CityCentre Four
840 West Sam Houston Parkway North
Suite 600
Houston, Texas 77024

T +1 281 600 1000
F +1 281 520 4625

erm.com

Louisiana Department of Energy and Natural Resources
Office of Conservation - Injection & Mining Division
Gavin Broussard, Interim Director
617 North Third Street, LaSalle Building
Baton Rouge, Louisiana 70802-5431

DATE
18 February 2025

SUBJECT
10th Analytical Data Submittal
Sulphur Mines Dome
Calcasieu Parish, Louisiana

REFERENCE
0765886

Dear Mr. Broussard:

On behalf of Westlake US 2, LLC (Westlake), Environmental Resources Management Southwest, Inc. (ERM) is pleased to provide the Louisiana Department of Energy Natural Resources Injection & Mining Division(LDENR IMD) with a summary of field sampling activities, data evaluation, and final laboratory analytical reports for groundwater, surface water, gas, and oil samples collected at the Sulphur Mines Dome in Calcasieu Parish during the 4th Quarter 2024.

Only final laboratory reports received since the previous data submittal are provided in Attachment 1. Supplemental submittals will be made as additional final laboratory analytical data are received. The field notes recorded during sampling are included as Attachment 2.

1. WATER SAMPLING RESULTS

From October through December 2024, additional samples of groundwater and surface water were collected on a monthly basis. The sampling locations are shown on Figures 1-2. The water samples were analyzed by ALS Global laboratory in Houston, Texas, a Louisiana Environmental Laboratory Accreditation Program (LELAP)-accredited laboratory. Dissolved gas samples were submitted to and analyzed by Isotech, a Stratum Reservoir Company in Champaign, Illinois. All samples were hand delivered or shipped under proper Chain-of-Custody in laboratory-supplied containers with appropriate preservative and handling requirements.

1.1 WATER WELL SAMPLING AND RESULTS

Monthly groundwater samples continue to be collected from the industrial water wells operated by Westlake, as well as the Cottages Well (019-17636Z) located west of Cavern 7 (see Figure 1). An attempt is made to sample all water wells during the sampling events. However, periodically the water wells are not in operation, or not accessible, and not able to be sampled during the sampling events due to operating requirements, maintenance, or other mechanical or electrical issues.

At each water well, water was allowed to flow for several minutes prior to sampling. Field parameters, i.e., pH, specific conductivity (SC), oxidation-reduction potential (ORP), and temperature, were recorded with a hand-held meter at the time of sampling. The groundwater analytical data to date are summarized in Table 1.

Reported constituent concentrations have generally been consistent since sampling began in January 2023. Groundwater chloride trend graphs for the Chicot aquifer are provided as Figures 3-4. Concentrations reported in samples from the water wells have consistently been below their respective RECAP screening standards (GWSS) or EPA Secondary Maximum Contaminant Limits (SMCL), except for naturally occurring iron and manganese. Except for the few minor TPH fraction detections, the volatile organic compounds have been reported as not detected in the water wells since January 2023.

A Piper diagram depicting the water quality of multiple groundwater samples is provided as Figure 5. The Piper diagram illustrates the differences between the Chicot aquifer water and the produced water and brine. The industrial water wells ("500-foot" sand) and the Cottages well ("700-foot" sand) have consistently plotted in tight clusters, with the "500-foot" and "700-foot" sands having slightly different water quality signatures, both distinctly different from the produced water or brine. The data do not indicate mixing between the brine or produced water is occurring at the industrial water wells or Cottages Well.

1.2 MONITORING WELL SAMPLING AND RESULTS

The monitoring wells have been sampled on a monthly schedule beginning in March 2024. The pump intake is set in the middle of the screened interval. During pumping, water quality parameters (pH, specific conductance, oxidation-reduction potential, dissolved oxygen, temperature, and turbidity) were monitored along with the drawdown in the well to ensure a representative sample was collected from the aquifer. Once the water quality parameters have stabilized, a sample is collected. The analytical data from the monitoring well samples are provided on Table 1.

Constituents are generally reported below their respective GWSS or SMCL standards with elevated naturally occurring iron and manganese, consistent with the on-site water wells. Trend graphs of the chloride concentrations within the monitoring wells are provided as Figures 3-4. Elevated chloride concentrations reported in MW-3-500 and MW-3-700 are shown on Figure 4.

Arsenic continues to be reported slightly above the GWSS in MW-1-200 with stable concentrations. Arsenic at a similar concentration was also reported in residential water 019-13434Z, screened in the "200-foot" sand. Arsenic is known to be present in alluvial aquifers in South Louisiana, especially where finer-grained sediments are present. These arsenic concentrations are believed to be representative of naturally occurring conditions.

At the MW-3 well cluster, chloride and TDS remain above their SMCLs in MW-3-500 and MW-3-700 at concentrations consistent with previous samples. Barium is reported above the GWSS in MW-3-700 at stable concentrations. At MW-3-500, low levels of benzene, toluene, and light hydrocarbons (Aliphatics >C6-C8) had been detected in almost every sampling event but remain at concentrations below the GWSS.

As shown on the Piper diagram (Figure 5), the data for MW-1-200, MW-1-500, MW-1-700, MW-3-500, and MW-3-700 plot in tight clusters and have been consistent over time. However, the water quality of the other monitoring wells (MW-2-200, MW-2-500, MW-2-700, and MW-3-200) has changed somewhat over time. The following is a discussion of the water quality changes observed in these monitoring wells.

1.2.1 MW-2-200

MW-2-200 has had a change in few water quality parameters since the beginning of sampling in January 2024. A Piper diagram for MW-2-200 is provided as Figure 6. Chloride, sodium, and TDS, the major constituents of concern when evaluating brine impacts, have remained stable, or even slightly decreased over time. The majority of other constituent concentrations have also remained stable, and with a few minor exceptions BTEX and hydrocarbons have not been detected. There is no indication that brine or produced water is impacting MW-2-200.

The water quality changes are primarily associated with sulfate and total alkalinity (bicarbonate + carbonate) concentrations. Trend graphs for sulfate and total alkalinity are provided as Figure 7.

While the mechanism for the water quality change is not known, the most likely is microbial sulfate-dependent anaerobic methane oxidation (S-DAMO) (Cui, et al., 2014). In a general sense, methane is oxidized to form bicarbonate (HCO_3^-) and sulfate is reduced to bisulfide (HS^-). The increasing levels of total alkalinity in the water with an associated decrease in sulfate is indicative that this process is occurring. The absence of sulfide in the water could be a result of the formation and precipitation of insoluble sulfide minerals.

The water quality changes in MW-2-200 appear to be natural process that are occurring within the well.

1.2.2 MW-2-500

Similar to MW-2-200, MW-2-500 has exhibited a change in a few water quality parameters, with no indication of brine or produced water impacts. Chloride, sodium, and TDS concentrations have all remained stable and below the secondary MCLs. Unlike MW-2-200, nearly all other major cations have decreased over time, with the exception of potassium which has seen a substantial increase. While chloride has remained stable, sulfate concentration has decreased over time.

Also observed is an increase in pH over time. Due to the pH change, carbonate (CO_3^{2-}) has become the dominant species over bicarbonate. Overall, the total alkalinity has slightly increased.

The water quality change occurred abruptly, between May 2024 and June 2024 monthly sampling events. Concentrations have been consistent since July 2024. A likely explanation for the change is that it took a few months for the well to equilibrate with the aquifer following installation. Per USEPA, "*wells can require a considerable length of time to equilibrate with the aquifer after construction and development*" (USEPA, 2018).

This well was originally installed and sampled in January 2024. Subsequently, the well was pulled and reinstalled in the same location to increase the grout depth. The original sampling data are more similar to the current concentrations with higher pH and potassium, and lower calcium and barium. Water from the industrial wells was used to install the monitoring wells, and the early samples collected after the re-installation are more similar to the industrial water wells located off the dome and plot along a potential mixing line between the industrial well water and the initial water sample (Figure 8). Looking at the piper diagram on Figure 8, the evolution of water quality from the original sample to the current samples can be explained by sulfate reduction. However, the evolution from the initial sample to the early re-installation samples, then to the current samples is much more difficult to explain. It is most likely that the water in the well following well re-installation had not yet had enough time to equilibrate with the aquifer. Trend graphs for calcium, potassium, and pH are provided as Figure 9 to illustrate the significant change in water quality following the well re-installation.

Sulfate concentrations continue to steadily decrease along with a slight increase in total alkalinity concentration. Sulfate reduction (S-DAMO) is the most likely cause for the decrease in sulfate concentrations.

1.2.3 MW-2-700

MW-2-700 exhibited a similar water quality change to MW-2-500 where the major cations and anions decreased between two monthly sampling events, in this case between June 2024 and July 2024. A Piper diagram of the MW-2-700 data is provided as Figure 10. The data plot in two distinct clusters - pre-July 2024, and post-July 2024. The largest decreases were with barium, calcium, strontium, chloride, and sulfate. Total alkalinity and iron concentrations have slightly increased. Potassium and sodium have remained stable since the first sample collected in March 2024, and pH has also remained stable. There is no indication that brine or produced water are impacting MW-2-700.

The simplest explanation for the sudden change in water quality is that it took several months for the well and aquifer to equilibrate. Several cations concentration tends are plotted on Figure 11 to illustrate the sudden water quality change. Concentrations have

been stable since July 2024. Decreasing sulfate and increasing alkalinity are likely a result of S-DAMO occurring.

1.2.4 MW-3-200

A Piper diagram for MW-3-200 is provided as Figure 12. The majority of constituents at MW-3-200 are stable. In contrast to the data from the MW-2 wells, here cations including barium, calcium, magnesium, and strontium, have shown slight increases over time. However, chloride and sodium remain stable to slightly decreasing. There is no indication that brine or produced water is impacting MW-3-200. As with the other wells, the change in cations is likely a result of delayed equilibration with the aquifer, occurring a few months after installation. The most recent data suggest that water quality parameters have stabilized.

Sulfate has also exhibited a significant decrease over time, accompanied by an increase in total alkalinity. This is most likely attributed to S-DAMO. Trend graphs for sulfate and total alkalinity are provided as Figure 13.

1.2.5 HYDROGEN SULFIDE

Periodically and sporadically, dissolved hydrogen sulfide (H_2S) has been reported in samples from the monitoring wells. Commonly, sulfate-reducing bacteria within the groundwater or the well can generate hydrogen sulfide in wells through reduction of sulfate in anaerobic conditions. Sulfate concentrations are gradually decreasing over time in all monitoring wells and are expected to eventually stabilize. H_2S levels would likely stabilize once the sulfate concentrations stabilize. H_2S will continue to be monitored.

1.3 SURFACE WATER SAMPLING RESULTS

In October, November, and December 2024, Surface water samples were collected from the Central Lake, Salt Lake (LDNR 26), Brine Well 7B vault (PPG 7B BS), and the water body adjacent to Brine Well 4 (LDNR 9, and LDNR 19). The sampling locations are shown on Figure 2. Surface water sample data is summarized in Table 2.

During that 4th Quarter 2024, chloride concentrations in Central Lake were consistent with expected seasonal levels. The site received normal expected rainfall during those months. The concentrations will continue to be monitored over time. The Central Lake is generally homogeneous, with minor variations in water quality between sampling locations.

1.3.1 CENTRAL LAKE WATER COLUMN PROFILE

Field readings from the Central Lake water column are continuing on a weekly basis. The profile data collected from the monitoring station are provided in Table 3. Trend graphs of the field measured TDS compared with water depth is shown on Figure 14. Laboratory reported TDS confirms the general trend observed in the field data. The water quality within the Central Lake was generally consistent during the 4th Quarter of 2024. There appear to be fluctuations in water quality which can be attributed to water level in the lake and reflective of rainfall received. The surface water will

continue to be monitored to evaluate changes over time, which appear to vary with water level changes.

2. GAS SAMPLING RESULTS

The majority of submerged bubbles sites were successfully sampled using a water-displacement technique. At the few submerged bubble sites that do not exhibit visible bubbling, dissolved gas samples are collected. The gas data are summarized in Table 4 and sampling locations are shown on Figures 1 and 2.

Dissolved gas samples continue to be collected from the water wells and monitoring wells on a monthly basis (Table 4). Over time the methane levels have increased in the "500-foot" sand monitoring wells. The dissolved gas samples collected from the industrial water wells and Cottages well typically have low levels of gas limiting the ability to evaluate the isotopic ratios. Often there is enough gas to evaluate the carbon isotopic rations ($\delta^{13}C$) but insufficient gas to determine the hydrogen/deuterium ratio (δD). The monitoring wells installed on the salt dome have sufficient quantities of dissolved gas and isotopes can be readily evaluated.

Several identified bubbles sites (LDNR-10, 27, 28, and PPG-07A) are typically dry, and are difficult to locate. Gas samples were collected at these locations using a methane detector to identify the likely bubble location. The gas samples were collected via a hand pump and funnel surrounded with modeling clay in order to limit atmospheric contamination. These samples typically have significant atmospheric gas present in the samples.

2.1 METHANE ISOTOPES

The methane isotopic data have been plotted on Figure 15 for comparison with other gas samples collected. In general, the methane isotopic data have been consistent over time with the gas from the caverns, oil wells, and bubble sites plot as thermogenic gas. The gas within the "500-foot" and "700-foot" sands of the Chicot aquifer has a biogenic signature. However, MW-3-500 has a thermogenic signature, more similar to the bubble sites and cavern wells. Gas samples from the "200-foot" sand plot in the thermogenic gas range and appear to be different both compositionally and isotopically than the gas in the deeper Chicot sands, but distinctly different than the bubble sites. The gas in the "200-foot" sand falls along a line that could potentially indicate mixing of microbial and thermogenic gases.

MW-3-500 is unique in both gas and water quality data. This is the only well with benzene detected consistently and has a much higher chloride concentration than would be expected for the "500-foot" sand. It also has an elevated water temperature. The methane isotopes plot in a distinct cluster that is different from the rest of the gas data.

Three bubble sites (LDNR-07, 08, and 12) plot in a distinctly different cluster than the rest of the gas data collected from bubble sites. Also, LDNR-25 plots much differently

than the other bubble sites. These four bubble sites are located near each other and have low gas flux rates. The gas composition at these locations is similar, which could indicate that these bubble sites share a similar origin. Based on Figure 15, there is a possibility that these bubble sites have a component of gas found within the "200-foot" Chicot sand.

2.2 GAS COMPOSITION

The composition of the gas varies within the samples collected throughout the salt dome. Pie charts of the minor hydrocarbons (ethane – hexane+) are provided on Figure 16 for comparison. The gas compositions at the majority of the bubble site have remained consistent and exhibited very little to no variation over time.

There are no consistent gas composition patterns that can be attributed to a single source. While there are subsets of samples that have similar enough compositions to be grouped together, spatially these samples are not necessarily indicative of the same source as they appear randomly distributed throughout the site. The inconsistency and apparent randomness of the gas samples would suggest that there are different sources that are naturally heterogeneous.

2.3 HYDROGEN SULFIDE

During the 4th Quarter 2024, gas collected from the bubble sites was evaluated for H_2S. Samples were submitted to SPL for analysis. The H_2S data are summarized on Table 4. H_2S at the majority of the bubble sites was not detected or was reported at very low concentrations. However, a few bubble sites exhibited elevated levels of H_2S, including LDNR-03, 04, 17, 19, and 24. H_2S was not detected in ambient air at the site.

3. OIL SAMPLING RESULTS

An oil sample was collected from Cavern 7 in December 2024. The oil sample results are summarized on Table 5. Additional volume was sent for environmental forensics evaluation, and those results will be evaluated and reports by others. The oil data for Cavern 7B has remained consistent over time and is lighter (less dense) than the oil produced on the flanks of the dome.

4. POTENTIOMETRIC SURFACE

Groundwater levels are recorded during each sampling event prior to sampling. Before the water level is recorded, each well is opened and allowed to equilibrate with atmospheric pressure. The water level measurements and survey data are provided on Table 6.

Potentiometric surface contour maps for the three Chicot sand intervals from October through December are provided as Figures 17-25. Because of the elevated TDS in MW-3-500 and MW-3-700 wells, the groundwater elevations have been corrected for density to equivalent freshwater head (EFWH) [Post, et al., 2007]. The groundwater in

the "200-foot" sand appears to be flowing toward the southeast with high water levels reported in the MW-1-200 well. In both the "500-foot" sand, and the "700-foot" sand the groundwater flow direction appears to be toward the southwest, toward the industrial water wells. This flow regime for all three sand zones has been consistent since the monitoring wells were installed. Groundwater levels will continue to be recorded on a regular basis.

A hydrograph of the water levels in the monitoring wells is provided as Figure 26. The similarity in water elevation and the response consistency between the "500-foot" and the "700-foot" wells indicates that these units are hydraulically connected, consistent with the materials logged during well installation. It is evident from the potentiometric surface maps that the "500-foot" and "700-foot" sands are influenced by the continuous pumping from the industrial water wells. The water levels at MW-2-200 and MW-3-200 may be influenced by the industrial water wells as the water levels generally follow the same trend as the "500-foot" and "700-foot" wells. The MW-1-200 water level follows a different trend than the other "200-foot" monitoring wells, which may be a result of a local recharge boundary or less influence from pumping.

5. SCHEDULE

Sampling is currently scheduled to continue on a monthly basis. LDENR will be notified at least five business days prior to the start of sampling. Analytical data will continue to be provided to LDENR within 48-hours of receipt of the final report.

Reporting will continue on a quarterly basis. The next report will be prepared following the 1st Quarter 2025 sampling events and is expected to be submitted in May 2025 after all analytical data are received.

Should you have any questions or need additional information, please contact us at scott.himes@erm.com and david.upthegrove@erm.com.

Sincerely,

Environmental Resources Management Southwest, Inc.

Scott A. Himes, P.G.
Senior Hydrogeologist

David C. Upthegrove, P.G.
Partner

REFERENCES CITED

Cui, M., M. Anzhou, Q. Hongyan, Z. Xuliang, and G. Zhuang, 2014, *Anaerobic oxidation of methane: an "active" microbial process*, MicrobiologyOpen, Vol 4, Iss 1, pp. 1-11.

