ENSOLUM

2025 STAGE 1 ABATEMENT PLAN MODIFICATION

Property:

Salty Dog Water Gathering System
San Juan County, New Mexico
NMOCD Incident No: nCS1916853082
Abatement Plan No. AP-139

October 7, 2025

Prepared for:

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1.0 INTRODUCTION

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2025 Stage 1 Abatement Plan Modification* detailing delineation and groundwater sampling activities performed in 2024 and 2025 associated with the Salty Dog Water Gathering System (Site) pipeline release. The Site is located approximately 1,146 feet south of the San Juan River on private land in Unit N of Section 18, Township 29 North, Range 13 West, in San Juan County, New Mexico (Figure 1).

A complete history of Site activities and information pertaining to the release are included in the *Stage 1 Abatement Plan,* submitted to the New Mexico Oil Conservation Division (NMOCD) on December 20, 2019, the *Executive Summary – November 2022* report dated November 20, 2022, and the *2024 Additional Delineation and Annual Groundwater Monitoring Report* dated January 14, 2025. The initial release was assigned incident number nCS1916853082 and the *Stage 1 Abatement Plan* has been assigned Abatement Plan Number AP-139. The *Stage 1 Abatement Plan* also included a draft public notification that was subsequently approved by the NMOCD on October 20, 2022 (notification attached as Appendix A).

This report summarizes additional drilling and delineation completed in December 2024, and groundwater sampling and aquifer testing conducted in 2025. This report also provides recommendations for additional actions to be taken at the Site and modifications to the original *Stage 1 Abatement Plan* dated December 20, 2019.

2.0 2024 DRILLING AND DELINEATION ACTIVITIES

Site data collected between 2019 and 2024, including soil sampling from delineation drilling in 2019 and 2020, along with groundwater sampling results through 2024, indicated chloride impacts were not fully delineated in downgradient areas northwest of the release. To refine the downgradient extent, five boreholes (MW32 through MW36) were advanced in December 2024 using rotary sonic drilling methods. An Ensolum geologist logged lithology and drilling conditions and documented any hydrocarbon odors, staining, or other notable observations. Soil samples were field-screened for volatile organic compounds with a calibrated photoionization detector (PID) and for chloride using Hach® QuanTab® test strips. Borehole and monitoring well locations from this drilling event are depicted on Figure 2. Soil borehole logs and monitoring well construction diagrams are included as Appendix B.

The boreholes encountered unconsolidated sand with variable amounts of silt, clay, and gravel from ground surface to depths ranging from approximately 20 feet to 60 feet below ground surface (bgs). The five boreholes completed in 2024 encountered wet to saturated soils overlying a dry siltstone unit. All five boreholes were completed as permanent groundwater monitoring wells MW32 through MW36 Monitoring wells were constructed with the screen set across the groundwater interface and blank casing to surface, using 2-inch Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slotted screen. A No. 10–20 silica-sand filter pack was placed 2 feet above the screen, followed by a 2-foot hydrated bentonite seal and bentonite-cement slurry to ground surface. Wells were finished above grade with a locking steel protective monument cemented in place.

After construction, Ensolum surveyed the new groundwater monitoring wells with a Trimble® GeoExplorer® 3000 series Global Positioning System (GPS) to determine the latitude and longitude of each location. Top-of-casing elevations were surveyed using a DEWALT® DW074 Rotary Laser Level to an accuracy of (±) 0.01 feet so that groundwater flow direction and gradient could be determined relative to mean seal level. Once the top of well casing was surveyed, the depth to groundwater below top of casing was measured with an oil/water interface probe. The wells were developed by purging a minimum of 10 casing volumes, or until the well was purged dry.

2.1 SOIL SAMPLING AND RESULTS

A total of three soil samples from each borehole were submitted for laboratory analysis: two from the depth intervals corresponding to the maximum observed chloride contamination based on field screening results (in either vadose or saturated zone) and one from the terminus of the borehole. If no impacts were identified based on field screening, a sample was collected from the vadose zone, from the saturated zone, and from the terminus of each borehole. A notification of sampling activities was provided to the NMOCD prior to the delineation work and is attached as Appendix C. Soil samples were submitted to Eurofins Analytical Laboratory (Eurofins) for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B, total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), diesel range organics (DRO), and motor-oil range organics (MRO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Analytical results from the 2024 drilling event indicated all concentrations of benzene, BTEX, TPH, and chloride were either below the laboratory reporting limits or below the NMOCD Table I Closure Criteria. The soil analytical results collected during the December 2024 drilling event, as well as historical sampling events, are summarized in Table 1 and depicted on Figure 2. The laboratory analytical reports for the 2024 soil samples are included as Appendix D.

3.0 2025 SITEWIDE GROUNDWATER MONITORING

As proposed in the *Stage 1 Abatement Plan*, quarterly groundwater monitoring and sampling has been conducted beginning in the fourth quarter of 2019. Static groundwater levels are measured quarterly in all permanent monitoring wells at the Site using an oil/water interface probe. The interface probe is decontaminated with Alconox® soap and rinsed with distilled water prior to each measurement. Groundwater elevations at the Site are summarized in Table 2. Groundwater flow at the Site is predominantly west–northwest, but it is poorly defined north of the existing monitoring-well network. Figures 3 and 4 depict groundwater elevations, inferred potentiometric contours, and estimated flow direction for the first and second quarters of 2025.

Groundwater elevations in all Site wells have declined since monitoring began in 2019, and several wells are consistently dry or lack sufficient water for sampling. Historically, many of the Site wells were dry and/or contained insufficient volumes of water to sample during the winter months, as the groundwater table fluctuates with seasonal variations; however, this condition now commonly extends into spring and summer, likely in response to ongoing regional drought conditions.

3.1 GROUNDWATER SAMPLING AND RESULTS

Groundwater monitoring wells were purged a minimum of three casing volumes; where recharge was insufficient, purging continued until the well no longer yielded water. Field water-quality parameters were recorded during purging. After purging, groundwater samples were collected directly into laboratory-supplied containers and placed on ice. Each sample was labeled with the date and time of collection, sample name/ID, sampler's name, and submitted to Eurofins under strict chain-of-custody procedures. Groundwater samples were analyzed for volatile organic compounds (VOCs) following EPA Method 8260B, general water chemistry (GWC) including total dissolved solids (TDS) following EPA Standard Method (SM) 2540C, pH following EPA SM4500-H+B/9040C, anions (bromide, chloride, fluoride, nitrite-nitrate, phosphorus, and sulfate) following EPA Method 300.0, and cations (calcium, magnesium, potassium, and sodium) following EPA Method 200.7.

Based on historical results, all concentrations of analyzed VOCs have been below New Mexico Water Quality Control Commission (NMWQCC) standards since the first quarter of 2020. Of the general water chemistry parameters sampled during the 2025 quarterly events, concentrations of chloride, fluoride, sulfate, and TDS are the only constituents with exceedances of the NMWQCC standards at the Site. In general, most water chemistry parameters have been stable over time. Chloride concentrations have decreased in many of the Site wells located in the source area since sampling began in 2019; however, chloride concentrations in wells MW28, MW-29, and MW-31 have increased since they were first sampled in June of 2023, indicating the chloride plume is potentially migrating to the west and northwest with groundwater flow.

Additionally, groundwater samples from MW21 through MW24 indicate background concentrations of chloride, sulfate, and TDS at the Site are naturally elevated and exceed NMWQCC standards. All groundwater analytical results received for the Site, including background sampling results from temporary wells MW21 through MW24, are summarized in Tables 3 and 4. Groundwater analytical results for chloride and TDS from the 2025 quarterly sampling events are presented on Figures 3 and 4. For complete groundwater laboratory analytical reports, refer to the *2025 Interim Groundwater Monitoring Report.*

4.0 2025 AQUIFER ASSESSMENT ACTIVITIES

In August 2025, slug tests were performed at the Site to evaluate the hydraulic conductivity (K) of the shallow saturated zone. Hydraulic conductivity is a key parameter for estimating groundwater flow velocities, delineating potential plume migration pathways, and supporting remedial design. Results from the slug tests were also used to refine the site conceptual hydrogeologic model and to characterize lateral and vertical heterogeneity within the impacted aquifer unit.

4.1 WELL SELECTION CRITERIA

Slug testing was performed in monitoring wells that had sufficient saturated thickness to accommodate equipment installation and produce a measurable hydraulic response. Candidate wells were evaluated based on well construction, geologic setting, hydrogeologic conditions, and observed impacts to groundwater quality. Monitoring wells MW13, MW28, MW33, and MW34 were selected for slug testing based on their location at the Site and their relevance to the site conceptual model (CSM).

4.2 SLUG TEST PROCEDURE

Prior to each test, the static water level was measured with an oil/water interface probe, and the total well depth was confirmed. Wells were inspected for sediment accumulation, obstructions, or mechanical damage. A submersible vented pressure transducer with internal data logging capabilities (In-Situ Level TROLL 500) was then installed below the anticipated maximum displacement depth. All equipment was decontaminated before and after use to prevent cross-contamination.

Slug tests were performed using a rising-head configuration, which involved the instantaneous removal of a known-volume slug from the water column to displace the static water level. Water-level fluctuations were recorded at 0.5-second intervals using high-frequency logging to capture rapid responses. Testing continued until water levels recovered at least 90 percent (%)toward static conditions, or for a maximum of 90 minutes. At least two slug tests were completed in each well to evaluate reproducibility and minimize the influence of anomalies such as incomplete well development or partial recovery. Field personnel documented environmental conditions, slug dimensions, initial displacement height, and well response behavior on field forms. All pressure transducer data were time-synchronized with field measurements.

4.3 DATA ANALYSIS

Recovery data was downloaded from the transducer and exported to Excel for an initial review of displacement versus time. Slug-test data was analyzed in AQTESOLV v4.5. The Kansas Geological Survey (KGS) model (Hyder et al., 1994) for unconfined, partially penetrating wells intersecting the water table was used to evaluate each slug test. The analysis included a review of curve fits and semi-log linearity to confirm the reliability of hydraulic conductivity estimates. For well parameters, the effective well radius was assumed to include the gravel-pack envelope, as the filter-pack material is expected to be significantly more permeable than the aquifer (Butler, 1998). Complete AQTESOLV outputs, including type-curve analyses, are provided in Appendix E.

4.4 SLUG TEST RESULTS

Slug tests were successfully performed in monitoring wells MW13, MW28, MW33, and MW34. All tests achieved sufficient recovery for reliable analysis using AQTESOLV and the KGS model for unconfined, partially penetrating wells. Results were reproducible between replicate tests at each well, providing confidence in the derived hydraulic conductivity (K) values. A summary of slug test results is depicted on Figure 5 and provided in Table 5.

4.4.1 MW-13

Hydraulic conductivity values of 6.12×10^{-3} centimeters per second (cm/sec) and 7.06×10^{-3} cm/sec were calculated from the two slug tests performed in MW13, yielding an average K value of 6.59×10^{-3} cm/sec. Both tests failed to completely return to static and were corrected for incomplete recovery. Correction was applied by estimating the residual (non-recoverable) head from the late-time trend and normalizing the time–displacement data in accordance with Butler (1998). This approach preserves the characteristic test response, so the reported K values reflect the incomplete-recovery–corrected curves rather than the raw measurements. The resulting K value indicates a relatively permeable interval of clean fine to medium grained sand, consistent with the borehole log description of silty sand overlying saturated, poorly graded sand with silt. Although MW13 often pumps dry during sampling, this is attributed to the limited saturated thickness of only 4.05 feet, which restricts available yield despite the permeable nature of the formation. The aquifer material exhibits high intrinsic hydraulic conductivity, but the thin saturated interval constrains transmissivity and well recharge capacity.

4.4.2 MW-28

Hydraulic conductivity values of 4.98×10^{-4} cm/sec and 5.24×10^{-4} cm/sec were calculated from the two slug tests performed in MW28, yielding an average K value of 5.11×10^{-4} cm/sec. These values are approximately an order of magnitude lower than those observed in MW-13, reflecting the more restrictive hydraulic properties of this interval. Lithologic data from the borehole log describe a sequence of clayey sand with poorly graded sand and minor gravel overlying dry clay, consistent with reduced permeability. The extended recovery tail observed in the test response supports this interpretation, as delayed recovery and residual drawdown are diagnostic of aquifer materials with lower permeability and minor well losses (Butler, 1998). MW-28 therefore represents a locally restrictive zone within the aquifer system that may impede lateral groundwater flow relative to more transmissive units.

4.4.3 MW-33

Two consistent hydraulic conductivity values of 7.12×10^{-3} cm/sec and 7.13×10^{-3} cm/sec were estimated from the slug tests in MW33, yielding an average K value of 7.12×10^{-3} cm/sec. Analytical results were corrected for incomplete recovery similar to MW13. Based on the borehole log, the saturated zone at MW33 consists of poorly graded medium sand overlain by fat clay, which may function as a semi-confining unit. This stratigraphy is consistent with the relatively high permeability response observed in the test. Overall, the results indicate that MW-33 is screened within a transmissive interval capable of facilitating lateral groundwater migration.

4.4.4 MW-34

MW34 yielded the highest hydraulic conductivity in the program, ranging from 8.11×10^{-3} cm/sec to 8.64×10^{-3} cm/s, with a mean K value of 8.37×10^{-3} cm/s. Lithology at this location consists of well graded medium sand and gravel, consistent with higher observed hydraulic conductivity and transmissivity. These results indicate that MW34 is screened within the most transmissive portion of the tested interval and may represent a preferential flow pathway within the shallow aquifer system.

4.4.5 Sitewide Results

Hydraulic conductivity values ranged from 5.11×10^{-4} cm/sec at MW-28 to 8.37×10^{-3} cm/sec at MW-34, spanning nearly an order of magnitude. The geometric mean hydraulic conductivity across the Site was 3.76×10^{-3} cm/sec. When combined with the measured hydraulic gradient of

0.004 ft/ft between MW-13 and MW-34, these values correspond to estimated groundwater seepage velocity of approximately 0.17 feet per day (ft/day) (assuming an effective porosity of 0.25). This rate reflects relatively slow but measurable groundwater movement capable of supporting plume migration along the more transmissive pathways. Seepage velocity calculations are provided in Appendix F.

4.5 SLUG TEST DISCUSSION

The slug testing program provided reliable estimates of hydraulic conductivity across four monitoring wells at the Site, with values ranging from 5.11×10^{-4} cm/sec at MW28 to 8.37×10^{-3} cm/sec at MW34. These results are consistent with hydraulic characteristics commonly associated with unconsolidated sand and gravel aquifers, indicating relatively permeable conditions and significant heterogeneity within the shallow aquifer system. The geometric mean hydraulic conductivity of 3.76×10^{-3} cm/sec is representative of sitewide conditions and falls within the ranges reported by Freeze and Cherry (1979), where clays and silts typically range from 10^{-6} to 10^{-4} cm/sec and clean sands and gravels from approximately 10^{-3} to 10^{0} cm/sec. This comparison supports the interpretation that groundwater flow at the Site is dominated by higher-permeability sand units, with localized restrictions in finer-grained zones.

The distribution of K values highlights the significance of preferential pathways in controlling groundwater flow and plume migration (Figure 5). Wells MW13, MW33, and MW34 yielded higher hydraulic conductivity values consistent with sand and gravel intervals that are likely to transmit groundwater more efficiently. By contrast, MW28 yielded lower values consistent with silty sands, suggesting that portions of the aquifer may act as restrictive zones or localized barriers to flow.

Overall, the slug test results indicate the aquifer possesses sufficient transmissivity to sustain measurable groundwater movement, with estimated seepage velocities on the order of 0.17 ft/day (assuming an effective porosity of 0.25 and a hydraulic gradient of 0.004 ft/ft). These findings provide an improved understanding of the hydraulic framework of the Site and will inform the subsequent evaluation of aquifer performance through additional investigations.

5.0 RECOMMENDATIONS AND ABATEMENT PLAN MODIFICATIONS

Based on previous soil and groundwater sampling at the Site, Hilcorp and Ensolum advanced additional borings in December 2024 to further delineate groundwater impacts from the produced water release. Wells MW32 through MW36 were installed downgradient of existing wells with elevated chloride concentrations; however, analytical results confirmed these wells are also impacted. As such, further delineation will be necessary to define the downgradient extent of the plume. To maximize efficiency, the delineation wells will also be constructed to support aquifer testing, allowing the same well network to provide both plume characterization and hydraulic performance data.

Using these wells, Hilcorp and Ensolum will also evaluate the feasibility of a pump-and-treat remedy to hydraulically control and remove chloride impacted groundwater. This approach would involve operating the wells as recovery points to intercept the plume, treating the extracted water to manage elevated chloride and TDS concentrations, and either disposing of or beneficially reusing the treated water. As an alternative, recovered water may be applied for phytoremediation irrigation if sustainable yields can be demonstrated and water quality is compatible with salt-tolerant vegetation.

To support this evaluation, aquifer testing is needed to confirm that the aquifer can sustain pumping rates sufficient for hydraulic capture without excessive drawdown. As an initial step, the AQTESOLV Forward Solution module with the Neuman (1974) unconfined-aquifer solution was used to run predictive simulations based on slug test derived hydraulic conductivity values and candidate pumping rates (Q). For each simulation, the radius of influence (ROI) was defined as the distance at which simulated drawdown declines to a measurable threshold. Results summarized in Table 6 and depicted on Figure 6 indicate the smallest ROI occurs at MW-28 (Q = 0.7 gallons per minute (gpm); simulated drawdown ≈ 6.9 feet; ROI ≈ 7.6 feet), whereas the largest ROI occurs toward MW-34 (Q = 10.0 gpm; simulated drawdown ≈ 7.3 feet; ROI ≈ 22.9 feet), suggesting localized hydraulic capture may be achievable. Because forward modeling is sensitive to input assumptions and cannot fully replicate field conditions, controlled step-drawdown and constant-rate aquifer tests will be conducted in the delineation wells to validate sustainable yield, refine transmissivity estimates, and confirm capture-zone geometry under actual pumping stress. The AQTESOLV Forward Solutions outputs are provided in Appendix G, and the ROI plots are provided in Appendix H.

5.1 RECOMMENDATIONS

The following recommendations are proposed to advance Site characterization and evaluate the feasibility of groundwater recovery as a remedial option. Each task is designed to both complete the delineation of the chloride plume and provide the aquifer performance data necessary to determine whether pump-and-treat or phytoremediation irrigation can be implemented effectively. The program uses dual-purpose delineation/test wells combined with step-drawdown testing followed by a constant-rate pumping test. A Stage 2 Abatement Plan will also be prepared, integrating test results into a remedial strategy.

5.1.1 Additional Delineation / Test Wells

Based on slug test results and AQTESOLV forward modeling, additional delineation/test wells will be installed at the locations shown on Figure 7 to delineate the downgradient extent of chloride impacts and support aquifer testing and potential recovery. The four pumping test locations were selected to delineate the chloride plume and step progressively toward the river to the north in order to separate aquifer behavior from potential river-recharge effects. Samples from the first borehole drilled at each test location will be submitted to Envirotech Laboratories for chloride analysis with a rush turnaround (same day or within 24 hours) to confirm the presence of impacts

before conducting the pumping test. If the test location is drilled into unimpacted material, an alternative testing location will be proposed. The test wells for each pumping test, if successful, may be re-proposed as pumping wells for a potential future remediation system.

At each proposed test location, four wells (16 total) will be installed by sonic rotary, with soil samples collected at 5-foot intervals for lithologic and geochemical evaluation. The four test (pumping) wells will be constructed with 4-inch casing and a continuous-slot screen submerged across the target interval, a graded silica sand filter pack, a 2-foot hydrated bentonite seal above the pack, and bentonite–cement grout to surface. The 12 observation wells will be constructed out of 2-inch PVC and screened to match the pumping well interval within each test cluster. All wells will be aggressively developed (surging and purging) in accordance with American Society of Testing and Materials (ASTM) D5092, *Standard Practice for Design and Installation of Groundwater Monitoring Wells*, until turbidity stabilizes, thereby reducing well skin and turbulent losses and yielding cleaner step-drawdown and constant-rate responses (Driscoll, 1986).

Tests 1 and 2 (Figure 7a and 7b) are interior well clusters positioned far enough from the river to minimize early boundary effects and yield cleaner estimates of transmissivity (T) and storage (S). The maximum ROI for Tests 1 and 2 was defined from the predicted values at MW-34 and MW-33, respectively. Test 3 (Figure 7c) occupies a mid-field location along the MW-33 corridor, oriented on the northeast flowline to show how responses change toward the river and to check for anisotropy. Test 4 (Figure 7d) is the boundary-proximal set, placed closest to the river so any recharge influence should appear earliest (e.g., late-time flattening and derivative downturn). These locations will provide both aquifer parameters under relatively boundary-free conditions along with potential river interaction, refining capture assumptions at the margins. The ROIs selected for Tests 3 and 4 were based on the predicted ROI at MW-34.

Within each test, wells will be arranged by percent distance of the predicted ROI. A near-field observation well will be placed at 30%of the predicted ROI on a cross-gradient bearing to capture strong early-time response for T with minimal boundary bias. A second observation well will be installed at 60% of the ROI distance toward the river along the presumed flowline to record mid-time behavior and register any recharge break earlier. A third observation point will be located near the outer limit of the predicted ROI on the same riverward azimuth to act as a boundary sentinel and to help confirm capture at the selected rate. At Test 1 and Test 2, an existing well outside the predicted ROI serves as a far-field control for barometric and ambient correction and ROI verification. Screen elevations will be matched within each cluster, so responses are comparable across pumping and observation points.

5.1.2 Step Drawdown and Constant Rate Pumping Test:

Aquifer testing will be conducted in the newly installed wells to confirm sustainable pumping rates and refine aquifer parameters for remedial design. Testing will begin with a step-drawdown test consisting of 3 to 5 incremental pumping steps, each held for 30 to 60 minutes at increasing discharge rates. Discharge will be measured with a calibrated inline totalizer and maintained within 5%of the target rate. Water levels will be logged with a vented pressure transducer (In-Situ Level TROLL 500) programmed on a high-frequency linear interval. The step-drawdown is a single-well performance test, and the analysis is based on the pumping well. Observation wells do not need to be instrumented, but loggers may be placed in one or two nearby observation wells to verify aquifer response and confirm that mid-field drawdown will be measurable during the constant-rate test. These tests will provide data on well efficiency, identify operational pumping limits, and establish practical pumping rates for a constant-rate test.

Following the step test, a constant-rate pumping test will be conducted using pumping rates determined from the step-drawdown results. To characterize background trends (e.g., barometric pressure effects on water table, river stage, and regional fluctuations), a vented pressure

transducer (In-Situ Level TROLL 500) will be installed at the Site 3 to 5 days prior to the test. On the date of the test, a submersible pump and transducer will be installed in the 4-inch pumping well, and transducers will be installed in each observation well. Water levels will be logged at high frequency interval initially and then tapered as the test proceeds. Discharge will be held constant to within 5% and verified periodically with a totalizer. Interior Test 1 and Test 2 will be run for 12 to 24 hours. Boundary-proximal Test 3 and Test 4 (river-facing) should run for 24 to 36 hours to improve the chance of observing any recharge-boundary response. Recovery will be monitored for at least the pumping duration. Although vented transducers will be used, a barologger (In-Situ BaroTROLL) will be deployed to capture on-site atmospheric pressure and for barometric-efficiency correction, if necessary. The barologger will be placed in a far-field control well, suspended in air (above the water surface), time-synchronized with the pressure loggers, and set to the same logging interval. This data will be used to verify and, if needed, adjust the water-level measurements for barometric pressure correction. Manual water-level measurements will be collected during the test to ground-truth the transducers, and any rate adjustments or interruptions will be documented in the field log.

Assuming a nominal constant rate of 5 gpm, a 24-hour test will generate approximately 7,200 gallons of extracted groundwater (10,800 gallons for a 36-hour boundary-proximal test). Prior to testing, adequate storage and disposal capacity will be staged, preferably a high capacity frac tank. Periodic vacuum-truck pulls may be scheduled. Use of multiple totes is not preferred due to handling and spill-risk considerations. Water produced during testing will be profiled for chloride and TDS for acceptance at an approved disposal facility. If step-test results indicate higher sustained rates or longer durations, storage and hauling capacity will be scaled accordingly.

Observation well drawdown and recovery data will be used to confirm the ROI and capture geometry and to derive T and S. Prior to interpretation, data will be corrected for any pump-rate variability and barometric effects. Diagnostic plots, such as derivative and late-time behavior, will be used to distinguish early wellbore effects from radial flow and separate boundary influence (e.g., river recharge) from directional differences indicative of anisotropy. Recovery responses will be reviewed to corroborate parameters and verify data quality. Together, the step and constant-rate tests will provide the hydraulic basis to evaluate pump-and-treat feasibility and whether sustained yields can support potential phytoremediation irrigation. If warranted, results will be used to parameterize a numerical flow model (e.g., MODFLOW) to evaluate capture zones and operating scenarios under seasonal and river-stage variability.

5.1.3 Stage 2 Abatement Plan:

Assuming delineation efforts are successful and pumping test results are favorable, a Stage 2 Abatement Plan will be prepared summarizing the results of the drilling and aquifer testing activities. The plan will evaluate the relative feasibility of pump-and-treat versus phytoremediation irrigation as remedial strategies, with specific consideration of sustainable yields, water quality, and chloride treatment/disposal options. Recommended remedial techniques will be presented alongside supporting aquifer performance data, plume delineation results, and a proposed monitoring and implementation schedule.

5.2 STAGE 1 ABATEMENT PLAN MODIFICATIONS:

Hilcorp requests that groundwater analytes be reduced at this time to chloride, sulfate, and TDS for all future sampling events, as these are the only constituents of concern that continue to exceed NMWQCC standards. All other analyzed constituents are not present at the Site above the NMWQCC standards and/or naturally occurring background concentrations

6.0 REFERENCES

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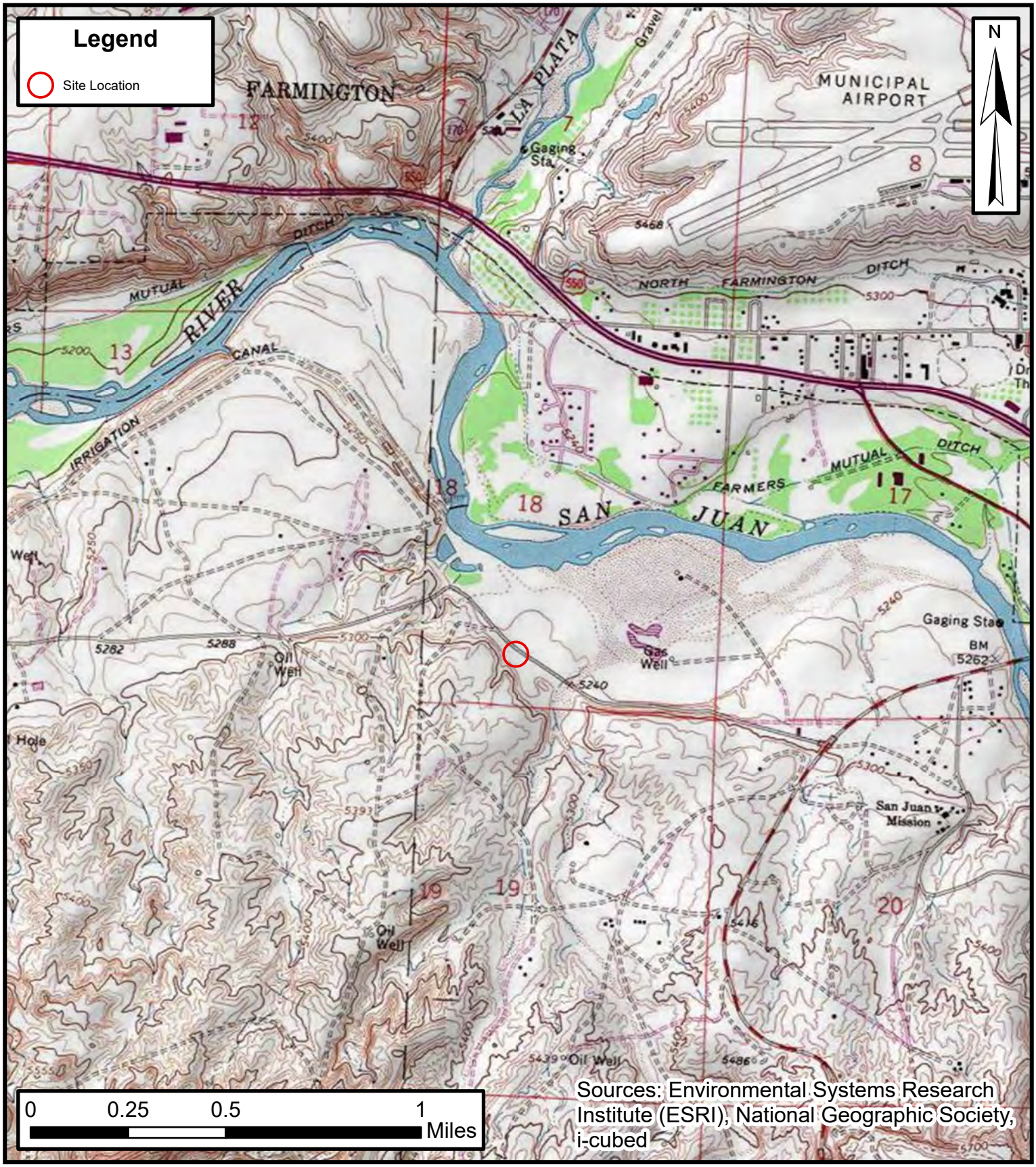
FIGURES



