µg/L	1	12/6/2023 1:08:00 AM	R101602
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	12/6/2023 1:08:00 AM	R101602
Surr: Toluene-d8	92.6	70-130		%Rec	1	12/6/2023 1:08:00 AM	R101602

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D101749**	RunNo: **101749**
Prep Date:	Analysis Date: **12/11/2023**	SeqNo: **3749970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D101749**	RunNo: **101749**
Prep Date:	Analysis Date: **12/11/2023**	SeqNo: **3749972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.48	0.020	0.5000	0	97.0	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A101766**	RunNo: **101766**
Prep Date:	Analysis Date: **12/12/2023**	SeqNo: **3750832** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0030								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A101766**	RunNo: **101766**
Prep Date:	Analysis Date: **12/12/2023**	SeqNo: **3750837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0030	0.5000	0	95.3	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.7	85	115			
Boron	0.48	0.040	0.5000	0	95.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A101766**	RunNo: **101766**
Prep Date:	Analysis Date: **12/12/2023**	SeqNo: **3750837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	94.5	85	115			
Chromium	0.48	0.0060	0.5000	0	95.7	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.0	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.49	0.020	0.5000	0	97.2	85	115			
Manganese	0.48	0.0020	0.5000	0	95.2	85	115			
Molybdenum	0.47	0.0080	0.5000	0	94.8	85	115			
Nickel	0.48	0.010	0.5000	0	95.0	85	115			
Silver	0.48	0.0050	0.5000	0	96.1	85	115			
Zinc	0.48	0.010	0.5000	0	95.3	85	115			

Sample ID: **LCS_CAT-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A101766**	RunNo: **101766**
Prep Date:	Analysis Date: **12/12/2023**	SeqNo: **3750839** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D101582**	RunNo: **101582**
Prep Date:	Analysis Date: **12/4/2023**	SeqNo: **3740702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.00050								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00025								
Uranium	ND	0.00050								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D101582**	RunNo: **101582**
Prep Date:	Analysis Date: **12/4/2023**	SeqNo: **3740704** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.1	85	115			
Arsenic	0.025	0.00050	0.02500	0	99.0	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	97.3	85	115			
Thallium	0.012	0.00025	0.01250	0	99.7	85	115			
Uranium	0.012	0.00050	0.01250	0	99.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R101552**	RunNo: **101552**
Prep Date:	Analysis Date: **12/1/2023**	SeqNo: **3738833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R101552**	RunNo: **101552**
Prep Date:	Analysis Date: **12/1/2023**	SeqNo: **3738834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.3	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
Bromide	2.4	0.10	2.500	0	94.6	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.6	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	91.5	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Sulfate	9.9	0.50	10.00	0	99.3	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756424** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R101873**	RunNo: **101873**
Prep Date:	Analysis Date: **12/15/2023**	SeqNo: **3756453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.9	0.50	10.00	0	98.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **100ng lcs 3**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R101602**	RunNo: **101602**
Prep Date:	Analysis Date: **12/5/2023**	SeqNo: **3742765** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.8	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Sample ID: **mb 3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R101602**	RunNo: **101602**
Prep Date:	Analysis Date: **12/5/2023**	SeqNo: **3742766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **LCS-1 98.9uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R101791**	RunNo: **101791**
Prep Date:	Analysis Date: **12/12/2023**	SeqNo: **3751696** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	96	10	98.90	0	97.2	85	115			

Sample ID: **LCS-1 100uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R102332**	RunNo: **102332**
Prep Date:	Analysis Date: **1/9/2024**	SeqNo: **3778756** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	110	10	100.0	0	108	85	115			

Sample ID: **LCS-1 100uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R102414**	RunNo: **102414**
Prep Date:	Analysis Date: **1/11/2024**	SeqNo: **3782726** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.0	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **MB-1 Alk**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R101661**	RunNo: **101661**							
Prep Date:	Analysis Date: **12/6/2023**	SeqNo: **3744722**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **LCS-1 Alk**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R101661**	RunNo: **101661**							
Prep Date:	Analysis Date: **12/6/2023**	SeqNo: **3744723**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	76.56	20.00	80.00	0	95.7	90	110			