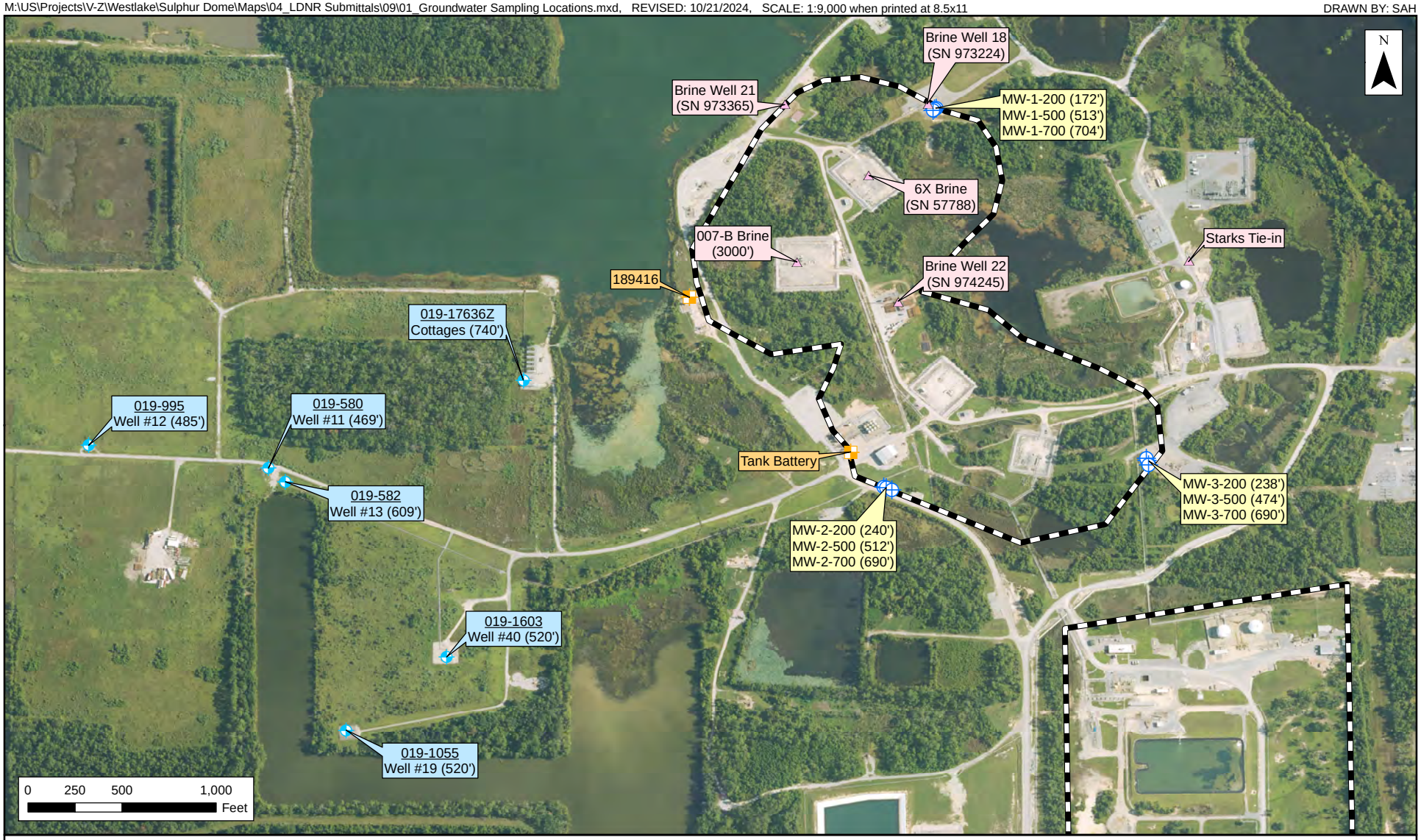
Post, V., H. Kooi, and C. Simmons, 2007, *Using hydraulic head measurements in variable-density ground water flow analyses*, Groundwater, Vol 45, Iss 6, pp. 664-671.

USEPA, 2018, *Design and Installation of Monitoring Wells*, SESDGUID-101-R2, 33 pp.

FIGURES

List of Figures:

M:\US\Projects\V-Z\Westlake\Sulphur Dome\Maps\04_LDNR Submittals\09\01_Groundwater Sampling Locations.mxd, REVISED: 10/21/2024, SCALE: 1:9,000 when printed at 8.5x11 DRAWN BY: SAH



Legend

- Water Well Sample Location
- Monitoring Well Sample Location
- Produced Water Sample Location
- Brine Sample Location
- Westlake Property

Notes:
2023 NAIP imagery via USDA.

Figure 1
Groundwater Sampling Locations
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; GCS North American 1983

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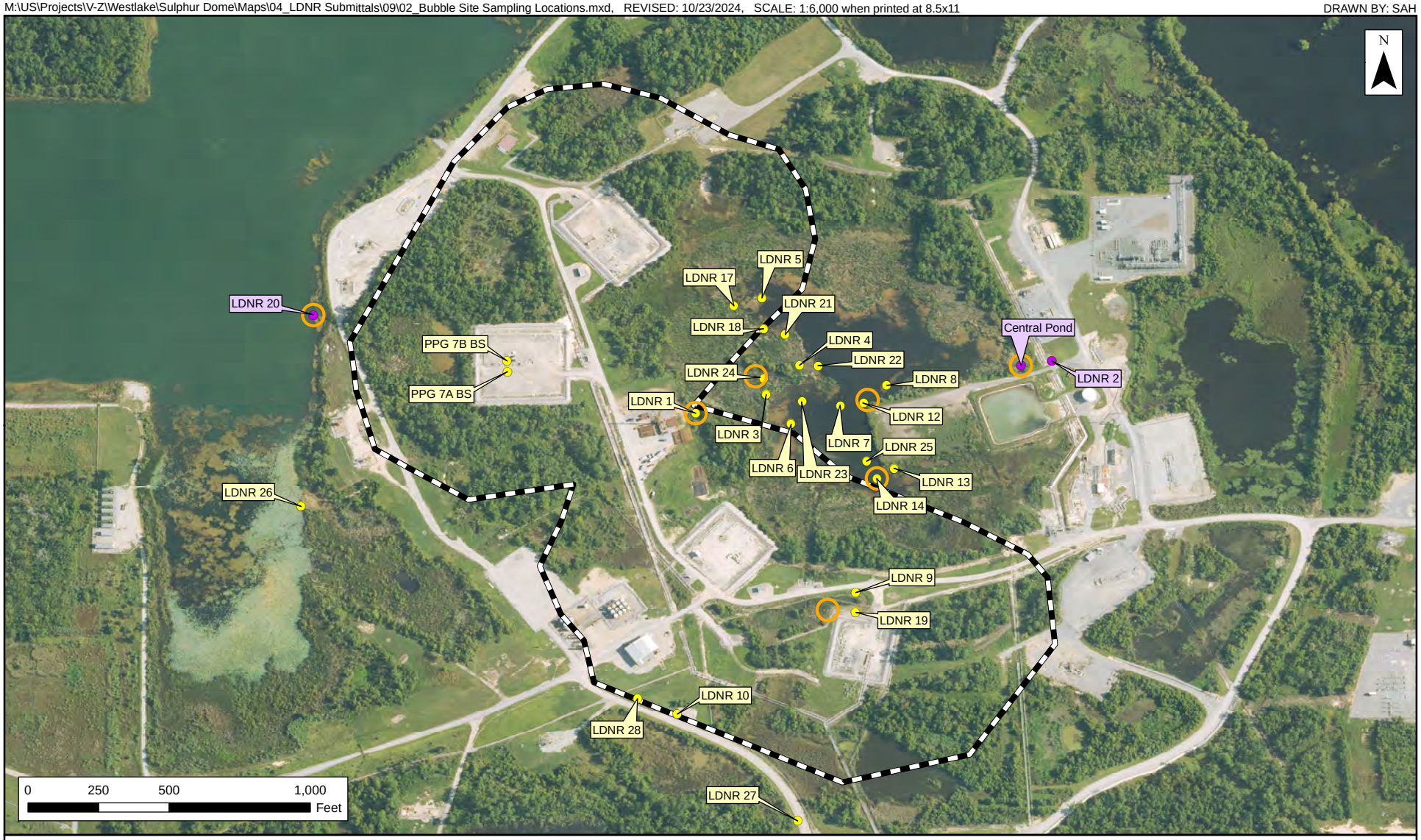


Legend

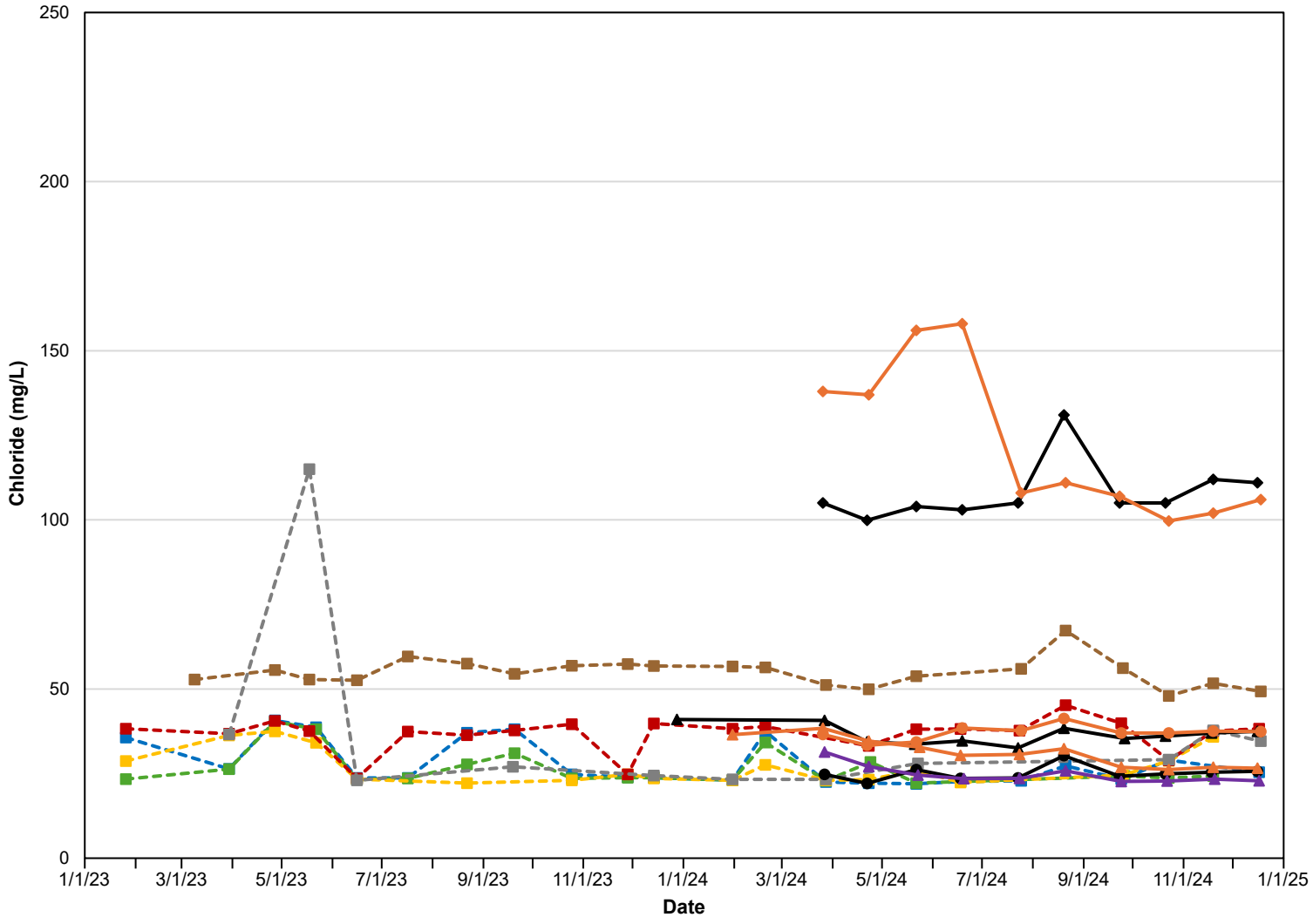
- Surface Water Sample Location (non-bubble site)
- Bubble Site Water/Gas Sample Location
- Sheen Sample Location
- Westlake Property

Notes:
2023 NAIP imagery via USDA.

Figure 2
Bubble Site Sampling Locations
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; GCS North American 1983

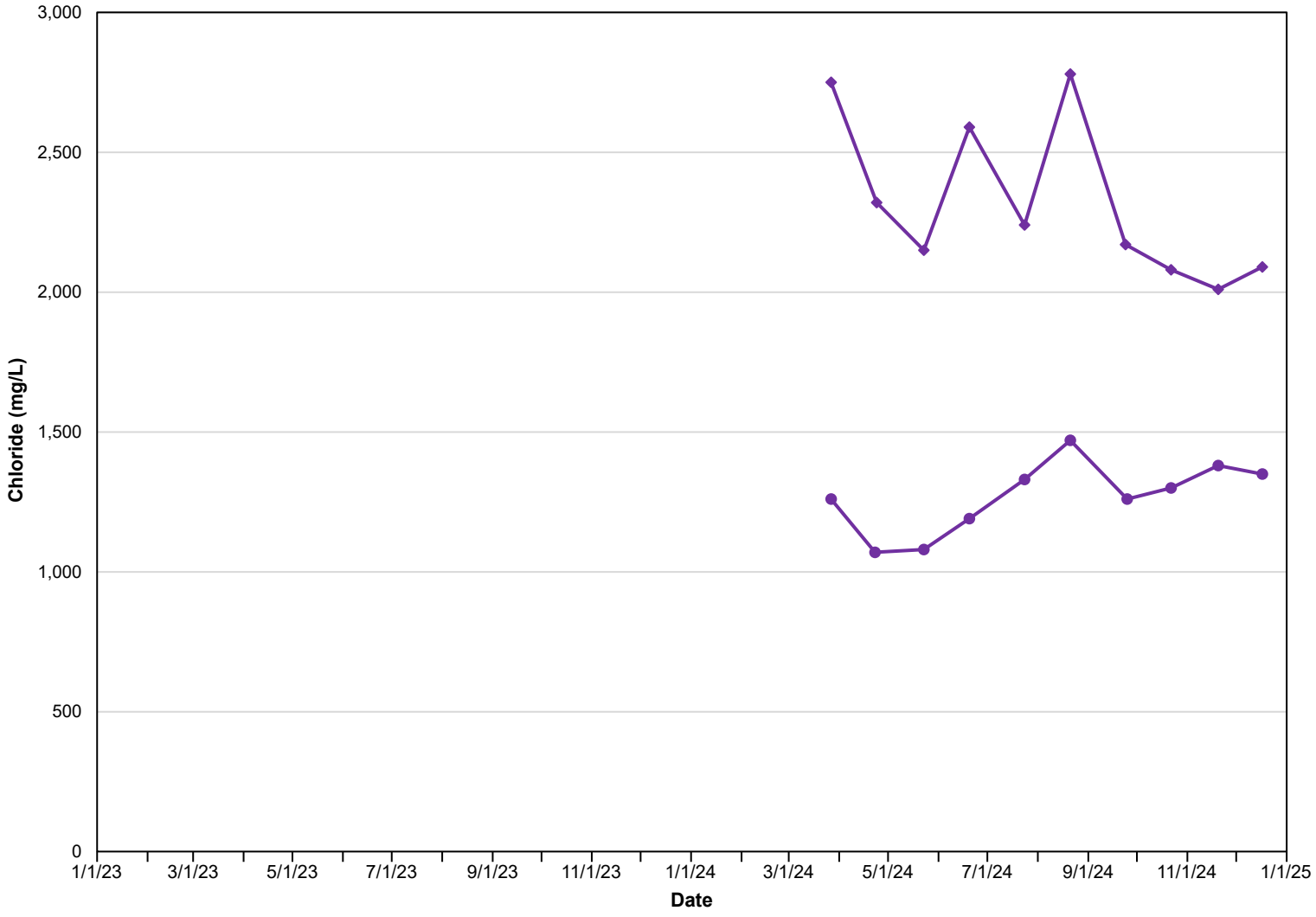


Legend

- 019-580
- 019-582
- 019-995
- 019-1055
- 019-1603
- 019-17636Z (Cottages)
- MW-1-200
- MW-1-500
- MW-1-700
- MW-2-200
- MW-2-500
- MW-2-700
- MW-3-200

Figure 3
Groundwater Chloride Trend
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM

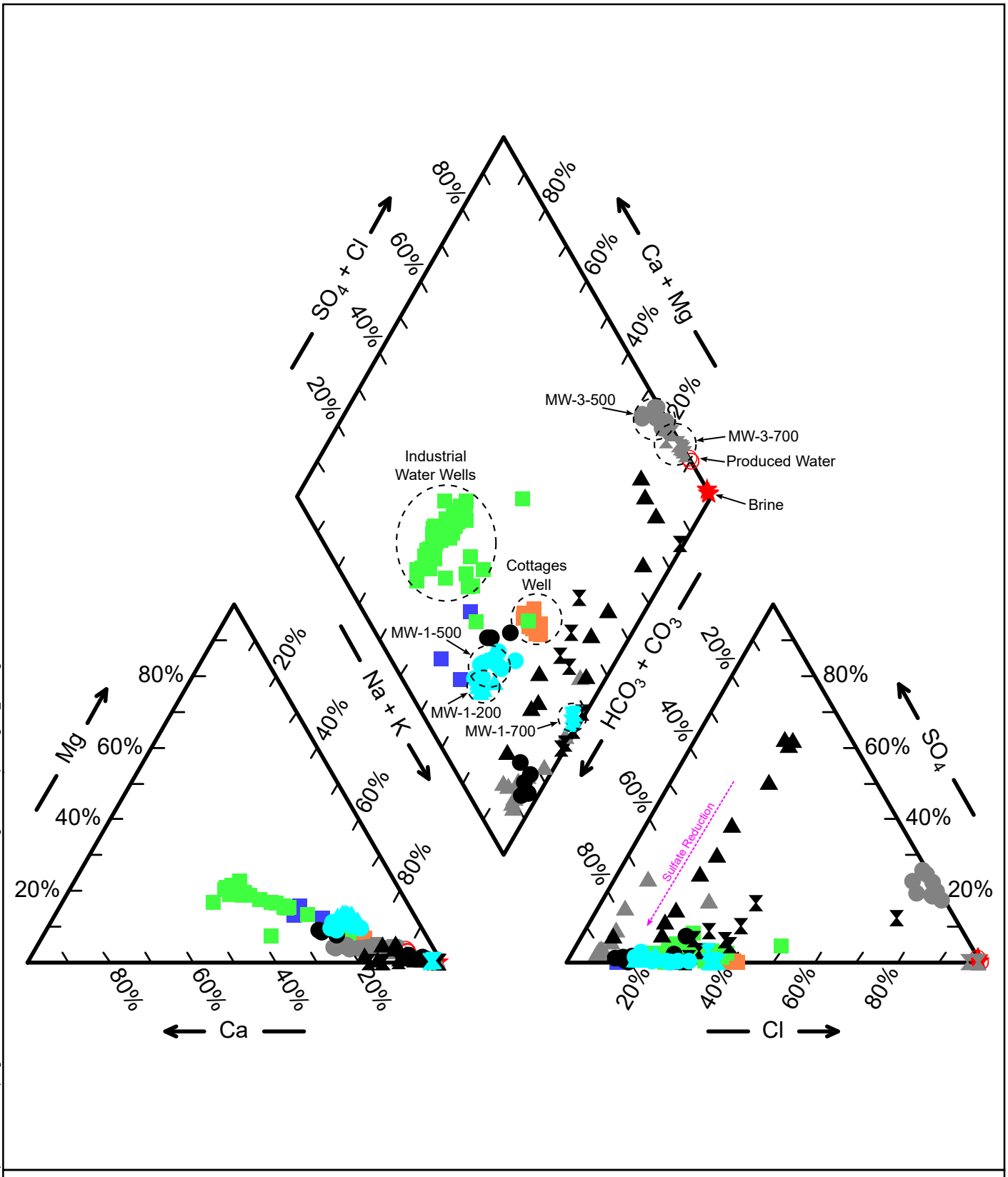


Legend

- MW-3-500
- MW-3-700

Figure 4
Groundwater Chloride Trend
MW-3-500 & MW-3-700
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM

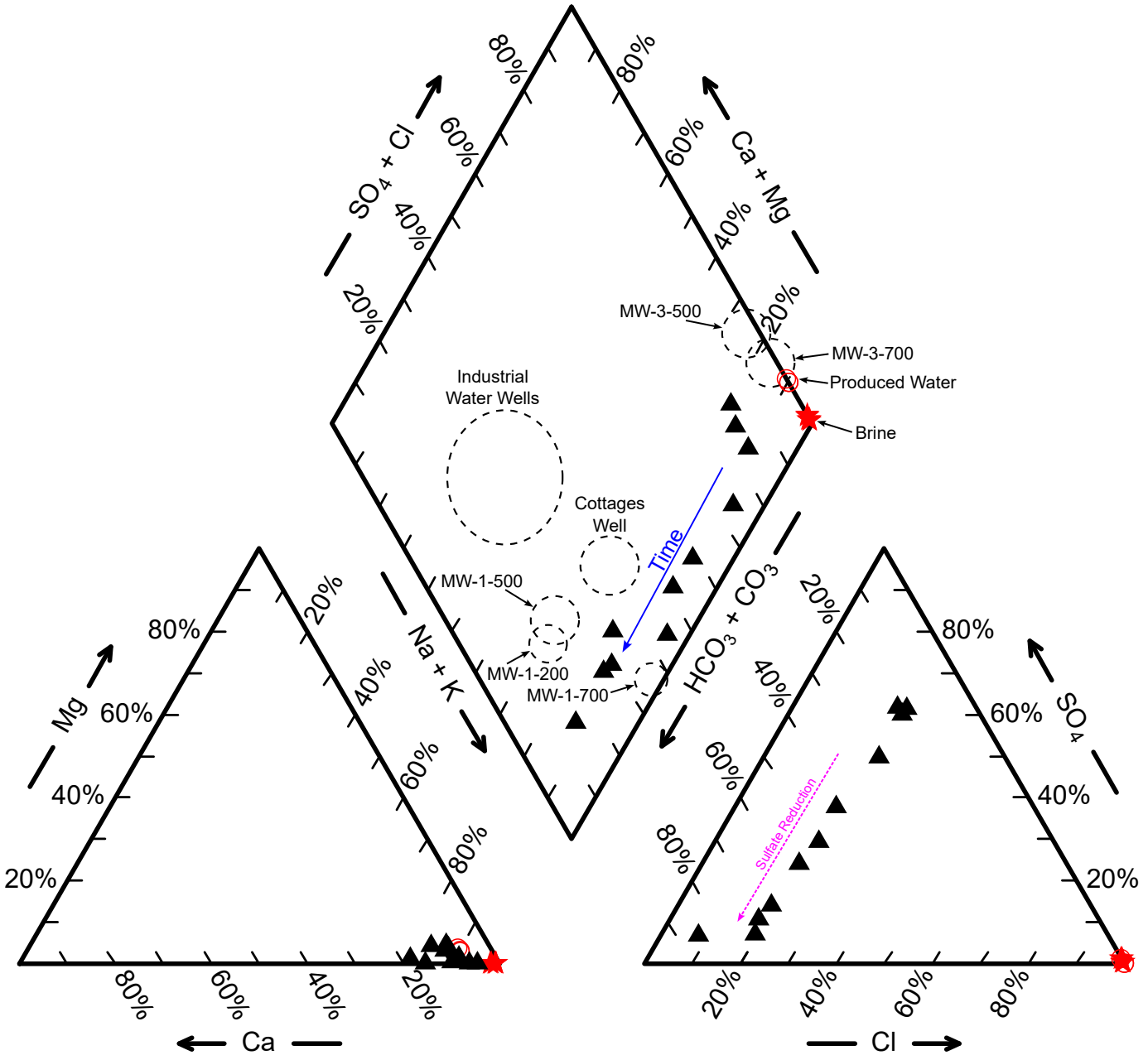


Legend

- Industrial Water Well
- Residential Water Well
- Cottages Well
- Produced Water
- Brine
- MW-1-200
- MW-1-500
- MW-1-700
- MW-2-200
- MW-2-500
- MW-2-700
- MW-3-200
- MW-3-500
- MW-3-700

Figure 5
Groundwater Piper Diagram
Sulphur Dome
Westlake US 2, LLC
Calcacieu Parish, Louisiana

ERM



Legend

- MW-2-200
- Produced Water
- Brine

Figure 6
MW-2-200 Piper Diagram
Sulphur Dome
Westlake US 2, LLC
Calcacieu Parish, Louisiana

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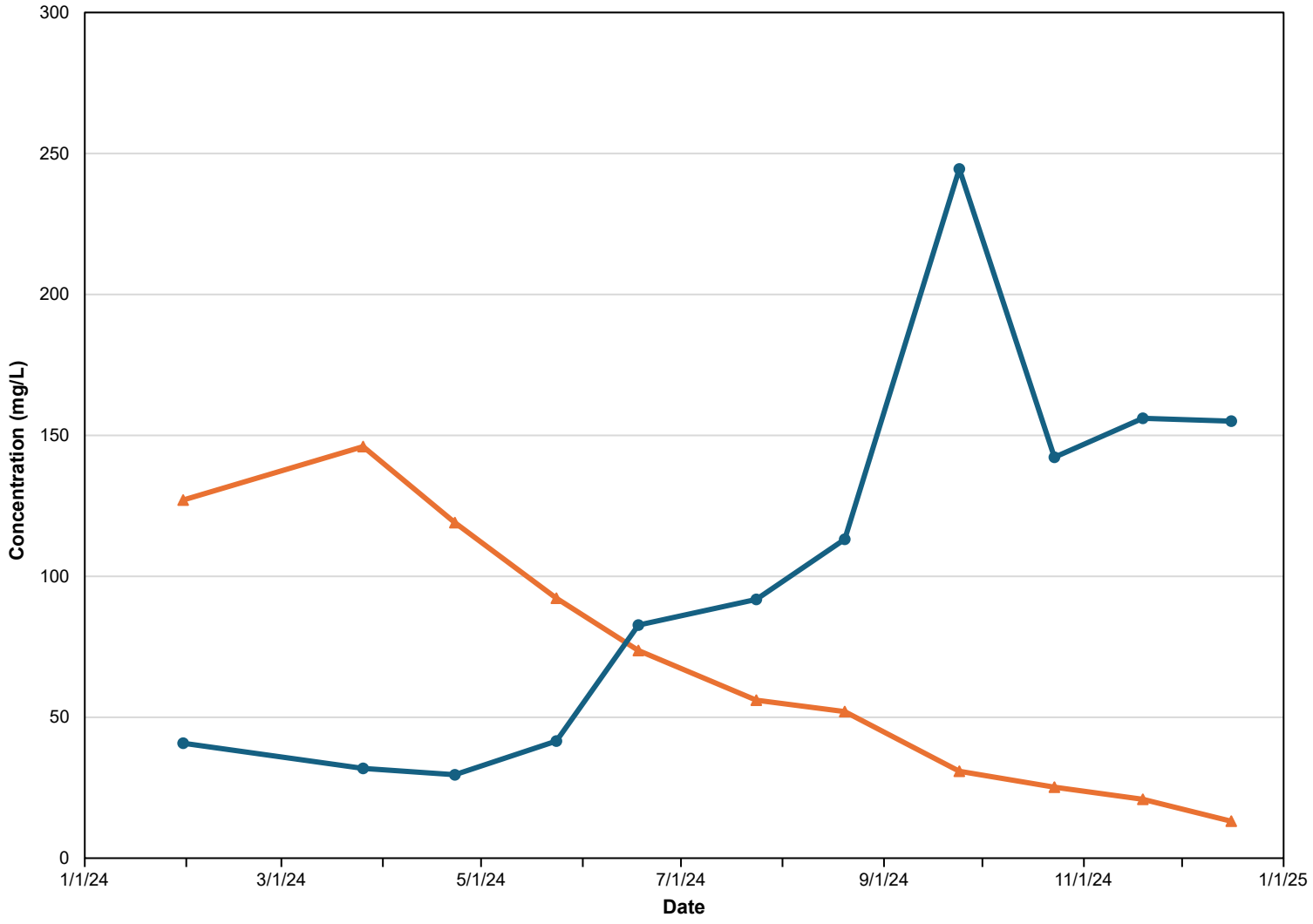

Legend

- Sulfate
- Bicarbonate + Carbonate

Figure 7
MW-2-200 Sulfate vs Bicarbonate Trends
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

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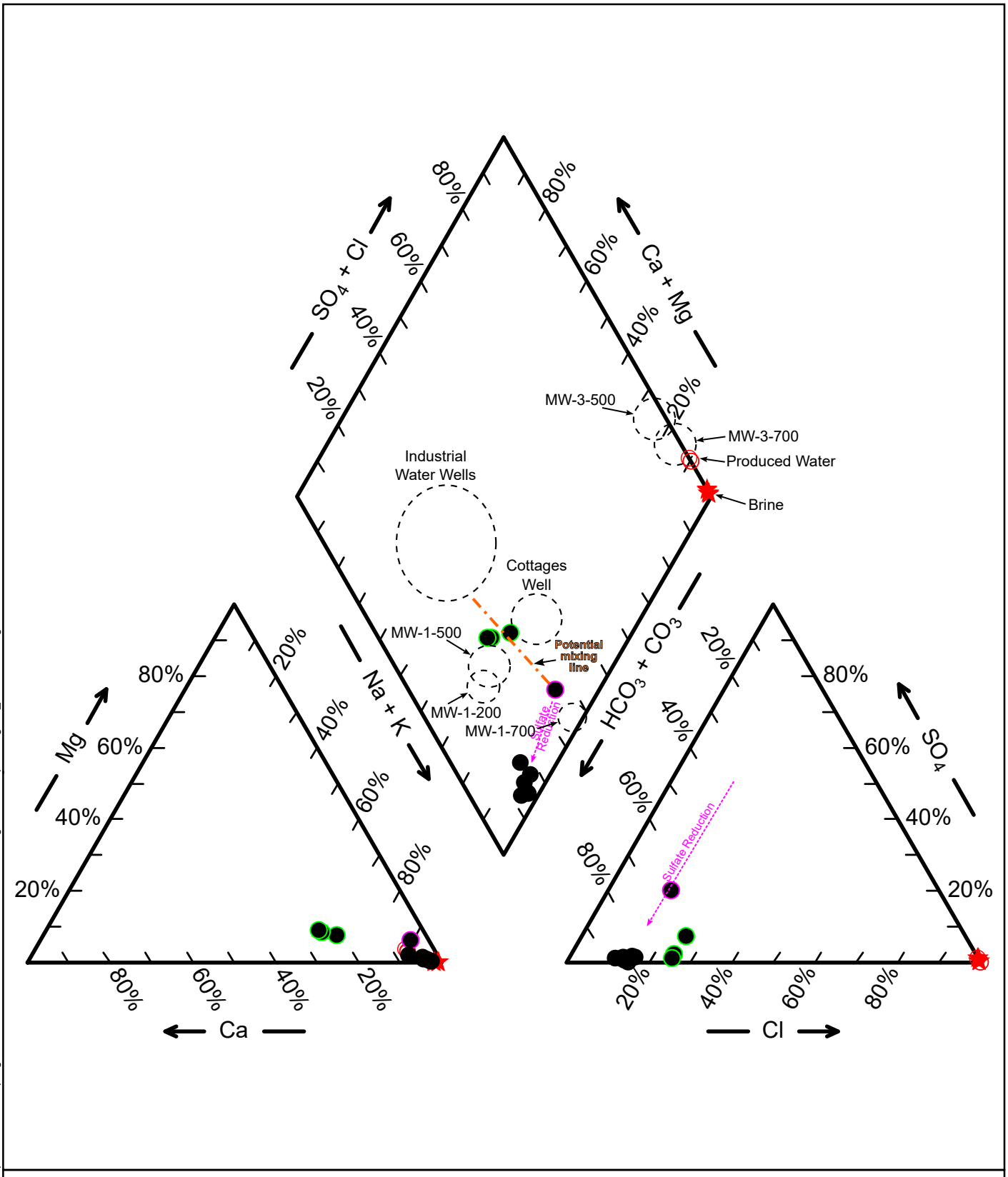

Legend

- MW-2-500 initail sample (January 2024)
- MW-2-500 early re-install sample (March - May 2024
- MW-2-500 (June - December 2024)
- Produced Water
- Brine

Figure 8
MW-2-500 Piper Diagram
Sulphur Dome
Westlake US 2, LLC
Calcacieu Parish, Louisiana

ERM

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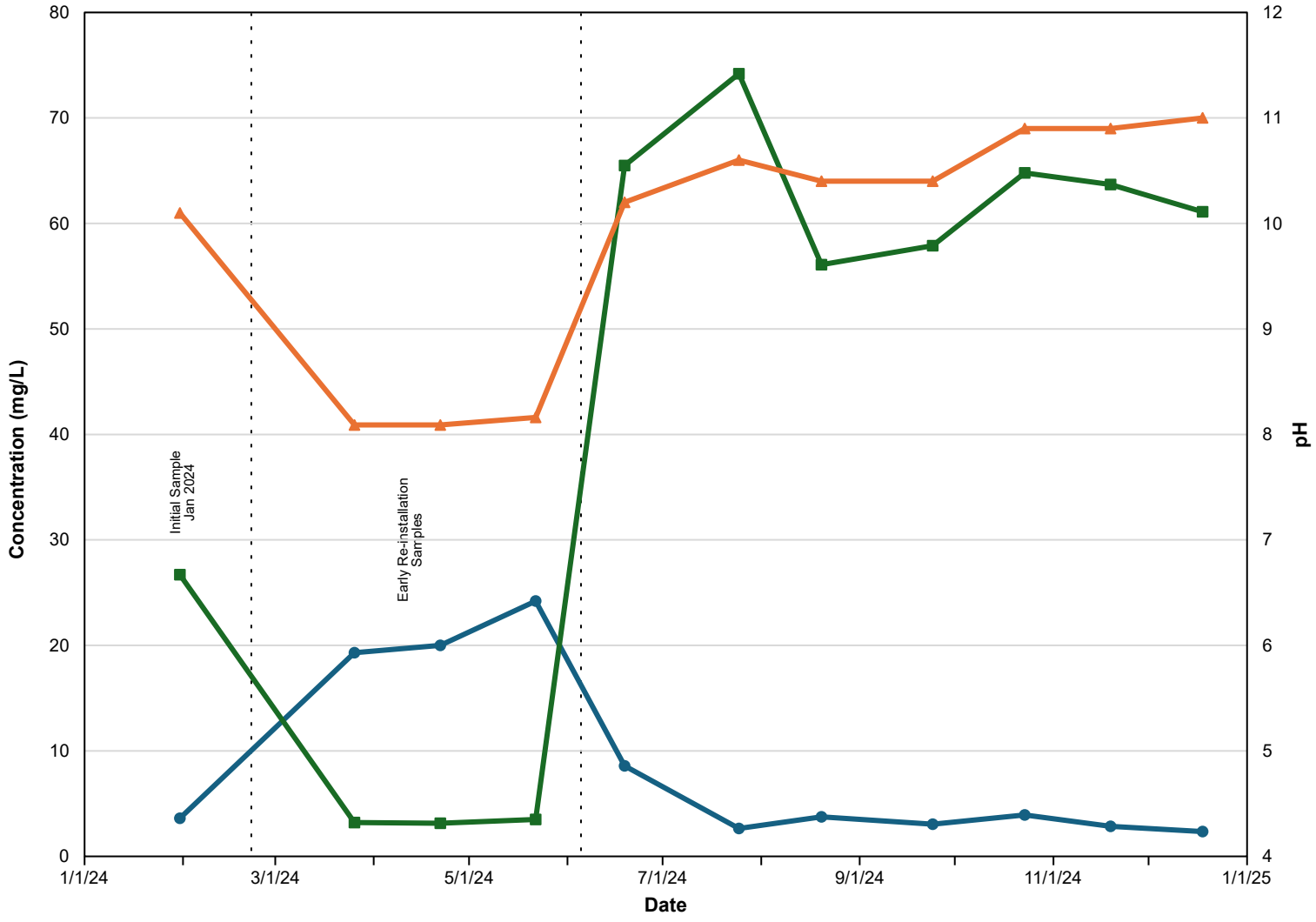
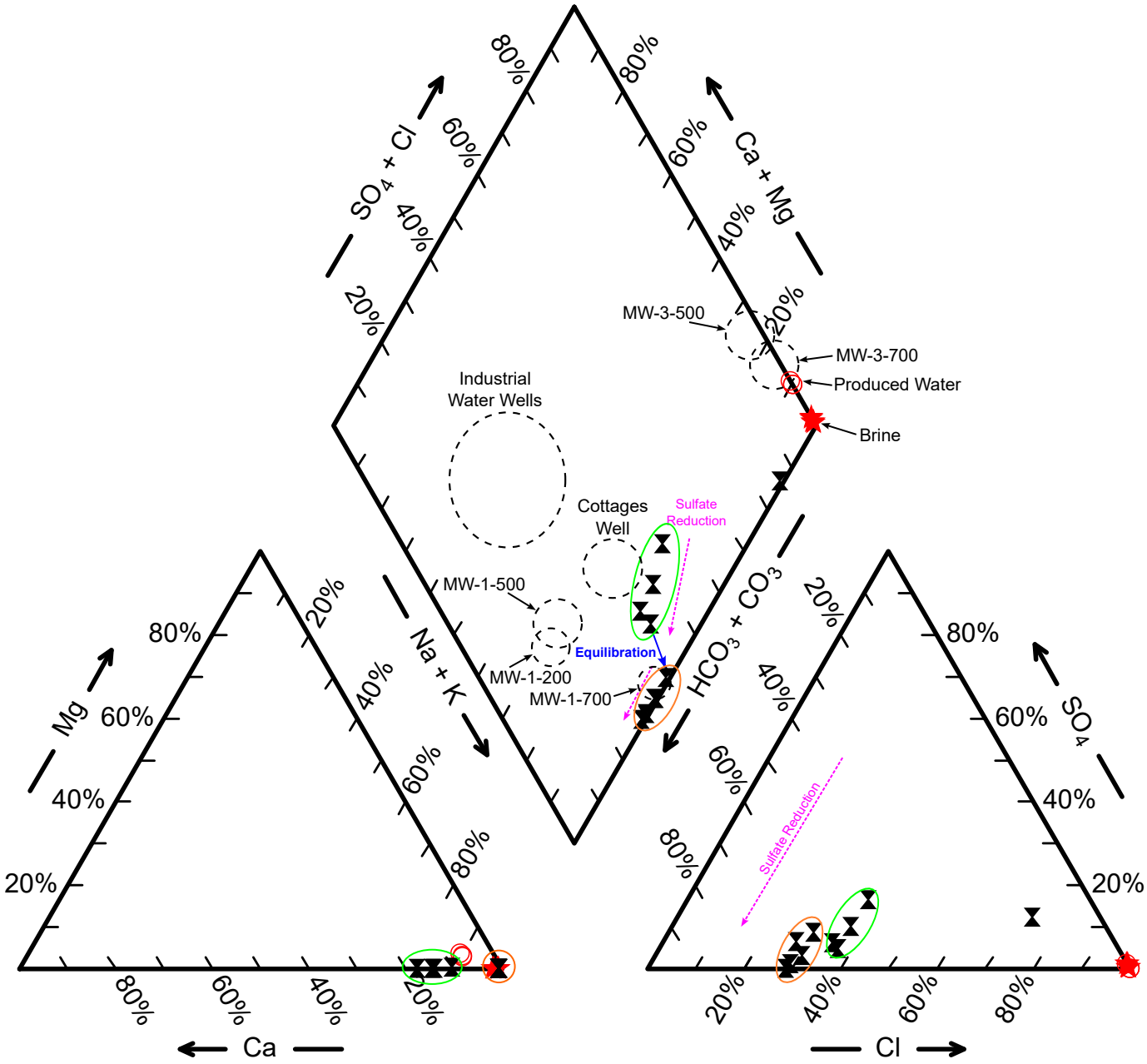