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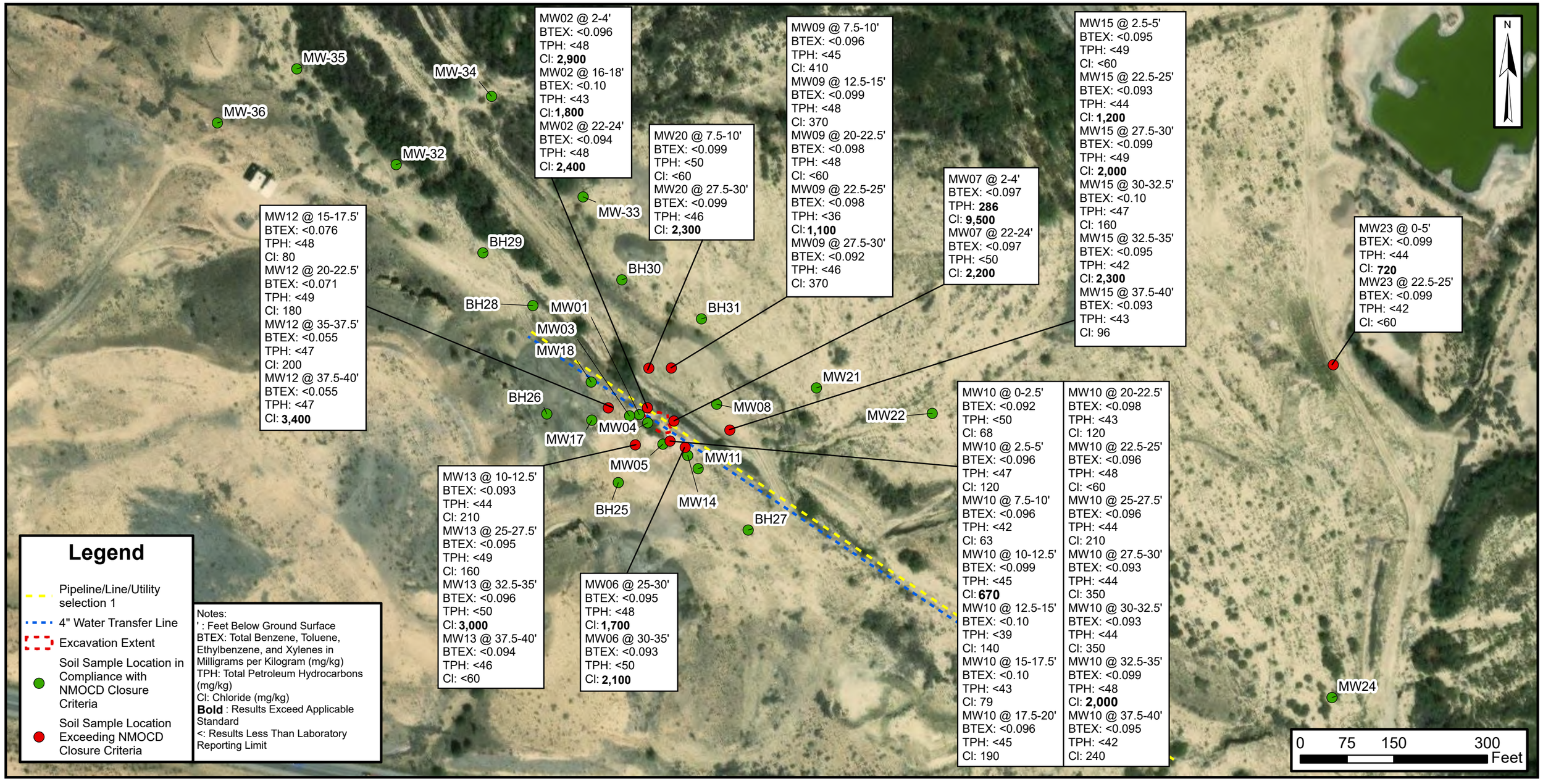
Site Location Map

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
1



Legend

- Pipeline/Line/Utility selection 1
- 4" Water Transfer Line
- Excavation Extent
- Soil Sample Location in Compliance with NMOCD Closure Criteria
- Soil Sample Location Exceeding NMOCD Closure Criteria

Notes:
' : Feet Below Ground Surface
BTEX: Total Benzene, Toluene, Ethylbenzene, and Xylenes in Milligrams per Kilogram (mg/kg)
TPH: Total Petroleum Hydrocarbons (mg/kg)
Cl: Chloride (mg/kg)
Bold : Results Exceed Applicable Standard
<: Results Less Than Laboratory Reporting Limit

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Environmental, Engineering and Hydrogeologic Consultants

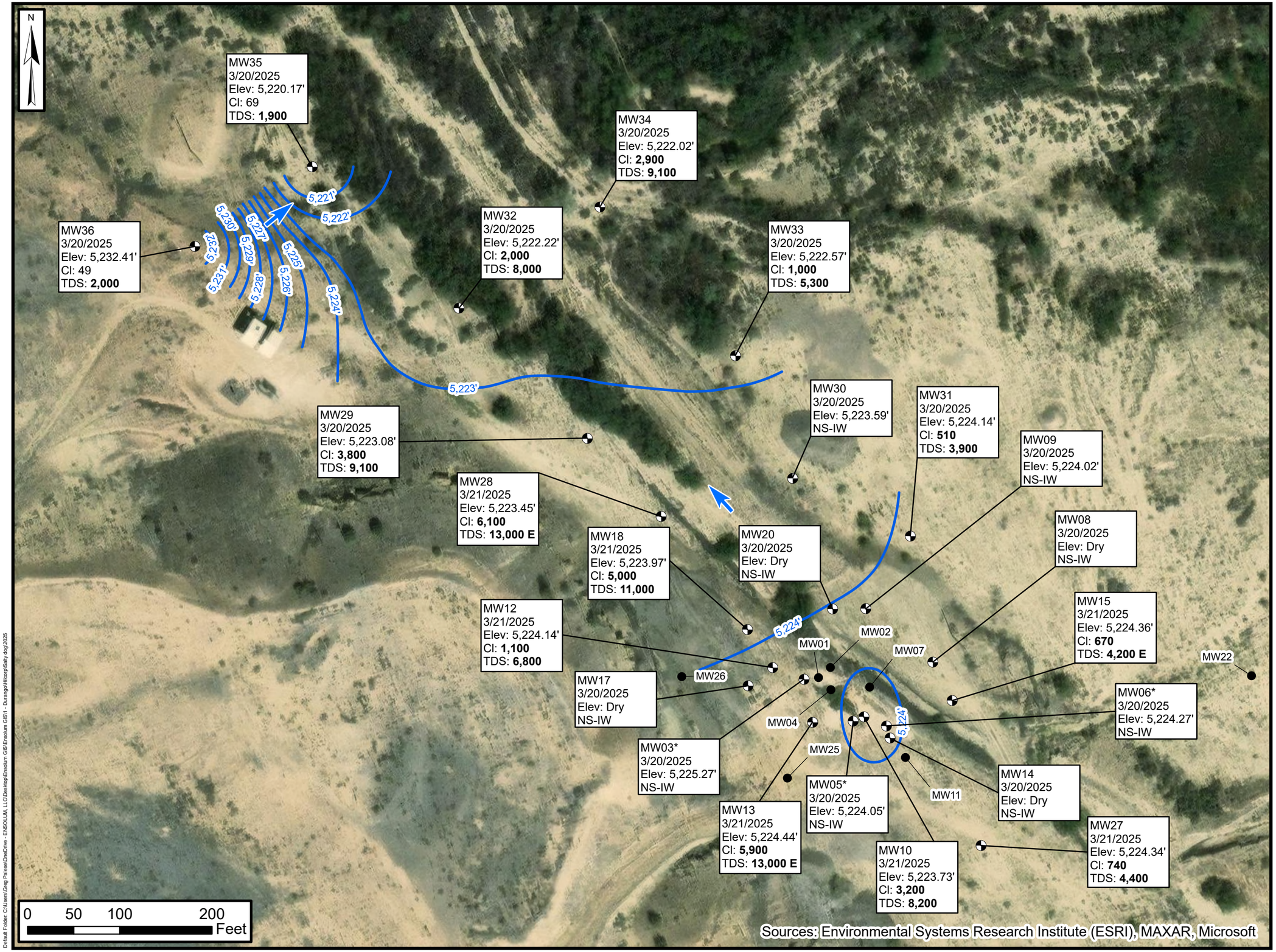
Soil Analytical Results

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
2

Sources: Environmental Systems Research Institute (ESRI), Maxar, Microsoft



Legend

- Monitoring Well
- Soil Boring
- Groundwater Elevation Contour
- Estimated Groundwater Flow Direction

Notes:
Elev: Groundwater Elevation in Feet Above Mean Sea Level
TDS: Total Dissolved Solids
Cl: Chloride in Milligrams per Liter (mg/L)
Bold: Indicates Result Exceeds NMWQCC Standard
NMWQCC: New Mexico Water Quality Conservation Commission
*: Not Indicative of Formation Groundwater
E: Results Exceed Calibration Range
NS-IW: Not Sampled due to Insufficient Water Volume

Groundwater Elevation and Analytical Results - Q1 2025

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 3

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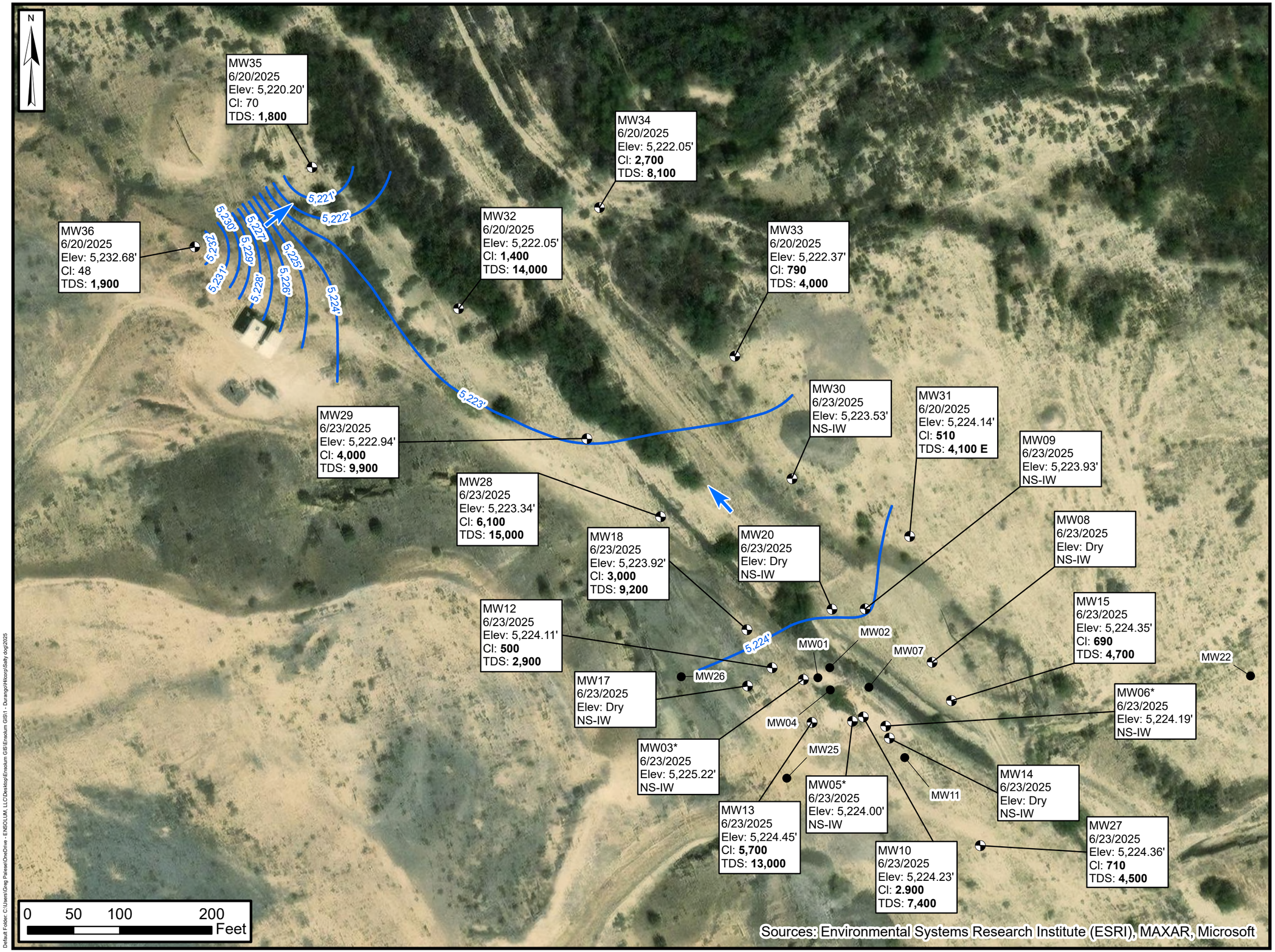
Default Folder: C:\Users\Greg Pelesel\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\Ensolum GIS\1 - Durango\Hilcorp\Salty dog\2025



Legend

- Monitoring Well
- Soil Boring
- Groundwater Elevation Contour
- Estimated Groundwater Flow Direction

Notes:
Elev: Groundwater Elevation in Feet Above Mean Sea Level
TDS: Total Dissolved Solids
Cl: Chloride in Milligrams per Liter (mg/L)
Bold: Indicates Result Exceeds NMWQCC Standard
NMWQCC: New Mexico Water Quality Conservation Commission
*: Not Indicative of Formation Groundwater
E: Results Exceed Calibration Range
NS-IW: Not Sampled due to Insufficient Water Volume

Groundwater Elevation and Analytical Results - Q2 2025

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 4

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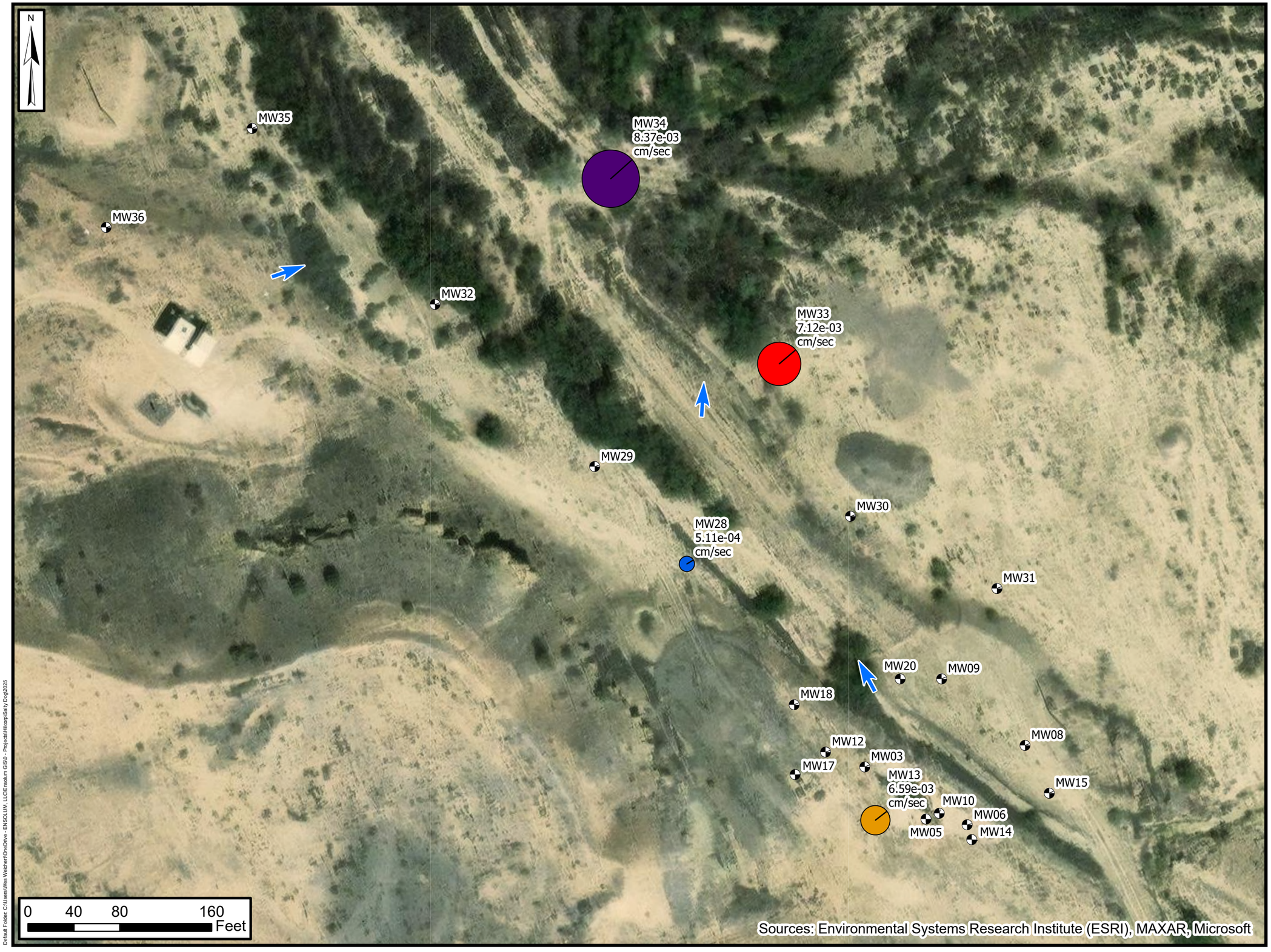

Legend

Slug Testing Locations

- 5.11E-04 cm/sec
- 6.59E-03 cm/sec
- 7.12E-03 cm/sec
- 8.37E-03 cm/sec

Monitoring Well Location

Estimated Groundwater Flow Direction

Notes:
Symbol size represents hydraulic conductivity (K) values in centimeters per second (cm/sec) derived from slug test analyses. K-values were calculated using the KGS model in AQTESOLV and are expressed in cm/sec. Larger symbols indicate higher hydraulic conductivity and greater relative ease of groundwater flow.

2025 Slug Test Results: Hydraulic Conductivity Distribution

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 5

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Legend

- Monitoring Well Location
- Predicted Radius of Influence (ROI)

Notes:
Predicted radius of influence (ROI) for a 500-minute constant-rate pumping test. ROIs were modeled in AQTESOLV (Forward Solutions) using the Neuman unconfined-aquifer solution. Pumping rates represent the maximum expected discharge that does not exceed allowable drawdown in the pumping well.

Predicted Pumping Test Radius of Influence

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 6

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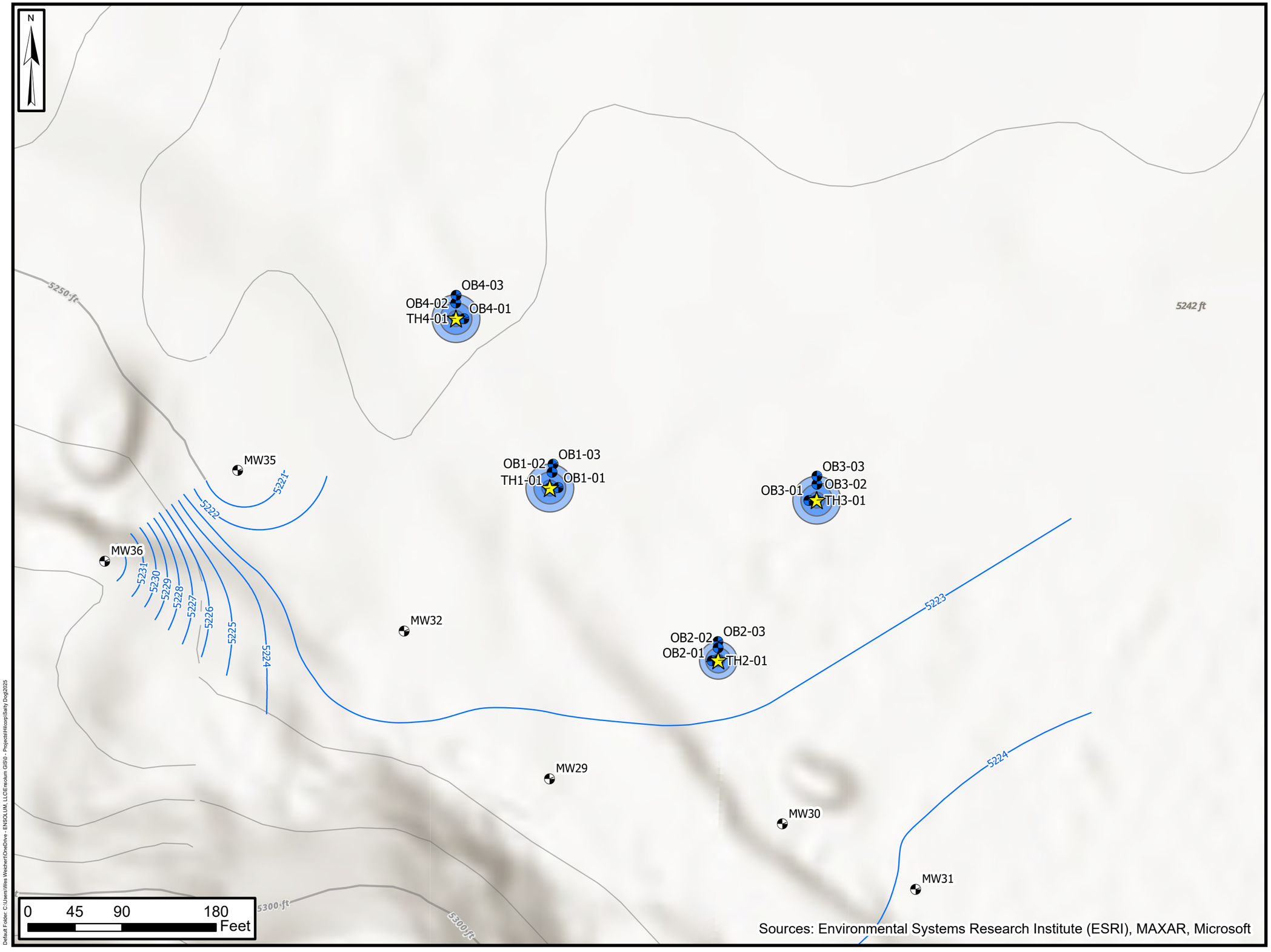

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Legend

- Monitoring Well Location
- Proposed 2-inch Pumping Test Observation Well
- Proposed 4-inch Pumping Well
- Maximum Predicted ROI
- 30% of Predicted ROI
- 30% of Predicted ROI
- Groundwater Flow Direction
- Groundwater Elevation Contour

Notes:
Proposed 4-inch pumping wells are identified as a start at the pump test centers, and proposed 2-inch observation wells are the companion observation points for each test. Concentric rings depict the predicted radius of influence (ROI) from forward modeling: the outer ring is the maximum predicted ROI, and the inner rings mark represent 30% of ROI for near-field and 60% of ROI for mid-field placement.

Proposed Pumping Test and Delineation Well Locations

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 7

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Legend

- Monitoring Well Location
- Proposed 2-inch Pumping Test Observation Well
- Proposed 4-inch Pumping Well
- Maximum Predicted ROI
- 30% of Predicted ROI
- 30% of Predicted ROI

Notes:
Proposed 4-inch pumping wells are identified as a star at the pump test centers, and proposed 2-inch observation wells are the companion observation points for each test. Concentric rings depict the predicted radius of influence (ROI) from forward modeling: the outer ring is the maximum predicted ROI, and the inner rings mark represent 30% of ROI for near-field and 60% of ROI for mid-field placement.

Proposed Pumping Test 1

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 7a

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Legend

- Monitoring Well Location
- Proposed 2-inch Pumping Test Observation Well
- Proposed 4-inch Pumping Well
- Maximum Predicted ROI
- 30% of Predicted ROI
- 30% of Predicted ROI

Notes:
Proposed 4-inch pumping wells are identified as a star at the pump test centers, and proposed 2-inch observation wells are the companion observation points for each test. Concentric rings depict the predicted radius of influence (ROI) from forward modeling: the outer ring is the maximum predicted ROI, and the inner rings mark represent 30% of ROI for near-field and 60% of ROI for mid-field placement.

Proposed Pumping Test 2

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 7b

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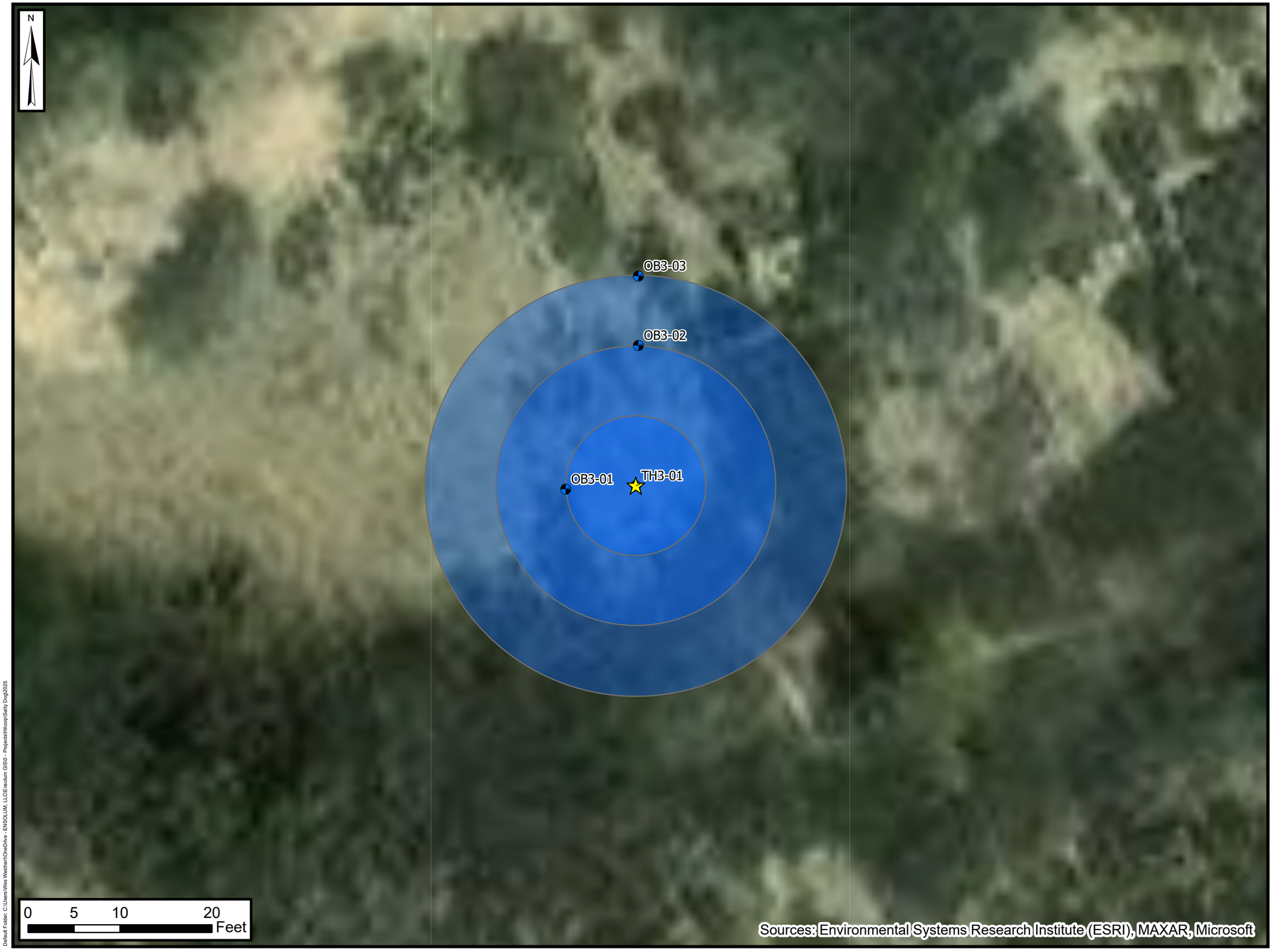

Legend

- Monitoring Well Location
- Proposed 2-inch Pumping Test Observation Well
- Proposed 4-inch Pumping Well
- Maximum Predicted ROI
- 30% of Predicted ROI
- 30% of Predicted ROI

Notes:
Proposed 4-inch pumping wells are identified as a start at the pump test centers, and proposed 2-inch observation wells are the companion observation points for each test. Concentric rings depict the predicted radius of influence (ROI) from forward modeling: the outer ring is the maximum predicted ROI, and the inner rings mark represent 30% of ROI for near-field and 60% of ROI for mid-field placement.

Proposed Pumping Test 3

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 7c

ENSOLUM
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Legend

- Monitoring Well Location
- Proposed 2-inch Pumping Test Observation Well
- Proposed 4-inch Pumping Well
- Maximum Predicted ROI
- 30% of Predicted ROI
- 30% of Predicted ROI

Notes:
Proposed 4-inch pumping wells are identified as a start at the pump test centers, and proposed 2-inch observation wells are the companion observation points for each test. Concentric rings depict the predicted radius of influence (ROI) from forward modeling: the outer ring is the maximum predicted ROI, and the inner rings mark represent 30% of ROI for near-field and 60% of ROI for mid-field placement.