Sample ID: **MB-2 alk**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R101661**	RunNo: **101661**							
Prep Date:	Analysis Date: **12/6/2023**	SeqNo: **3744746**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **LCS-2 Alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R101661**	RunNo: **101661**							
Prep Date:	Analysis Date: **12/6/2023**	SeqNo: **3744747**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.08	20.00	80.00	0	92.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312013**

18-Jan-24

Client: EOG

Project: Lattions Pit

Sample ID: **MB-79174**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **79174**	RunNo: **101684**
Prep Date: **12/6/2023**	Analysis Date: **12/7/2023**	SeqNo: **3745622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: **LCS-79174**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **79174**	RunNo: **101684**
Prep Date: **12/6/2023**	Analysis Date: **12/7/2023**	SeqNo: **3745623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1070	50.0	1000	0	107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: EOG | Work Order Number: 2312013 | RcptNo: 1

Received By: Juan Rojas 12/1/2023 7:45:00 AM

Completed By: Cheyenne Cason 12/1/2023 9:12:29 AM

Reviewed By: JN 12/1/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 8 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SCM 12/1/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: TRIP BLANKS NOT PROVIDED BY EUROFINS SOUTH CENTRAL. SCM 12/1/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: EOG-Artesia / Ranger Env.

Mailing Address: EOG - 105 S 4th St, Artesia NM, 88210

Ranger: PO Box 201179, Austin TX 78720

Phone #: 521-335-1785

email or Fax#: Will@RangerEnv.com

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
■ NELAC ☐ Other

■ EDD (Type) Excel

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: ~~WILLIAMS PIT~~ MW-4 11/29
LATTIONS PIT

Project #: 5375

Project Manager: W. Kierdorf

Sampler: W. KIERDORF

On Ice: ☑ Yes ☐ No

# of Coolers: 1 4oz

Cooler Temp (Including CF): 2.9+0.1=3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2312013	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride (EPA 300)	BTEX NAPTHALENE	WQCC DISSOLVED METALS	CATIONS ANIONS	TDS	pH	SP. CONDUCTANCE
11/29/23	—	AQ	TRIP BLANK	2 VOAs	HCL	001				X					
11/29/23	1337	AQ	MW-1	6	SEE NOTES	002				X	X	X	X	X	X
11/29/23	1615	AQ	MW-2	6	"	003				X	X	X	X	X	X
11/29/23	1535	AQ	MW-3	6	"	004				X	X	X	X	X	X
11/29/23	1432	AQ	MW-4	6	"	005				X	X	X	X	X	X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/30/23	0832				11/30/23	0832
11/30/23	1900			courier	12/1/23	7:45

Remarks: Bill to EOG Artesia
CONTAINER TYPES
3x 40mL HCL VOAs
1x 500mL PLASTIC (UNP.)
1x 125 mL PLASTIC (H2SO4) & 1x 125 mL PLASTIC (HNO3)

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

ATTACHMENT 3 – NMOCD CORRESPONDENCE

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Tuesday, November 21, 2023 9:24 AM
To: Miriam Morales <Miriam_Morales@eogresources.com>; Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>
Cc: Artesia Regulatory <Artesia_Regulatory@eogresources.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] Lattion Pit (NAUTOFAB000337) Sampling Notification

Good morning Miriam,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Miriam Morales <Miriam_Morales@eogresources.com>
Sent: Tuesday, November 21, 2023 9:14 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>
Cc: Artesia Regulatory <Artesia_Regulatory@eogresources.com>; Artesia S&E Spill Remediation <Artesia_S&E_Spill_Remediation@eogresources.com>
Subject: [EXTERNAL] Lattion Pit (NAUTOFAB000337) Sampling Notification

Good morning,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location. (Due to the holiday this week, this is going out early)

Lattion Pit
O-23-18S-26E
Eddy County, NM
NAUTOFAB000337

Sampling will begin at 12:00 p.m. on Tuesday, November 28, 2023.