Legend

- pH
- Calcium
- Potassium

Figure 9
MW-2-500 Trend Graphs
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM



Legend

- MW-2-700
- Produced Water
- Brine

Figure 10
MW-2-700 Piper Diagram
Sulphur Dome
Westlake US 2, LLC
Calcacieu Parish, Louisiana

ERM

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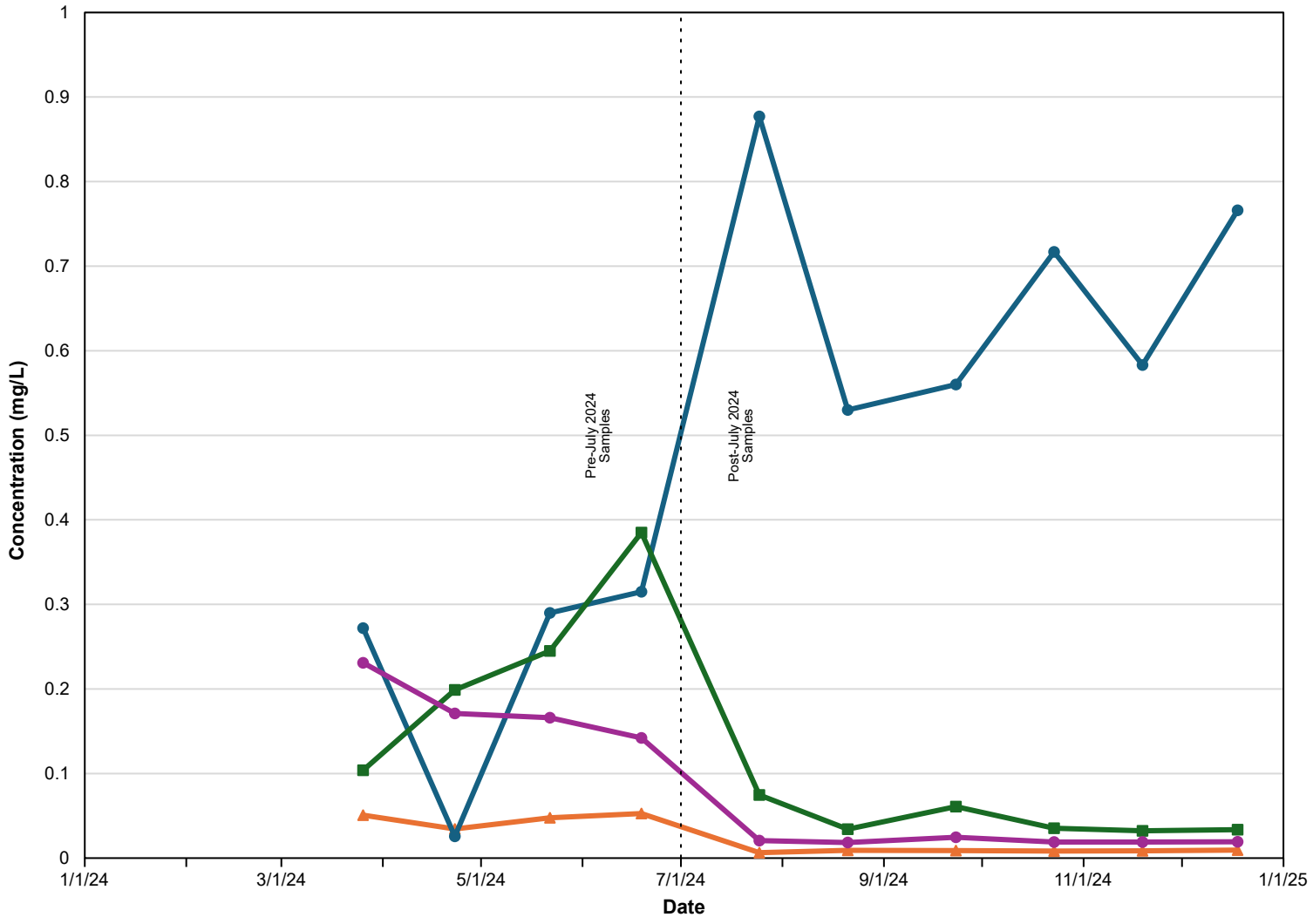
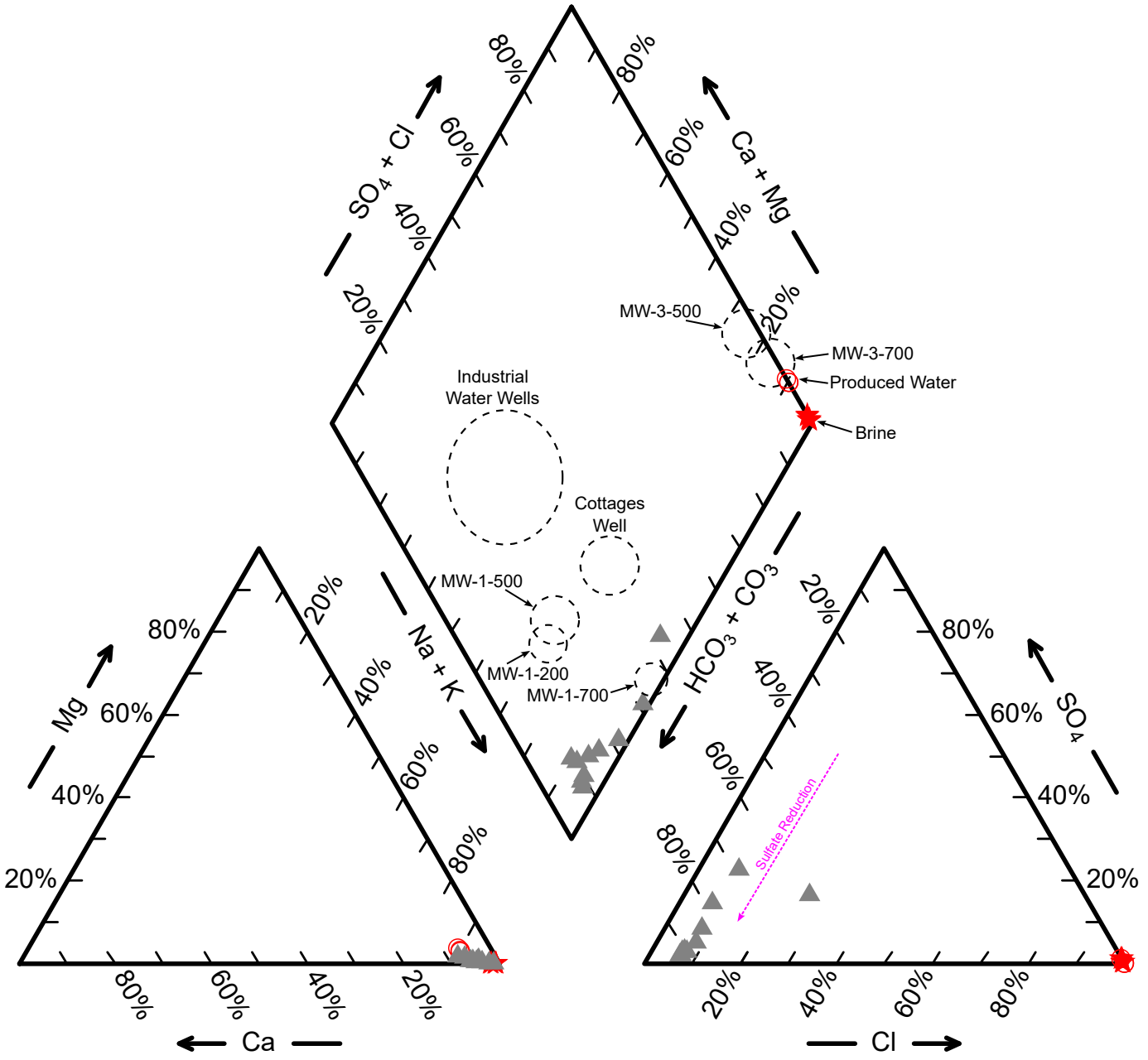


Legend

- Barium
- Iron
- Magnesium
- Strontium

Figure 11
MW-2-700 Trend Graphs
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM



Legend

- MW-3-200
- Produced Water
- Brine

Figure 12
MW-3-200 Piper Diagram
Sulphur Dome
Westlake US 2, LLC
Calcacieu Parish, Louisiana

ERM

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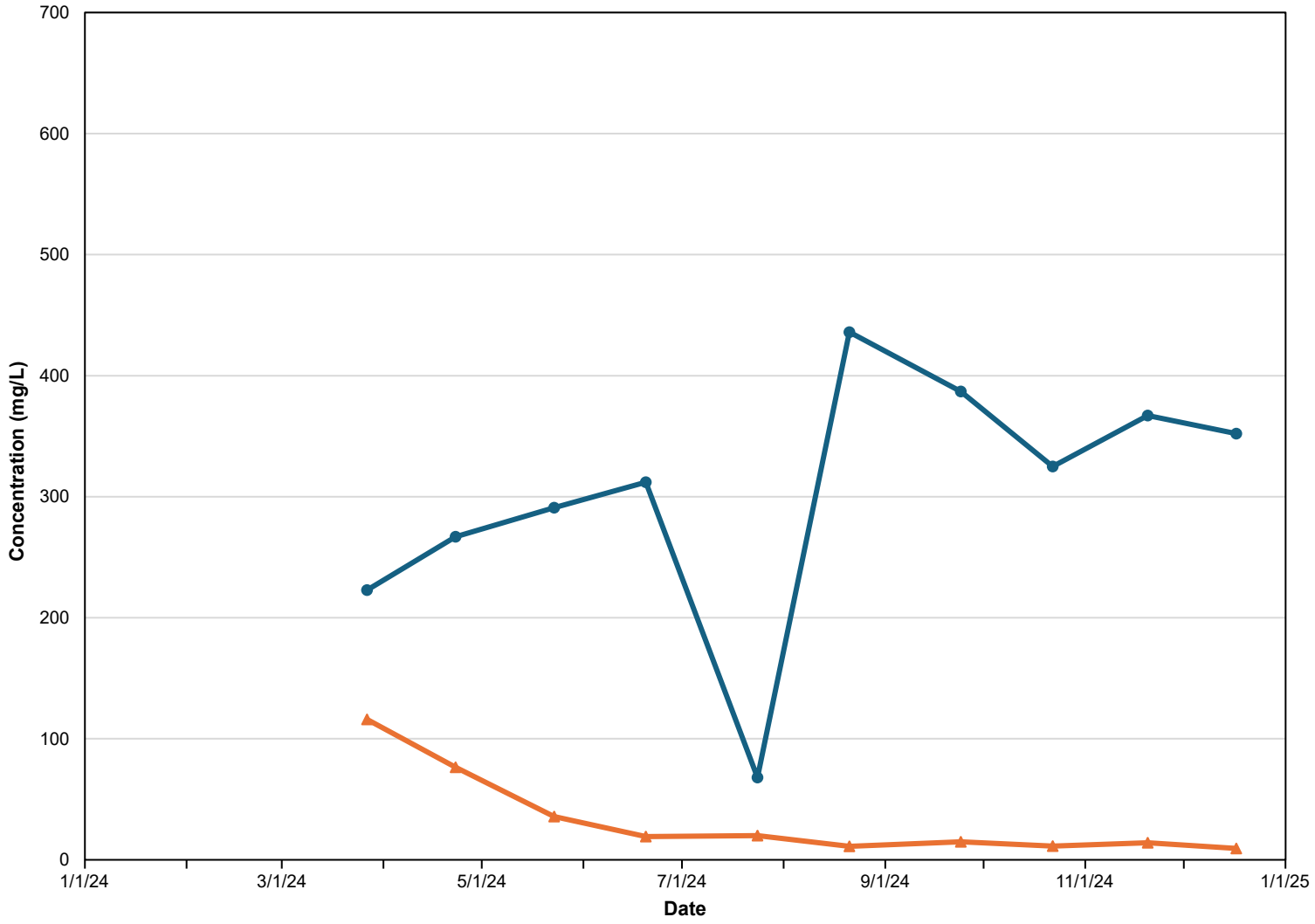


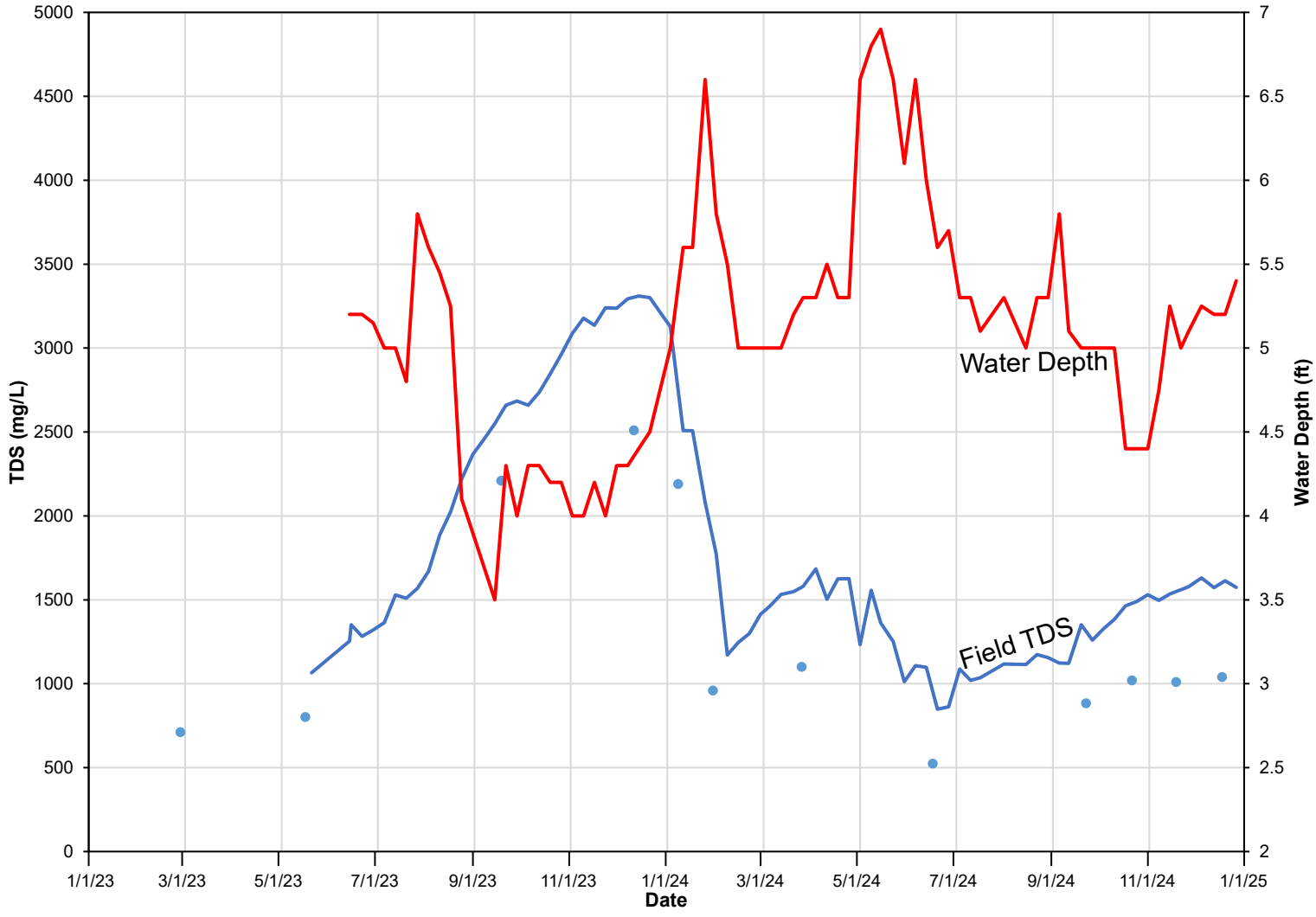
Legend

- Sulfate
- Bicarbonate + Carbonate

Figure 13
MW-3-200 Sulfate vs Bicarbonate Trends
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM

P:\Projects\0677804 Eagle US 2 LLC Sulphur Dome Sampling.SH\LDNR Submittals\10th Data Submittal\Figure\SVG\Central Lake TDS.svg, REVISED: 02/05/2025 DRAWN BY: SAH