Proposed Pumping Test 4

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

Figure 7d

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TABLES

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TABLE 1
SOIL ANALYTICAL RESULTS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Field Chloride (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria				10	50	100	600
MW01 @ 0' - 2'	8/30/2019	1.9	--	<0.023	<0.093	<46	<60
MW01 @ 8' - 10'	8/30/2019	1.0	--	<0.023	<0.094	<47	75
MW01 @ 10' - 12'	8/30/2019	1.0	--	<0.024	<0.096	<49	84
MW02 @ 2' - 4'	8/29/2019	9.1	--	<0.024	<0.096	<48	**2,900**
MW02 @ 16' - 18'	8/29/2019	4.8	--	<0.025	<0.10	<43	**1,800**
MW02 @ 22' - 24'	8/29/2019	1.9	--	<0.023	<0.094	<48	**2,400**
MW03 @ 14' - 16'	8/29/2019	7.6	--	<0.025	<0.099	<44	190
MW03 @ 26' - 28'	8/29/2019	2.7	--	<0.025	<0.10	<44	<61
MW04 @ 2' - 4'	8/30/2019	0.4	--	<0.025	<0.098	<48	390
MW04 @ 16' - 18'	8/30/2019	1.1	--	<0.023	<0.093	<49	160
MW04 @ 18' - 20'	8/30/2019	1.2	--	<0.025	<0.099	<49	110
MW05 @ 25' - 30'	8/28/2019	5.0	--	<0.024	<0.094	<49	390
MW05 @ 30' - 35'	8/28/2019	1.9	--	<0.025	<0.099	<48	110
MW06 @ 25' - 30'	8/28/2019	1.9	--	<0.024	<0.095	<48	**1,700**
MW06 @ 30' - 35'	8/28/2019	0.8	--	<0.023	<0.093	<50	**2,100**
MW07 @ 2'- 4'	8/29/2019	5.0	--	<0.024	<0.097	**286**	**9,500**
MW07 @ 22' - 24'	8/29/2019	5.0	--	<0.024	<0.097	<50	**2,200**
MW08 @ 2.5 - 5'	10/20/2019	0.2	<128	<0.024	<0.095	<41	<60
MW08 @ 20 - 22.5'	10/20/2019	0.4	<128	<0.025	<0.10	<46	<60
MW08 @ 22.5 - 25'	10/20/2019	0.3	<128	<0.025	<0.10	<42	69
MW08 @ 27.5 - 30'	10/20/2019	0.4	<128	<0.023	<0.093	<44	<60
MW09 @ 7.5 - 10'	10/20/2019	0.2	244	<0.024	<0.096	<45	410
MW09 @ 12.5 - 15'	10/20/2019	0.2	356	<0.025	<0.099	<48	370
MW09 @ 20 - 22.5'	10/23/2019	0.2	<128	<0.025	<0.10	<48	<60
MW09 @ 22.5 - 25'	10/20/2019	0.2	1,148	<0.024	<0.098	<36	**1,100**
MW09 @ 27.5 - 30'	10/20/2019	0.2	212	<0.023	<0.092	<46	370
MW10 @ 0 - 2.5'	10/21/2019	0.2	<128	<0.023	<0.092	<50	68
MW10 @ 2.5 - 5'	10/21/2019	0.3	<128	<0.024	<0.096	<47	120
MW10 @ 7.5 - 10'	10/21/2019	0.1	<128	<0.024	<0.096	<42	63
MW10 @ 10 - 12.5'	10/21/2019	0.9	776	<0.025	<0.099	<45	**670**
MW10 @ 12.5 - 15'	10/21/2019	0.6	<128	<0.025	<0.10	<39	140
MW10 @ 15 - 17.5'	10/21/2019	0.6	<128	<0.025	<0.10	<43	79
MW10 @ 17.5 - 20'	10/21/2019	0.4	184	<0.024	<0.096	<45	190
MW10 @ 20 - 22.5'	10/21/2019	0.4	184	<0.024	<0.098	<43	120
MW10 @ 22.5 - 25'	10/21/2019	0.2	<128	<0.024	<0.096	<48	<60
MW10 @ 25 - 27.5'	10/21/2019	0.4	184	<0.024	<0.096	<44	210
MW10 @ 27.5 - 30'	10/21/2019	0.7	988	<0.023	<0.093	<44	350
MW10 @ 30 - 32.5'	10/21/2019	0.2	656	<0.023	<0.093	<44	350
MW10 @ 32.5 - 35'	10/21/2019	0.2	1,148	<0.025	<0.099	<48	**2,000**
MW10 @ 37.5 - 40'	10/21/2019	0.6	<128	<0.024	<0.095	<42	240

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TABLE 1
SOIL ANALYTICAL RESULTS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Field Chloride (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW11 @ 32.5 - 35'	10/21/2019	1.6	<128	<0.020	<0.079	<46	130
MW11 @ 37.5 - 40'	10/21/2019	0.7	<128	<0.019	<0.076	<47	97
MW12 @ 15 - 17.5'	10/21/2019	0.5	280	<0.019	<0.076	<48	80
MW12 @ 20 - 22.5'	10/21/2019	0.3	356	<0.018	<0.071	<49	180
MW12 @ 35 - 37.5'	10/21/2019	0.3	280	<0.014	<0.055	<47	200
MW12 @ 37.5 - 40'	10/21/2019	0.3	5,420	<0.014	<0.055	<47	**3,400**
MW13 @ 10 - 12.5'	10/21/2019	0.3	212	<0.023	<0.093	<44	210
MW13 @ 25 - 27.5'	10/21/2019	1.0	156	<0.024	<0.095	<49	160
MW13 @ 32.5 - 35'	10/21/2019	0.4	2,472	<0.024	<0.096	<50	**3,000**
MW13 @ 37.5 - 40'	10/21/2019	0.3	<128	<0.023	<0.094	<46	<60
MW14 @ 5 - 7.5'	10/22/2019	0.8	<128	<0.024	<0.094	<46	<60
MW14 @ 20 - 22.5'	10/22/2019	1.0	212	<0.024	<0.094	<49	270
MW14 @ 25 - 27.5'	10/22/2019	2.5	184	<0.025	<0.099	<48	75
MW14 @ 27.5 - 30'	10/22/2019	2.2	<128	<0.024	<0.097	<47	<60
MW14 @ 30 - 32.5'	10/22/2019	2.1	128	<0.024	<0.097	<46	230
MW15 @ 2.5 - 5'	10/22/2019	0.0	<128	<0.024	<0.095	<49	<60
MW15 @ 22.5 - 25'	10/22/2019	0.0	400	<0.023	<0.093	<44	**1,200**
MW15 @ 27.5 - 30'	10/22/2019	0.0	988	<0.025	<0.099	<49	**2,000**
MW15 @ 30 - 32.5'	10/23/2019	0.1	212	<0.025	<0.10	<47	160
MW15 @ 32.5 - 35'	10/22/2019	0.0	2,472	<0.024	<0.095	<42	**2,300**
MW15 @ 37.5 - 40'	10/22/2019	0.0	<128	<0.023	<0.093	<43	96
MW17 @ 17.5 - 20'	2/6/2020	2.4	<124	<0.025	<0.10	<47	120
MW17 @ 37.5 - 40'	2/6/2020	0.9	<31	<0.025	<0.10	<48	<60
MW18 @ 20 - 22.5'	2/5/2020	4.1	132	<0.025	<0.099	<45	86
MW18 @ 37.5 - 40'	2/5/2020	0.9	<112	<0.024	<0.097	<50	91
MW20 @ 7.5 - 10'	2/7/2020	0.9	<112	<0.025	<0.099	<50	<60
MW20 @ 27.5 - 30'	2/7/2020	0.0	964	<0.025	<0.099	<46	**2,300**
MW21 @ 15 - 17.5'	2/6/2020	0.1	<124	<0.025	<0.10	<46	160
MW21 @ 17.5 - 20'	2/6/2020	1.0	<124	<0.025	<0.099	<48	99
MW22 @ 15 - 17.5'	2/6/2020	0.1	<124	<0.025	<0.098	<49	<60
MW22 @ 17.5 - 20'	2/6/2020	0.2	<124	<0.024	<0.098	<47	<60
MW23 @ 0 - 5'	2/7/2020	0.5	892	<0.025	<0.099	<44	**720**
MW23 @ 22.5 - 25'	2/7/2020	0.1	<28	<0.025	<0.099	<42	<60
MW24 @ 4.5 - 7'	2/7/2020	1.5	<112	<0.025	<0.099	<46	<60
MW24 @ 17.5 - 20'	2/7/2020	0.2	<112	<0.024	<0.097	<49	180
BH25 @ 15-20'	4/11/2023	0.4	<120	<0.024	<0.095	<49	<60
BH25 @ 38-41'	4/11/2023	--	--	<0.025	<0.099	<50	<60
BH26 @ 30-35'	4/12/2023	0.2	--	<0.025	<0.098	<48	<60
BH26 @ 35-40'	4/12/2023	0.0	--	<0.025	<0.099	<49	<60
BH27 @ 30-34'	4/13/2023	0.4	<120	<0.023	<0.093	<47	<60
BH27 @ 35-40'	4/13/2023	0.4	<120	<0.024	<0.097	<50	<60

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TABLE 1
SOIL ANALYTICAL RESULTS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Field Chloride (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BH28 @ 25-30'	4/13/2023	1.2	<120	<0.024	<0.095	<47	210
BH28 @ 30-35'	4/13/2023	0.4	<120	<0.024	<0.095	<50	<60
BH29 @ 20-25'	4/14/2023	1.2	<120	<0.024	<0.095	<50	190
BH29 @ 25-30'	4/14/2023	3.0	356	<0.024	<0.097	<42	360
BH29 @ 30-32'	4/14/2023	0.6	<120	<0.024	<0.096	<50	<60
BH30 @ 20-25'	4/14/2023	1.2	<120	<0.024	<0.097	<43	110
BH30 @ 25-27'	4/14/2023	2.0	180	<0.025	<0.099	<43	190
BH31 @ 15-20'	4/14/2023	0.8	<120	<0.025	<0.10	<44	<60
BH31 @ 25-30'	4/14/2023	1.2	<120	<0.024	<0.097	<44	150
MW-32@15'	12/12/2024	0.0	308	<0.023	<0.094	<48	310
MW-32@20'	12/12/2024	0.0	397	<0.024	<0.094	<49	350
MW-32@27.5'	12/12/2024	0.3	269	<0.024	<0.098	<48	170
MW-33 @ 20'	12/10/2024	0.0	<168	<0.024	<0.097	<50	100
MW-33 @ 25'	12/10/2024	0.0	<168	<0.023	<0.094	<49	140
MW-33 @ 30'	12/10/2024	0.0	<168	<0.025	<0.10	<48	230
MW-34 @ 20'	12/11/2024	5.2	229.6	<0.025	<0.098	<47	160
MW-34 @ 25'	12/11/2024	7.1	229.6	<0.025	<0.099	<45	530
MW-34 @ 28'	12/11/2024	8.0	229.6	<0.024	<0.096	<47	170
MW-35 @ 10'	12/12/2024	0.0	<156	<0.024	<0.094	<48	<60
MW-35 @ 15'	12/12/2024	0.0	<156	<0.024	<0.097	<49	<60
MW-35 @ 28'	12/12/2024	0.0	<156	<0.024	<0.096	<46	<60
MW-36 @ 30'	12/13/2024	0.7	<156	<0.024	<0.096	<48	<61
MW-36 @ 47.5'	12/13/2024	0.0	<156	<0.023	<0.093	<49	<60
MW-36 @ 55'	12/13/2024	0.0	<156	<0.025	<0.098	<46	<60

Notes:

--: not measured

BTEX: benzene, toluene, ethylbenzene, total xylenes

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

ppm: parts per million

TPH: total petroleum hydrocarbons

<: indicates result is less than the stated laboratory reporting limit

*Concentrations in **bold** and shaded exceed the NMOCD Closure Criteria, 19.15.29 of the New Mexico Administrative Code*

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW03	5,262.40	9/12/2019	33.62	5,228.78
		10/22/2019	33.92	5,228.48
		10/24/2019	33.98	5,228.42
		2/11/2020	33.66	5,228.74
		3/12/2020	33.52	5,228.88
		6/22/2020	33.83	5,228.57
		9/10/2020	34.60	5,227.80
		12/1/2020	35.22	5,227.18
		2/22/2021	35.43	5,226.97
		6/24/2021	35.60	5,226.80
		9/28/2021*	36.23	5,226.17
		12/7/2021*	37.12	5,225.28
		3/15/2022*	36.65	5,225.75
		6/27/2022*	36.90	5,225.50
		9/23/2022*	37.04	5,225.36
		12/31/2022*	37.07	5,225.33
		3/30/2023*	37.06	5,225.34
		6/21/2023*	37.32	5,225.08
		8/16/2023	DRY	DRY
		12/13/2023*	37.09	5,225.31
		3/11/2024*	37.09	5,225.31
		6/25/2024*	37.10	5,225.30
		9/11/2024*	37.12	5,225.28
		12/12/2024*	37.13	5,225.27
		3/20/2025*	37.13	5,225.27
		6/23/2025*	37.18	5,225.22
MW05	5,262.11	9/12/2019	33.36	5,228.75
		10/22/2019	33.70	5,228.41
		10/24/2019	33.70	5,228.41
		2/11/2020	33.48	5,228.63
		3/12/2020	33.35	5,228.76
		6/22/2020	33.65	5,228.46
		9/10/2020	34.43	5,227.68
		11/30/2020	35.10	5,227.01
		2/19/2021	35.32	5,226.79
		6/24/2021	35.48	5,226.63
		9/28/2021	36.09	5,226.02
		12/7/2021	36.42	5,225.69
		3/15/2022	36.54	5,225.57
		6/27/2022	36.92	5,225.19
		9/23/2022*	37.12	5,224.99
		12/31/2022*	37.53	5,224.58
		3/30/2023*	37.49	5,224.62
		6/21/2023*	37.28	5,224.83
		8/16/2023	DRY	DRY
		12/13/2023*	37.99	5,224.12
		3/11/2024*	37.98	5,224.13
		6/25/2024*	38.00	5,224.11
		9/11/2024*	38.02	5,224.09
		12/12/2024*	38.07	5,224.04
		3/20/2025*	38.06	5,224.05
		6/23/2025*	38.11	5,224.00

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW06	5,261.78	9/12/2019	32.74	5,229.04
		10/22/2019	33.05	5,228.73
		10/24/2019	33.08	5,228.70
		2/11/2020	32.87	5,228.91
		3/12/2020	32.76	5,229.02
		6/22/2020	33.00	5,228.78
		9/9/2020	33.73	5,228.05
		11/30/2020	34.42	5,227.36
		2/18/2021	34.64	5,227.14
		6/24/2021	34.81	5,226.97
		9/27/2021	35.47	5,226.31
		12/7/2021	35.79	5,225.99
		3/16/2022	35.88	5,225.90
		6/27/2022	35.97	5,225.81
		9/23/2022*	36.53	5,225.25
		12/31/2022*	36.93	5,224.85
		3/30/2023*	36.82	5,224.96
		6/21/2023*	36.70	5,225.08
		8/16/2023	DRY	DRY
		12/13/2023*	37.51	5,224.27
		3/11/2024*	37.47	5,224.31
		6/25/2024*	37.55	5,224.23
		9/11/2024*	37.64	5,224.14
		12/12/2024*	37.68	5,224.10
		3/20/2025*	37.51	5,224.27
		6/23/2025*	37.59	5,224.19
MW08	5,252.50	10/22/2019	23.80	5,228.70
		10/24/2019	23.81	5,228.69
		2/11/200	23.98	5,228.52
		3/12/2020	23.50	5,229.00
		6/23/2020	23.76	5,228.74
		9/14/2020	24.50	5,228.00
		12/2/2020	25.03	5,227.47
		2/23/2021	25.18	5,227.32
		6/24/2021	25.21	5,227.29
		9/27/2021	25.21	5,227.29
		12/7/2021	DRY	DRY
		3/16/2022	DRY	DRY
		6/27/2022	DRY	DRY
		9/23/2022	DRY	DRY
		12/31/2022	DRY	DRY
		3/30/2023	DRY	DRY
		6/21/2023*	25.10	5,227.40
		8/16/2023	DRY	DRY
		12/13/2023	DRY	DRY
		3/11/2024	DRY	DRY
		6/25/2024*	25.30	5,227.20
		9/11/2024	DRY	DRY
		12/12/2024	DRY	DRY
		3/20/2025	DRY	DRY
		6/23/2025	DRY	DRY

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW09	5,252.38	10/22/2019	23.94	5,228.44
		10/24/2019	23.93	5,228.45
		2/11/2020	23.70	5,228.68
		3/12/2020	23.53	5,228.85
		6/23/2020	23.86	5,228.52
		9/15/2020	24.62	5,227.76
		12/2/2020	25.21	5,227.17
		2/23/2021	25.39	5,226.99
		6/24/2021	25.60	5,226.78
		9/28/2021	26.22	5,226.16
		12/7/2021	36.58	5,215.80
		3/16/2022	26.66	5,225.72
		6/27/2022	26.77	5,225.61
		9/23/2022	27.28	5,225.10
		12/31/2022	27.68	5,224.70
		3/30/2023	27.58	5,224.80
		6/21/2023	27.49	5,224.89
		8/16/2023	27.87	5,224.51
		12/13/2023	28.24	5,224.14
		3/11/2024	28.19	5,224.19
		6/25/2024	28.35	5,224.03
		9/11/2024	28.56	5,223.82
		12/12/2024	28.60	5,223.78
		3/20/2025	28.36	5,224.02
		6/23/2025	28.45	5,223.93
MW10	5,259.28	10/22/2019	30.59	5,228.69
		10/24/2019	30.60	5,228.68
		2/11/2020	30.35	5,228.93
		3/12/2020	30.25	5,229.03
		6/22/2020	30.52	5,228.76
		9/9/2020	31.26	5,228.02
		11/30/2020	31.93	5,227.35
		2/18/2021	32.16	5,227.12
		6/24/2021	32.32	5,226.96
		9/27/2021	33.00	5,226.28
		12/7/2021	33.34	5,225.94
		3/15/2022	33.43	5,225.85
		6/27/2022	34.53	5,224.75
		9/23/2022	34.06	5,225.22
		12/31/2022	34.45	5,224.83
		3/30/2023	34.35	5,224.93
		6/21/2023	34.21	5,225.07
		8/17/2023	34.62	5,224.66
		12/12/2023	35.00	5,224.28
		3/11/2024	34.96	5,224.32
		6/25/2024	35.10	5,224.18
		9/11/2024	35.32	5,223.96
		12/12/2024	35.85	5,223.43
		3/21/2025	35.55	5,223.73
		6/23/2025	35.05	5,224.23

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW12	5,259.25	10/22/2019	30.85	5,228.40
		10/24/2019	30.83	5,228.42
		2/11/2020	30.55	5,228.70
		3/12/2020	30.41	5,228.84
		6/23/2020	30.72	5,228.53
		9/11/2020	31.49	5,227.76
		12/1/2020	32.11	5,227.14
		2/22/2021	32.33	5,226.92
		6/24/2021	32.57	5,226.68
		9/28/2021	32.12	5,227.13
		12/7/2021	33.45	5,225.80
		3/15/2022	33.54	5,225.71
		6/27/2022	33.65	5,225.60
		9/23/2022	34.15	5,225.10
		12/31/2022	34.96	5,224.29
		3/30/2023	34.42	5,224.83
		6/21/2023	34.35	5,224.90
		8/17/2023	34.70	5,224.55
		12/12/2023	34.98	5,224.27
		3/11/2024	35.02	5,224.23
		6/25/2024	35.17	5,224.08
		9/11/2024	35.38	5,223.87
		12/12/2024	35.47	5,223.78
		3/21/2025	35.11	5,224.14
		6/23/2025	35.14	5,224.11
MW13	5,260.32	10/22/2019	31.81	5,228.51
		10/24/2019	31.83	5,228.49
		2/11/2020	31.55	5,228.77
		3/12/2020	31.43	5,228.89
		6/22/2020	31.73	5,228.59
		9/10/2020	32.51	5,227.81
		12/1/2020	33.16	5,227.16
		2/19/2021	33.37	5,226.95
		6/24/2021	33.75	5,226.57
		9/28/2021	34.14	5,226.18
		12/7/2021	34.46	5,225.86
		3/15/2022	34.53	5,225.79
		6/27/2022	34.63	5,225.69
		9/23/2022	35.11	5,225.21
		12/31/2022	35.53	5,224.79
		3/30/2023	35.53	5,224.79
		6/21/2023	NM	NM
		8/17/2023	37.45	5,222.87
		12/13/2023	35.80	5,224.52
		3/11/2024	36.00	5,224.32
		6/25/2024	35.88	5,224.44
		9/11/2024	36.11	5,224.21
		12/12/2024	36.25	5,224.07
		3/21/2025	35.88	5,224.44
		6/23/2025	35.87	5,224.45

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW14	5,259.67	10/22/2019	30.92	5,228.75
		10/24/2019	30.92	5,228.75
		2/11/2020	30.74	5,228.93
		3/12/2020	30.63	5,229.04
		6/23/2020	30.91	5,228.76
		9/9/2020	31.62	5,228.05
		11/30/2020	32.30	5,227.37
		2/18/2021	32.52	5,227.15
		6/24/2021	32.70	5,226.97
		9/27/2021	33.34	5,226.33
		12/7/2021	33.68	5,225.99
		3/15/2022	33.74	5,225.93
		6/27/2022	33.87	5,225.80
		9/23/2022*	34.40	5,225.27
		12/31/2022*	34.82	5,224.85
		3/30/2023*	34.70	5,224.97
		6/21/2023*	34.60	5,225.07
		8/17/2023	DRY	DRY
		12/13/2023*	35.13	5,224.54
		3/11/2024*	35.16	5,224.51
		6/25/2024*	35.14	5,224.53
		9/11/2024*	35.16	5,224.51
		12/12/2024	DRY	DRY
		3/20/2025	DRY	DRY
		6/23/2025	DRY	DRY
MW15	5,256.00	10/22/2019	27.20	5,228.80
		10/24/2019	27.15	5,228.85
		2/11/2020	26.96	5,229.04
		3/12/2020	26.84	5,229.16
		6/23/2020	27.12	5,228.88
		9/14/2020	27.91	5,228.09
		12/2/2020	28.55	5,227.45
		2/23/2021	28.76	5,227.24
		6/24/2021	28.92	5,227.08
		9/27/2021	29.59	5,226.41
		12/7/2021	29.92	5,226.08
		3/16/2022	29.97	5,226.03
		6/27/2022	30.12	5,225.88
		9/23/2022	30.63	5,225.37
		12/31/2022	31.05	5,224.95
		3/30/2023	30.93	5,225.07
		6/21/2023	30.84	5,225.16
		8/16/2023	31.21	5,224.79
		12/12/2023	31.66	5,224.34
		3/11/2024	31.59	5,224.41
		6/25/2024	31.67	5,224.33
		9/11/2024	30.93	5,225.07
		12/12/2024	30.95	5,225.05
		3/21/2025	31.64	5,224.36
		6/23/2025	31.65	5,224.35

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW17	5,260.27	2/11/2020	31.60	5,228.67
		3/12/2020	31.47	5,228.80
		6/22/2020	31.87	5,228.40
		9/11/2020	32.69	5,227.58
		12/2/2020	33.32	5,226.95
		2/22/2021	33.54	5,226.73
		6/24/2021	--	--
		9/28/2021*	34.32	5,225.95
		12/6/2021*	34.61	5,225.66
		3/16/2022*	34.66	5,225.61
		6/27/2022*	35.18	5,225.09
		9/23/2022*	35.09	5,225.18
		12/31/2022	DRY	DRY
		3/30/2023	DRY	DRY
		6/21/2023*	35.25	5,225.02
		8/17/2023	DRY	DRY
		12/12/2023*	33.73	5,226.54
		3/11/2024*	33.79	5,226.48
		6/25/2024*	35.10	5,225.17
		9/11/2024*	35.34	5,224.93
		12/12/2024*	35.34	5,224.93
		3/20/2025	DRY	DRY
		6/23/2025	DRY	DRY
MW18	5,259.64	2/11/2020	31.07	5,228.57
		3/12/2020	30.92	5,228.72
		6/22/2020	31.33	5,228.31
		9/11/2020	32.08	5,227.56
		12/1/2020	32.67	5,226.97
		2/22/2021	32.86	5,226.78
		6/24/2021	38.09	5,221.55
		9/28/2021	38.74	5,220.90
		12/6/2021	34.06	5,225.58
		3/14/2022	34.11	5,225.53
		6/27/2022	34.24	5,225.40
		9/23/2022	34.76	5,224.88
		12/31/2022	35.12	5,224.52
		3/30/2023	34.97	5,224.67
		6/21/2023	34.90	5,224.74
		8/17/2023	35.31	5,224.33
		12/12/2023	35.54	5,224.10
		3/11/2024	35.52	5,224.12
		6/25/2024	35.71	5,223.93
		9/11/2024	35.95	5,223.69
		12/12/2024	36.03	5,223.61
		3/21/2025	35.67	5,223.97
		6/23/2025	35.72	5,223.92

ENSOLUM

TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW20	5,252.11	2/11/2020	23.41	5,228.70
		3/12/2020	23.24	5,228.87
		6/23/2020	23.58	5,228.53
		9/15/2020	24.36	5,227.75
		12/2/2020	24.94	5,227.17
		2/23/2021	25.11	5,227.00
		6/24/2021	25.32	5,226.79
		9/28/2021	DRY	DRY
		12/7/2021	26.26	5,225.85
		3/16/2022	26.33	5,225.78
		6/27/2022	DRY	DRY
		9/23/2022	DRY	DRY
		12/31/2022	DRY	DRY
		3/30/2023	DRY	DRY
		6/21/2023	DRY	DRY
		8/17/2023	DRY	DRY
		12/12/2023	DRY	DRY
		3/11/2024	DRY	DRY
		6/25/2024	DRY	DRY
		9/11/2024	DRY	DRY
		12/12/2024	DRY	DRY
		3/20/2025	DRY	DRY
		6/23/2025	DRY	DRY
MW27	5,262.41	6/21/2023	DRY	DRY
		8/17/2023	DRY	DRY
		12/12/2023	38.09	5,224.32
		3/11/2024	38.02	5,224.39
		6/25/2024	38.13	5,224.28
		9/11/2024	38.37	5,224.04
		12/12/2024	38.37	5,224.04
		3/21/2025	38.07	5,224.34
		6/23/2025	38.05	5,224.36
MW28	5,252.68	6/21/2023	28.60	5,224.08
		8/17/2023	29.06	5,223.62
		12/12/2023	29.17	5,223.51
		3/11/2024	29.03	5,223.65
		6/25/2024	29.24	5,223.44
		9/11/2024	29.58	5,223.10
		12/12/2024	29.64	5,223.04
		3/20/2025	29.23	5,223.45
		6/23/2025	29.34	5,223.34
MW29	5,251.76	6/21/2023	28.09	5,223.67
		8/17/2023	28.65	5,223.11
		12/12/2023	28.60	5,223.16
		3/11/2024	28.42	5,223.34
		6/25/2024	28.92	5,222.84
		9/11/2024	29.09	5,222.67
		12/12/2024	29.14	5,222.62
		3/20/2025	28.68	5,223.08
		6/23/2025	28.82	5,222.94

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TABLE 2
GROUNDWATER ELEVATIONS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW30	5,243.58	6/21/2023	19.32	5,224.26
		8/17/2023	20.45	5,223.13
		12/13/2023	19.94	5,223.64
		3/11/2024	19.83	5,223.75
		6/26/2024	20.02	5,223.56
		9/11/2024	20.33	5,223.25
		12/12/2024	20.35	5,223.23
		3/20/2025	19.99	5,223.59
		6/23/2025	20.05	5,223.53
MW31	5,244.32	6/21/2023	19.39	5,224.93
		8/17/2023	19.78	5,224.54
		12/13/2023	20.17	5,224.15
		3/11/2024	20.08	5,224.24
		6/26/2024	20.23	5,224.09
		9/11/2024	20.49	5,223.83
		12/12/2024	20.50	5,223.82
		3/20/2025	20.18	5,224.14
		6/20/2025	20.18	5,224.14
MW32	5,249.34	3/20/2025	27.12	5,222.22
		6/20/2025	27.12	5,222.22
MW33	5,242.32	3/20/2025	19.75	5,222.57
		6/20/2025	19.95	5,222.37
MW34	5,240.95	3/20/2025	18.93	5,222.02
		6/20/2025	18.90	5,222.05
MW35	5,248.08	3/20/2025	27.91	5,220.17
		6/20/2025	27.88	5,220.20
MW36	5,272.84	3/20/2025	40.43	5,232.41
		6/20/2025	40.16	5,232.68

Notes:

**: not indicative of formation groundwater, low volumes insufficient for sampling and likely due to condensation buildup*

AMSL: above mean sea level

BTOC: below top of casing

NM: Not Measured

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW03	9/12/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/1/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/28/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	Insufficient Water Volumes to Collect Sample			
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/16/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW05	9/12/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	11/30/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/28/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/17/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	Insufficient Water Volumes to Collect Sample			
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/16/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW06	9/12/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	11/30/2020	<1.0	<1.0	<1.0	<3.0

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW06	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/28/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	<1.0	<1.0	<1.0	<1.5
	6/28/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/16/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW08	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/13/2020	<1.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	Insufficient Water Volumes to Collect Sample			
	11/30/2020	Insufficient Water Volumes to Collect Sample			
	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	Insufficient Water Volumes to Collect Sample			
	9/28/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	Insufficient Water Volumes to Collect Sample			
	6/28/2022	Insufficient Water Volumes to Collect Sample			
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/16/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW09	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/13/2020	<1.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/2/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/27/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	<1.0	<1.0	<1.0	<1.5

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW09	6/28/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<1.0	<1.0	<1.0	<1.5
	3/30/2023	<2.0	<2.0	<2.0	<3.0
	6/21/2023	<1.0	<1.0	<1.0	<1.5
	8/16/2023	<1.0	<1.0	<1.0	<1.5
	12/13/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<2.0	<2.0	<2.0	<3.0
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW10	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	11/30/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/27/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/15/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<1.0	<1.0	<1.0	<1.5
	3/30/2023	<1.0	<1.0	<1.0	<1.5
	6/21/2023	<2.0	<2.0	<2.0	<3.0
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW12	10/24/2019	**26**	12	2.6	22
	3/12/2020	2.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	1.9
	9/9/2020	2.32	<1.0	<1.0	4.14
	12/1/2020	1.77	<1.0	<1.0	4.52
	2/22/2021	1.20	<1.0	<1.0	4.42
	6/28/2021	<2.0	<2.0	<2.0	<3.0
	9/28/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/15/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<1.0	<1.0	<1.0	<1.5
	3/30/2023	<1.0	<1.0	<1.0	<1.5
	6/21/2023	<1.0	<1.0	<1.0	<1.5
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<1.0	<1.0	<1.0	<1.5
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<2.0 F1	<2.0 F1	<2.0	<3.0
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW13	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/1/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/28/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/15/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<1.0	<1.0	<1.0	<1.5
	3/30/2023	<1.0	<1.0	<1.0	<1.5
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/13/2023	<1.0	<1.0	<1.0	<1.5
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/26/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW14	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	11/30/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	Insufficient Water Volumes to Collect Sample			
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/28/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/17/2022	<1.0	<1.0	<1.0	<1.5
	6/28/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/17/2023	Insufficient Water Volumes to Collect Sample			
	12/13/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW15	10/24/2019	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/2/2020	<1.0	<1.0	<1.0	<3.0

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW15	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/24/2021	<1.0	<1.0	<1.0	<1.5
	9/27/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	<1.0	<1.0	<1.0	<1.5
	6/28/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<2.0	<2.0	<2.0	<3.0
	3/30/2023	<1.0	<1.0	<1.0	<1.5
	6/21/2023	<1.0	<1.0	<1.0	<1.5
	8/16/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW17	2/11/2020	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/1/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/24/2021	Insufficient Water Volumes to Collect Sample			
	9/27/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/14/2022	<1.0	<1.0	<1.0	<1.5
	6/28/2022	Insufficient Water Volumes to Collect Sample			
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/17/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW18	2/11/2020	<1.0	<1.0	<1.0	<1.5
	3/12/2020	<1.0	<1.0	<1.0	<1.5
	6/22/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/1/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/28/2021	<2.0	<2.0	<2.0	--
	9/27/2021	<1.0	<1.0	<1.0	<1.5
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/14/2022	<1.0	<1.0	<1.0	<1.5

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW18	6/27/2022	<1.0	<1.0	<1.0	<1.5
	9/23/2022	<1.0	<1.0	<1.0	<1.5
	12/31/2022	<1.0	<1.0	<1.0	<1.5
	3/30/2023	<1.0	<1.0	<1.0	<1.5
	6/21/2023	<2.0	<2.0	<2.0	<3.0
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW20	2/11/2020	<1.0	<1.0	<1.0	<1.5
	3/13/2020	<1.0	<1.0	<1.0	<1.5
	6/23/2020	<1.0	<1.0	<1.0	<1.5
	9/9/2020	<1.0	<1.0	<1.0	<3.0
	12/2/2020	<1.0	<1.0	<1.0	<3.0
	2/22/2021	<1.0	<1.0	<1.0	<3.0
	6/24/2021	Insufficient Water Volumes to Collect Sample			
	9/27/2021	Insufficient Water Volumes to Collect Sample			
	12/7/2021	Insufficient Water Volumes to Collect Sample			
	3/16/2022	<1.0	<1.0	<1.0	<1.5
	6/27/2022	Insufficient Water Volumes to Collect Sample			
	9/23/2022	Insufficient Water Volumes to Collect Sample			
	12/31/2022	Insufficient Water Volumes to Collect Sample			
	3/30/2023	Insufficient Water Volumes to Collect Sample			
	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/17/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	Insufficient Water Volumes to Collect Sample			
	3/11/2024	Insufficient Water Volumes to Collect Sample			
	6/25/2024	Insufficient Water Volumes to Collect Sample			
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW21 (2)	2/6/2020	<5.0	<5.0	<5.0	<7.5
MW22 (2)	2/7/2020	<1.0	<1.0	<1.0	<1.5
MW23 (2)	2/7/2020	<5.0	<5.0	<5.0	<7.5
MW24 (2)	2/15/2020	<1.0	<1.0	<1.0	<1.5
MW27	6/21/2023	Insufficient Water Volumes to Collect Sample			
	8/17/2023	Insufficient Water Volumes to Collect Sample			
	12/12/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<2.0	<2.0	<2.0	<3.0
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/21/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW28	6/22/2023	<2.0	<2.0	<2.0	<3.0
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANICS
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standard		**5**	**1,000**	**700**	**620**
MW29	6/22/2023	<2.0	<2.0	<2.0	<3.0
	8/17/2023	<1.0	<1.0	<1.0	<1.5
	12/12/2023	<0.500	<0.500	<0.500	<0.500
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/25/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/23/2025	<1.0	<1.0	<1.0	<1.5
MW30	6/22/2023	<2.0	<2.0	<2.0	<3.0
	8/16/2023	<1.0	<1.0	<1.0	<1.5
	12/13/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/26/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	Insufficient Water Volumes to Collect Sample			
	12/12/2024	Insufficient Water Volumes to Collect Sample			
	3/20/2025	Insufficient Water Volumes to Collect Sample			
	6/20/2025	Insufficient Water Volumes to Collect Sample			
MW31	6/22/2023	<2.0	<2.0	<2.0	<3.0
	8/16/2023	<1.0	<1.0	<1.0	<1.5
	12/13/2023	<1.0	<1.0	<1.0	<1.0
	3/11/2024	<1.0	<1.0	<1.0	<1.5
	6/26/2024	<1.0	<1.0	<1.0	<1.5
	9/11/2024	<1.0	<1.0	<1.0	<1.5
	12/12/2024	<1.0	<1.0	<1.0	<1.5
	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5
MW32	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5
MW33	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5
MW34	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5
MW35	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5
MW36	3/20/2025	<1.0	<1.0	<1.0	<1.5
	6/20/2025	<1.0	<1.0	<1.0	<1.5

Notes:

(1): Volatile organic compounds (VOCs) not detected above laboratory reporting limits were not included in this table. See Laboratory Analyitcal Reports for complete results.