Thank you,

Miriam Morales

ATTACHMENT 4 – 1981 AND 1997 AERIAL PHOTOGRAPHS

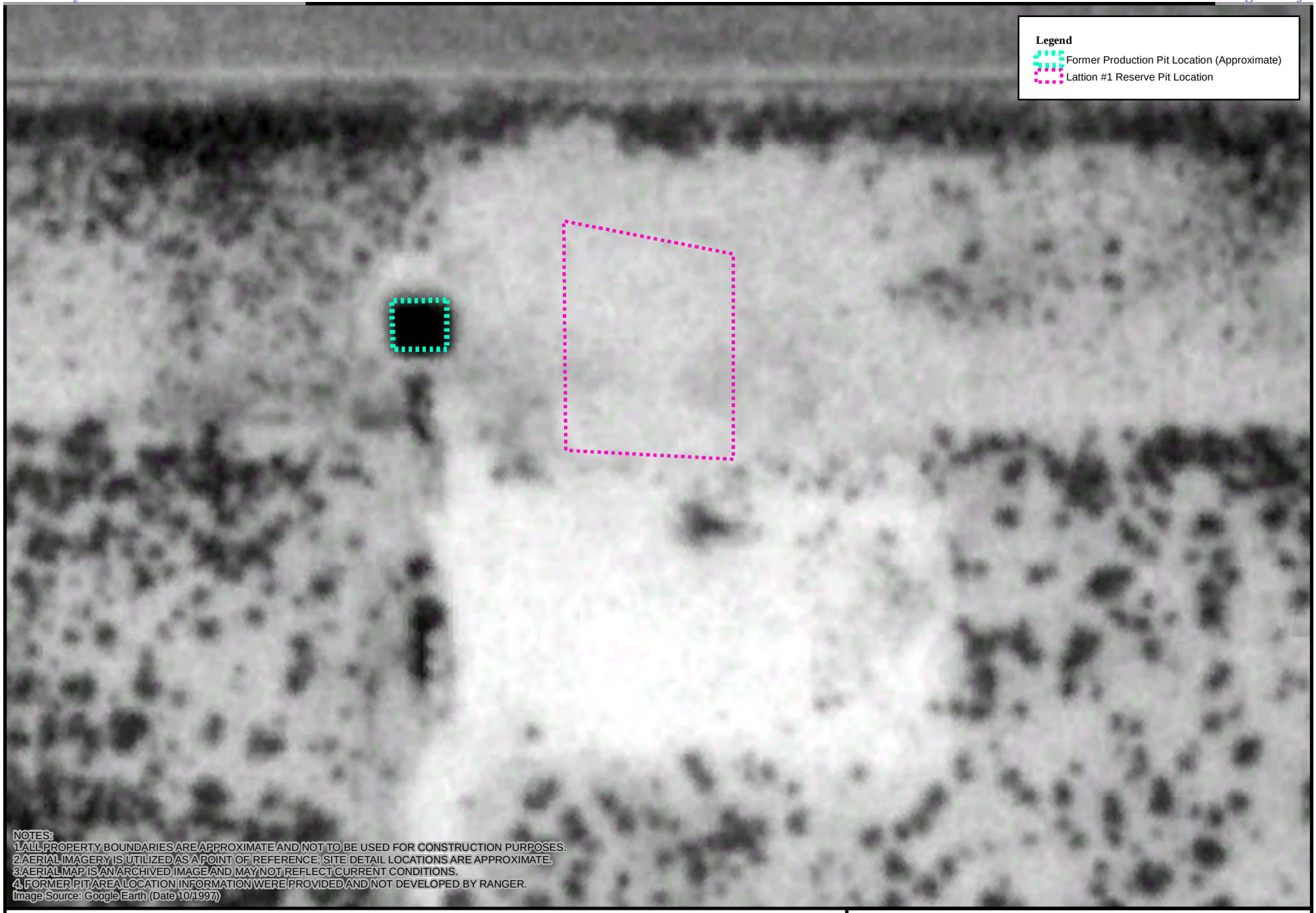
RANGER
ENVIRONMENTAL SERVICES, LLC

0 25 50 100 150 200 Feet

1:1,000

N

Historic Aerial (1981)
Lattions Pit
EOG Resouces, Inc.



RANGER ENVIRONMENTAL SERVICES, LLC

0 25 50 100 150 200 Feet

1:1,000

N

Historic Aerial (1997)
Lattions Pit
EOG Resouces, Inc.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 329523

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 329523
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the Annual Groundwater Monitoring Report (03.26.2024) for Lattion Pit (AP-23): accepted for the record and site is currently under review; a meeting is currently being scheduled between OCD and EOG to discuss a work plan and path forward for the site.	9/20/2024