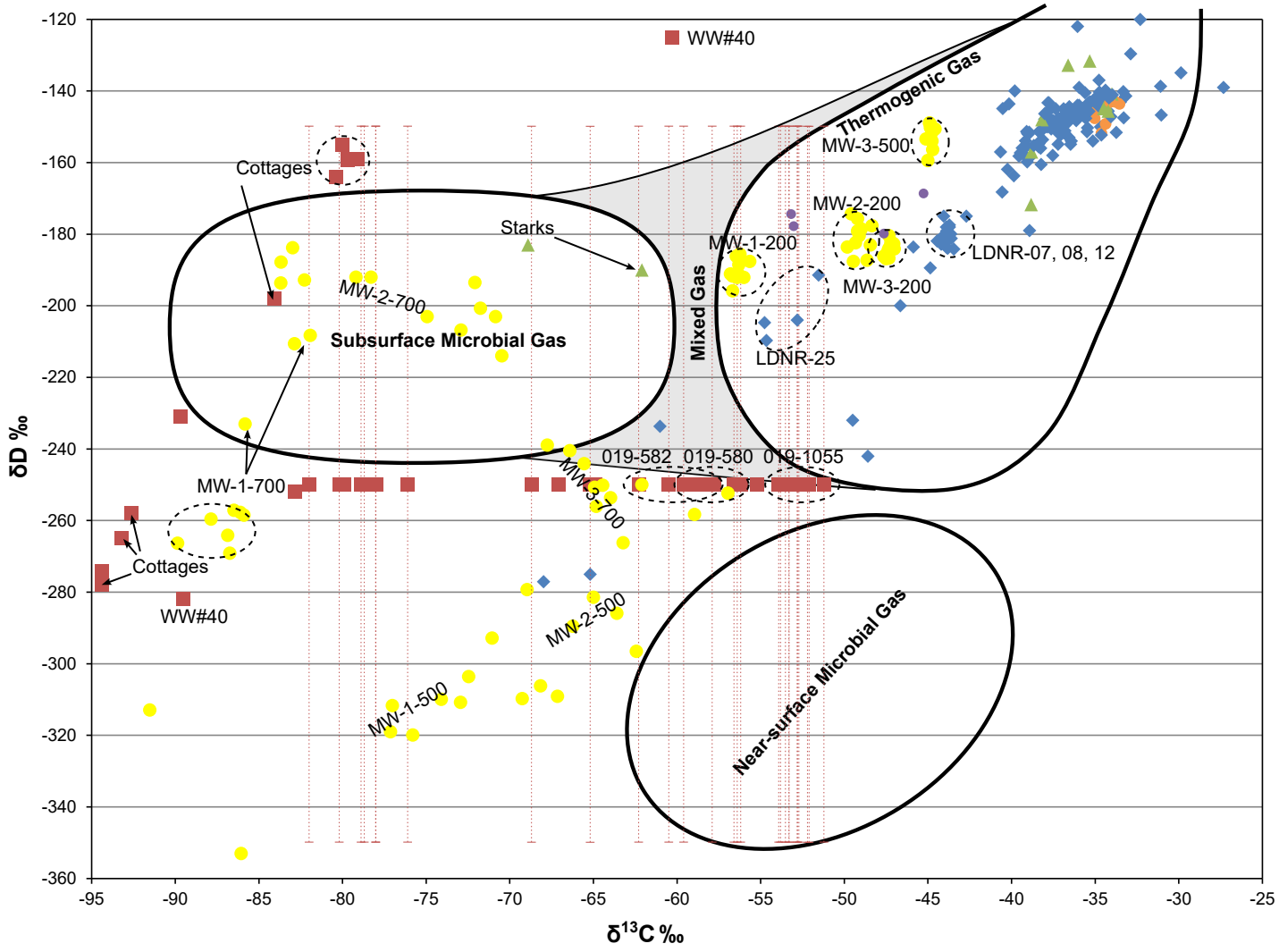
Legend

- Field TDS (mg/L)
- Water Depth (ft)
- Laboratory TDS at LDNR 12 (mg/L)

Notes:
Field TDS measured from approxmiately 5-ft deep with handheld Ultrameter II, which is calculated based on Specific Conductivity.

Figure 14
Central Lake TDS Trend
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM



Legend

- Cavern Gas (Lonquist)
- Bubble Site
- Groundwater
- Monitoring Well
- Brine
- Production Gas

Notes:
If δD is not analyzed due to insufficient methane in sample δD is assumed at -250‰ with error bars added.
Coleman, D.D., Liu, C., Hackley, K.C., and Pelphrey, S.R., 1995, Identification of Landfill Methane, Environmental Geosciences, Vol. 2, No. 2, pp. 95-103.

Figure 15
Methane Isotopes
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM

Legend

- Bubble Site Water/Gas Sample Location
- Westlake Property

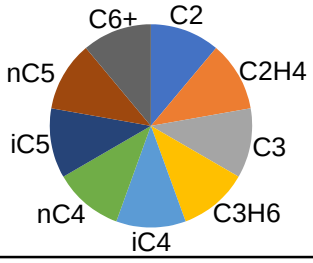


Figure 16
Gas Comparison
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: ESRI - ArcGIS Online; GCS North American 1983

DRAWN BY: SAH

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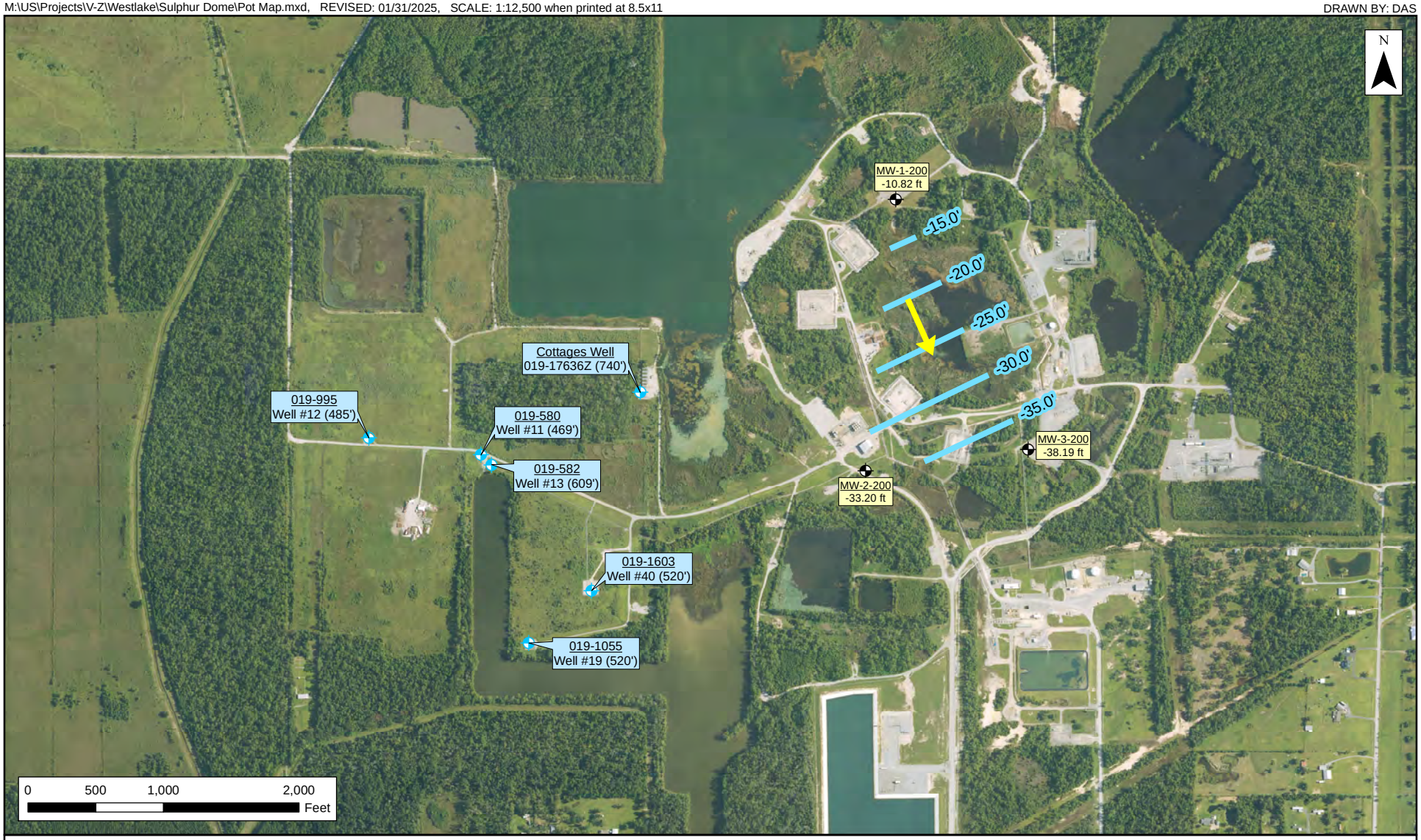

Legend

- Water Well Sample Location
- "200-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 17
Potentiometric Surface Map - October 2024
"200-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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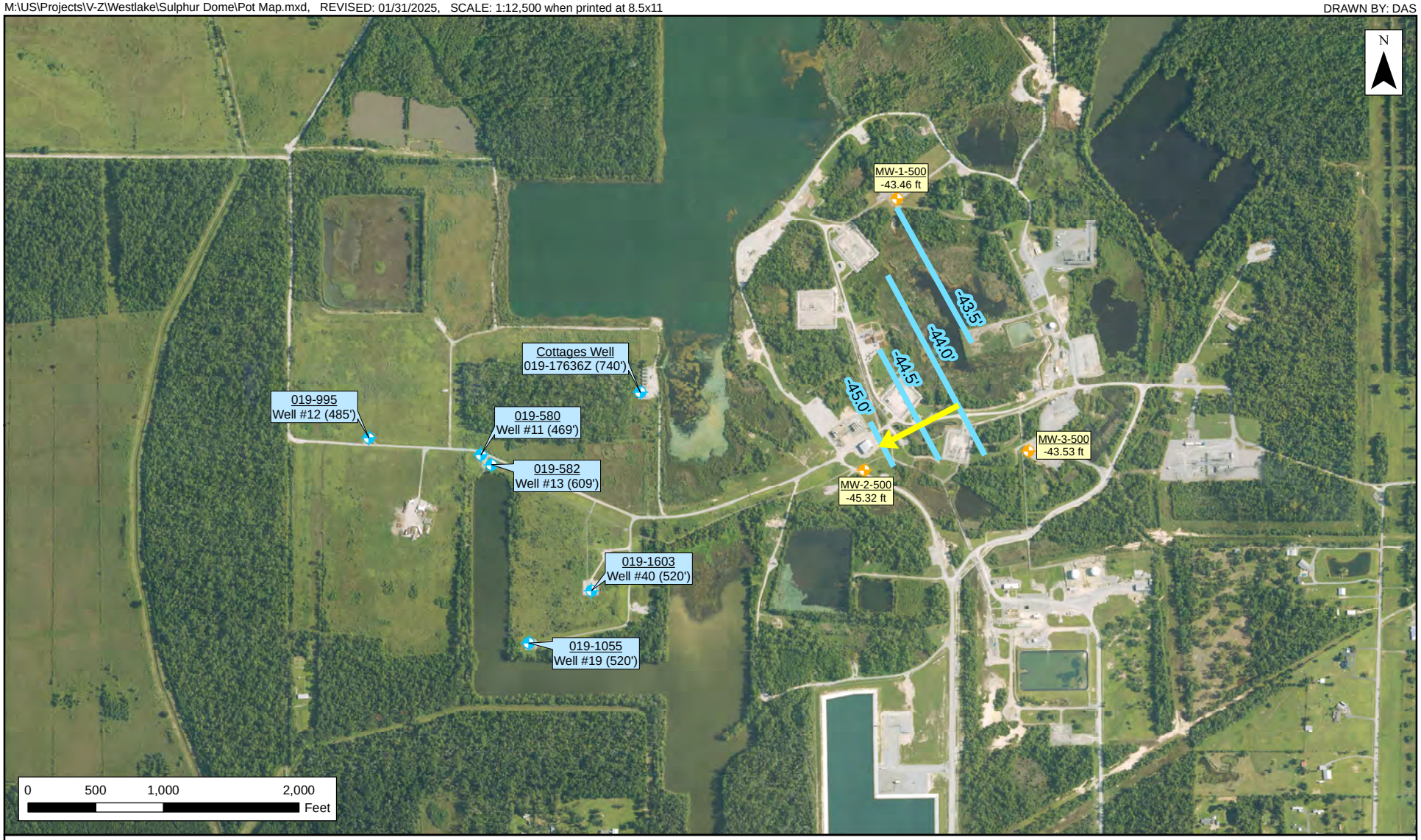

Legend

- Water Well Sample Location
- "500-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (0.5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 18
Potentiometric Surface Map - October 2024
"500-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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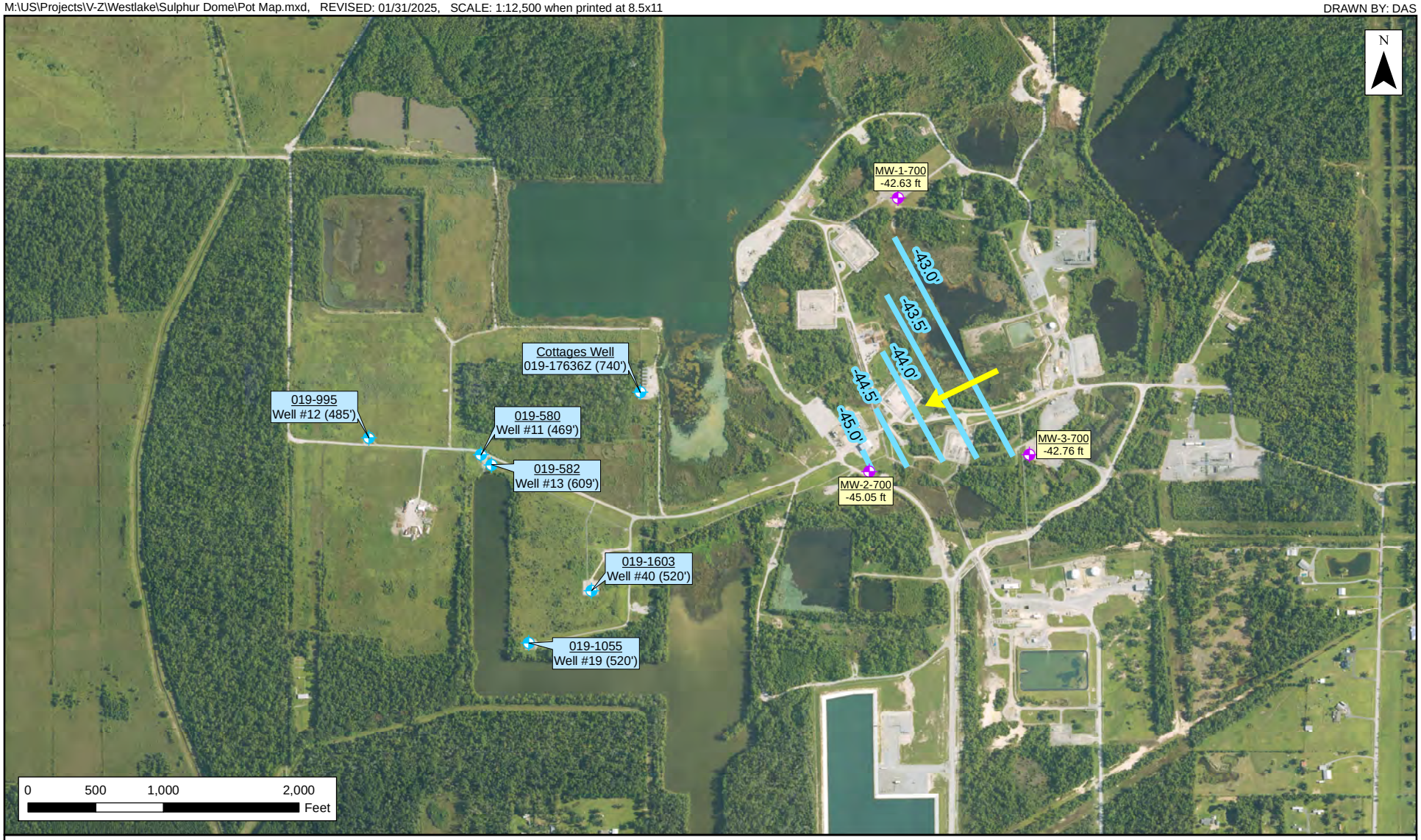

Legend

- Water Well Sample Location
- "700-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (0.5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 19
Potentiometric Surface Map - October 2024
"700-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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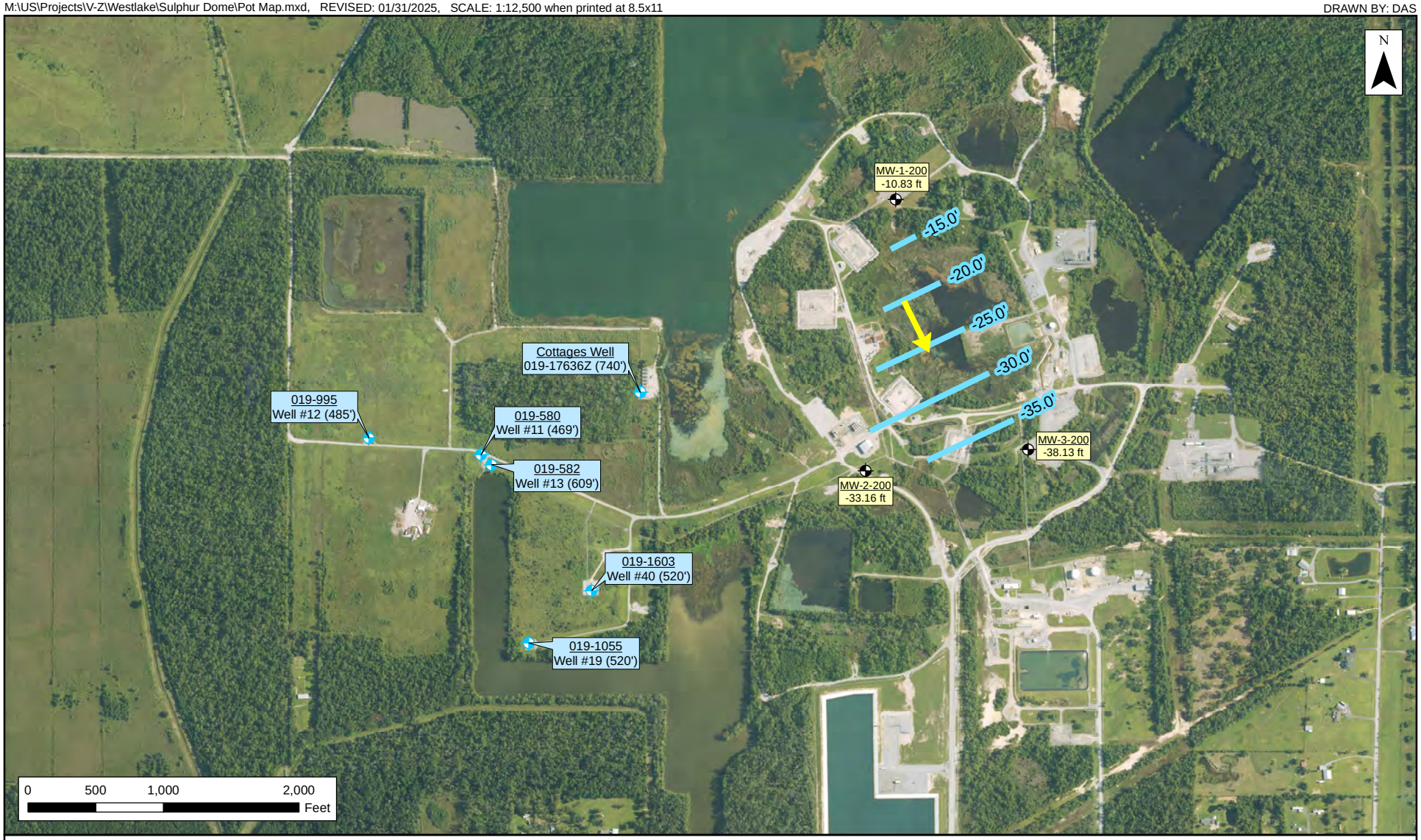