(2): Groundwater samples collected from a temporary well screen placed in the open boring.

µg/L: micrograms per liter

NMWQCC: New Mexico Water Quality Control Commission

ND: not detected above laboratory reporting limit

<: indicates result less than the stated laboratory reporting limit (RL)

*Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code*

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW03	9/12/2019	13	**13,000**	**1,600**	<10	**19**	<10	--	<50	2,500	390	27	6,600	137.8	<2.000	137.8	45,000	**30,000**	7.41
	3/12/2020	19	**15,000**	**1,700**	<1.0	<10	<10	--	<5.0	2,500	410	25	6,500	--	--	--	--	**26,700**	7.38
	6/22/2020	16	**12,000**	**1,800**	<1.0	<10	<10	--	<5.0	1,900	350	25	5,500	131.1	<2.000	131.1	46,000	**22,000**	7.48
	9/9/2020	<500	**14,900**	**2,830**	<1.50	--	--	0.152	--	--	--	--	--	--	--	--	--	**32,600**	7.36
	12/1/2020	15.6	**11,300**	**1,770**	<1.50	--	--	0.233	--	--	--	--	--	--	--	--	--	**25,700**	7.31
	2/22/2021	<100	**12,200**	**1,930**	<1.50	--	--	0.359	--	--	--	--	--	--	--	--	--	**29,200**	7.25
	6/24/2021	15	**11,000**	**1,900**	<1.0	--	--	<10	<5.0	2,000	310	28	5,900	--	--	--	--	**23,600**	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	Insufficient Water Volumes to Collect Sample																	
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/16/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW05	9/12/2019	15	**15,000**	**2,300**	<1.0	**20**	**21**	--	<5.0	2,100	750	25	7,800	153.9	<2.000	153.9	54,000	**34,000**	7.25
	3/12/2020	4.3	**3,400**	**2,600**	<1.0	<4.0	<4.0	--	<5.0	760	110	12	2,300	--	--	--	--	**8,420**	7.57
	6/22/2020	5.8	**4,500**	**2,100**	<1.0	<4.0	<4.0	--	<5.0	1,000	150	16	2,500	199.6	<2.000	199.6	19,000	**12,000**	7.66
	9/9/2020	<100	**1,780**	**3,000**	0.761	--	--	1.83	--	--	--	--	--	--	--	--	--	**6,720**	7.46
	11/30/2020	<100	**1,660**	**2,510**	0.751	--	--	0.294	--	--	--	--	--	--	--	--	--	**6,600**	7.52
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	2.5	**1,900**	**2,300**	<1.0	--	--	<1.0	<5.0	540	80	10	1300	--	--	--	--	**6,420**	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/17/2022	4.9	**3,300**	**4,700**	<1.0	--	--	<2.0	<5.0	820	98	13	1,500	271.4	<2.000	271.4	22,000	**13,100**	7.68
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/16/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
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	6/20/2025	Insufficient Water Volumes to Collect Sample																	

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW06	9/12/2019	5.5	**5,300**	**2,300**	<1.0	<10	1.0	--	<5.0	1,100	170	16	3,500	200.8	<2.000	200.8	22,000	**13,600**	7.49
	3/12/2020	12	**9,600**	**3,900**	<1.0	<10	**18**	--	<5.0	1,100	450	18	5,400	--	--	--	--	**19,800**	7.50
	6/22/2020	9.8	**7,200**	**3,800**	<1.0	<10	**13**	--	<5.0	870	350	17	4,800	226.3	<2.000	226.3	31,000	**18,200**	7.69
	9/9/2020	<100	**8,610**	**4,330**	<1.50	--	--	13.4	--	--	--	--	--	--	--	--	--	**18,400**	7.35
	11/30/2020	13.5	**9,100**	**3,700**	<1.50	--	--	15.3	--	--	--	--	--	--	--	--	--	**19,600**	7.53
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	7.3	**4,900**	**4,700**	1.2	--	--	9.6	<5.0	730	290	15	4,800	--	--	--	--	**15,200**	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	5	**3,400**	**4,700**	<1.0	--	--	5.0	<5.0	610	230	17	3,500	269.8	<2.000	269.8	23,000	**13,300**	7.73
	6/28/2022	3.9	**2,300**	**4,000**	0.86	--	--	2.3	<2.5	560	220	18	3,300	276.0	<2.000	276.0	20,000	**11,800**	--
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/16/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW08	10/24/2019	2.4	**1,500**	**3,100**	**2.8**	<0.50	3.0	--	<10	580	200	9.0	1,800	--	--	--	--	**7,700**	7.76
	3/12/2020	1.4	**670**	**4,400**	**2.8**	<2.0	<2.0	--	<5.0	470	180	6.1	1,700	--	--	--	--	**6,950**	7.63
	6/23/2020	1.4	**550**	**4,700**	**2.6**	<1.0	<1.0	--	<5.0	450	190	6.2	1,800	232.2	<2.000	232.2	9,100	**8,050**	7.60
	9/9/2020	Insufficient Water Volumes to Collect Sample																	
	11/30/2020	Insufficient Water Volumes to Collect Sample																	
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	Insufficient Water Volumes to Collect Sample																	
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
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	12/12/2023	Insufficient Water Volumes to Collect Sample																	
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	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	

ENSOLUM

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW09	10/24/2019	3.9	**3,300**	**1,900**	<0.50	<2.0	3.1	--	<2.5	1,100	190	14	1,600	--	--	--	--	**8,410**	7.35
	3/13/2020	4.5	**3,400**	**2,200**	<1.0	<2.0	3.5	--	<5.0	1,000	180	11	1,700	--	--	--	--	**8,980**	7.24
	6/23/2020	4.3	**3,200**	**2,300**	<1.0	<1.0	3.0	--	<5.0	870	170	11	1,900	236.1	<2.000	236.1	15,000	**10,400**	7.58
	9/9/2020	<100	**1,720**	**2,870**	<1.50	--	--	2.34	--	--	--	--	--	--	--	--	--	**6,400**	7.18
	12/2/2020	<10.0	**1,410**	**2,380**	<1.50	--	--	2.38	--	--	--	--	--	--	--	--	--	**6,100**	7.21
	2/22/2021	<100	**1,240**	**2,580**	<1.50	--	--	2.14	--	--	--	--	--	--	--	--	--	**4,980**	7.27
	6/24/2021	1.5	**740**	**2,500**	<1.0	--	--	<1.0	<5.0	530	94	12	860	--	--	--	--	**5,100**	--
	9/27/2021	2	**1,200**	**2,600**	<1.0	<1.0	1.1	--	<5.0	690	120	14	1,000	236.8	<2.000	236.8	7,300	**5,560**	7.19
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	2.5	**1,700**	**2,300**	<1.0	--	--	<1.0	<5.0	710	130	15	1,200	229.8	<2.000	229.8	8,900	**6,560**	7.31
	6/28/2022	1.8	**970**	**2,200**	1.0	--	--	<1.0	<2.5	990	190	52	1,100	242.5	<2.000	242.5	7,200	**5,370**	--
	9/23/2022	4.5	**3,500**	**2,200**	0.62	--	--	<2.0	<2.5	1200	220	21	1,900	263.2	<2.000	263.2	15,000	**8,750**	7.36
	12/31/2022	2.0	**1,300**	**2,400**	<1.0	--	--	<1.0	<5.0	620	110	12	1,200	--	--	--	--	**6,110**	7.38
	3/30/2023	<0.50	**540**	**2,100**	<0.50	<0.50	<0.50	<0.50	<2.5	510	83	8.1	890	244.3	<2.000	244.3	6,000	**4,620**	7.22
	6/21/2023	1.6	**720**	**2,800**	<1.0	<1.0	<1.0	<1.0	<5.0	660	110	8.7	1,000	305.0	<2.000	305.0	7,200	**5,660**	7.42
	8/16/2023	2.3	**1,100**	**3,600**	0.94	<0.50	<0.50	--	<10	740	160	6.4	1,600	462.7	<2.000	462.7	9,600	**6,600**	7.72
	12/13/2023	1.4	**780**	**2,600**	0.69	<0.50	<0.50	--	<2.5	620	130	12	980	313.3	<2.000	313.3	7,000	**5,920**	7.56
	3/11/2024	2.1	**1,200**	**2,200**	<1.0	<1.0	<1.0	<1.0	<5.0	600	120	8.9	910	--	--	260.0	7,200	**6,900**	--
	6/26/2024	1.8	**940**	**2,700**	0.98	<2.0	<0.50	<2.0	<2.5	690	150	9	1,300	--	--	350.0	8,000	**6,900**	8.0 HF
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW10	10/24/2019	3.4	**2,700**	**2,200**	<0.50	<2.0	3.5	--	<10	600	82	9.1	2,300	--	--	--	--	**8,040**	7.24
	3/12/2020	2.9	**2,200**	**2,200**	<1.0	<2.0	2.2	--	<5.0	640	85	8.7	1,600	--	--	--	--	**6,660**	7.36
	6/22/2020	3.1	**2,100**	**2,000**	<1.0	<2.0	<2.0	--	<5.0	710	94	8.8	1,500	218.7	<2.000	218.7	9,900	**7,200**	7.65
	9/9/2020	<100	**1,540**	**2,640**	<1.50	--	--	1.78	--	--	--	--	--	--	--	--	--	**5,370**	7.45
	11/30/2020	<10.0	**1,210**	**2,160**	<1.50	--	--	1.67	--	--	--	--	--	--	--	--	--	**5,950**	7.42
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	1.8	**1,200**	**2,200**	<1.0	--	--	<1.0	<5.0	510	77	9.5	1,200	--	--	--	--	**5,690**	--
	9/27/2021	5.3	**3,600**	**1,900**	<1.0	--	--	<4.0	<5.0	1,300	180	26	1,800	185.4	<2.000	185.4	16,000	**9,510**	7.34
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	3.9	**2,900**	**2,000**	<1.0	--	--	<2.0	<5.0	1,100	120	18	1,700	198.5	<2.000	198.5	14,000	**7,340**	7.70
	6/27/2022	5.2	**3,500**	**1,600**	<0.50	--	--	<4.0	<2.5	1,500	200	39	2,000	170.8	<2.000	<170.8	18,000	**10,100**	--
	9/23/2022	4.5	**3,300**	**1,600**	0.71	--	--	<4.0	<2.5	920	120	18	1,800	180.7	<2.000	180.7	15,000	**9,200**	7.51
	12/31/2022	3.8	**3,100**	**2,100**	<1.0	--	--	<2.0	<5.0	910	120	16	1,800	--	--	--	--	**7,670**	7.66
	3/30/2023	2.5	**2,700**	**1,800**	<0.50	<2.0	<2.0	<2.0	<2.5	860	98	9.2	1,800	173.2	<2.000	173.2	13,000	**8,260**	7.62
	6/21/2023	<10	**2,700**	**1,900**	<10	<10	<10	<10	<50	880	98	11	1,800	194.2	<2.000	194.2	15,000	**7,980**	7.51
	8/17/2023	3.3	**2,600**	**2,000**	<0.50	<2.0	0.52	--	<10	830	87	10	1,700	207.9	<2.000	207.9	13,000	**85,500***	7.73
	12/12/2023	3.6	**3,100**	**2,100**	<0.50	<0.50	<0.50	--	<2.5	1,000	120	16	1,700	178.8	<2.000	178.8	15,000	**8,480**	7.88
	3/11/2024	3.6	**3,100**	**2,000**	<1.0	<1.0	<1.0	<1.0	<5.0	790	90	9.7	1,600	--	--	190	14,000	**9,600**	--
	6/25/2024	Not Sampled																	
	9/11/2024	2.8	**2,500 H**	**2,100**	<1.0	--	--	<2.0	--	730	85	13	1,700	--	--	200	13,000	**8,300**	--
	12/12/2024	3.5	**2,800**	**2,100**	**2.1**	--	--	<1.0	<5.0	1,200	160	16	3,100	--	--	180	15,000	**7,700**	7.5 HF
	3/21/2025	<10	**3,200**	**2,200**	<10	<10 H	<10 H	<10	<50 H	820	100	13	1,800	--	--	170	16,000	**8,200**	7.5 HF
	6/23/2025	3.3	**2,900**	**2,100**	<1.0	<10 H	1.3 H	1.3 H	<5.0 H	800	92	10	1,800	--	--	170	--	**7,400**	7.6 HF

ENSOLUM

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW12	10/24/2019	35	**27,000**	**2,400**	<0.50	<20	<20	--	<2.5	2,800	400	75	18,000	--	--	--	--	**57,000**	7.34
	3/12/2020	33	**28,000**	**2,400**	<1.0	<20	<20	--	<5.0	2,400	370	67	13,000	--	--	--	--	**42,900**	7.20
	6/23/2020	32	**25,000**	**2,400**	<1.0	<10	2.5	--	<5.0	2,300	370	73	15,000	256.2	<2.000	256.2	91,000	**52,000**	7.45
	9/9/2020	<500	**21,900**	**3,230**	<1.5	--	--	2.24	--	--	--	--	--	--	--	--	--	**41,600**	7.07
	12/1/2020	22.4	**18,600**	**<2500**	<1.50	--	--	3.45	--	--	--	--	--	--	--	--	--	**31,100**	7.17
	2/22/2021	<100	**14,400**	**2,860**	<1.50	--	--	3.90	--	--	--	--	--	--	--	--	--	**27,100**	7.38
	6/28/2021	5.2	**3,400**	**1,800**	<1.0	--	--	<4.0	<5.0	1,100	150	12	1,800	--	--	--	--	**10,500**	--
	9/28/2021	11	**8,300**	**2,900**	<1.0	<1.0	4.9	4.90	<5.0	910	140	36	4,800	256.8	<2.000	256.6	36,000	**18,900**	7.39
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	8.7	**6,500**	**2,700**	<1.0	--	--	6.90	<5.0	730	110	34	4,600	248.4	<2.000	248.6	30,000	**15,200**	7.48
	6/27/2022	7.7	**5,900**	**2,400**	<0.50	--	--	7.40	<2.5	670	110	27	4,100	245.6	<2.000	245.6	26,000	**13,900**	--
	9/23/2022	4.3	**3,700**	**2,600**	0.64	--	--	5.20	<2.5	490	73	20	3,200	226.6	<2.000	226.6	16,000	**8,900**	7.45
	12/31/2022	3.2	**2,700**	**2,800**	<1.0	--	--	5.50	<5.0	380	63	20	2,300	--	--	--	--	**7,940**	7.73
	3/30/2023	2.4	**2,500**	**2,400**	<0.50	<2.0	4.6	4.6	<2.5	360	55	15	2,600	254.6	<2.000	254.6	14,000	**8,540**	7.69
	6/21/2023	3.3	**2,300**	**1,900**	<2.0	<2.0	<2.0	<2.0	<10	260	42	14	2,000	252.0	<2.000	252.0	13,000	**6,690**	7.58
	8/17/2023	1.3	**910**	**760**	0.60	<0.50	<0.50	--	<2.5	120	23	17	780	171.5	<2.000	171.5	4,500	**28,500***	7.65
	12/12/2023	1.9	**1,500**	**3,300**	0.65	<0.50	4.1	--	<2.5	330	68	19	2,000	263.8	<2.000	263.8	13,000	**6,250**	7.93
	3/11/2024	7.5	**6,100**	**2,800**	<1.0	<10	2.1 H	2.1	<5.0	860	150	24	3,300	--	--	220.0	25,000	**14,000**	--
	6/25/2024	9.3	**7,700**	**1,100**	<0.50	<2.0	1.1 H	1.1	<2.5	1800	280	52	3,300	--	--	160.0	27,000	**19,000**	7.7 HF
	9/11/2024	3.0	**2,000 H**	**840**	<1.0	--	--	<2.0	--	440	77	25	1,200	--	--	4,800	8,100	**4,800**	--
	12/12/2024	2.2	**1,700**	**1,400**	<1.0	--	--	<1.0	<5.0	470	79	25	1,100	--	--	180	7,300	**4,000**	7.4 HF
	3/21/2025	1.5	**1,100**	**3,500**	<1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	500	83	24	1,600	--	--	250	8,900	**6,800**	7.7 HF
	6/23/2025	<1.0	**500**	**1,300**	<1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	240	36	15	740	--	--	230	--	**2,900**	7.6 HF
MW13	10/24/2019	13000 E	**19,000**	**1,600**	**4.4**	<20	<20	--	<2.5	3,400	440	37	11,000	--	--	--	--	**40,400**	7.17
	3/12/2020	19	**16,000**	**2,200**	<1.0	<10	<10	--	<5.0	2,500	320	26	7,500	--	--	--	--	**30,000**	7.06
	6/22/2020	17	**14,000**	**1,800**	<1.0	<10	<10	--	<5.0	2,400	340	26	6,100	182.5	<2.000	182.5	47,000	**29,200**	7.36
	9/9/2020	<100	**7,380**	**3,160**	<1.50	--	--	4.76	--	--	--	--	--	--	--	--	--	**15,900**	7.25
	12/1/2020	12.3	**8,030**	**2,420**	<1.50	--	--	1.18	--	--	--	--	--	--	--	--	--	**21,000**	7.32
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	9.8	**6,900**	**1,900**	<1.0	--	--	<10	<5.0	1,700	250	20	3,400	--	--	--	--	**16,900**	--
	9/28/2021	11	**8,600**	**2,000**	<1.0	<10	<1.0	--	<5.0	2,000	280	32	4,000	198.9	<2.000	198.9	33,000	**17,200**	7.29
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	5.3	**3,800**	**2,500**	<1.0	--	--	<4.0	<5.0	780	100	16	2,800	249.3	<2.000	249.3	20,000	**11,300**	7.55
	6/27/2022	5.5	**3,500**	**2,000**	0.54	--	--	<2.0	<2.5	630	75	<10	2,600	231.1	<2.000	231.1	20,000	**11,000**	--
	9/23/2022	3.6	**2,800**	**2,500**	0.7	--	--	<2.0	<2.5	710	86	12	2,800	271.9	<2.000	271.9	16,000	**8,950**	7.55
	12/31/2022	3.8	**3,300**	**2,600**	<1.0	--	--	<2.0	<5.0	760	93	12	2,400	--	--	--	--	**9,270**	7.71
	3/30/2023	2.7	**3,000**	**2,400**	<0.50	<2.0	1.8	1.8	<2.5	780	96	11	2,600	240.6	<2.000	240.6	16,000	**10,200**	7.65
	6/21/2023	Not Sampled																	
	8/17/2023	3.7	**3,000**	**2,600**	<0.50	<2.0	2.1	--	<10	730	87	12	2,400	258.2	<2.000	258.2	16,000	**8,950**	7.72
	12/13/2023	4.0	**3,500**	**2,500**	<0.50	<0.50	1.3	--	<2.5	810	120	13	2,300	218.9	<2.000	218.9	17,000	**9,140**	7.74
	3/11/2024	10.0	**8,300**	**1,700**	<1.0	<10	3.0 H	3.0	<5.0	1,400	180	16	3,300	--	--	160	310,000	**18,000**	--
	6/26/2024	8.3	**7,100**	**2,100**	<2.0	<2.0	2.6	2.6	<2.5	1,600	190	17	3,500	--	--	160	27,000	**18,000**	7.8 HF
	9/11/2024	6.6	**5,500 H**	**1,900**	<1.0	--	--	2.5	--	1,300	180	33	3,200	--	--	180	23,000	**14,000 E**	--
	12/12/2024	<10	**5,200**	**2,000**	<10	--	--	<10	<50	850	96	10	1,800	--	--	170	25,000	**13,000 E**	7.4 HF
	3/21/2025	<10	**5,900**	**2,100**	<10	<10 H	<10 H	<10	<50 H	1,200	160	18	3,000	--	--	160	26,000	**13,000 E**	7.4 HF
	6/23/2025	<10	**5,700**	**2,000**	<10	<10 H	<10 H	<10 H	<50 H	1,100	150	14	2,900	--	--	160	--	**13,000**	7.6 HF

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ENSOLUM

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW14	10/24/2019	3.9	**2,900**	**1,900**	<0.50	<2.0	5.8	--	<2.5	960	160	12	1,900	--	--	--	--	**8,860**	7.29
	3/12/2020	3.9	**3,000**	**2,200**	<1.0	<2.0	4.5	--	<5.0	930	140	9.2	1,600	--	--	--	--	**7,600**	7.29
	6/23/2020	4.5	**3,400**	**2,000**	<1.0	<1.0	5.1	--	<5.0	940	150	10	1,800	223.0	<2.000	223.00	15,000	**8,450**	7.56
	9/9/2020	<100	**3,640**	**2,430**	<1.50	--	--	6.66	--	--	--	--	--	--	--	--	--	**9,050**	7.21
	11/30/2020	<10.0	**2,700**	**2,180**	<1.50	--	--	4.25	--	--	--	--	--	--	--	--	--	**7,860**	7.36
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	4.0	**2,900**	**2,400**	<1.0	--	--	<1.0	<5.0	910	130	14	2,200	--	--	--	--	**7,810**	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/17/2022	2.8	**1,900**	**2,800**	<1.0	--	--	<2.0	<5.0	760	95	12	1,900	225.6	<2.000	225.6	13,000	**7,580**	7.83
	6/28/2022	3.1	**2,200**	**2,300**	0.78	--	--	<2.0	<2.5	810	99	12	2,000	216.5	<2.000	216.5	14,000	**8,060**	--
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/17/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW15	10/24/2019	2.7	**1,600**	**1,700**	<0.50	<0.50	2.1	--	<2.5	720	130	9.5	1,400	--	--	--	--	**6,370**	7.45
	3/12/2020	1.3	**730**	**2,200**	<1.0	<2.0	<2.0	--	<5.0	590	91	6.7	720	--	--	--	--	**4,300**	7.27
	6/23/2020	1.3	**560**	**2,000**	<1.0	<1.0	1.7	--	<5.0	520	89	6.7	670	232.8	<2.000	232.8	5,400	**4,500**	7.70
	9/9/2020	<100	**650**	**2,750**	0.810	--	--	1.72	--	--	--	--	--	--	--	--	--	**3,790**	7.14
	12/2/2020	<100	**758**	**2,060**	0.822	--	--	2.24	--	--	--	--	--	--	--	--	--	**4,670**	7.29
	2/22/2021	<100	**630**	**2,390**	<1.50	--	--	2.03	--	--	--	--	--	--	--	--	--	**4,170**	7.21
	6/24/2021	1.2	**490**	**2,200**	<1.0	--	--	1.1	<5.0	520	88	10.0	690	--	--	--	--	**3,850**	--
	9/27/2021	1.3	**430**	**2,500**	<1.0	--	--	1.8	<5.0	530	85	13.0	560	219.4	<2.000	219.4	4,900	**3,990**	7.29
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	1.1	**360**	**2,000**	<1.0	--	--	1.2	<5.0	550	80	11.0	550	216.8	<2.000	216.8	5,000	**4,180**	7.63
	6/28/2022	0.98	**430**	**2,200**	1.2	--	--	<1.0	<2.5	570	83	13.0	580	215.0	<2.000	215.0	4,900	**4,030**	--
	9/23/2022	1.0	**480**	**2,100**	1.2	--	--	<1.0	<2.5	600	82	14.0	610	221.8	<2.000	221.8	5,000	**3,820**	7.43
	12/31/2022	<1.0	**500**	**2,100**	<1.0	--	--	<1.0	<5.0	590	80	12.0	630	--	--	--	--	**4,050**	7.49
	3/30/2023	0.84	**540**	**2,100**	<0.50	<0.50	0.69	0.69	<2.5	580	75	7.8	630	212.7	<2.000	212.7	5,200	**3,740**	7.50
	6/21/2023	1.2	**530**	**2,000**	<1.0	<1.0	<1.0	<1.0	<5.0	610	77	8.2	640	220.8	<2.000	220.8	5,400	**4,150**	7.28
	8/16/2023	1.1	**570**	**2,000**	<0.50	<0.50	<0.50	--	<10	600	77	7.7	650	222.4	<2.000	222.4	5,500	**4,440**	7.56
	12/12/2023	1.1	**740**	**2,200**	0.57	<0.50	0.63	--	<2.5	590	80	11	660	213.9	<2.000	213.9	5,600	**4,300**	7.65
	3/11/2024	1.3	**630**	**2,000**	<1.0	<1.0	<1.0	<1.0	<5.0	580	76	8.1	680	--	--	210	5,500	**4,600**	--
	6/25/2024	1.1	**660**	**2,100**	0.66	<2.0	0.80 H	0.8	<2.5	630	77	10	760	--	--	220	5,800	**4,700**	7.8 HF
	9/12/2024	1.2	**720**	**2,200**	<1.0	--	--	<2.0	--	630	80	9.2	760	--	--	230	5,900	**4,600**	--
	12/12/2024	1.3	**640**	**2,100**	1.1	--	--	<1.0	<5.0	630	75	9.1	780	--	--	210	5,600	**4,200**	7.3 HF
	3/21/2025	1.2	**670**	**2,200**	1.1	<1.0 H	<1.0 H	<1.0	<5.0 H	570	79	11	720	--	--	210	5,700	**4,200 E**	7.5 HF
	6/23/2025	1.3	**690**	**2,200**	<1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	600	82	8.5	750	--	--	220	--	**4,700**	7.4 HF