Legend

- Water Well Sample Location
- "200-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contours (5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 20
Potentiometric Surface Map - November 2024
"200-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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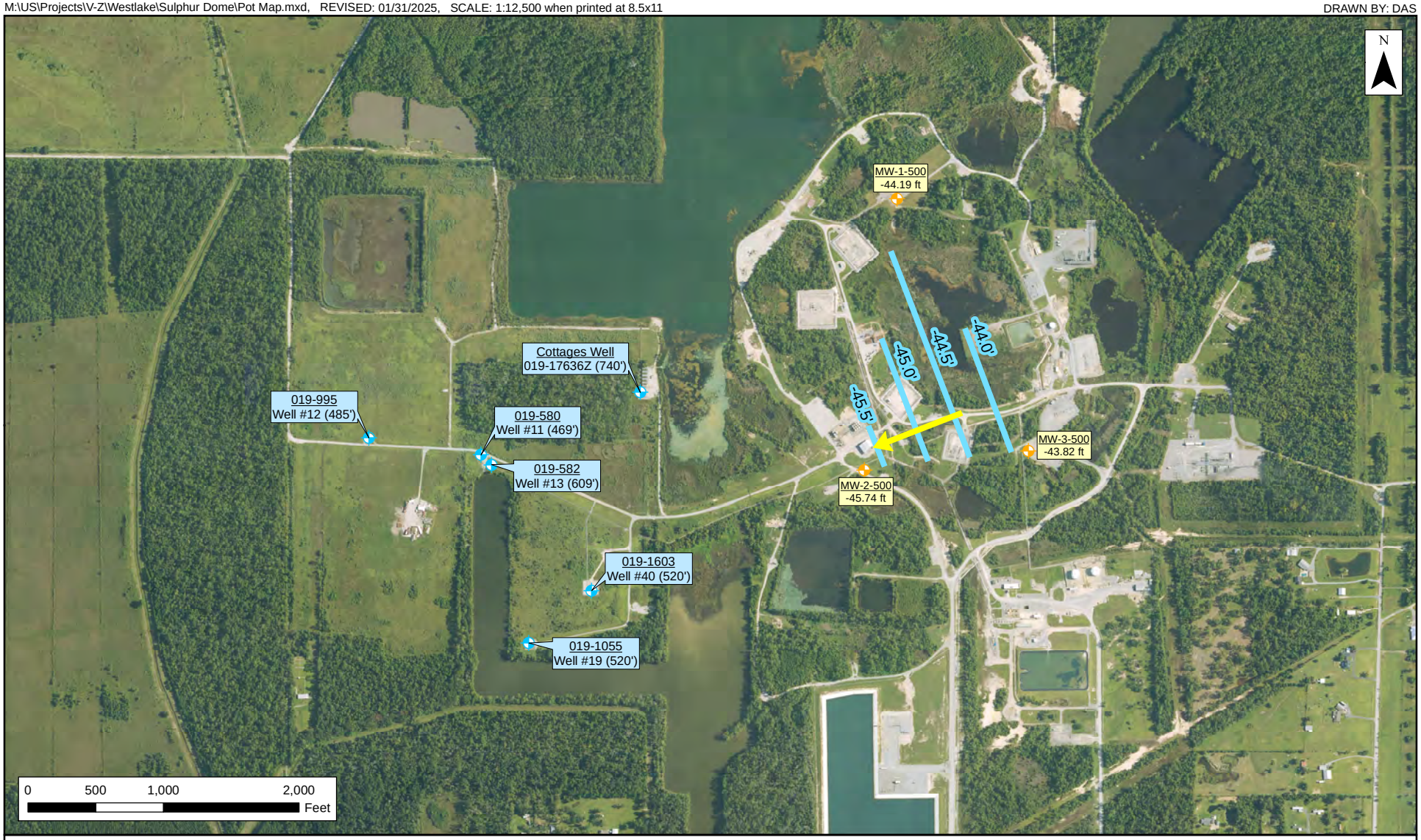

Legend

- Water Well Sample Location
- "500-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contours (0.5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 21
Potentiometric Surface Map - November 2024
"500-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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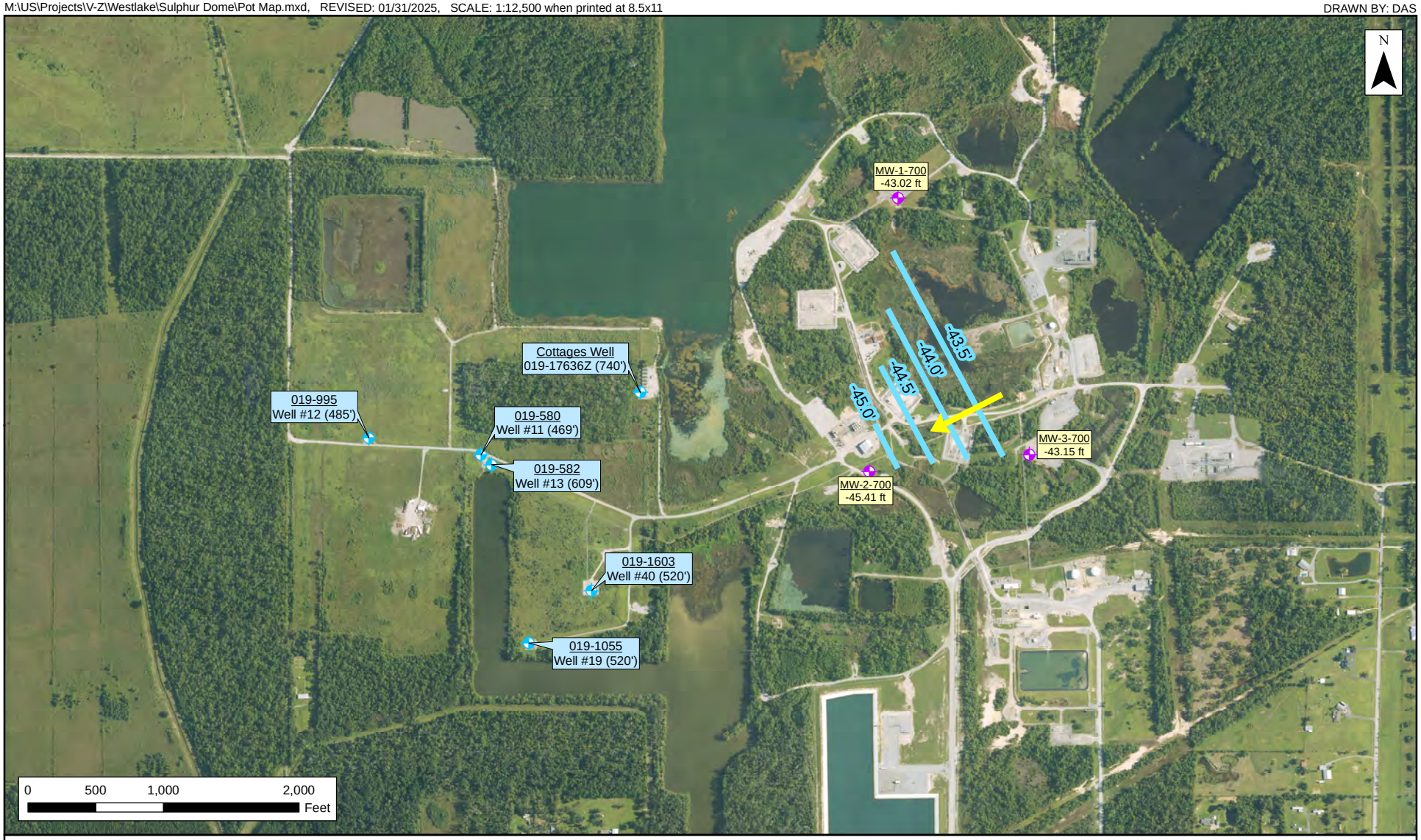

Legend

- Water Well Sample Location
- "700-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (0.5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 22
Potentiometric Surface Map - November 2024
"700-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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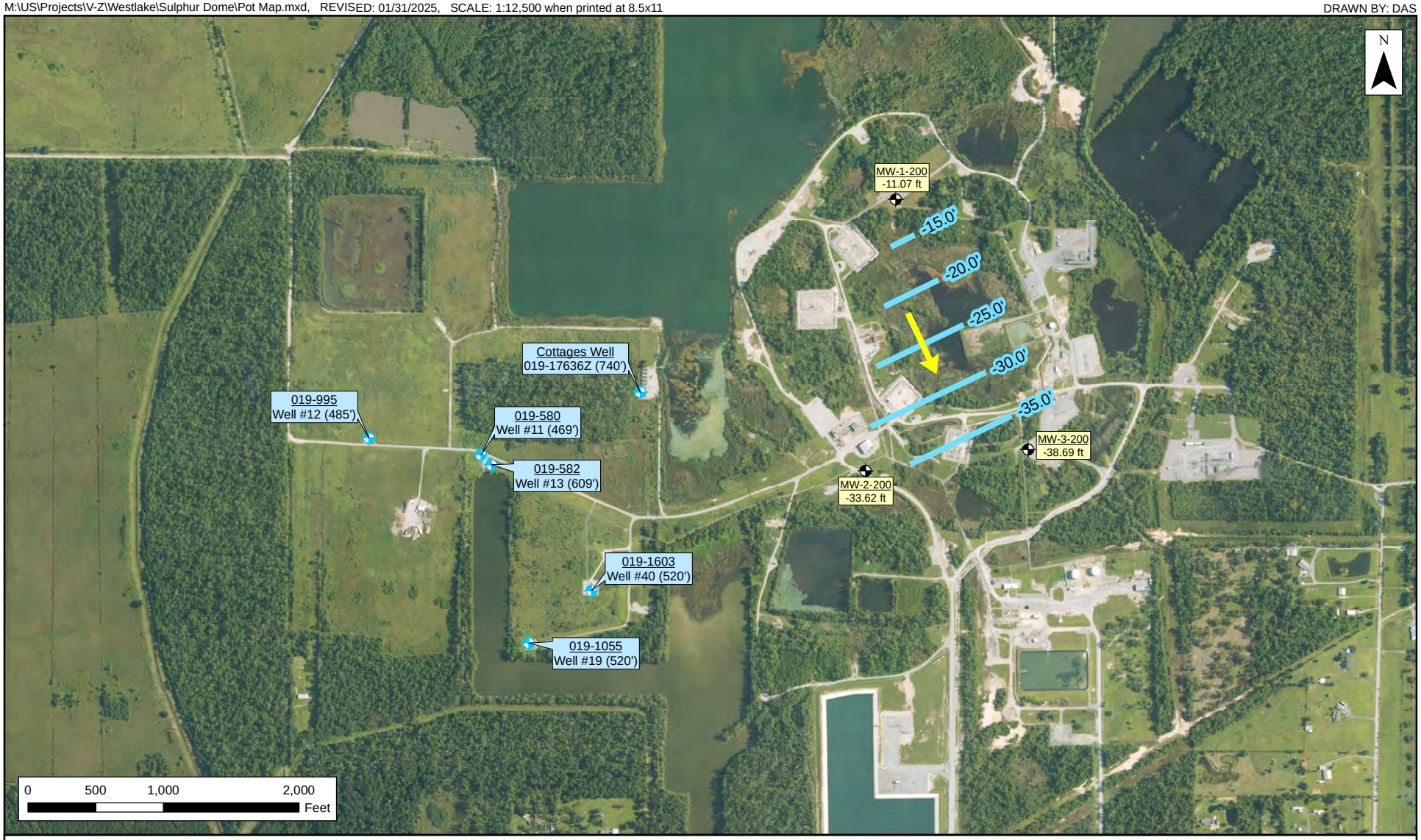

Legend

- Water Well Sample Location
- "200-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 23
Potentiometric Surface Map - December 2024
"200-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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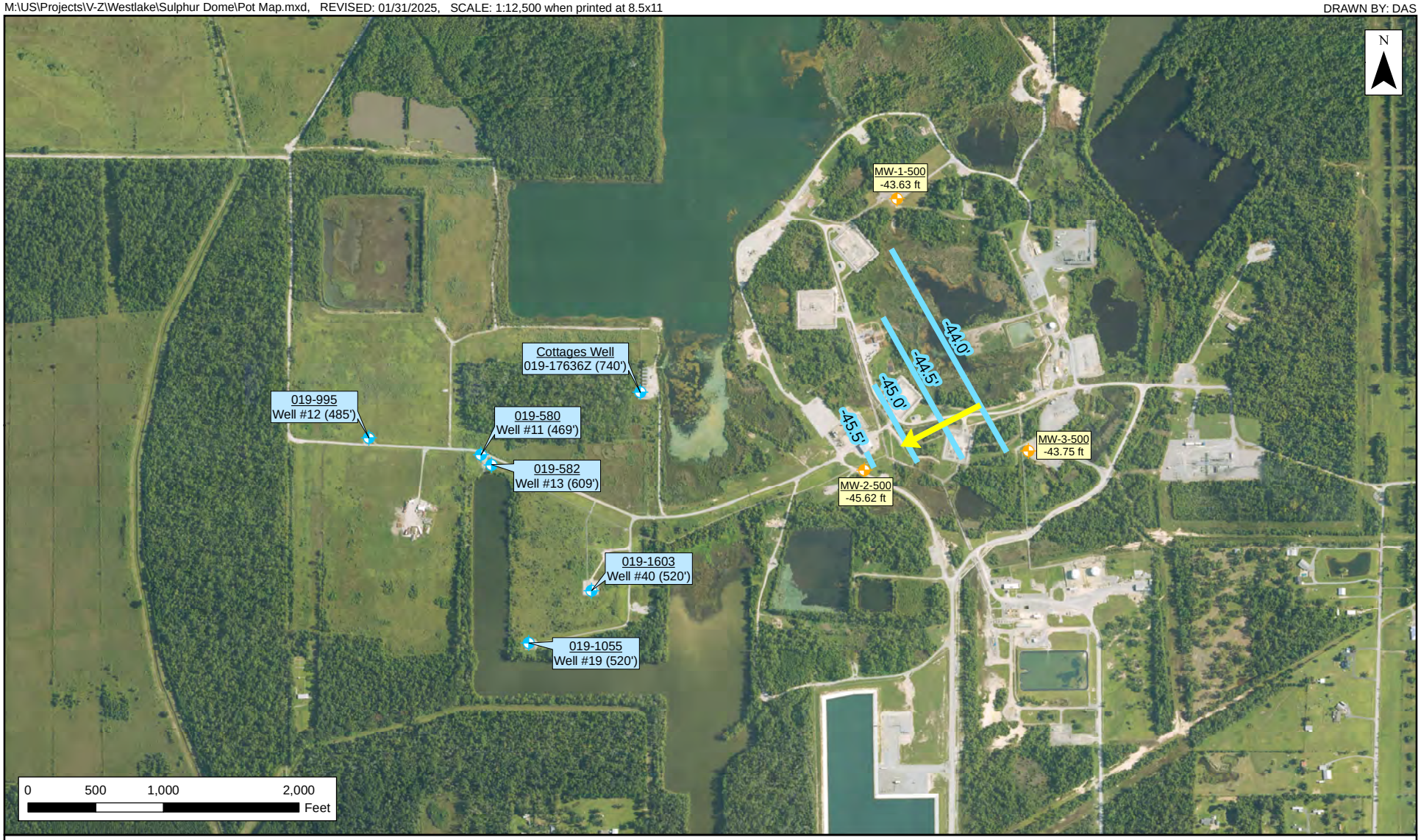

Legend

- Water Well Sample Location
- "500-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (0.5 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 24
Potentiometric Surface Map - December 2024
"500-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

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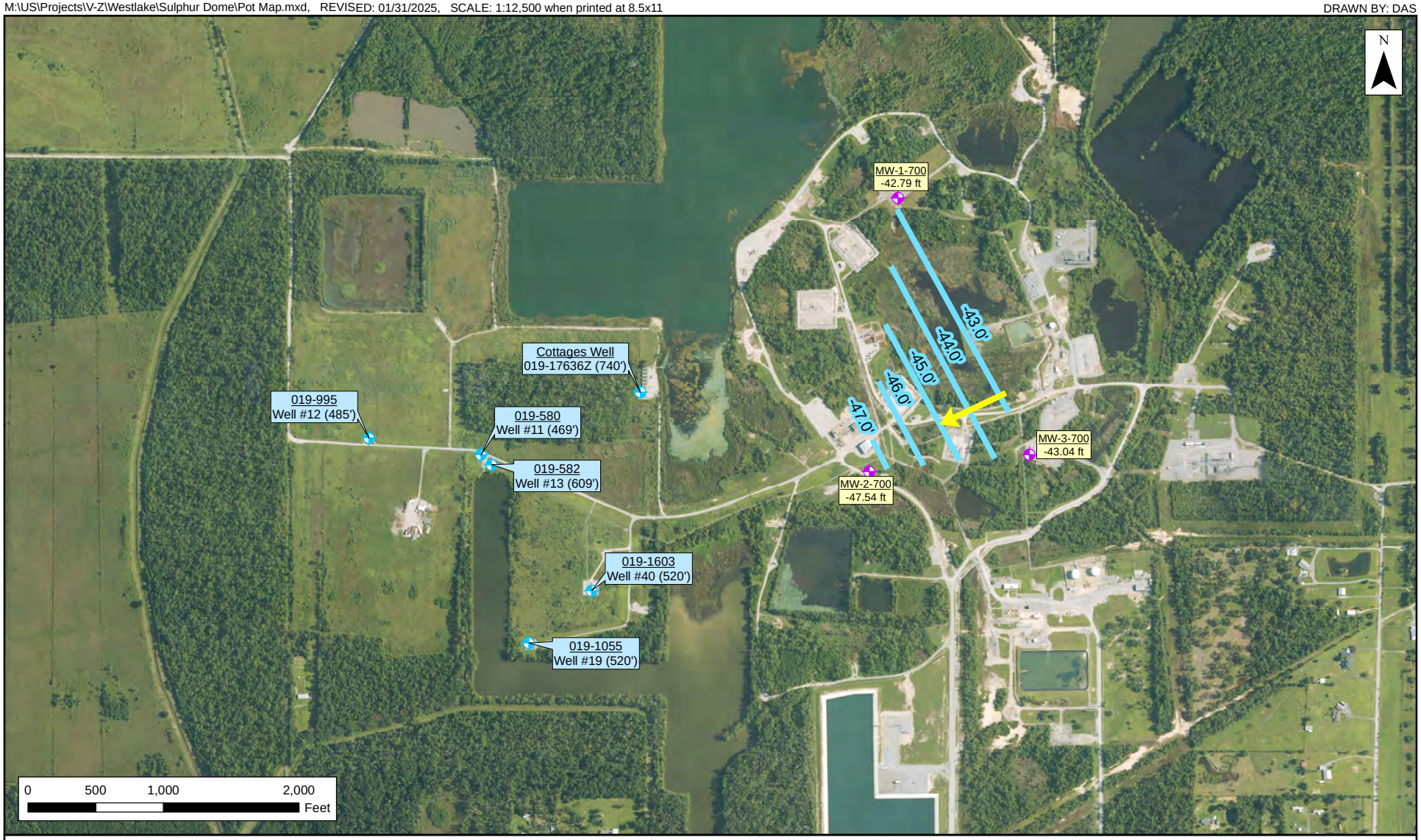