ENSOLUM

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Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW17	2/11/2020	2.5	**1,900**	**2,300**	<1.0	<1.0	2.7	--	<5.0	590	87	7.6	1,500	--	--	--	9,000	**6,860**	7.40
	3/12/2020	2.3	**1,700**	**2,500**	<1.0	<2.0	2.6	--	<5.0	590	87	6.7	1,400	--	--	--	--	**6,570**	7.41
	6/22/2020	2.2	**1,500**	**2,400**	<1.0	2.1	2.1	--	<5.0	550	82	7.0	1,300	242.0	<2.000	242.0	8,200	**5,900**	7.59
	9/9/2020	<100	**2,650**	**3,170**	0.862	--	--	1.93	--	--	--	--	--	--	--	--	--	**7,650**	7.41
	12/1/2020	<100	**6,320**	**2,280**	0.603	--	--	0.472	--	--	--	--	--	--	--	--	--	**10,100**	7.36
	2/22/2021	<100	**7,210**	**2,130**	<1.50	--	--	0.221	--	--	--	--	--	--	--	--	--	**17,900**	7.37
	6/24/2021	Insufficient Water Volumes to Collect Sample																	
	9/27/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/14/2022	Insufficient Water Volumes to Collect Sample																	
	6/28/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/17/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW18	2/11/2020	11	**8,200**	**2,300**	<1.0	<10	1.6	--	<5.0	1,400	230	25	5,000	--	--	--	32,000	**18,600**	7.45
	3/12/2020	22	**18,000**	**2,200**	<1.0	<20	<20	--	<5.0	2,200	320	33	9,200	--	--	--	--	**7,600**	7.29
	6/22/2020	16	**10,000**	**2,300**	<1.0	<10	<10	--	<5.0	1,600	260	29	6,700	229.6	<2.000	229.6	47,000	**21,800**	7.33
	9/9/2020	<100	**8,400**	**2,670**	<1.50	--	--	2.97	--	--	--	--	--	--	--	--	--	**17,600**	7.04
	12/1/2020	<10	**5,730**	**2,360**	<1.50	--	--	3.28	--	--	--	--	--	--	--	--	--	**12,700**	7.26
	2/22/2021	<100	**5,300**	**2,640**	<1.50	--	--	3.32	--	--	--	--	--	--	--	--	--	**12,400**	7.25
	6/28/2021	3	**1,900**	**2,200**	<1.0	--	--	2.50	<5.0	600	87	7	1,400	--	--	--	--	**6,750**	--
	9/27/2021	4.3	**3,300**	**2,600**	<1.0	<1.0	2.6	--	<5.0	920	150	21	2,000	216.6	<2.000	216.6	15,000	**7,890**	7.25
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/14/2022	6.2	**4,700**	**2,500**	<1.0	--	--	5.0	<5.0	870	130	21	3,200	235.7	<2.000	235.7	23,000	**10,500**	7.64
	6/27/2022	5.8	**3,700**	**2,200**	<0.50	--	--	4.9	<2.5	800	120	18	3,100	235.8	<2.000	235.8	20,000	**11,000**	--
	9/23/2022	4.3	**3,100**	**2,000**	0.88	--	--	3.3	<2.5	870	130	20	2,800	222.6	<2.000	222.6	16,000	**8,630**	7.34
	12/31/2022	4.2	**3,400**	**2,200**	<1.0	--	--	3.4	<5.0	860	130	14	2,000	--	--	--	--	**8,760**	7.57
	3/30/2023	2.9	**2,900**	**2,100**	<0.50	<2.0	3.3	3.3	<2.5	820	120	10	2,000	221.9	<2.000	221.9	15,000	**9,060**	7.52
	6/21/2023	<10	**2,400**	**2,800**	<10	<10	<10	<10	<50	680	88	12	2,400	255.3	<2.000	255.3	16,000	**8,050**	7.47
	8/17/2023	3.6	**2,800**	**2,600**	<0.50	<2.0	4.0	--	<10	630	85	11	2,400	249.7	<2.000	249.7	16,000	**8,900**	7.67
	12/12/2023	4.5	**3,800**	**2,500**	<0.50	<0.50	4.1	--	<2.5	770	140	22	2,700	205.9	<2.000	205.9	19,000	**10,300**	7.82
	3/11/2024	13	**10,000**	**1,900**	<1.0	<10	3.4	3.4	<5.0	1,900	300	22	4,100	--	--	180	35,000	**20,000**	--
	6/25/2024	11	**9,000**	**1,900**	<2.0	<2.0	5.2 H	5.2	<2.5	2,000	290	27	4,600	--	--	190	33,000	**24,000 E**	7.6 HF
	9/11/2024	7.4	**6,900**	**2,100**	<1.0	--	--	4.2	--	1,300	210	37	3,300	--	--	200	25,000	**15,000**	--
	12/12/2024	<10	**5,100**	**2,400**	<10	--	--	<10	<50	800	120	13	2,000	--	--	210	26,000	**14,000**	7.3 HF
	3/21/2025	<10	**5,000**	**2,600**	<10	<10 H	<10 H	<10	<50 H	1,000	190	26	2,900	--	--	220	23,000	**11,000**	7.4 HF
	6/23/2025	3.4	**3,000**	**2,900**	<1.0	<10 H	3.4 H	3.4 H	<5.0 H	700	120	13	2,300	--	--	240	--	**9,200**	7.5 HF

ENSOLUM

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW20	2/11/2020	12	**8,300**	**2,500**	<1.0	<10	1.9	--	<5.0	970	190	23	5,800	--	--	--	32,000	**19,300**	7.26
	3/13/2020	9.2	**7,300**	**2,500**	<1.0	<10	<10	--	<5.0	880	180	17	4,600	--	--	--	--	**13,800**	7.30
	6/23/2020	4.9	**3,400**	**2,300**	<1.0	<10	2.0	--	<5.0	550	120	12	2,600	248.1	<2.000	248.1	16,000	**10,200**	7.69
	9/9/2020	<100	**3,120**	**2,860**	<1.50	--	--	1.61	--	--	--	--	--	--	--	--	--	**8,650**	7.30
	12/2/2020	<10.0	**3,100**	**2,420**	<1.50	--	--	1.76	--	--	--	--	--	--	--	--	--	**8,480**	7.35
	2/22/2021	<100	**2,730**	**2,530**	<1.50	--	--	1.67	--	--	--	--	--	--	--	--	--	**8,020**	7.24
	6/24/2021	2.8	**1,700**	**2,300**	<1.0	--	--	<1.0	<5.0	500	110	13.0	1600	--	--	--	--	**7,010**	--
	9/27/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	1.7	**920**	**2,100**	<1.0	--	--	1.3	<5.0	500	93	14.0	980	228.8	<2.000	228.8	7,000	**5,030**	7.53
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
	12/31/2022	Insufficient Water Volumes to Collect Sample																	
	3/30/2023	Insufficient Water Volumes to Collect Sample																	
	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/17/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	Insufficient Water Volumes to Collect Sample																	
	3/11/2024	Insufficient Water Volumes to Collect Sample																	
	6/25/2024	Insufficient Water Volumes to Collect Sample																	
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW21 (1)	2/6/2020	1.1	**360**	**2,200**	<1.0	<1.0	<1.0	--	<5.0	540	76	<10.0	650	--	--	--	5,100	**4,150**	7.15
MW22 (1)	2/7/2020	<1.0	**310**	**2,100**	<1.0	<1.0	<1.0	--	<5.0	650	94	23	540	--	--	--	4,900	**4,490**	7.62
MW23 (1)	2/7/2020	<1.0	**410**	**1,900**	<1.0	<1.0	<1.0	--	<5.0	680	110	19	460	--	--	--	5,000	**5,200**	6.85
MW24 (1)	2/15/2020	<1.0	240	**2,100**	<1.0	<1.0	<1.0	--	<5.0	510	66	<10.0	530	--	--	--	4,400	**3,860**	7.24
MW27	6/21/2023	Insufficient Water Volumes to Collect Sample																	
	8/17/2023	Insufficient Water Volumes to Collect Sample																	
	12/12/2023	1.1	**790**	**2,200**	0.53	<0.50	0.50	--	<2.5	620	91	17	690	224.6	<2.000	224.6	5,800	**4,370**	7.78
	3/11/2024	1.4	**830**	**2,100**	<1.0	<1.0	<1.0	<1.0	<5.0	590	75	9.7	710	--	--	220	5,800	**4,500**	--
	6/25/2024	1.3	**780**	**2,100**	0.66	<2.0	0.56 H	0.56	<2.5	740	91	20	800	--	--	220	6,100	**5,100**	7.8 HF
	9/12/2024	1.2	**730**	**2,000**	<1.0	--	--	<2.0	--	630	76	12	750	--	--	220	6,000	**4,000**	--
	12/12/2024	1.4	**710**	**2,100**	1.1	--	--	<1.0	<5.0	1,300	180	18	3,300	--	--	220	5,900	**4,800**	7.4 HF
	3/21/2025	1.3	**740**	**2,300**	1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	680	95	19	770	--	--	220	6,000	**4,400**	7.5 HF
	6/23/2025	1.3	**710**	**2,100**	<1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	590	81	12	750	--	--	210	--	**4,500**	7.5 HF
MW28	6/22/2023	2.9	**2,200**	**2,500**	<1.0	<1.0	1.4	1.4	<5.0	670	95	13	1,800	242.7	<2.000	242.7	13,000	**7,500**	7.43
	8/17/2023	3.0	**2,100**	**2,300**	<0.50	<2.0	1.5	--	<10	620	87	13	1,900	251.5	<2.000	251.5	13,000	**7,850**	7.69
	12/12/2023	2.4	**2,000**	**2,400**	0.65	<0.50	1.4	--	<2.5	590	92	15	1,700	233.9	<2.000	233.9	12,000	**6,510**	7.84
	3/11/2024	2.9	**2,200**	**2,400**	<1.0	<1.0	1.4 H	1.4	<5.0	630	87	11	1,600	--	--	220	9,900	**6,800**	--
	6/25/2024	3.6 F1	**2,900**	**2,400**	0.59 F1	<2.0	2.2 H F1	2.2	<2.5	880	120	18	2,200	--	--	240	16,000	**9,600**	7.8 HF
	9/11/2024	5.1	**4,100**	**2,300**	<1.0	--	--	2.2	--	980	160	25	2,400	--	--	230	18,000	**10,000 E**	--
	12/12/2024	7.5	**5,700**	**2,200**	**2.7**	--	--	2.7	<5.0	570	79	7.8	590	--	--	200	25,000	**13,000 E**	7.3 HF
	3/20/2025	<10	**6,100**	**2,200**	<10	<10 H	<10 H	<10	<50 H	1,200	190	21	3,100	--	--	190	26,000	**13,000 E**	7.4 HF
	6/23/2025	<10	**6,100**	**2,000**	<10	<10 H	<10 H	<10	<50 H	1,300	200	15	3,200	--	--	230	--	**15,000**	7.4 HF

ENSOLUM

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY
Salty Dog Water Gathering System
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate + Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	**250**	**600**	**1.6**	1.0	10.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1,000**	**6-9**
MW29	6/22/2023	2.6	**1,800**	**2,200**	<1.0	<1.0	<1.0	<1.0	<5.0	490	71	9.5	1,700	251.1	<2.000	251.1	9,300	**6,470**	7.25
	8/17/2023	2.8	**1,900**	**2,200**	0.55	<2.0	<0.50	--	<10	530	69	11	1,800	254.0	<2.000	254	12,000	**6,350**	7.70
	12/12/2023	2.8	**2,400**	**2,500**	0.71	<0.50	<0.50	--	<2.5	590	88	12	1,900	245.6	<2.000	245.6	14,000	**7,780**	7.76
	3/11/2024	2.9	**2,000**	**2,400**	<1.0	<1.0	<1.0	<1.0	<5.0	510	81	10	1,700	--	--	240	9,700	**7,000**	--
	6/25/2024	2.5	**2,000**	**2,400**	0.72	<2.0	<0.50	<2.0	<2.5	650	85	14	1,800	--	--	250	11,000	**7,300**	7.8 HF
	9/11/2024	2.3	**1,900**	**2,300**	<1.0	--	--	<2.0	--	590	84	16	1,500	--	--	240	12,000	**7,000**	--
	12/12/2024	3.9	**2,900**	**2,500**	**2.0**	--	--	<1.0	<5.0	600	76	8.5	720	--	--	230	16,000	**8,600**	7.3 HF
	3/20/2025	<10	**3,800**	**2,400**	<10	<10 H	<10 H	<10	<50 H	850	130	16	2,300	--	--	210	19,000	**9,100**	7.4 HF
	6/23/2025	<10	**4,000**	**2,200**	<10	<10 H	<10 H	<10	<50 H	970	140	12	2,400	--	--	210	--	**9,900**	7.4 HF
MW30	6/22/2023	1.1	**480**	**2,000**	<1.0	<1.0	<1.0	<1.0	<5.0	540	74	9.3	700	286.1	<2.000	286.1	5,400	**4,610**	7.61
	8/16/2023	1.0	**360**	**2,100**	<0.50	<0.50	<0.50	--	<10	600	84	10	720	277.5	<2.000	277.5	5,200	**42,500***	7.81
	12/13/2023	0.93	**400**	**2,400**	0.66	<0.50	<0.50	--	<2.5	540	78	9.4	690	254.7	<2.000	254.7	5,100	**3,770**	7.83
	3/11/2024	1.10	**380**	**2,100**	<1.0	<1.0	<1.0	<1.0	<5.0	530	80	8.4	620	--	--	230	5,100	**3,600**	--
	6/26/2024	0.95	**380**	**2,000**	0.74	<0.50	<0.50	<0.50	<2.5	700	86	15	710	--	--	250	5,100 B	**4,400**	7.5 HF
	9/11/2024	Insufficient Water Volumes to Collect Sample																	
	12/12/2024	Insufficient Water Volumes to Collect Sample																	
	3/20/2025	Insufficient Water Volumes to Collect Sample																	
	6/20/2025	Insufficient Water Volumes to Collect Sample																	
MW31	6/22/2023	<1.0	**320**	**2,000**	<1.0	<1.0	<1.0	<1.0	<5.0	530	74	7.9	600	216.3	<2.000	216.3	4,900	**4,110**	7.42
	8/16/2023	0.99	**370**	**2,100**	0.69	<0.50	0.91	--	<10	570	82	8.5	670	217.6	<2.000	217.6	5,000	**39,500***	7.79
	12/13/2023	0.89	**390**	**2,300**	0.59	<0.50	0.51	--	<2.5	570	85	15	580	205.5	<2.000	205.5	4,900	**3,790**	7.81
	3/11/2024	1.10	**360**	**2,100**	<1.0	<1.0	<1.0	<1.0	<5.0	510	71	6.8	540	--	--	220	4,700	**3,100**	--
	6/26/2024	0.94	**360**	**1,900**	0.60	<0.50	<0.50	<0.50	<2.5	610	80	9.9	640	--	--	220	5,000 B	**4,700**	7.5 HF
	9/12/2024	<1.0	**390**	**2,000**	<1.0	--	--	<2.0	--	570	82	9.4	580	--	--	230	4,900	**4,000**	--
	12/12/2024	1.10	**440**	**2,100**	1.1	--	--	<1.0	<5.0	1,100	180	17	3,300	--	--	220	5,000	**3,800**	7.5 HF
	3/20/2025	1.1	**510**	**2,200**	<1.0	<1.0 H	<1.0 H	<1.0	<5.0 H	560	82	8.5	610	--	--	220	5,100	**3,900**	7.6 HF
	6/20/2025	1.0	**510**	**2,000**	<1.0	<1.0 H H3	<1.0 H H3	<1.0	<5.0 H H3	590	83	7.4	620	--	--	220	--	**4,100 E**	7.4 HF
MW32	3/20/2025	1.9	**2,000**	**3,500**	**1.8**	<1.0 H	3.1 H	3.1	<5.0 H	570	110	11	1,900	--	--	240	15,000	**8,000**	7.7 HF
	6/20/2025	1.4	**1,400**	**3,300**	1.1	<1.0 H H3	2.1 H H3	2.1 H H3	<5.0 H H3	520	99	7.7	1,900	--	--	240	--	**14,000**	7.6 HF
MW33	3/20/2025	1.7	**1,000**	**2,400**	1.1	<1.0 H	<1.0 H	<1.0	<5.0 H	780	120	30	990	--	--	350	6,900	**5,300**	7.3 HF
	6/20/2025	1.5	**790**	**2,200**	<1.0	<1.0 H H3	<1.0 H H3	<1.0	<5.0 H H3	720	110	20	890	--	--	330	--	**4,000**	7.2 HF
MW34	3/20/2025	<10	**2,900**	**3,100**	<10	<10 H	<10 H	<10	<50 H	740	96	23	2,300	--	--	260	17,000	**9,100**	7.4 HF
	6/20/2025	3.3	**2,700**	**2,900**	<1.0	<10 H H3	<1.0 H H3	<10	<5.0 H H3	660	69	9.7	2,200	--	--	230	--	**8,100**	7.2 HF
MW35	3/20/2025	<1.0	69	**840**	**3.6**	<1.0 H	<1.0 H	<1.0	<5.0 H	24	5.9	4.7	660	--	--	520	2,900	**1,900**	8.3 HF
	6/20/2025	<1.0	70	**880**	**3.5**	<1.0 H H3	<1.0 H H3	<1.0	<5.0 H H3	20	4.1	2.8	660	--	--	450	--	**1,800**	8.1 HF
MW36	3/20/2025	<1.0	49	**1,200**	**3.0**	<1.0 H	<1.0 H	<1.0	<5.0 H	51	19	6.1	630	--	--	200	3,000	**2,000**	8.2 HF
	6/20/2025	<1.0	48	**1,200**	**3.0**	<1.0 H H3	<1.0 H H3	<1.0	<5.0 H H3	61	8.5	3.3	570	--	--	150	--	**1,900**	8.1 HF

Notes:

(1): Groundwater samples collected from a temporary well screen placed in the open boring.

E: Result exceeded calibration range

H: Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

HF: Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

mg/L: milligrams per liter

µmhos/cm: micromhos per centimeter

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

<: indicates result less than the stated laboratory reporting limit (RL)

**: anomalous data*

*Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code*

ENSOLUM

TABLE 5
SLUG TEST SUMMARY
Salty Dog Water Transfer
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Test	Test Number	Aquifer Type	Correction	Solution	Depth to Water (ft)	K (cm/sec)	Ss (ft-1)	Kz/Kr	Average K (cm/sec)	Geomean K (cm/sec)	Lithology	Hydrogeologic Interpretation
MW-13	Rising Head	1	Unconfined	Late Time Drift	KGS	36.12	6.12E-03	1.54E-04	0.1	**6.59E-03**	**3.76E-03**	Poorly graded sand with silt (SP-SM) underlying fat clay (CH).	High permeability interval in clean fine–medium sand with some silt fraction.
	Rising Head	2					7.06E-03	1.50E-04					
MW-28	Rising Head	1	Unconfined	None	KGS	29.73	4.98E-04	3.94E-04	0.1	**5.11E-04**		Clayey sand (SC) with poorly graded sand (SP) and clay (CL).	Moderately low K, silty sand/sandy silt; longer tail suggests higher compressibility and minor well loss.
	Rising Head	2					5.24E-04	2.50E-04					
MW-33	Rising Head	1	Unconfined	Late Time Drift	KGS	20.41	7.12E-03	9.82E-07	0.1	**7.12E-03**		Poorly graded sand (SP) underlying fat clay (CH).	High permeability, clean fine–medium sand; unconfined.
	Rising Head	2					7.13E-03	0.00 00435					
MW-34	Rising Head	1	Unconfined	None	KGS	19.33	8.11E-03	4.51E-05	0.1	**8.37E-03**		Well graded medium sand (SW) and gravel (GW).	High-permeability interval in clean sand/sandy gravel.
	Rising Head	2					8.64E-03	3.47E-05					

Notes:

KGS: Kansas Geological Survey Model (Hyder et al., 1994)

Hyder, Z., J.J. Butler, Jr., C.D. McElwee and W. Liu, 1994. Slug tests in partially penetrating wells, Water Resources Research, vol. 30, no. 11, pp. 2945-2957.

ENSOLUM

TABLE 6
RADIUS OF INFLUENCE PREDICTIONS
Salty Dog Water Transfer
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Average K (cm/sec)	b (cm)	T (cm/sec)	S	Method	Maximum Proposed Q (gpm)	Pumping Duration (min)	Estimated Drawdown (ft)	Estimated ROI (ft)
MW-13	**6.59E-03**	123.4	0.81	0.0006	Neuman	2.0	500	3.7	14.9
MW-28	**5.11E-04**	239.8	0.12	0.003	Neuman	0.7	500	6.9	7.6
MW-33	**7.12E-03**	224.9	1.6	0.00007	Neuman	5.5	500	5.6	18.0
MW-34	**8.37E-03**	274.2	2.3	0.0004	Neuman	10.0	500	7.3	22.9

Notes:

ROI: Radius of Influence

All hydraulic conductivities were estimated from slug tests using the Kansas Geological Survey (KGS) model (Hyder et al., 1994).

Hyder, Z., J.J. Butler, Jr., C.D. McElwee and W. Liu, 1994. Slug tests in partially penetrating wells, Water Resources Research, vol. 30, no. 11, pp. 2945-2957.

ROI predictive simulations were completed in AQTESOLV (Forward Solutions) using the Neuman (1974) unconfined-aquifer model to estimate drawdown and radius of influence.

Neuman, S.P., 1974. Effect of partial penetration on flow in unconfined aquifers considering delayed gravity response, Water Resources Research, vol. 10, no. 2, pp. 303-312.

ENSOLUM

APPENDIX A

Public Notification

Hilcorp Energy Company – Lower 48. (Hilcorp) announces publication of a Stage 1 Abatement Plan for groundwater impacts identified at the Salty Dog Water Gathering System pipeline release located at latitude 36.721261 degrees (°) and longitude -108.247803° in Unit N of Section 18 of Township 29 North, Range 13 West in San Juan County approximately 1.5 miles southwest of Farmington, New Mexico.

On April 29, 2019, approximately 80 barrels (bbls) of produced water were released from a pipeline due to corrosion. Upon discovery, Hilcorp Lower 48 (Hilcorp) isolated and de-energized the waterline for repair, dispatched a vacuum truck to the Site for fluid recovery. Initial source removal and subsurface investigation indicated soil in the vadose zone and shallow groundwater occurring at approximately 30 feet to 40 feet below ground surface are impacted above applicable remediation standards defined by the New Mexico Oil Conservation Division (NMOCD). All soil impacted by the release has been delineated, but concentrations of chloride and small concentrations benzene exceeding the NMOCD standards for groundwater have been identified. The extent of groundwater impact has been not delineated but is estimated to be less than 24,000 square feet. No surface water was impacted.

The Director of the NMOCD has approved a Stage 1 Abatement Plan in which Hilcorp will obtain lateral delineation of impacted groundwater. The data obtained from the Stage 1 Abatement Plan will be combined with previously collected subsurface data to complete characterization of the groundwater impacts and to design appropriate remediation. In determining that the Stage 1 Abatement Plan is administratively complete, the NMOCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NMOCD's Santa Fe office at 1220 South St Francis Drive, # 3, Santa Fe, New Mexico or at the NMOCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NMOCD public database at http://www.emnrd.state.nm.us/OCD/.

The NMOCD is accepting written comments and requests for consideration if the NMOCD Director receives them within 30 days after the date of publication of this public notice. A person seeking to comment on a stage 1 abatement plan should submit written comments to:

Mr. Cory Smith
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NMOCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Additional information can be obtained from the Harvest project contact:

Jennifer Deal
Hilcorp Energy Company – Lower 48
382 Road 3100.
Aztec, New Mexico 87410
505-599-3400

ENSOLUM

APPENDIX B

Borehole Logs

ENSOLUM

Client: Hilcorp Energy Company	BOREHOLE ID: MW-32 (Proposed MW-32)
Project Name: Salty Dog Water Transfer	
Project Location: San Juan Co. NM	
Project Manager: S. Hyde	Date: 12-11-2024 → 12-12-2024
Project No.: 07A1988013	Borehole Diameter: 8"
Drilling Company: Cascade	Casing Diameter: 2" PVC
Driller: Manny	Well Materials: 10/20 Sand | 0.010 Slot
Drilling Equip: TerraSonic	Surface Completion:
Logged By: W. Weichert	Drilling Method: Sonic
	Ground Surface Elevation:
	Top of Casing Elevation:
	Latitude:
	Longitude:
	Total Depth:

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
0–5					Dry	SP	POORLY GRADED SAND- tan Medium w/ Some fine + Coarse, Moderate to Well Sorted, loose + Unconsolidated, few Clay lenses, Dry.	
5–10					Dry	SM	SILTY SAND- tan to light brown, Very fine to fine, Well Sorted, Unconsolidated, Dry.	
10–11					Dry			
11–14						GM	GRAVELLEY SILT- tan to light brown Silt + Very fine Sand w/ Well rounded Cobbles up to 3.5" loose, Unconsolidated Dry.	
14–15						SM	SILTY SAND- As Above	
15			308 Mg/Kg	0.0 PPM	Dry			
16–17						CL	CLAY - Brown, Caliche Veins	
17–20			397 Mg/Kg	0.0 PPM			SILTY SAND- Gray-tan, Very fine to fine, Well Sorted, loose, dry. * Head Tilt Cylinder Broke.	

Page:

ENSOLUM

Client: Hilcorp
Project Name: Salty Dog Water Transfer
Project Location: San Juan Co. NM
Project Manager: S. Hyde

BOREHOLE ID: MW-32
Date: 12/12/24

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
25		10%		.	dry	SM	Silty sand - tan; silt + very fine - fine sand, well sorted, unconsolidated	
26			156			GP		
27				0.3	wet	wet	Sand with silt - orange to tan, subrounded, fine to coarse sand, cobbles @ 27.5', unconsolidated	
28			208.8					
29				0.1	wet	GP wet	sandy gravel - brown to gray, rounded, gravel to cobble, unconsolidated	
30							siltstone - dry grey, dense	
31								
32								
33								
34								
35							TD	
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

ENSOLUM

	Client: Hilcorp Energy Company	BOREHOLE ID	
	Project Name: Salty Dog Water Transfer	MW-33 (MW-34 Proposed)	
	Project Location: San Juan Co. NM	Date: 12-2-24	
Project No.: 07A1988013	Project Manager: S. Hyde	Ground Surface Elevation:	
Drilling Company: Cascade	Borehole Diameter:	Top of Casing Elevation:	
Driller:	Casing Diameter:	Latitude:	
Drilling Equip:	Well Materials:	Longitude:	
Logged By:	Surface Completion:	Total Depth:	
	Drilling Method:		

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
0–5		100%			Slight Moist	SW/GW	WELL GRADED GRAVELLY SAND- light brown to tan, Fine to Coarse Sand w/ gravel + Cobbles up to 4", Poorly Sorted / Well graded, loose + Unconsolidated, Slightly Moist.	
5–10		100%			Dry	SP	POORLY GRADED SAND- tan to light brown, Medium, little Silt + Clay, well Sorted, Clay lens @ 9', loose & unconsolidated. Slightly Moist / Dry.	
10–14		100%				SC	SILTY / CLAYEY SAND- light brown, as above more Clay + fines	
14–15					▽			
15–20	1 SAMPLE		1168	0.0 PPM	Wet	CH	FAT CLAY - Brown, Soft, Consolidated & highly plastic Clay, Wet, Hydrocarbon Staining & Odor Observed @ 20' *Water Encountered @ 14'	

Page:

ENSOLUM

Client: Hilcorp
Project Name: Salty Dog Water Transfer
Project Location: San Juan Co. NM
Project Manager: S. Hyde

BOREHOLE ID

Date:

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
25		SAMPLE		0.0 PPM	Wet		@ 22.5' - POORLY GRADED SAND. Brown, Medium, Well sorted / Poorly graded, Soft + Unconsolidated, Wet.	
26								
27								
28								
29								
30		SAMPLE					BED ROCK @ 24' SAND - Gray, Very Coarse, Well Sorted, rounded, moist to wet	
31				0.0 PPM	Dry			
32								
33								
34								
35				0.0 PPM			Siltstone - gray, hard, Consolidated, Friable, Dry TD @ 35'	
36							Screen 9-24 ft	
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

Page:

ENSOLUM

Client: Hilcorp Energy Company	BOREHOLE ID: MW-34 (Proposed MW-36)
Project Name: Salty Dog Water Transfer	
Project Location: San Juan Co. NM	
Project Manager: S. Hyde	Date: 12-11-2024
Project No.: 07A1988013	Borehole Diameter: 8"
Drilling Company: Cascade	Casing Diameter: 2" PVC
Driller: Manny	Well Materials: 10/20 Sand / 0.010 slot
Drilling Equip: Terrasonic	~~Surface~~ Completion: 10-25 ft.
Logged By: W. Weichert	Drilling Method: Sonic
	Ground Surface Elevation:
	Top of Casing Elevation:
	Latitude:
	Longitude:
	Total Depth: 28 ft

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
0–5					Dry	SM	SILTY SAND – light tan – buff, Very fine, Well Sorted / Poorly graded, loose + Unconsolidated, Dry.	
5–8					Dry	SC	CLAYEY SAND – Brown to dark brown, Very fine, Well Sorted, Unconsolidated, Slightly moist to dry, as above darker w/ more clay	5 ft; 8 ft
8–10						SM	SILTY SAND – tan, very fine to fine, Well Sorted, Unconsolidated, slightly moist to dry.	10 ft
10–15					Dry	SC	CLAYEY SAND – As above, Dry. Brown, Very fine to fine, Well sorted, darker than above.	
15						XX	Becoming coarser w/ gray	
16	Sample		156.8 mg/kg	1.4 ppm	Dry			
17–18					Dry	SW/GW	~~POORLY~~ WELL GRADED SAND w/ GRAVEL – Gray to black, Coarse to Very Coarse w/ occasional rounded cobble, Mod – well Sort, decomposing organic odor "swampy"	
19–20			229.6 mg/kg	5.2 ppm	WET		Very Moist to Wet, large Cobbles!	

Page:

ENSOLUM

Client: Hilcorp
Project Name: Salty Dog Water Transfer
Project Location: San Juan Co. NM
Project Manager: S. Hyde

BOREHOLE ID

Date:

DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	Chloride (mg/kg)	PID (PPM)	MOISTURE	USCS	GEOLOGIC DESCRIPTION	WELL COMPLETION
20				7.1 ppm		GW/SW	WELL GRADED GRAVEL + SAND - Medium to dark gray / blackish, Coarse w/ larger Well rounded Cobbles up to 6", Poorly sorted, becoming clay rich matrix @ 22.5 ft. Swampy odor. Wet,	25 ft
24								
28								
32								
36			229.6 Mg/kg	8.0 ppm	WET		* Bedrock Contact @ 26'	26 ft
37					DRY	ML	SILTSTONE - light gray, hard but friable, fissle, non-plastic, Very Dry.	
28								28 ft.
29							TD @ ~~28~~ 28 ft * Driller Corrected	
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								

Page:

ENSOLUM

Client: Hilcorp Energy Company
Project Name: Salty Dog Water Transfer
Project Location: San Juan Co. NM
Project Manager: S. Hyde

BORING LOG NUMBER: MW 35
Project No.:

Date Sampled: 12/12/24
Drilled By: Cascade - Terrasonic Rig
Driller: Manny
Logged By: S. Mahanay

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:

Borehole Diameter: 8"
Casing Diameter: 2" PVC
Well Materials: 10/20 sand, 0.010 slot screen
Surface Completion: stick up
Boring Method: Sonic

DEPTH (FEET)	SAMPLE INTERVAL	BLOW COUNT	RECOVERY (%)	FID/PID READING (PPM)	USCS SYMBOL	GEOLOGIC DESCRIPTION	BORING/WELL COMPLETION
0–6	0-2.5 2.5-5 5-6			dry	SP	poorly graded sand with silt - tan Medium with minor fine & coarse Moderately sorted, unconsolidated, dry	
6–10	6-8 8-10			dry	GM	Gravely silt with fine to very fine sand, rounded to subrounded cobbles & gravel. Well sorted unconsolidated, dry.	
10–12			15%	dry		Interbedded siltstone, with very fine sand & silt, tan, dry.	
12–15				moist		Same as above - color changes from tan to grey to blue grey. Moist	
15–17.5	0% 15-17.5		15%				
17.5–20	17.5-20			wet	CL / SP	Interbedded massive clay, grey, dense with minor silt & fine sand, moist (6"-1') with medium to coarse grained sand subrounded, grey-black, wet. poorly graded, minor clay lenses with high plasticity. poorly consolidated	
20–22.5	20-22.5						
22.5–25	22.5-25						

ENSOLUM

Client:
Project Name:
Project Location:
Project Manager:

BORING LOG NUMBER: MW-35
Project No.:

Date Sampled:
Drilled By:
Driller:
Logged By:

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:

Borehole Diameter:
Casing Diameter:
Well Materials:
Surface Completion:
Boring Method:

DEPTH (FEET)	SAMPLE INTERVAL	BLOW COUNT	RECOVERY (%)	FID/PID READING (PPM)	USCS SYMBOL	GEOLOGIC DESCRIPTION	BORING/WELL COMPLETION
25							
26				1/SP	wet	consolidated siltstone (25-26) followed by fine-coarse sand, poorly graded, grey, unconsolidated (26-27.5)	
27							
28			1/56		moist	grey consolidated siltstone dense, minor fine-medium sand, moist.	drilling hot.
29							
30							
31						same as above - siltstone dry grey	
32							
33							
34							
35					TD		
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							

Notes: Potentially water bearing zones within the sand & siltstone (~16' bgs - 27' bgs). The coarse sand units were located @ 26'-27' bgs, 22'-23' bgs, and 17'-18' bgs & ranged in thickness from 6"-8"

ENSOLUM

Client: Hilcorp Energy Company
Project Name: Salty Dog Water Transfer
Project Location: San Juan Co NM
Project Manager: S. Hyde

BORING LOG NUMBER MW-36

Project No.:

Date Sampled: 12/3/24
Drilled By: Cascade
Driller: Manny
Logged By: S. Mahoney

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:

Borehole Diameter: 8"
Casing Diameter: 2" PVC
Well Materials: 10/20 sand; 0.010 slot
Surface Completion: stick up
Boring Method: Sonic

DEPTH (FEET)	SAMPLE INTERVAL	BLOW COUNT	RECOVERY (%)	FID/PID READING (PPM)	USCS SYMBOL	GEOLOGIC DESCRIPTION	BORING/WELL COMPLETION
0–10		dry			SP	well graded sand, fine-medium grained, tan, unconsolidated & loose, ~~poorly~~ moderately sorted, minor silt	
10–15		10% recovery			SP	same as above; increase in grain size fine-coarse	
15–17				<1.56 0.7			
17–25		dry		<1.56 0.0	GW	sandy gravel with silt, well ~~poorly~~ graded, medium sand with pebbles to cobbles tan, unconsolidated, rounded-subrounded.	

ENSOLUM

	Client:	BORING LOG NUMBER MW-36
	Project Name:	
	Project Location:	
	Project Manager:	Project No.:
Date Sampled:	Ground Surface Elevation:	Borehole Diameter:
Drilled By:	Top of Casing Elevation:	Casing Diameter:
Driller:	North Coordinate:	Well Materials:
Logged By:	West Coordinate:	Surface Completion:
		Boring Method:

DEPTH (FEET)	SAMPLE INTERVAL	BLOW COUNT	RECOVERY (%)	FID/PID READING (PPM)	USCS SYMBOL	GEOLOGIC DESCRIPTION	BORING/WELL COMPLETION
25–26		>/<156 0.0			GW	same as above	
27–28			dry		—	~~sandy siltstone~~, sandstone moist (due to water added for drilling) medium grain with minor silt	
29–30		<156 0.7					
31–32			dry		—	same sandstone, color change to grey/~~blue~~grey green.	
33–34							
35–36							
37–38							
39–40		>/<156 0.0					
41–42							
43–44							
45–46		<156 0.0					
47–48							
49–50		<156 0.0			—	Same as above	

ENSOLUM

Client: Hilcorp Energy Company
Project Name: Salty Dog Water Flood
Project Location: San Juan Co NM
Project Manager: S. Hyde

BORING LOG NUMBER MW-36
Project No.:

Date Sampled: 12/13/24
Drilled By: Cascade
Driller: Manny
Logged By: S. Mahanay

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:

Borehole Diameter: 8"
Casing Diameter: 2" PVC
Well Materials: 10/20 Sand 0.010 Slot
Surface Completion: Stickup
Boring Method: Sonic

DEPTH (FEET)	SAMPLE INTERVAL	BLOW COUNT	RECOVERY (%)	FID/PID READING (PPM)	USCS SYMBOL	GEOLOGIC DESCRIPTION	BORING/WELL COMPLETION
50							
51			Wet			Same as above, increased moisture	
52							
53							
54							
55		2156 0.0	Wet			Interbedded sandstone with clayey silt, moist, grey, low plasticity	
56							
57							
58						Note: Possible chlorite present with increased concentrations from 32'-55'. Attributes to greenish tint of sandstone	
59							
60						dry siltstone	
61						TD	
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							

ENSOLUM

APPENDIX C

Agency Correspondence

From: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 408589
Date: Wednesday, December 4, 2024 1:31:29 PM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Stuart Hyde for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nCS1916853082.

The sampling event is expected to take place:

When: 12/09/2024 @ 09:00
Where: N-18-29N-13W 0 FNL 0 FEL (36.721261,-108.247803)

Additional Information: Contact PM Stuart Hyde, 970-903-1607

Drilling and sampling work will take place between 12/9/2024 and 12/13/2024 beginning at 8:30 AM each day

Additional Instructions: Salty Dog Water Transfer, coordinates 36.721350, -108.247862

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

ENSOLUM

APPENDIX D

Soil Analytical Laboratory Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mitch Killough
Hilcorp Energy
PO BOX 4700
Farmington, New Mexico 87499

Generated 1/13/2025 12:09:33 PM Revision 1

JOB DESCRIPTION

Salty Dog Water Transfer

JOB NUMBER

885-17034-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
1/13/2025 12:09:33 PM
Revision 1

Authorized for release by
Michelle Garcia, Project Manager
michelle.garcia@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Laboratory Job ID: 885-17034-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Hilcorp Energy
Project: Salty Dog Water Transfer

Job ID: 885-17034-1

Job ID: 885-17034-1 Eurofins Albuquerque

Job Narrative
885-17034-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/14/2024 7:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8°C and 2.8°C.

Client requested update. Lab sample ID's 13 through 15 (MW-37@30, MW-37@47.5, and MW-37@55) were mislabled during site work. Sample ID has been updated to the following:

- Lab 13: MW-36@30
- Lab 14: MW-36@47.5
- Lab 15: MW-36@55

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-33@20'

Date Collected: 12/10/24 15:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		12/16/24 14:32	12/19/24 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*12/16/24 14:32*	*12/19/24 12:56*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 01:08	1
Ethylbenzene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 01:08	1
Toluene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 01:08	1
Xylenes, Total	ND		0.097		mg/Kg		12/16/24 14:32	12/19/24 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*12/16/24 14:32*	*12/19/24 01:08*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		12/18/24 09:14	12/23/24 19:00	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		12/18/24 09:14	12/23/24 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*12/18/24 09:14*	*12/23/24 19:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		60		mg/Kg		12/16/24 15:58	12/17/24 11:40	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-33@25'

Date Collected: 12/10/24 15:15
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		12/16/24 14:32	12/19/24 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*35 - 166*	*12/16/24 14:32*	*12/19/24 13:18*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		12/16/24 14:32	12/19/24 01:30	1
Ethylbenzene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 01:30	1
Toluene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 01:30	1
Xylenes, Total	ND		0.094		mg/Kg		12/16/24 14:32	12/19/24 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*12/16/24 14:32*	*12/19/24 01:30*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		12/18/24 09:14	12/23/24 19:10	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		12/18/24 09:14	12/23/24 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*112*		*62 - 134*	*12/18/24 09:14*	*12/23/24 19:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		59		mg/Kg		12/16/24 15:58	12/17/24 11:50	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-33@30'
Date Collected: 12/10/24 15:30
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-3
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		12/16/24 14:32	12/19/24 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*12/16/24 14:32*	*12/19/24 13:40*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		12/16/24 14:32	12/19/24 01:52	1
Ethylbenzene	ND		0.050		mg/Kg		12/16/24 14:32	12/19/24 01:52	1
Toluene	ND		0.050		mg/Kg		12/16/24 14:32	12/19/24 01:52	1
Xylenes, Total	ND		0.10		mg/Kg		12/16/24 14:32	12/19/24 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 01:52*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		12/18/24 09:14	12/23/24 19:21	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		12/18/24 09:14	12/23/24 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*	*12/18/24 09:14*	*12/23/24 19:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		60		mg/Kg		12/16/24 15:58	12/17/24 12:21	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-34@25'

Date Collected: 12/11/24 11:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-4

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		12/16/24 14:32	12/19/24 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*35 - 166*	*12/16/24 14:32*	*12/19/24 14:02*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		12/16/24 14:32	12/19/24 02:13	1
Ethylbenzene	ND		0.050		mg/Kg		12/16/24 14:32	12/19/24 02:13	1
Toluene	ND		0.050		mg/Kg		12/16/24 14:32	12/19/24 02:13	1
Xylenes, Total	ND		0.099		mg/Kg		12/16/24 14:32	12/19/24 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*12/16/24 14:32*	*12/19/24 02:13*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.9		mg/Kg		12/18/24 09:14	12/23/24 19:32	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		12/18/24 09:14	12/23/24 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*12/18/24 09:14*	*12/23/24 19:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**530**		60		mg/Kg		12/16/24 15:58	12/17/24 12:31	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-34@20'
Date Collected: 12/11/24 11:15
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-5
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		12/16/24 14:32	12/19/24 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*35 - 166*	*12/16/24 14:32*	*12/19/24 14:23*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		12/16/24 14:32	12/19/24 02:35	1
Ethylbenzene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 02:35	1
Toluene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 02:35	1
Xylenes, Total	ND		0.098		mg/Kg		12/16/24 14:32	12/19/24 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*12/16/24 14:32*	*12/19/24 02:35*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		12/18/24 09:14	12/23/24 19:53	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		12/18/24 09:14	12/23/24 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*12/18/24 09:14*	*12/23/24 19:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**160**		60		mg/Kg		12/16/24 15:58	12/17/24 12:42	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-34@28'

Date Collected: 12/11/24 11:30
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-6

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		12/16/24 14:32	12/19/24 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*35 - 166*	*12/16/24 14:32*	*12/19/24 14:45*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 02:57	1
Ethylbenzene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 02:57	1
Toluene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 02:57	1
Xylenes, Total	ND		0.096		mg/Kg		12/16/24 14:32	12/19/24 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 02:57*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		12/18/24 09:14	12/23/24 20:04	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		12/18/24 09:14	12/23/24 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		60		mg/Kg		12/16/24 15:58	12/17/24 12:52	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-32@15'

Date Collected: 12/12/24 17:30
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-7

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		12/16/24 14:32	12/19/24 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*35 - 166*	*12/16/24 14:32*	*12/19/24 15:07*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		12/16/24 14:32	12/19/24 03:40	1
Ethylbenzene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 03:40	1
Toluene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 03:40	1
Xylenes, Total	ND		0.094		mg/Kg		12/16/24 14:32	12/19/24 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*12/16/24 14:32*	*12/19/24 03:40*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		12/18/24 09:14	12/23/24 20:14	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		12/18/24 09:14	12/23/24 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**310**		59		mg/Kg		12/16/24 15:58	12/17/24 13:02	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-32@20'

Date Collected: 12/12/24 17:25
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-8

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		12/16/24 14:32	12/19/24 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*12/16/24 14:32*	*12/19/24 15:29*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 04:02	1
Ethylbenzene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 04:02	1
Toluene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 04:02	1
Xylenes, Total	ND		0.094		mg/Kg		12/16/24 14:32	12/19/24 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*12/16/24 14:32*	*12/19/24 04:02*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		12/18/24 09:14	12/23/24 20:25	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		12/18/24 09:14	12/23/24 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**350**		60		mg/Kg		12/16/24 15:58	12/17/24 13:13	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-32@27.5'

Date Collected: 12/12/24 17:35
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-9

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		12/16/24 14:32	12/19/24 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*12/16/24 14:32*	*12/19/24 15:51*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 04:24	1
Ethylbenzene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 04:24	1
Toluene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 04:24	1
Xylenes, Total	ND		0.098		mg/Kg		12/16/24 14:32	12/19/24 04:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 04:24*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		12/18/24 09:14	12/23/24 20:36	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		12/18/24 09:14	12/23/24 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		60		mg/Kg		12/16/24 15:58	12/17/24 13:23	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-35@10'

Date Collected: 12/12/24 18:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-10

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		12/16/24 14:32	12/19/24 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*12/16/24 14:32*	*12/19/24 16:12*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 04:45	1
Ethylbenzene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 04:45	1
Toluene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 04:45	1
Xylenes, Total	ND		0.094		mg/Kg		12/16/24 14:32	12/19/24 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 04:45*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		12/18/24 09:14	12/23/24 20:46	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		12/18/24 09:14	12/23/24 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		12/16/24 15:58	12/17/24 13:33	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-35@15'

Date Collected: 12/12/24 17:55
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-11

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		12/16/24 14:32	12/19/24 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*35 - 166*	*12/16/24 14:32*	*12/19/24 16:34*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 05:07	1
Ethylbenzene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:07	1
Toluene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:07	1
Xylenes, Total	ND		0.097		mg/Kg		12/16/24 14:32	12/19/24 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*12/16/24 14:32*	*12/19/24 05:07*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		12/18/24 09:14	12/23/24 20:57	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		12/18/24 09:14	12/23/24 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*132*		*62 - 134*	*12/18/24 09:14*	*12/23/24 20:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		12/16/24 15:58	12/17/24 13:44	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-35@28'

Date Collected: 12/12/24 17:50
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-12

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		12/16/24 14:32	12/19/24 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*35 - 166*	*12/16/24 14:32*	*12/19/24 16:56*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 05:29	1
Ethylbenzene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:29	1
Toluene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:29	1
Xylenes, Total	ND		0.096		mg/Kg		12/16/24 14:32	12/19/24 05:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 05:29*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		12/18/24 09:14	12/23/24 21:07	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		12/18/24 09:14	12/23/24 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*12/18/24 09:14*	*12/23/24 21:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		12/16/24 15:58	12/17/24 13:54	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-36@30'

Date Collected: 12/13/24 14:10
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-13

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		12/16/24 14:32	12/19/24 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*35 - 166*	*12/16/24 14:32*	*12/19/24 17:17*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		12/16/24 14:32	12/19/24 05:50	1
Ethylbenzene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:50	1
Toluene	ND		0.048		mg/Kg		12/16/24 14:32	12/19/24 05:50	1
Xylenes, Total	ND		0.096		mg/Kg		12/16/24 14:32	12/19/24 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*12/16/24 14:32*	*12/19/24 05:50*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		12/18/24 09:14	12/23/24 21:18	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		12/18/24 09:14	12/23/24 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*12/18/24 09:14*	*12/23/24 21:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		12/16/24 15:58	12/17/24 14:25	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-36@47.5'

Date Collected: 12/13/24 14:05
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-14

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		12/16/24 14:32	12/19/24 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*35 - 166*	*12/16/24 14:32*	*12/19/24 17:39*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		12/16/24 14:32	12/19/24 06:12	1
Ethylbenzene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 06:12	1
Toluene	ND		0.047		mg/Kg		12/16/24 14:32	12/19/24 06:12	1
Xylenes, Total	ND		0.093		mg/Kg		12/16/24 14:32	12/19/24 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*12/16/24 14:32*	*12/19/24 06:12*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		12/18/24 09:14	12/23/24 21:39	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		12/18/24 09:14	12/23/24 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*12/18/24 09:14*	*12/23/24 21:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		12/16/24 15:58	12/17/24 14:35	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-36@55'

Date Collected: 12/13/24 14:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-15

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		12/16/24 14:32	12/19/24 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*35 - 166*	*12/16/24 14:32*	*12/19/24 18:01*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		12/16/24 14:32	12/19/24 06:34	1
Ethylbenzene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 06:34	1
Toluene	ND		0.049		mg/Kg		12/16/24 14:32	12/19/24 06:34	1
Xylenes, Total	ND		0.098		mg/Kg		12/16/24 14:32	12/19/24 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*12/16/24 14:32*	*12/19/24 06:34*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		12/18/24 09:14	12/23/24 21:50	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		12/18/24 09:14	12/23/24 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*12/18/24 09:14*	*12/23/24 21:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		12/16/24 15:58	12/17/24 14:46	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-17859/1-A
Matrix: Solid
Analysis Batch: 18085

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17859

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		12/16/24 14:32	12/19/24 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*35 - 166*	*12/16/24 14:32*	*12/19/24 10:23*	*1*

Lab Sample ID: LCS 885-17859/2-A
Matrix: Solid
Analysis Batch: 18085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17859

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	23.2		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*187*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-17859/1-A
Matrix: Solid
Analysis Batch: 18095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17859

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		12/16/24 14:32	12/18/24 21:53	1
Ethylbenzene	ND		0.050		mg/Kg		12/16/24 14:32	12/18/24 21:53	1
Toluene	ND		0.050		mg/Kg		12/16/24 14:32	12/18/24 21:53	1
Xylenes, Total	ND		0.10		mg/Kg		12/16/24 14:32	12/18/24 21:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*12/16/24 14:32*	*12/18/24 21:53*	*1*

Lab Sample ID: LCS 885-17859/3-A
Matrix: Solid
Analysis Batch: 18095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17859

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.889		mg/Kg		89	70 - 130		
Ethylbenzene			1.00	0.920		mg/Kg		92	70 - 130		
m&p-Xylene			2.00	1.83		mg/Kg		91	70 - 130		
o-Xylene			1.00	0.919		mg/Kg		92	70 - 130		
Toluene			1.00	0.920		mg/Kg		92	70 - 130		
Xylenes, Total			3.00	2.75		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-18005/1-A
Matrix: Solid
Analysis Batch: 18344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18005

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		12/18/24 09:14	12/23/24 18:05	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		12/18/24 09:14	12/23/24 18:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*12/18/24 09:14*	*12/23/24 18:05*	*1*

Lab Sample ID: LCS 885-18005/2-A
Matrix: Solid
Analysis Batch: 18344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18005

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	60.5		mg/Kg		121	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*114*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-17873/1-A
Matrix: Solid
Analysis Batch: 17811

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17873

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		12/16/24 15:58	12/16/24 16:27	1

Lab Sample ID: LCS 885-17873/2-A
Matrix: Solid
Analysis Batch: 17811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17873

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.9		mg/Kg		96	90 - 110		

QC Association Summary

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

GC VOA

Prep Batch: 17859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	5030C	
885-17034-2	MW-33@25'	Total/NA	Solid	5030C	
885-17034-3	MW-33@30'	Total/NA	Solid	5030C	
885-17034-4	MW-34@25'	Total/NA	Solid	5030C	
885-17034-5	MW-34@20'	Total/NA	Solid	5030C	
885-17034-6	MW-34@28'	Total/NA	Solid	5030C	
885-17034-7	MW-32@15'	Total/NA	Solid	5030C	
885-17034-8	MW-32@20'	Total/NA	Solid	5030C	
885-17034-9	MW-32@27.5'	Total/NA	Solid	5030C	
885-17034-10	MW-35@10'	Total/NA	Solid	5030C	
885-17034-11	MW-35@15'	Total/NA	Solid	5030C	
885-17034-12	MW-35@28'	Total/NA	Solid	5030C	
885-17034-13	MW-36@30'	Total/NA	Solid	5030C	
885-17034-14	MW-36@47.5'	Total/NA	Solid	5030C	
885-17034-15	MW-36@55'	Total/NA	Solid	5030C	
MB 885-17859/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-17859/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-17859/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 18085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	8015M/D	17859
885-17034-2	MW-33@25'	Total/NA	Solid	8015M/D	17859
885-17034-3	MW-33@30'	Total/NA	Solid	8015M/D	17859
885-17034-4	MW-34@25'	Total/NA	Solid	8015M/D	17859
885-17034-5	MW-34@20'	Total/NA	Solid	8015M/D	17859
885-17034-6	MW-34@28'	Total/NA	Solid	8015M/D	17859
885-17034-7	MW-32@15'	Total/NA	Solid	8015M/D	17859
885-17034-8	MW-32@20'	Total/NA	Solid	8015M/D	17859
885-17034-9	MW-32@27.5'	Total/NA	Solid	8015M/D	17859
885-17034-10	MW-35@10'	Total/NA	Solid	8015M/D	17859
885-17034-11	MW-35@15'	Total/NA	Solid	8015M/D	17859
885-17034-12	MW-35@28'	Total/NA	Solid	8015M/D	17859
885-17034-13	MW-36@30'	Total/NA	Solid	8015M/D	17859
885-17034-14	MW-36@47.5'	Total/NA	Solid	8015M/D	17859
885-17034-15	MW-36@55'	Total/NA	Solid	8015M/D	17859
MB 885-17859/1-A	Method Blank	Total/NA	Solid	8015M/D	17859
LCS 885-17859/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	17859

Analysis Batch: 18095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	8021B	17859
885-17034-2	MW-33@25'	Total/NA	Solid	8021B	17859
885-17034-3	MW-33@30'	Total/NA	Solid	8021B	17859
885-17034-4	MW-34@25'	Total/NA	Solid	8021B	17859
885-17034-5	MW-34@20'	Total/NA	Solid	8021B	17859
885-17034-6	MW-34@28'	Total/NA	Solid	8021B	17859
885-17034-7	MW-32@15'	Total/NA	Solid	8021B	17859
885-17034-8	MW-32@20'	Total/NA	Solid	8021B	17859
885-17034-9	MW-32@27.5'	Total/NA	Solid	8021B	17859
885-17034-10	MW-35@10'	Total/NA	Solid	8021B	17859

QC Association Summary

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

GC VOA (Continued)

Analysis Batch: 18095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-11	MW-35@15'	Total/NA	Solid	8021B	17859
885-17034-12	MW-35@28'	Total/NA	Solid	8021B	17859
885-17034-13	MW-36@30'	Total/NA	Solid	8021B	17859
885-17034-14	MW-36@47.5'	Total/NA	Solid	8021B	17859
885-17034-15	MW-36@55'	Total/NA	Solid	8021B	17859
MB 885-17859/1-A	Method Blank	Total/NA	Solid	8021B	17859
LCS 885-17859/3-A	Lab Control Sample	Total/NA	Solid	8021B	17859

GC Semi VOA

Prep Batch: 18005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	SHAKE	
885-17034-2	MW-33@25'	Total/NA	Solid	SHAKE	
885-17034-3	MW-33@30'	Total/NA	Solid	SHAKE	
885-17034-4	MW-34@25'	Total/NA	Solid	SHAKE	
885-17034-5	MW-34@20'	Total/NA	Solid	SHAKE	
885-17034-6	MW-34@28'	Total/NA	Solid	SHAKE	
885-17034-7	MW-32@15'	Total/NA	Solid	SHAKE	
885-17034-8	MW-32@20'	Total/NA	Solid	SHAKE	
885-17034-9	MW-32@27.5'	Total/NA	Solid	SHAKE	
885-17034-10	MW-35@10'	Total/NA	Solid	SHAKE	
885-17034-11	MW-35@15'	Total/NA	Solid	SHAKE	
885-17034-12	MW-35@28'	Total/NA	Solid	SHAKE	
885-17034-13	MW-36@30'	Total/NA	Solid	SHAKE	
885-17034-14	MW-36@47.5'	Total/NA	Solid	SHAKE	
885-17034-15	MW-36@55'	Total/NA	Solid	SHAKE	
MB 885-18005/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-18005/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 18344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	8015M/D	18005
885-17034-2	MW-33@25'	Total/NA	Solid	8015M/D	18005
885-17034-3	MW-33@30'	Total/NA	Solid	8015M/D	18005
885-17034-4	MW-34@25'	Total/NA	Solid	8015M/D	18005
885-17034-5	MW-34@20'	Total/NA	Solid	8015M/D	18005
885-17034-6	MW-34@28'	Total/NA	Solid	8015M/D	18005
885-17034-7	MW-32@15'	Total/NA	Solid	8015M/D	18005
885-17034-8	MW-32@20'	Total/NA	Solid	8015M/D	18005
885-17034-9	MW-32@27.5'	Total/NA	Solid	8015M/D	18005
885-17034-10	MW-35@10'	Total/NA	Solid	8015M/D	18005
885-17034-11	MW-35@15'	Total/NA	Solid	8015M/D	18005
885-17034-12	MW-35@28'	Total/NA	Solid	8015M/D	18005
885-17034-13	MW-36@30'	Total/NA	Solid	8015M/D	18005
885-17034-14	MW-36@47.5'	Total/NA	Solid	8015M/D	18005
885-17034-15	MW-36@55'	Total/NA	Solid	8015M/D	18005
MB 885-18005/1-A	Method Blank	Total/NA	Solid	8015M/D	18005
LCS 885-18005/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	18005

QC Association Summary

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

HPLC/IC

Analysis Batch: 17811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-17873/1-A	Method Blank	Total/NA	Solid	300.0	17873
LCS 885-17873/2-A	Lab Control Sample	Total/NA	Solid	300.0	17873

Prep Batch: 17873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	300_Prep	
885-17034-2	MW-33@25'	Total/NA	Solid	300_Prep	
885-17034-3	MW-33@30'	Total/NA	Solid	300_Prep	
885-17034-4	MW-34@25'	Total/NA	Solid	300_Prep	
885-17034-5	MW-34@20'	Total/NA	Solid	300_Prep	
885-17034-6	MW-34@28'	Total/NA	Solid	300_Prep	
885-17034-7	MW-32@15'	Total/NA	Solid	300_Prep	
885-17034-8	MW-32@20'	Total/NA	Solid	300_Prep	
885-17034-9	MW-32@27.5'	Total/NA	Solid	300_Prep	
885-17034-10	MW-35@10'	Total/NA	Solid	300_Prep	
885-17034-11	MW-35@15'	Total/NA	Solid	300_Prep	
885-17034-12	MW-35@28'	Total/NA	Solid	300_Prep	
885-17034-13	MW-36@30'	Total/NA	Solid	300_Prep	
885-17034-14	MW-36@47.5'	Total/NA	Solid	300_Prep	
885-17034-15	MW-36@55'	Total/NA	Solid	300_Prep	
MB 885-17873/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-17873/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 17905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-17034-1	MW-33@20'	Total/NA	Solid	300.0	17873
885-17034-2	MW-33@25'	Total/NA	Solid	300.0	17873
885-17034-3	MW-33@30'	Total/NA	Solid	300.0	17873
885-17034-4	MW-34@25'	Total/NA	Solid	300.0	17873
885-17034-5	MW-34@20'	Total/NA	Solid	300.0	17873
885-17034-6	MW-34@28'	Total/NA	Solid	300.0	17873
885-17034-7	MW-32@15'	Total/NA	Solid	300.0	17873
885-17034-8	MW-32@20'	Total/NA	Solid	300.0	17873
885-17034-9	MW-32@27.5'	Total/NA	Solid	300.0	17873
885-17034-10	MW-35@10'	Total/NA	Solid	300.0	17873
885-17034-11	MW-35@15'	Total/NA	Solid	300.0	17873
885-17034-12	MW-35@28'	Total/NA	Solid	300.0	17873
885-17034-13	MW-36@30'	Total/NA	Solid	300.0	17873
885-17034-14	MW-36@47.5'	Total/NA	Solid	300.0	17873
885-17034-15	MW-36@55'	Total/NA	Solid	300.0	17873

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-33@20'
Date Collected: 12/10/24 15:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 12:56
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 01:08
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 19:00
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 11:40

Client Sample ID: MW-33@25'
Date Collected: 12/10/24 15:15
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 13:18
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 01:30
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 19:10
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 11:50

Client Sample ID: MW-33@30'
Date Collected: 12/10/24 15:30
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 13:40
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 01:52
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 19:21
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 12:21

Client Sample ID: MW-34@25'
Date Collected: 12/11/24 11:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 14:02

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-34@25'
Lab Sample ID: 885-17034-4
Date Collected: 12/11/24 11:00
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 02:13
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 19:32
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 12:31

Client Sample ID: MW-34@20'
Lab Sample ID: 885-17034-5
Date Collected: 12/11/24 11:15
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 14:23
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 02:35
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 19:53
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 12:42

Client Sample ID: MW-34@28'
Lab Sample ID: 885-17034-6
Date Collected: 12/11/24 11:30
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 14:45
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 02:57
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:04
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 12:52

Client Sample ID: MW-32@15'
Lab Sample ID: 885-17034-7
Date Collected: 12/12/24 17:30
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 15:07
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 03:40

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-32@15'
Lab Sample ID: 885-17034-7
Date Collected: 12/12/24 17:30
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:14
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:02

Client Sample ID: MW-32@20'
Lab Sample ID: 885-17034-8
Date Collected: 12/12/24 17:25
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 15:29
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 04:02
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:25
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:13

Client Sample ID: MW-32@27.5'
Lab Sample ID: 885-17034-9
Date Collected: 12/12/24 17:35
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 15:51
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 04:24
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:36
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:23

Client Sample ID: MW-35@10'
Lab Sample ID: 885-17034-10
Date Collected: 12/12/24 18:00
Matrix: Solid
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 16:12
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 04:45
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:46

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-35@10'
Date Collected: 12/12/24 18:00
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:33

Client Sample ID: MW-35@15'
Date Collected: 12/12/24 17:55
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 16:34
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 05:07
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 20:57
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:44

Client Sample ID: MW-35@28'
Date Collected: 12/12/24 17:50
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 16:56
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 05:29
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 21:07
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 13:54

Client Sample ID: MW-36@30'
Date Collected: 12/13/24 14:10
Date Received: 12/14/24 07:30

Lab Sample ID: 885-17034-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 17:17
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 05:50
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 21:18
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 14:25

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Salty Dog Water Transfer

Job ID: 885-17034-1

Client Sample ID: MW-36@47.5'

Lab Sample ID: 885-17034-14
Matrix: Solid
Date Collected: 12/13/24 14:05
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 17:39
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 06:12
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 21:39
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 14:35

Client Sample ID: MW-36@55'

Lab Sample ID: 885-17034-15
Matrix: Solid
Date Collected: 12/13/24 14:00
Date Received: 12/14/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8015M/D		1	18085	AT	EET ALB	12/19/24 18:01
Total/NA	Prep	5030C			17859	AT	EET ALB	12/16/24 14:32
Total/NA	Analysis	8021B		1	18095	AT	EET ALB	12/19/24 06:34
Total/NA	Prep	SHAKE			18005	JM	EET ALB	12/18/24 09:14
Total/NA	Analysis	8015M/D		1	18344	DH	EET ALB	12/23/24 21:50
Total/NA	Prep	300_Prep			17873	JT	EET ALB	12/16/24 15:58
Total/NA	Analysis	300.0		20	17905	ES	EET ALB	12/17/24 14:46

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Hilcorp Energy
Job ID: 885-17034-1
Project/Site: Salty Dog Water Transfer

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-25-25

Chain-of-Custody Record

Client: Hilcorp Energy Company

Mailing Address:

Phone #:

email or Fax#: SHyde@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
5day
☑ Standard ☐ Rush

Project Name: Salty Dog Water Transfer

Project #: 07A1988013

Project Manager: Stuart Hyde

Sampler: W. Weichert

On Ice: ☑ Yes ☐ No mgp

# of Coolers: 2

Cooler Temp(including CF): 3.1 -0.3 = 2.8 (°C)
2.1 -0.3 = 1.8

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

885-17034 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE~~ / ~~TMB's (8021)~~	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl, F, Br, NO_3, NO_2, PO_4, SO_4)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/10/24	15:00	Soil	MW-33@20'	4oz glass	None	1	X	X					X			
12.10.24	15:15		MW-33@25'			2										
12.10.24	15:30		MW-33@30'			3										
12.11.24	11:00		MW-34@25'			4										
↓	11:15		MW-34@20'			5										
↓	11:30	↓	MW-34@28'			6										
12/12/24	1730		MW-32@15'			7										
↓	1725		MW-32@20			8										
↓	1735		MW-32@27.5			9										
↓	1800		MW-35@10			10										
↓	1755		MW-35@15			11										
↓	1750	↓	MW-35@28	↓	↓	12										

Analysis Request

Remarks:

Date	Time	Relinquished by:	Received by	Via	Date	Time
12/13/24	1516				12/13/24	1516
12/13/24	1748			courier	12/14/24	7:30

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

Chain-of-Custody Record

Client: Hilcorp Energy Company

Mailing Address:

Phone #:

email or Fax#: shyde@ensolum.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard 5day ☐ Rush

Project Name: Salty Dog Water Transfer

Project #: 07A1988013

Project Manager: Stuart Hyde

Sampler: S. Mahoney

On Ice: ☒ Yes ☐ No majo

# of Coolers: 2

Cooler Temp(Including CF): 3.1 - 0.3 = 2.8 (°C)

2.1 - 0.3 = 1.8 °C

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.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/13/24	1610	Soil	MW-37 @ 30	4oz glass x1	None	13	X	X					X			
	1605		MW-37 @ 47.5			14										
	1600		MW-37 @ 55			15										

Note: MW-37 was mislabeled in the field and is identified here in as MW-36.

12/13

Date	Time	Relinquished by:	Received by	Via	Date	Time
12/13/24	1516				12/13/24	1516
12/13/24	1745			courier	12/14/24	7:30

Remarks:

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

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-17034-1

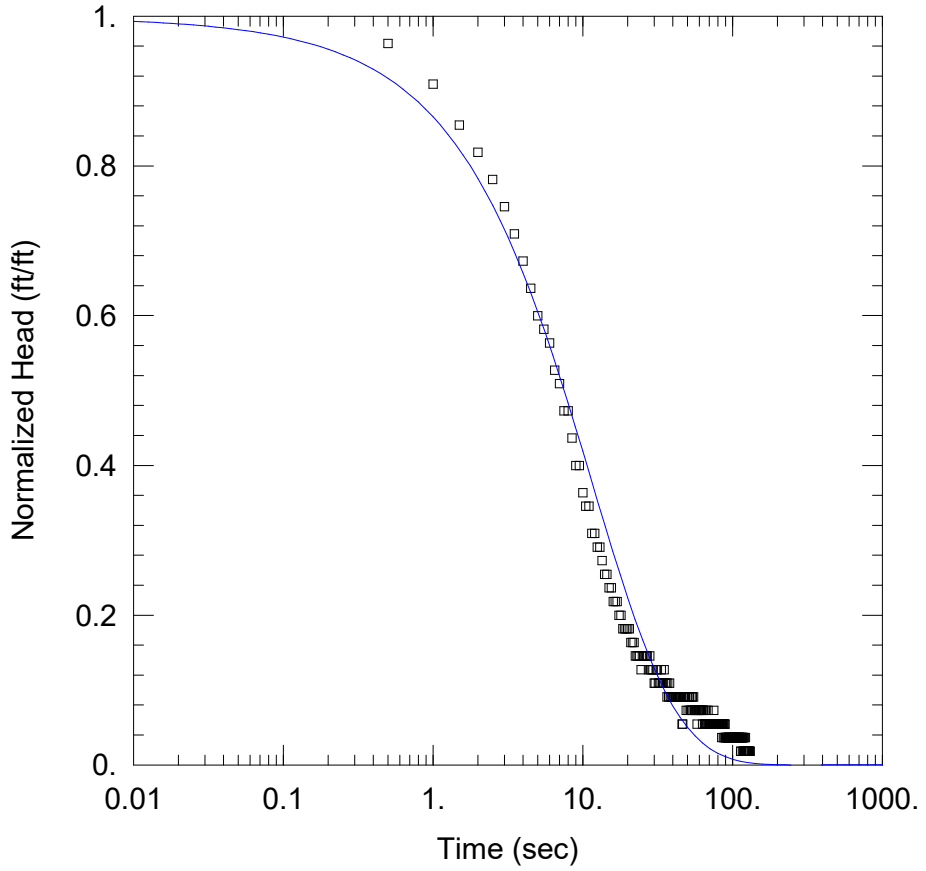
Login Number: 17034 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ENSOLUM

APPENDIX E

AQTESOLV Slug Test Output



MW-13 SLUG TEST 1

Data Set: C:\...\MW-13 Slug Out 1.aqt
Date: 08/18/25 Time: 10:14:29

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-13
Test Date: 7/31/2025

AQUIFER DATA

Saturated Thickness: 4.05 ft

WELL DATA (New Well)

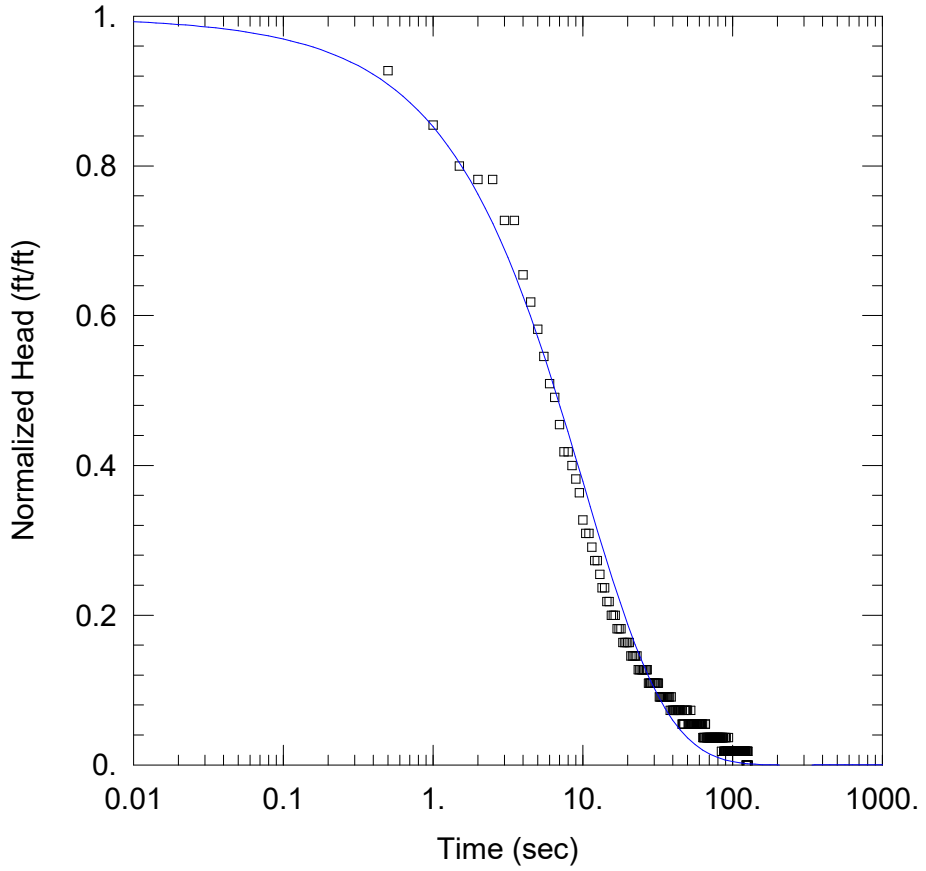
Initial Displacement: 0.55 ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 4.05 ft
Screen Length: 10. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.006121 cm/sec
Ss = 0.000154 ft^{-1}

Kz/Kr = 0.1



MW-13 SLUG TEST 2

Data Set: C:\...\MW-13 Slug Out 2.aqt
Date: 08/18/25 Time: 10:16:52

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-13
Test Date: 7/31/2025

AQUIFER DATA

Saturated Thickness: 4.05 ft

WELL DATA (New Well)

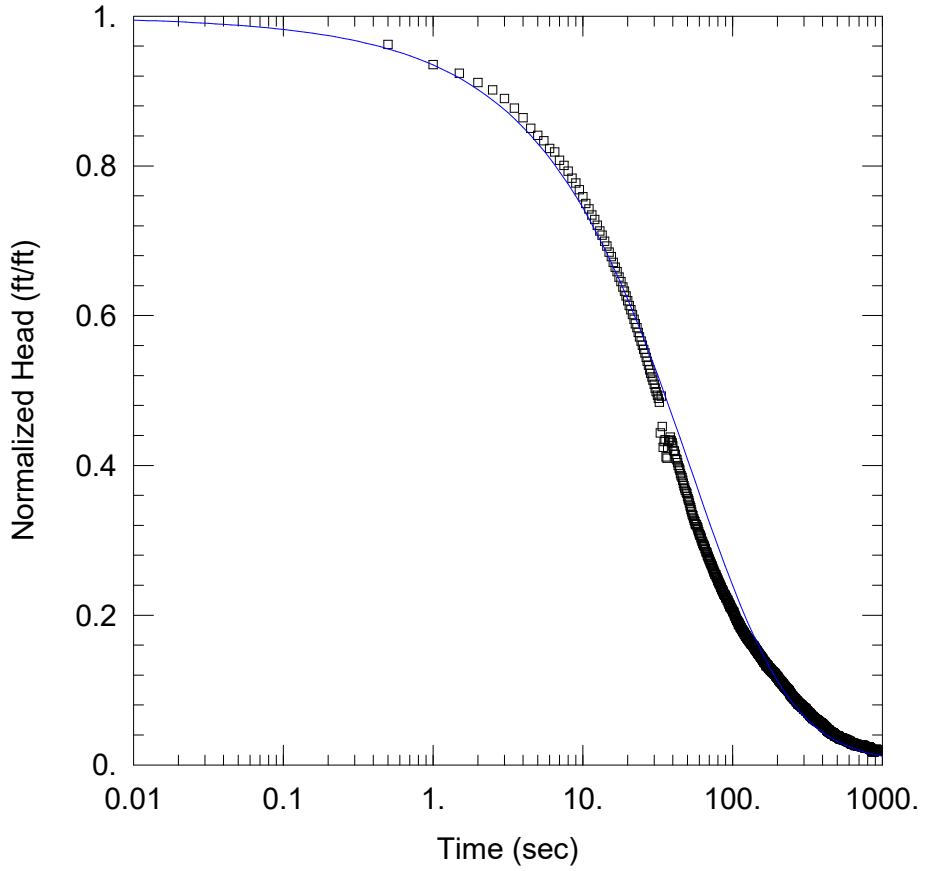
Initial Displacement: 0.55 ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 4.05 ft
Screen Length: 10. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.007055 cm/sec
Ss = 0.00015 ft^{-1}

Kz/Kr = 0.1



MW-28 SLUG TEST 1

Data Set: C:\...\MW-28 Slug Out 1.aqt
Date: 08/18/25 Time: 10:35:08

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-28
Test Date: 7/31/2025

AQUIFER DATA

Saturated Thickness: 7.87 ft

WELL DATA (New Well)

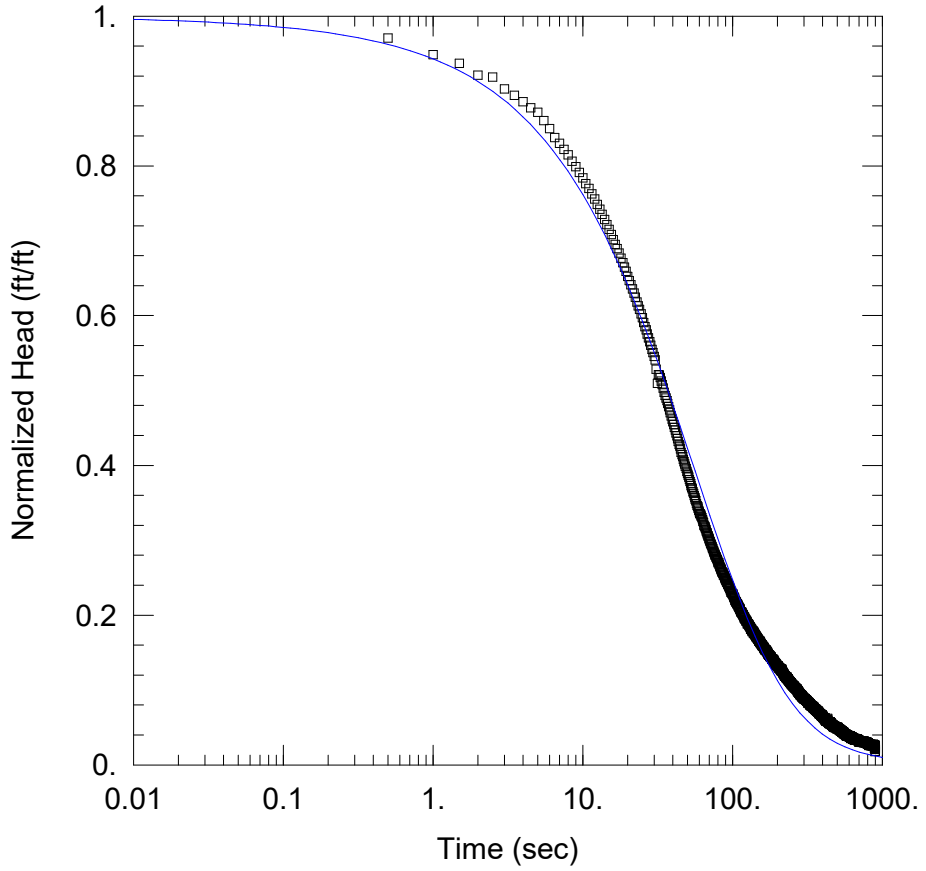
Initial Displacement: 1.99 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 7.87 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.0004984 cm/sec
Ss = 0.0003938 ft^{-1}

Kz/Kr = 0.1



MW-28 SLUG TEST 2

Data Set: C:\...\MW-28 Slug Out 2.aqt
Date: 08/18/25 Time: 10:35:20

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-28
Test Date: 7/31/2025

AQUIFER DATA

Saturated Thickness: 7.87 ft

WELL DATA (New Well)

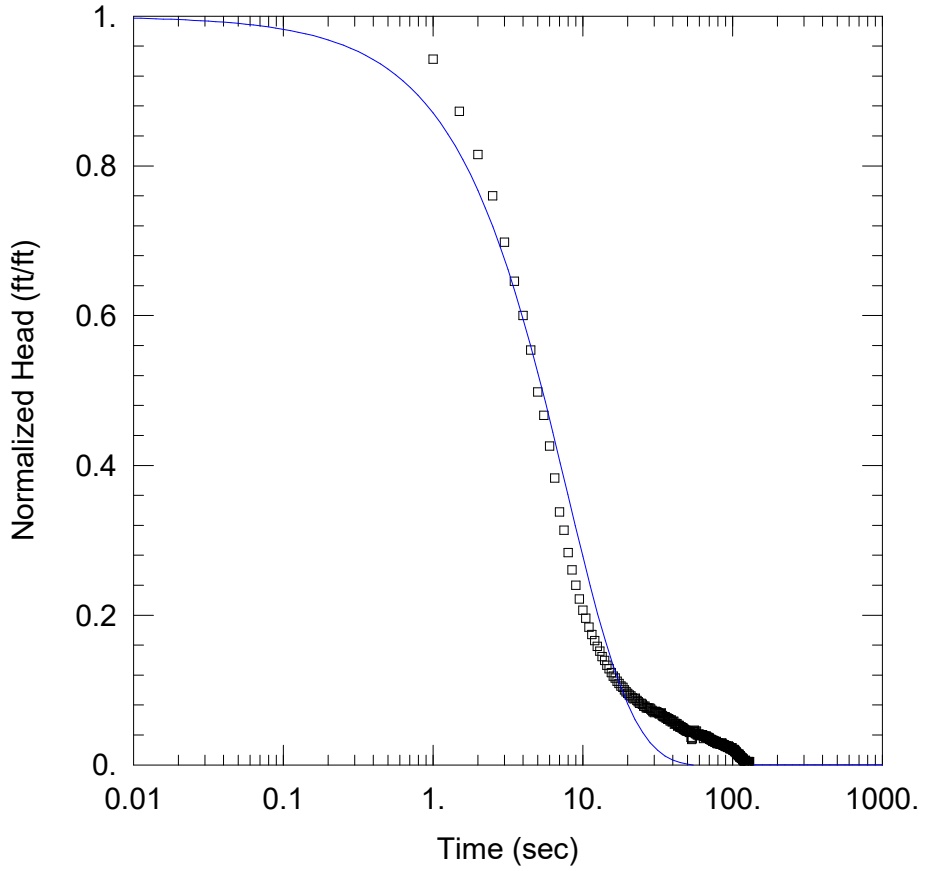
Initial Displacement: 2.1 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 7.87 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.000524 cm/sec
Ss = 0.0002502 ft^{-1}

Kz/Kr = 0.1



MW-33 SLUG OUT 1

Data Set: C:\...\MW-33 Slug Out 1.aqt
Date: 08/18/25 Time: 11:29:26

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-33
Test Date: 7/17/2025

AQUIFER DATA

Saturated Thickness: 7.38 ft

WELL DATA (New Well)

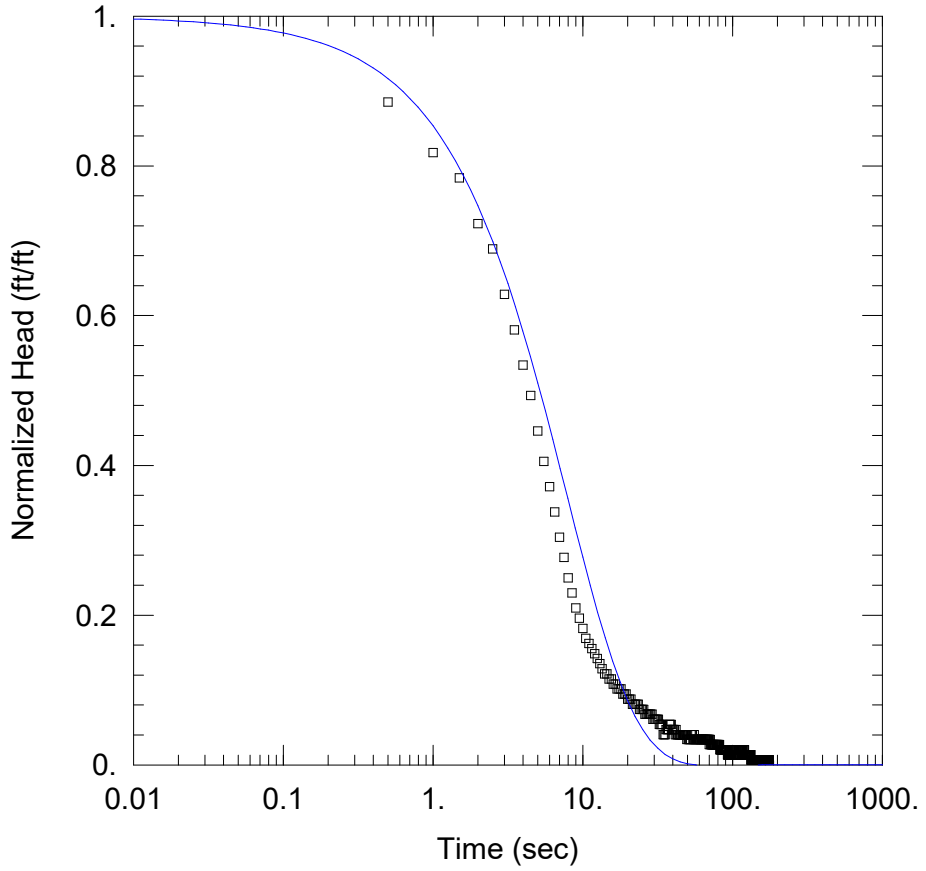
Initial Displacement: 1.25 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 7.38 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.007118 cm/sec
Ss = 9.816E-7 ft^{-1}

Kz/Kr = 0.1



MW-33 SLUG OUT 2

Data Set: C:\...\MW-33 Slug Out 2.aqt
Date: 08/18/25 Time: 11:29:36

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-33
Test Date: 7/17/2025

AQUIFER DATA

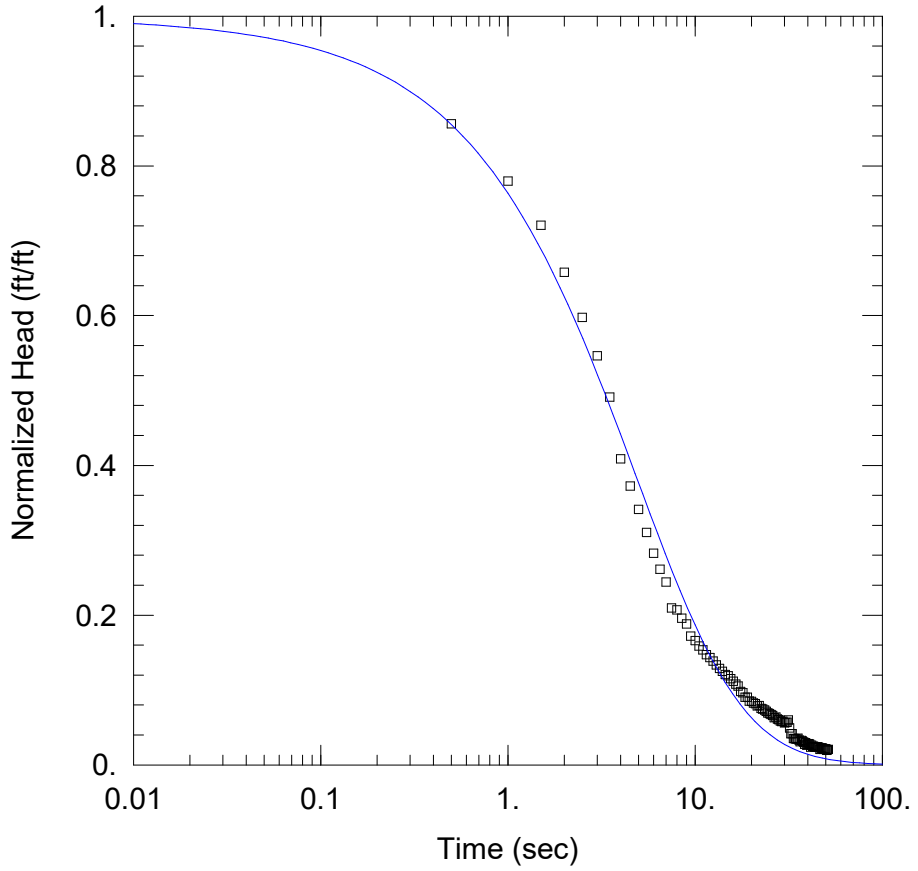
Saturated Thickness: 7.38 ft

WELL DATA (New Well)

Initial Displacement: 1.48 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 7.38 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 0.007129 cm/sec
Ss = 4.435E-6 ft^{-1}
Kz/Kr = 0.1



MW-34 SLUG TEST 1

Data Set: C:\...\MW-34 Slug Out 1.aqt
Date: 08/18/25 Time: 11:33:48

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-34
Test Date: 7/17/2025

AQUIFER DATA

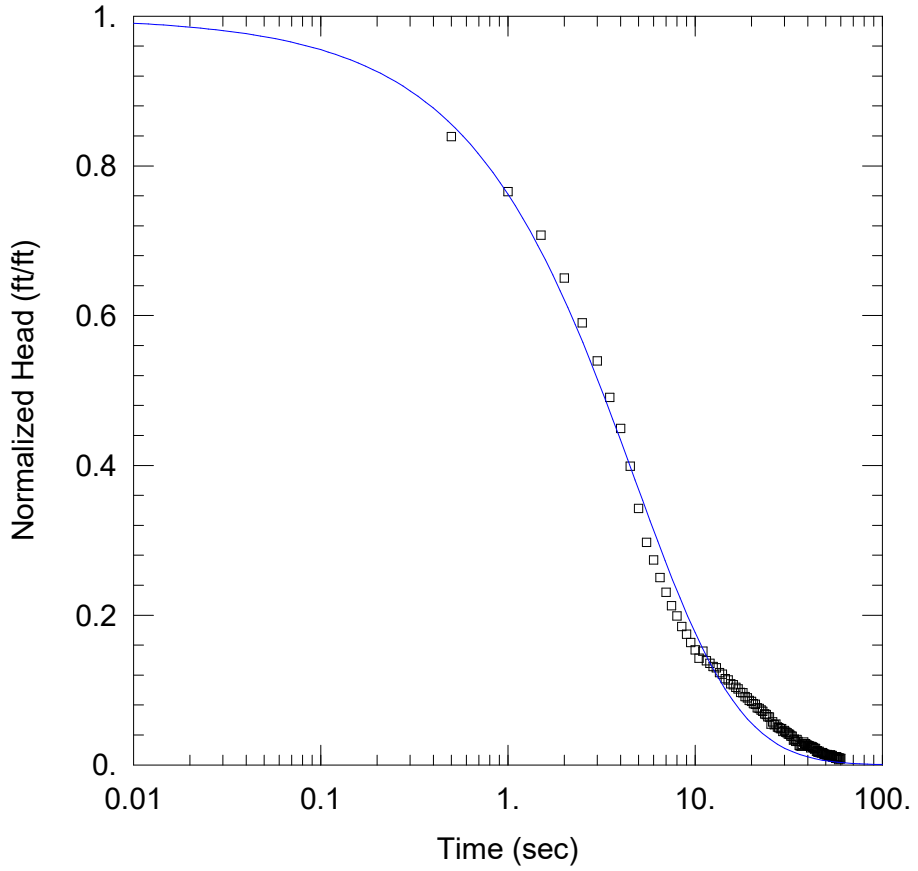
Saturated Thickness: 8.11 ft

WELL DATA (New Well)

Initial Displacement: 1.66 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 8.11 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 0.00811 cm/sec
Ss = 4.508E-5 ft^{-1}
Kz/Kr = 0.1



MW-34 SLUG TEST 2

Data Set: C:\...\MW-34 Slug Out 2.aqt
Date: 08/18/25 Time: 11:33:59

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-34
Test Date: 7/17/2025

AQUIFER DATA

Saturated Thickness: 8.11 ft

WELL DATA (New Well)

Initial Displacement: 1.66 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08333 ft
Static Water Column Height: 8.11 ft
Screen Length: 15. ft
Well Radius: 0.25 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 0.008637 cm/sec
Ss = 3.473E-5 ft^{-1}
Kz/Kr = 0.1

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APPENDIX F

Seepage Velocity Calculation

ENSOLUM

Seepage Velocity Calculation – Salty Dog Site

1) Darcy's Law for Specific Discharge (q):

$$q = K \times i$$

Where:

- K = hydraulic conductivity
  - Sitewide geometric mean: K = 3.76 × 10^{-3} cm/sec (K = 10.7 ft/day)
- i = hydraulic gradient
  - Hydraulic gradient between MW-13 and MW-34 = 0.004 ft/ft
- q = Darcy velocity (specific discharge)

q = (10.7 ft/day) × (0.004)

q = **0.0428 ft/day**

2) Calculate Seepage Velocity (v):

$$v = q / n_e$$

Where:

- n_e = effective porosity (assumed 0.25 for sand)

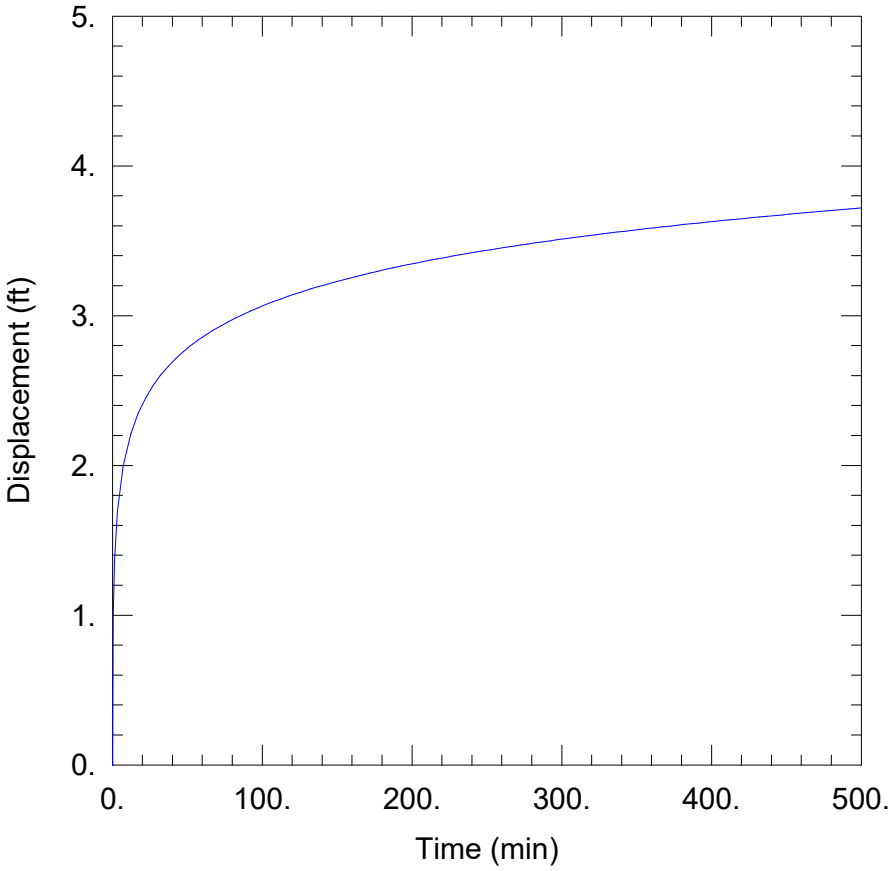
v = (0.0428 ft/day)/ (0.25)

v = 0.17 ft/day

ENSOLUM

APPENDIX G

AQTESOLV Forward Solution Output



MW-13 FORWARD SOLUTION

Data Set: C:\...\MW-13_Forward_Soln.aqt
Date: 09/15/25 Time: 15:14:34

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-13

AQUIFER DATA

Saturated Thickness: 4.05 ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
MW-13	0	0

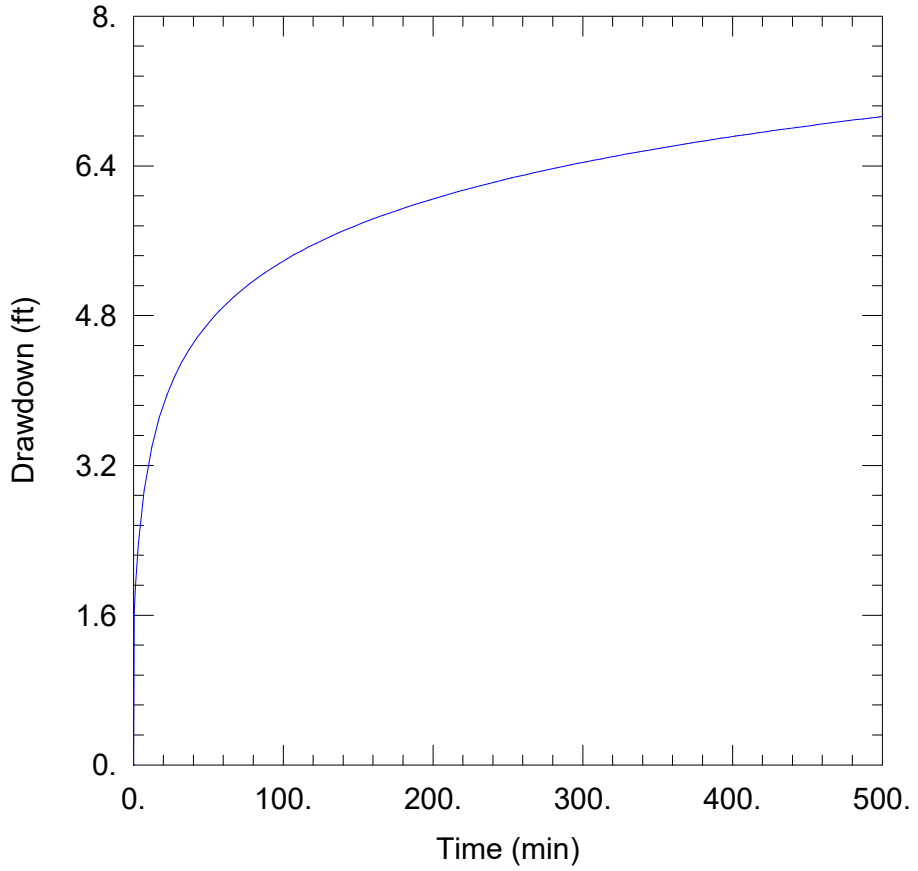
Observation Wells

Well Name	X (ft)	Y (ft)
▫ MW-13	0	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.81 cm^2/sec
S = 0.0006
Sy = 0.1
ß = 0.1



MW-28 FORWARD SOLUTION

Data Set: C:\...\MW-28_Forward_Soln.aqt
Date: 09/15/25 Time: 15:13:47

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-28

AQUIFER DATA

Saturated Thickness: 7.87 ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
MW-28	0	0

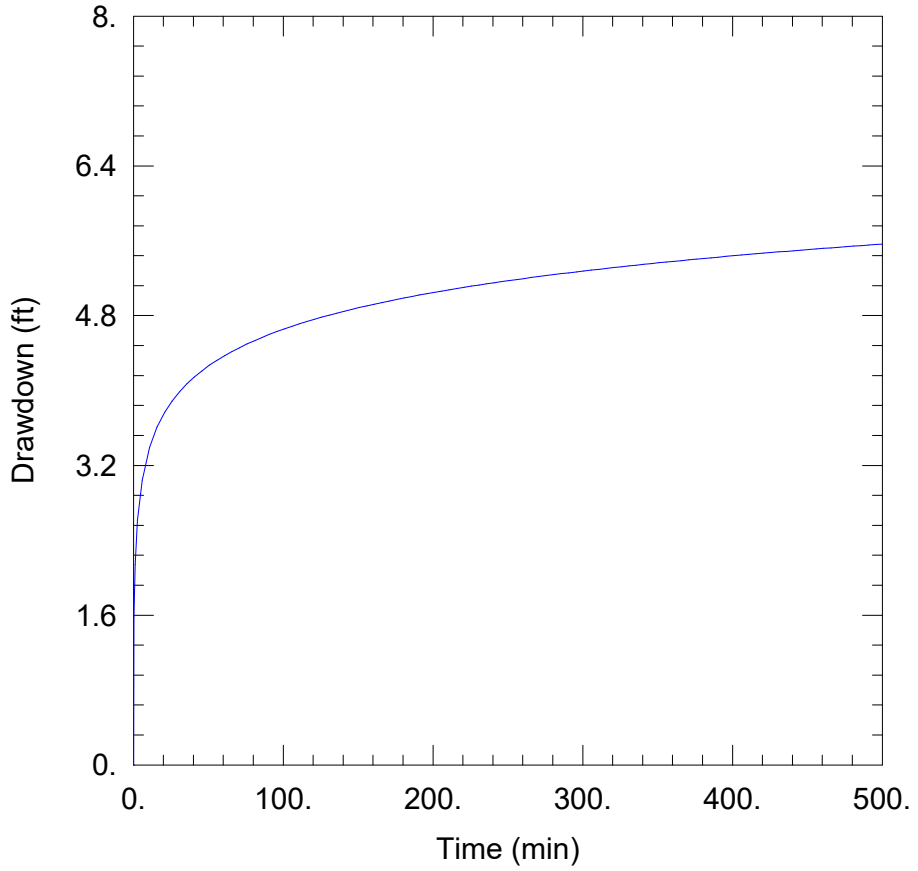
Observation Wells

Well Name	X (ft)	Y (ft)
▫ MW-28	0	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.12 cm^2/sec
S = 0.003
Sy = 0.1
ß = 0.1



MW-33 FORWARD SOLUTION

Data Set: C:\...\MW-33_Forward_Soln.aqt
Date: 09/15/25 Time: 15:14:01

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-33

AQUIFER DATA

Saturated Thickness: 7.38 ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
MW-33	0	0

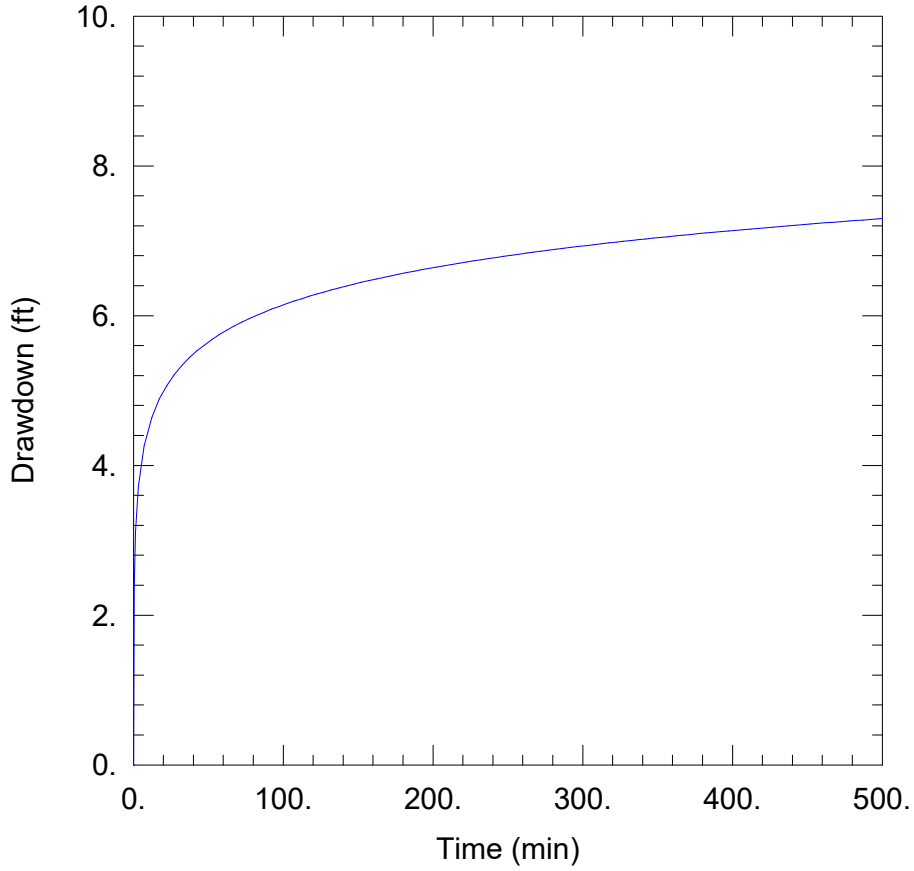
Observation Wells

Well Name	X (ft)	Y (ft)
▫ MW-33	0	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 1.6 cm^2/sec
S = 7.0E-5
Sy = 0.1
ß = 0.1



MW-34 FORWARD SOLUTION

Data Set: C:\...\MW-34_Forward_Soln.aqt
Date: 09/15/25 Time: 15:14:17

PROJECT INFORMATION

Company: Ensolum
Client: Hilcorp
Location: San Juan County, New Mexico
Test Well: MW-34

AQUIFER DATA

Saturated Thickness: 8.11 ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
MW-34	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ MW-34	0	0

SOLUTION

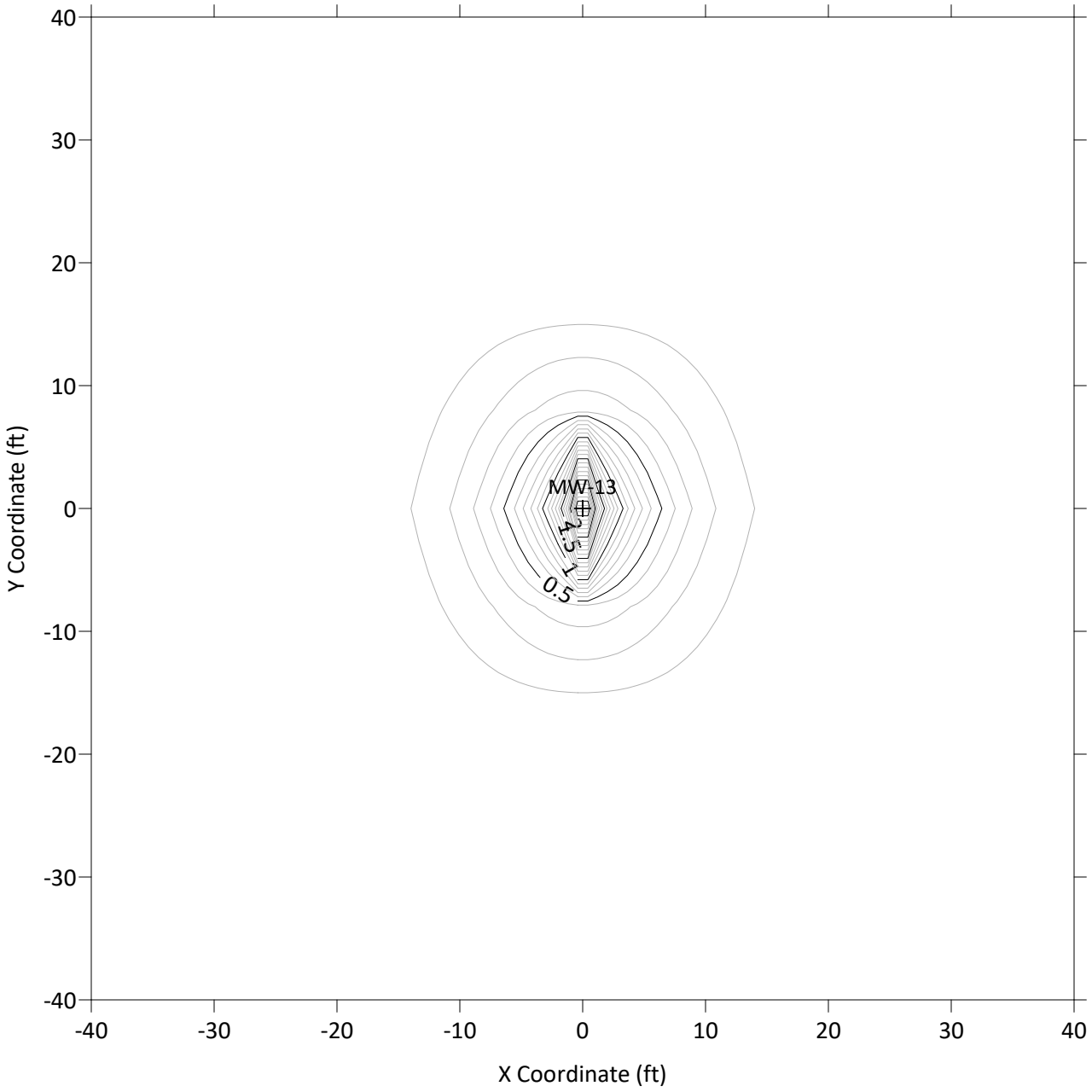
Aquifer Model: Unconfined
Solution Method: Neuman

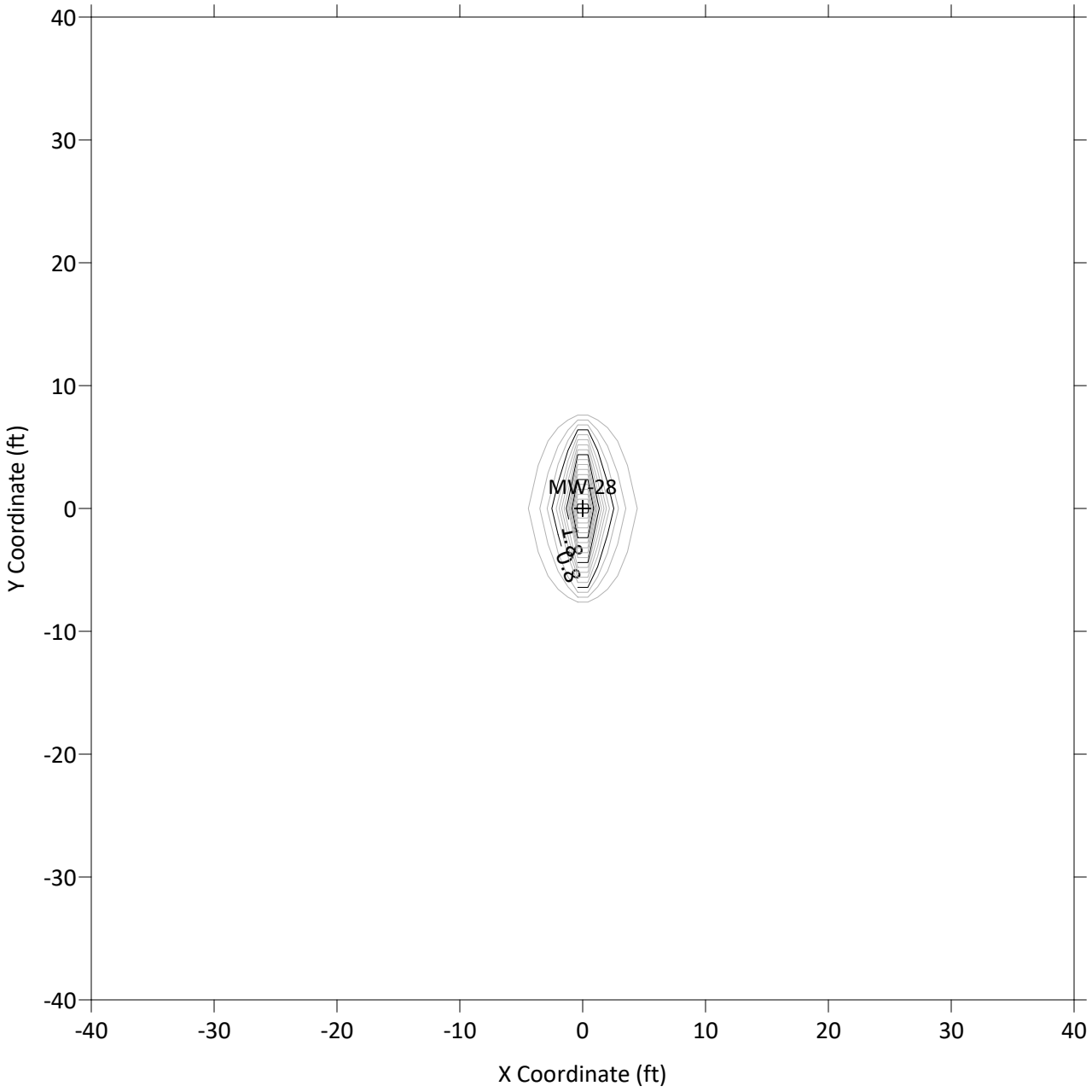
T = 2.3 cm^2/sec
S = 0.0004
Sy = 0.1
ß = 0.1

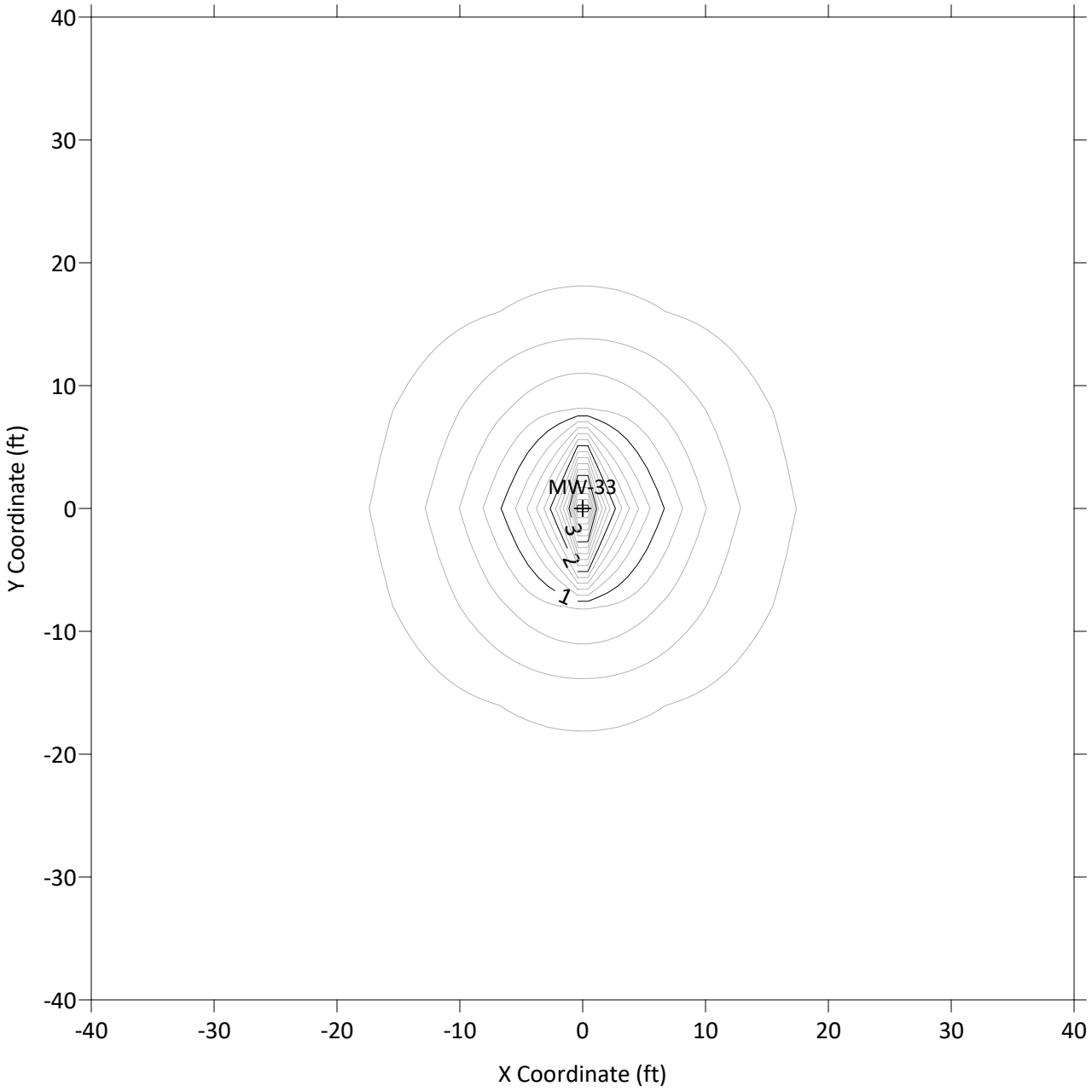
ENSOLUM

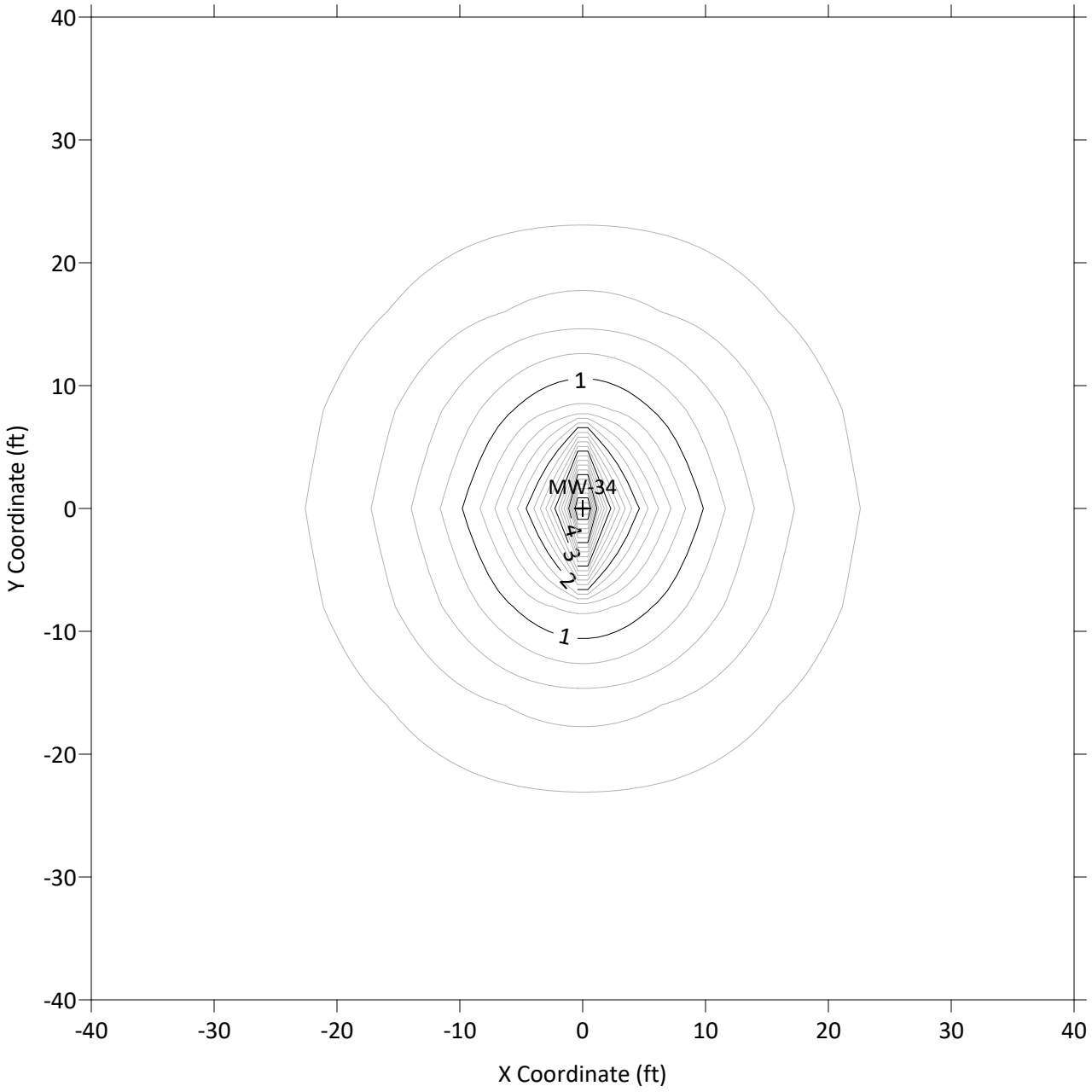
APPENDIX H

Radius of Influence (ROI) Plots


MW-13
0.5
1.0
1.5
Y Coordinate (ft)
X Coordinate (ft)
40
30
20
10
0
-10
-20
-30
-40
-40
-30
-20
-10
0
10
20
30
40


MW-28
1.0
0.8
40
30
20
10
0
-10
-20
-30
-40
-40
-30
-20
-10
0
10
20
30
40
Y Coordinate (ft)
X Coordinate (ft)


MW-33
3
2
1
Y Coordinate (ft)
X Coordinate (ft)
40
30
20
10
0
-10
-20
-30
-40
-40
-30
-20
-10
0
10
20
30
40


MW-34
1
2
3
4
1
Y Coordinate (ft)
X Coordinate (ft)
40
30
20
10
0
-10
-20
-30
-40
-40
-30
-20
-10
0
10
20
30
40

State of New Mexico
Energy, Minerals and Natural Resources Department

BY ELECTRONIC MAIL ONLY

August 18, 2026

Ivan Ramos
Hilcorp Energy Company
1111 Travis Street
Houston, TX 77002
ivan.ramos@hilcorp.com

RE: Hilcorp Energy Company, LP, Salty Dog Water Gathering System, Notice of a Stage 1 Abatement Plan Modification Proposal

Dear Mr. Ramos:

The New Mexico Energy, Minerals and Natural Resource Department's Oil Conservation Division (OCD) has reviewed OGRID 372171 Hilcorp Energy Company (Hilcorp) October 7, 2025, Stage 1 Abatement Plan (AP) Modification, Application ID 512896 submittal for Hilcorp's, Salty Dog Water Gathering System incident, ID# nCS1916853082.

Per 19.15.30.16 NMAC, OCD is required to notify Hilcorp of approval or notice of deficiency of the AP proposal. The Stage 1 Abatement Plan Modification has been approved with conditions of approval, see Application #512896 for a complete record of the required conditions on the OCD permitting website.

The public may view a copy of the Stage 1 Abatement Plan Modification and the conditions of approval online from OCD permitting under incident ID# nCS1916853082 at http://www.emnrd.state.nm.us/ocd/.

If Hilcorp has any questions or concerns regarding this letter, please contact Ashley Maxwell at (505) 635-5000 or Ashley.Maxwell@emnrd.nm.gov.

Respectfully,

Rosa M Romero

Rosa Romero
Environmental Bureau Chief

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

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 512896
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Stage I Abatement Plan Modification approved with the following conditions listed below:	8/12/2026
amaxwell	All groundwater samples will be analyzed according to all constituents in 20.6.2.3103 NMAC Pursuant to 19.15.30.9.B(2) NMAC. Operators may request to reduce sampling constituents based upon results.	8/12/2026
amaxwell	Request to reduce groundwater analytes to be reduced at this time to chloride, sulfate, and TDS, is denied pending the outcome of the requested sampling of all constituents in 20.6.2.3103 NMAC Pursuant to 19.15.30.9.B(2) NMAC	8/12/2026
amaxwell	A reduction in sampling groundwater analytes can be requested after the first quarter sampling event. This request must be submitted as a standalone document.	8/12/2026
amaxwell	Sampling and monitoring events will be conducted and reported to the OCD on a quarterly schedule.	8/12/2026
amaxwell	Submit a Stage 2 Abatement plan by December 11, 2026.	8/12/2026
amaxwell	In the event that the release site was not fully delineated during the 120-day time frame, submit an extension request including the location of current monitoring wells, the proposed location of additional monitor wells, and a time schedule of additional delineation activities. Quarterly monitoring events are to continue.	8/12/2026