Legend

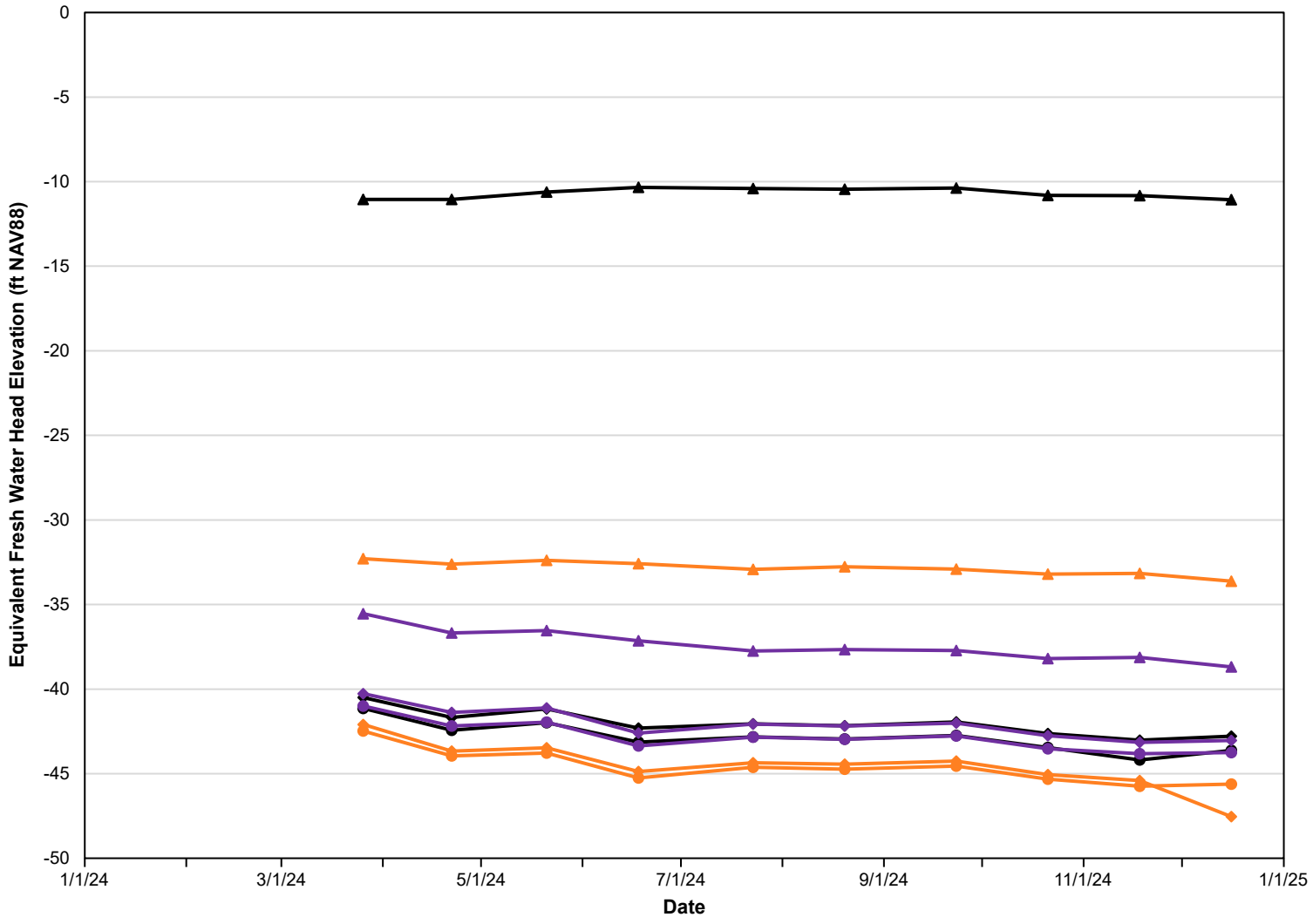
- Water Well Sample Location
- "700-foot" Sand Monitoring Well
- General Direction of Groundwater Flow
- Potentiometric Surface Contour (1 ft)

Notes:
Groundwater elevations adjusted to equivilent freshwater head (Post, et al., 2007)
2023 Aerial imagery via USDA (NAIP).

Figure 25
Potentiometric Surface Map - December 2024
"700-foot" Sand
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana

ERM

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



Legend

- MW-1-200
- MW-1-500
- MW-1-700
- MW-2-200
- MW-2-500
- MW-2-700
- MW-3-200
- MW-3-500
- MW-3-700

Figure 26
Groundwater Hydrograph
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Lousiana

ERM

TABLES

List of Tables:

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Constituent	Units		Sample ID	Sample Location	Sample Interval (ft)	Sample Date	Sampler
			019-580	WW #11	469'	1/26/23	ERM
						3/30/23	ERM
						4/27/23	ERM
						5/22/23	ERM
						6/16/23	ERM
						7/17/23	ERM
						8/22/23	ERM
						9/20/23	ERM
						10/25/23	ERM
						11/28/23	ERM
						12/14/23	ERM
						1/31/24	ERM
						2/20/24	ERM
						3/28/24	ERM
						4/23/24	ERM
						5/22/24	ERM
						6/18/24	ERM
						7/25/24	ERM
						8/21/24	ERM
						9/24/24	ERM
						10/23/24	ERM
						12/17/24	ERM
			Industrial Water Wells				
Total Metals		**RECAP GWSS**					
Arsenic	mg/L	0.01	0.000477 J	<0.0004	0.000615 J	<0.0004	0.000452 J
Barium	mg/L	2	**0.23**	**0.235**	**0.205**	**0.216**	**0.197**
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Calcium	mg/L	NS	**26.8**	**25.4**	**15.8**	**24.1**	**22.7**
Chromium	mg/L	0.1	<0.0004	<0.0004	0.000559 J	<0.0004	0.000462 J
Iron[a]	mg/L	0.3	**5.12**	**4.25**	**2.72**	**1.81**	**3.61**
Lead	mg/L	0.015	0.00144 J	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**8.03**	**8.10**	**4.32**	**7.19**	**7.43**
Manganese[a]	mg/L	0.05	**0.412**	**0.413**	**0.215**	**0.317**	**0.355**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	**0.00368**	<0.0006	<0.0006
Potassium	mg/L	NS	**2.93**	**2.68**	**2.42**	**2.62**	**2.51**
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sodium	mg/L	NS	**31.9**	**27.7**	**71.5**	**27.4**	**24.6**
Strontium	mg/L	NS	**0.246**	**0.228**	**0.183**	**0.212**	**0.214**
Vanadium	mg/L	0.026	NA	NA	0.00434 J	<0.0006	0.00322 J
Zinc	mg/L	1.1	**0.0147**	**0.0495**	**0.350**	**0.011**	**0.0130**
Anions/Water Quality Parameters							
Bicarbonate Alkalinity	mg/L	NS	**200**	**115**	**116**	**114**	**107**
Bromide	mg/L	NS	0.0992 J	<0.03	<0.03	**0.169**	<0.03
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5
Chloride[a]	mg/L	250	**35.7**	**26.4**	**40.7**	**38.7**	**23.7**
Sulfate[a]	mg/L	250	**2.91**	**3.67**	**2.21**	**3.3**	**4.28**
Total Dissolved Solids (TDS)[a]	mg/L	500	**236**	**186**	**210**	**266**	**204**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	NA	7.04 H	NA	7.30 H	7.22 H
pH (field)	SI	6.5 - 8.5	**6.41**	NA	**5.79**	**6.68**	NA
Sulfides							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7
Volatile Organic Compounds							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions							
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009
Stable Isotopes							
δD	‰	NS	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA

Constituent	Units		7/25/24	8/21/24	9/24/24	10/23/24	12/17/24
			019-580				
			WW #11				
			469'				
			ERM	ERM	ERM	ERM	ERM
			Industrial Water Wells				
Total Metals		**RECAP GWSS**					
Arsenic	mg/L	0.01	0.000509 J	<0.0004	0.000430 J	<0.0004	0.000555 J
Barium	mg/L	2	**0.219**	**0.184**	**0.188**	**0.205**	**0.201**
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**23.8**	**19.4**	**21.2**	**21.7**	**22.4**
Chromium	mg/L	0.1	0.000456 J	<0.0004	0.000712 J	<0.0004	<0.0004
Iron[a]	mg/L	0.3	**3.77**	**3.10**	**3.40**	**3.63**	**3.58**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**6.69**	**6.02**	**6.59**	**6.77**	**7.32**
Manganese[a]	mg/L	0.05	**0.385**	**0.307**	**0.348**	**0.355**	**0.355**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Potassium	mg/L	NS	**2.22**	**2.17**	**2.38**	**2.96**	**2.57**
Selenium	mg/L	0.05	NA	NA	NA	NA	NA
Silver	mg/L	0.18	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**24.9**	**20.3**	**22.5**	**43.1**	**24.5**
Strontium	mg/L	NS	**0.216**	**0.179**	**0.193**	**0.185**	**0.195**
Vanadium	mg/L	0.026	<0.0006	<0.0006	<0.0006	0.00245 J	<0.0006
Zinc	mg/L	1.1	**0.00737**	**0.0111**	**0.0121**	**0.00914**	**0.00622**
Anions/Water Quality Parameters							
Bicarbonate Alkalinity	mg/L	NS	**120**	**148**	**155**	**129**	**119**
Bromide	mg/L	NS	**0.108**	<0.03	**0.101**	**0.110**	<0.03
Carbonate Alkalinity	mg/L	NS	<3	<3	<3	<3	<3
Chloride[a]	mg/L	250	**22.9**	**27.3**	**23.4**	**29.0**	**25.4**
Sulfate[a]	mg/L	250	**4.44**	**4.17**	**3.87**	<0.2	**4.25**	**2.71**	**5.36**
Total Dissolved Solids (TDS)[a]	mg/L	500	**170**	**158**	**166**	**174**	**98.0**	**244**	**330**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	7.02 H	6.88 H	7.13 H	7.83 H	7.45 H	7.62 H	7.20 H
pH (field)	SI	6.5 - 8.5	**7.04**	NA	NA	**6.89**	NA	NA	NA
Sulfides							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions							
Aliphatics >C6-C8	mg/L	3.2	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aliphatics >C10-C12	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.025	<0.025	<0.025	0.0402 J	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes							
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Constituent	Units		Sample ID																	
			Sample Location																	
			Sample Interval (ft)																	
			Sample Date	1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	7/17/23	8/22/23	9/20/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/24/24	5/22/24	9/26/24	10/23/24	11/19/24
			Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
				019-582																		
				WW #13																		
				609'																		
				Industrial Water Wells																		
Total Metals		**RECAP GWSS**																				
Arsenic	mg/L	0.01		0.000812 J	<0.0004	0.000451 J	0.000418 J	0.000635 J	0.000436 J	0.000488 J	<0.0004	0.000739 J	<0.0004	<0.0004	0.000697 J	**0.000475**	0.000870 J	<0.0004	0.000478 J	0.000437 J	0.000580 J	0.00112 J
Barium	mg/L	2		**0.239**	**0.221**	**0.243**	**0.232**	**0.210**	**0.217**	**0.224**	**0.197**	**0.218**	**0.188**	**0.206**	**0.215**	**0.214**	**0.221**	**0.189**	**0.202**	**0.213**	**0.220**	**0.224**
Cadmium	mg/L	0.005		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS		**25.5**	**23.9**	**25.8**	**24.6**	**22.9**	**21.1**	**24.2**	**22.6**	**22.9**	**22.3**	**23.5**	**21.7**	**22.2**	**23.4**	**21.3**	**20.3**	**24.3**	**23.0**	**20.7**
Chromium	mg/L	0.1		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000697 J	0.000469 J	<0.0004	0.00105 J	0.000929 J	0.000631 J	<0.0004	0.000540 J	<0.0004	0.000630 J	0.000849 J	0.000420 J	<0.0004
Iron[(a)]	mg/L	0.3		**4.03**	**4.02**	**6.09**	**6.13**	**3.28**	**3.12**	**3.49**	**4.49**	**3.23**	**2.55**	**4.70**	**4.04**	**2.01**	**3.24**	**2.37**	**2.87**	**4.65**	**12.0**	**13.0**
Lead	mg/L	0.015		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS		**7.81**	**7.66**	**7.58**	**7.36**	**7.36**	**6.45**	**7.47**	**7.05**	**7.05**	**7.47**	**7.08**	**6.91**	**6.78**	**7.25**	**6.67**	**6.15**	**7.32**	**7.50**	**6.47**
Manganese[(a)]	mg/L	0.05		**0.417**	**0.388**	**0.388**	**0.408**	**0.361**	**0.349**	**0.372**	**0.353**	**0.379**	**0.423**	**0.388**	**0.362**	**0.310**	**0.385**	**0.343**	**0.347**	**0.389**	**0.510**	**0.365**
Mercury	mg/L	0.002		<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000640 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073		NA	NA	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000831 J	0.000872 J	0.000704 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000762 J	<0.0006
Potassium	mg/L	NS		**2.94**	**2.50**	**2.70**	**2.55**	**2.49**	**2.28**	**2.74**	**3.30**	**2.64**	**2.60**	**2.54**	**2.40**	**2.31**	**2.51**	**2.30**	**2.13**	**2.50**	**2.58**	**2.33**
Selenium	mg/L	0.05		<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS		**28.0**	**26.4**	**30.2**	**27.8**	**24.7**	**22.2**	**29.8**	**46.5**	**26.2**	**24.8**	**24.4**	**23.4**	**25.7**	**25.0**	**22.8**	**21.0**	**24.7**	**25.7**	**22.0**
Strontium	mg/L	NS		**0.240**	**0.208**	**0.231**	**0.218**	**0.221**	**0.195**	**0.215**	**0.201**	**0.216**	**0.195**	**0.192**	**0.197**	**0.209**	**0.217**	**0.187**	**0.186**	**0.214**	**0.213**	**0.194**
Vanadium	mg/L	0.026		NA	NA	0.00352 J	<0.0006	0.00358 J	<0.0006	<0.0006	<0.0006	**0.0148**	0.00222 J	<0.0006	0.00200 J	0.00167 J	0.00475 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Zinc	mg/L	1.1		**0.0107**	**0.0166**	**0.0474**	**0.019**	**0.00897**	**0.0102**	**0.656**	**0.00742**	**0.0115**	**0.00754**	**0.00922**	**0.00897**	**0.00841**	**0.0118**	**0.00814**	**0.00914**	**0.00590**	**0.0143**	**0.00680**
Anions/Water Quality Parameters																						
Bicarbonate Alkalinity	mg/L	NS		**180**	**115**	**119**	**120**	**109**	**119**	**116**	**132**	**114**	**112**	**113**	**113**	**120**	**109**	**110**	**120**	**121**	**112**	**110**
Bromide	mg/L	NS		0.0860 J	<0.03	<0.03	**0.168**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.0680 J	<0.03	<0.03	<0.03	**0.104**	**0.126**	0.0976 J
Carbonate Alkalinity	mg/L	NS		<5	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3	<3	<3	<3	<3
Chloride[(a)]	mg/L	250		**23.4**	**26.3**	**40.4**	**38.1**	**23.2**	**23.6**	**27.7**	**31.0**	**23.6**	**23.8**	**23.8**	**23.1**	**34.2**	**22.9**	**28.4**	**22.2**	**24.3**	**23.7**	**24.3**
Sulfate[(a)]	mg/L	250		**4.11**	**3.68**	**2.69**	**2.9**	**4.30**	**4.41**	**3.44**	**2.73**	**4.61**	**4.18**	**4.42**	**3.93**	**3.72**	**4.55**	**4.17**	**4.51**	**4.05**	**0.572**	**3.06**
Total Dissolved Solids (TDS)[(a)]	mg/L	500		**212**	**200**	**236**	**248**	**190**	**234**	**226**	**256**	**214**	**184**	**158**	**228**	**244**	**330**	**180**	**172**	**188**	**194**	**188**
Total Organic Carbon (TOC)	mg/L	NS		NA	NA	NA	NA	NA	NA	**2.14**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[(a)]	SI	6.5 - 8.5		NA	7.01 H	NA	7.37 H	7.36 H	7.75 H	7.23 H	7.42 H	7.21 H	7.24 H	7.57 H	7.54 H	7.13 H	7.47 H	7.45 H	6.95 H	7.78 H	7.28 H	7.30 H
pH (field)	SI	6.5 - 8.5		**6.45**	**6.53**	**5.89**	**6.42**	NA	**6.38**	**6.80**	NA	**5.60**	**6.09**	**6.91**	**7.32**	**6.11**	**7.01**	**6.62**	**7.07**	**7.33**	NA	NA
Sulfides																						
Hydrogen Sulfide	mg/L	NS		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	**1.44**
Sulfide	mg/L	NS		<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.36 J
Volatile Organic Compounds																						
Benzene	mg/L	0.005		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																						
Aliphatics >C6-C8	mg/L	3.2		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0192	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aliphatics >C10-C12	mg/L	0.15		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	**0.0206**	<0.008	<0.008	**0.0205**	**0.0204**	<0.008	**0.0365**	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15		<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																						
δD	‰	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[(a)] - EPA Secondary MCL (No RECAP standard)
[(b)] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample ID			019-995																
Sample Location			WW #12																
Sample Interval (ft)			485'																
Sample Date			1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	8/22/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24	5/22/24	6/18/24	9/25/24	10/23/24	11/19/24
Sampler			ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Industrial Water Wells**																
Total Metals		**RECAP GWSS**																	
Arsenic	mg/L	0.01	0.000762 J	<0.0004	0.000739 J	0.000497 J	<0.0004	0.000638 J	0.000623 J	0.000555 J	0.000461 J	0.000782 J	0.000756 J	0.000900 J	0.000715 J	0.000506 J	0.000416 J	0.000501 J	0.000405 J	0.00121 J
Barium	mg/L	2	**0.214**	**0.234**	**0.242**	**0.207**	**0.205**	**0.211**	**0.174**	**0.197**	**0.194**	**0.186**	**0.222**	**0.195**	**0.224**	**0.219**	**0.196**	**0.212**	**0.181**	**0.237**
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**26.4**	**25.3**	**27.7**	**24.8**	**23.0**	**24.3**	**21.1**	**22.8**	**24.1**	**20.4**	**25.2**	**23.4**	**25.9**	**23.5**	**23.7**	**23.5**	**18.9**	**25.9**
Chromium	mg/L	0.1	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000600 J	<0.0004	<0.0004	0.000577 J	0.000513 J	<0.0004	0.00196 J	0.000420 J	<0.0004	0.000409 J	0.000859 J	0.000435 J	0.000455 J
Iron[(a)]	mg/L	0.3	**0.821**	**4.76**	**3.42**	**2.11**	**4.88**	**3.53**	**1.23**	**3.42**	**1.38**	**1.26**	**1.04**	**0.907**	**2.88**	**1.17**	**2.25**	**2.14**	**3.61**	**1.73**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**8.02**	**7.87**	**8.14**	**7.47**	**7.51**	**7.66**	**6.40**	**7.46**	**7.40**	**6.41**	**7.96**	**7.23**	**8.01**	**7.07**	**7.42**	**7.07**	**5.87**	**7.94**
Manganese[(a)]	mg/L	0.05	**0.388**	**0.403**	**0.416**	**0.403**	**0.375**	**0.377**	**0.222**	**0.35**	**0.411**	**0.328**	**0.366**	**0.235**	**0.399**	**0.350**	**0.422**	**0.371**	**0.283**	**0.320**
Mercury	mg/L	0.002	<0.00003	0.0000310 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000310 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	**0.00531**	<0.0006	0.000820 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000682 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Potassium	mg/L	NS	**3.00**	**2.60**	**2.79**	**2.61**	**2.53**	**2.65**	**2.20**	**2.36**	**2.61**	**2.22**	**2.67**	**2.51**	**2.69**	**2.42**	**2.46**	**2.44**	**2.68**	**2.78**
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000242 J	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**29.9**	**30.3**	**32.2**	**30.5**	**25.0**	**27.2**	**31.6**	**24.1**	**25.4**	**22.3**	**29.3**	**26.2**	**26.3**	**25.6**	**25.6**	**24.6**	**37.4**	**31.5**
Strontium	mg/L	NS	**0.241**	**0.221**	**0.244**	**0.223**	**0.220**	**0.207**	**0.214**	**0.197**	**0.201**	**0.184**	**0.235**	**0.203**	**0.224**	**0.208**	**0.202**	**0.223**	**0.162**	**0.238**
Vanadium	mg/L	0.026	NA	NA	0.00299 J	<0.0006	0.00370 J	<0.0006	**0.0130**	0.00228 J	<0.0006	0.00220 J	0.00308 J	0.00474 J	<0.0006	<0.0006	<0.0006	<0.0006	0.00412 J	<0.0006
Zinc	mg/L	1.1	**0.00426**	<0.002	0.00276 J	<0.002	<0.002	0.00218 J	0.00245 J	0.00385 J	0.00244 J	**0.00461**	**0.00932**	**0.00606**	**0.00583**	**0.00532**	0.00374 J	<0.002	<0.002	0.00297 J
Anions/Water Quality Parameters																				
Bicarbonate Alkalinity	mg/L	NS	**258**	**122**	**124**	**128**	**194**	**118**	**129**	**116**	**116**	**117**	**119**	**110**	**119**	**131**	**130**	**126**	**132**	**128**
Bromide	mg/L	NS	0.0931 J	0.0782 J	<0.03	**0.164**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.0655 J	<0.03	<0.03	<0.03	<0.03	**0.103**	**0.103**	**0.108**
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3	<3	<3	<3	<3	<3
Chloride[(a)]	mg/L	250	**28.7**	**36.3**	**37.5**	**34.1**	**23.4**	**22.2**	**23.0**	**24.8**	**23.6**	**23.0**	**27.6**	**23.0**	**23.2**	**26.0**	**22.4**	**24.6**	**28.8**	**35.9**
Sulfate[(a)]	mg/L	250	**3.63**	**2.80**	**2.12**	**2.53**	**3.57**	**4.11**	**1.98**	**4.38**	**4.04**	**3.63**	**2.50**	**4.25**	**4.26**	**4.04**	**3.61**	**3.96**	**3.61**	**3.07**
Total Dissolved Solids (TDS)[(a)]	mg/L	500	**226**	**240**	**202**	**222**	**194**	**228**	**180**	**182**	**138**	**224**	**220**	**164**	**192**	**180**	**164**	**160**	**226**	**224**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	**3.84**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[(a)]	SI	6.5 - 8.5	NA	6.94 H	NA	7.55 H	7.30 H	7.32H	7.49 H	7.18 H	7.75 H	7.74 H	7.34 H	7.57 H	7.51 H	6.91 H	7.07 H	7.77 H	7.37 H	7.27 H
pH (field)	SI	6.5 - 8.5	**6.35**	**6.53**	**5.64**	**6.18**	NA	**6.87**	**6.15**	**6.56**	**6.84**	**6.98**	**6.32**	**7.36**	**6.14**	**7.17**	NA	NA	NA	NA
Sulfides																				
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds																				
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																				
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0338 J
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	**0.0235**	**0.0746**	<0.008	<0.008	0.0535 J	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																				
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[(a)] - EPA Secondary MCL (No RECAP standard)
[(b)] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Constituent	Units		Sample ID	Sample Location	Sample Interval (ft)	Sample Date	Sampler
			019-1055	WW #19	520'	1/26/23	ERM
						3/30/23	ERM
						4/27/23	ERM
						5/18/23	ERM
						6/16/23	ERM
						7/17/23	ERM
						8/22/23	ERM
						9/20/23	ERM
						10/25/23	ERM
						11/28/23	ERM
						12/14/23	ERM
						1/31/24	ERM
						2/20/24	ERM
						4/23/24	ERM
						5/22/24	ERM
						6/18/24	ERM
						7/24/24	ERM
						8/21/24	ERM
						9/24/24	ERM
						10/23/24	ERM
						11/19/24	ERM
						12/17/24	ERM
			Industrial Water Wells				
Total Metals		**RECAP GWSS**					
Arsenic	mg/L	0.01	0.000419 J	<0.0004	0.000461 J	<0.0004	<0.0004
Barium	mg/L	2	**0.265**	**0.263**	**0.242**	**0.256**	**0.207**
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Calcium	mg/L	NS	**28.7**	**27.5**	**24.7**	**25.9**	**22.6**
Chromium	mg/L	0.1	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Iron[a]	mg/L	0.3	**3.81**	**3.96**	**3.48**	**3.42**	**4.24**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**8.66**	**8.42**	**7.32**	**7.78**	**7.32**
Manganese[a]	mg/L	0.05	**0.420**	**0.400**	**0.353**	**0.379**	**0.359**
Mercury	mg/L	0.002	<0.00003	0.0000300 J	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	<0.0006	<0.0006	<0.0006
Potassium	mg/L	NS	**3.10**	**2.69**	**2.54**	**2.74**	**2.48**
Selenium	mg/L	0.05	0.00114 J	<0.0011	<0.0011	<0.0011	<0.0011
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sodium	mg/L	NS	**34.4**	**32.0**	**28.5**	**29.6**	**24.8**
Strontium	mg/L	NS	**0.262**	**0.238**	**0.225**	**0.24**	**0.215**
Vanadium	mg/L	0.026	NA	NA	0.00320 J	<0.0006	0.00311 J
Zinc	mg/L	1.1	**0.00993**	**0.0107**	**0.0163**	**0.00906**	**0.00514**
Anions/Water Quality Parameters							
Bicarbonate Alkalinity	mg/L	NS	**250**	**123**	**119**	**118**	**108**
Bromide	mg/L	NS	0.0982 J	<0.03	<0.03	**0.167**	<0.03
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5
Chloride[a]	mg/L	250	**38.3**	**36.8**	**40.6**	**37.6**	**23.6**
Sulfate[a]	mg/L	250	**3.51**	**3.39**	**3.55**	**3.85**	**4.21**
Total Dissolved Solids (TDS)[a]	mg/L	500	**244**	**230**	**220**	**274**	**176**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	NA	7.16 H	NA	7.14 H	7.38 H
pH (field)	SI	6.5 - 8.5	**6.82**	**6.53**	**5.84**	**6.46**	NA
Sulfides							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7
Volatile Organic Compounds							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions							
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009
Stable Isotopes							
δD	‰	NS	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA

Constituent	Units		1/26/23 ERM	3/30/23 ERM	4/27/23 ERM	5/18/23 ERM	6/16/23 ERM	7/17/23 ERM	8/22/23 ERM	9/20/23 ERM	10/25/23 ERM	11/28/23 ERM	12/14/23 ERM	1/31/24 ERM	2/20/24 ERM	4/23/24 ERM	5/22/24 ERM	6/18/24 ERM	7/24/24 ERM	8/21/24 ERM	9/24/24 ERM	10/23/24 ERM	11/19/24 ERM	12/17/24 ERM
Sulfides																								
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.44**	<0.5	<0.5	**1.44**	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	1.36 J	<1.2	<1.2	1.36 J	<1.2	<1.2	<1.2
Volatile Organic Compounds																								
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																								
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	0.0352 J	<0.0333
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																								
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	**019-1603**										
		Sample Location	**WW #40**										
		Sample Interval (ft)					520'						
		Sample Date	3/30/23	5/18/23	6/16/23	9/19/23	12/14/23	1/31/24	3/28/24	5/23/24	10/23/24	11/19/24	12/18/24
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Industrial Water Wells**										
Total Metals		**RECAP GWSS**											
Arsenic	mg/L	0.01	0.000974 J	**0.0044**	0.000466 J	<0.0004	**0.00215**	0.000561 J	0.00194 J	<0.0004	<0.0004	0.000905 J	<0.0004
Barium	mg/L	2	**0.258**	**0.178**	**0.136**	**0.173**	**0.389**	**0.193**	**0.391**	**0.191**	**0.201**	**0.199**	**0.205**
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**26.9**	**56**	**22.4**	**19.7**	**26.5**	**20.4**	**27.2**	**24.4**	**20.9**	**22.8**	**22.9**
Chromium	mg/L	0.1	<0.0004	0.000825 J	0.000415 J	0.000721 J	0.00123 J	0.000496 J	0.00134 J	<0.0004	<0.0004	0.000568 J	0.000446 J
Iron[(a)]	mg/L	0.3	**12.4**	**0.69**	**4.39**	**3.45**	**68.1**	**1.69**	**44.8**	**1.38**	**3.15**	**3.82**	**3.43**
Lead	mg/L	0.015	<0.0006	0.000702 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**8.33**	**6.58**	**7.37**	**6.34**	**7.76**	**6.48**	**8.35**	**7.41**	**6.52**	**7.31**	**7.16**
Manganese[(a)]	mg/L	0.05	**0.506**	**0.348**	**0.491**	**0.297**	**0.728**	**0.330**	**0.492**	**0.465**	**0.302**	**0.324**	**0.314**
Mercury	mg/L	0.002	<0.00003	0.0000720 J	0.0000400 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	**0.00202**	0.000750 J	0.000615 J	0.00133 J	<0.0006	**0.0032**	0.000718 J	<0.0006	0.000642 J	<0.0006
Potassium	mg/L	NS	**2.81**	**2.61**	**2.43**	**3.62**	**2.65**	**2.35**	**2.60**	**2.45**	**2.97**	**3.13**	**3.05**
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**32.1**	**92.9**	**24.0**	**52.1**	**25.7**	**23.2**	**26.8**	**26.6**	**41.2**	**48.2**	**39.0**
Strontium	mg/L	NS	**0.235**	**0.397**	**0.210**	**0.177**	**0.237**	**0.181**	**0.247**	**0.210**	**0.179**	**0.205**	**0.198**
Vanadium	mg/L	0.026	NA	**0.0136**	0.00320 J	<0.0006	<0.0006	0.00202 J	0.00224 J	<0.0006	0.00390 J	<0.0006	<0.0006
Zinc	mg/L	1.1	**0.0845**	**0.0231**	**0.0200**	**1.47**	**0.0362**	**0.0343**	**0.0720**	**0.0633**	**0.00878**	**0.0202**	**0.0358**
Anions/Water Quality Parameters													
Bicarbonate Alkalinity	mg/L	NS	**125**	**183**	**113**	**144**	**114**	**112**	**118**	**121**	**136**	**158**	**127**
Bromide	mg/L	NS	**0.101**	<0.03	**0.143**	<0.03	<0.03	<0.03	<0.0300	**0.115**	**0.106**	<0.03	0.0601 J
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3	<3	<3	<3
Chloride[(a)]	mg/L	250	**36.6**	**115**	**23.0**	**27.0**	**24.4**	**23.3**	**23.3**	**28.0**	**29.1**	**37.8**	**34.6**
Sulfate[(a)]	mg/L	250	0.426 J	**14.5**	**3.00**	**2.87**	**3.16**	**3.78**	**6.82**	**3.96**	**3.82**	**15.4**	**3.77**
Total Dissolved Solids (TDS)[(a)]	mg/L	500	**206**	**446**	**192**	**224**	**120**	**226**	**202**	**204**	**236**	**248**	214 H
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[(a)]	SI	6.5 - 8.5	7.23 H	8.02 H	7.45 H	7.38 H	7.66 H	7.93 H	7.59 H	7.41 H	7.67 H	7.15 H	6.79 H
pH (field)	SI	6.5 - 8.5	**6.68**	**6.65**	NA	**6.81**	**6.99**	**7.61**	**7.30**	**7.28**	NA	NA	NA
Sulfides													
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 H
Sulfide	mg/L	NS	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2 H
Volatile Organic Compounds													
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions													
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0670 J	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	**0.0191**	<0.008	<0.008	**0.441**	<0.025	0.0644 J	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0447 J	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	**0.175**	<0.025	<0.025	<0.025
Stable Isotopes													
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[(a)] - EPA Secondary MCL (No RECAP standard)
[(b)] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample ID			019-17636Z																		
Sample Location			Cottages Well																		
Sample Interval (ft)			740'																		
Sample Date			3/9/23	4/27/23	5/18/23	6/16/23	7/17/23	8/22/23	9/20/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24	5/22/24	7/25/24	8/21/24	9/25/24	10/23/24	11/19/24	12/18/24
Sampler			ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Industrial Water Wells**																				
Total Metals		**RECAP GWSS**																					
Arsenic	mg/L	0.01	<0.0004	0.000464 J	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000502 J	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00100 J	0.00162 J	**0.00228**
Barium	mg/L	2	**0.187**	**0.187**	**0.171**	**0.172**	**0.187**	**0.160**	**0.181**	**0.178**	**0.177**	**0.188**	**0.198**	**0.212**	**0.181**	**0.211**	**0.179**	**0.183**	**0.166**	**0.166**	**0.216**	**0.217**	**0.201**
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**13.7**	**14.5**	**14.5**	**14.4**	**13.4**	**12.2**	**14.4**	**13.2**	**13.5**	**13.8**	**14.4**	**14.6**	**14**	**16.2**	**13.2**	**13.7**	**12.4**	**11.6**	**15.9**	**15.3**	**15.6**
Chromium	mg/L	0.1	<0.0004	<0.0004	0.00103 J	0.000522 J	**0.00744**	0.000562 J	<0.0004	<0.0004	<0.0004	0.000404 J	**0.00634**	<0.0004	0.000849 J	<0.0004	**0.00489**	**0.00635**	0.000415 J	0.00116 J	0.00214 J	**0.00401**	**0.0113**
Iron[a]	mg/L	0.3	**5.57**	**2.48**	**4.76**	**6.04**	**2.34**	**1.46**	**2.35**	**3.22**	**3.49**	**3.32**	**3.46**	**2.97**	**5.99**	**9.13**	**2.52**	**2.38**	**1.48**	**5.96**	**12.8**	**10.2**	**14.3**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00124 J
Magnesium	mg/L	NS	**3.69**	**3.97**	**4.05**	**3.96**	**3.72**	**3.38**	**4.05**	**3.70**	**3.98**	**3.85**	**3.96**	**3.98**	**3.84**	**4.53**	**3.59**	**3.33**	**3.32**	**2.98**	**4.29**	**4.22**	**4.20**
Manganese[a]	mg/L	0.05	**0.193**	**0.192**	**0.224**	**0.211**	**0.190**	**0.156**	**0.183**	**0.178**	**0.185**	**0.182**	**0.192**	**0.194**	**0.220**	**0.259**	**0.179**	**0.182**	**0.152**	**0.211**	**0.358**	**0.263**	**0.279**
Mercury	mg/L	0.002	<0.00003	<0.00003	0.000117 J	<0.00003	0.0000510 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	**0.00330**	**0.00408**	**0.00304**	**0.00239**	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	**0.00221**	<0.0006	0.00135 J	0.00185 J	**0.00437**	0.000634 J	<0.0006	**0.00306**	**0.00704**	**0.00979**	**0.0198**
Potassium	mg/L	NS	**2.03**	**2.24**	**2.31**	**2.20**	**2.12**	**2.03**	**2.38**	**2.18**	**2.11**	**2.18**	**2.19**	**2.22**	**2.15**	**2.54**	**2.04**	**1.87**	**1.92**	**1.70**	**2.30**	**2.40**	**2.38**
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**57.7**	**65.2**	**71.2**	**66.2**	**71.2**	**72.1**	**77.9**	**73.5**	**75.2**	**72.5**	**77.8**	**79.5**	**67.3**	**76.8**	**68.8**	**73.3**	**69.1**	**57.0**	**65.6**	**66.9**	**63.0**
Strontium	mg/L	NS	**0.160**	**0.167**	**0.171**	**0.179**	**0.157**	**0.141**	**0.166**	**0.165**	**0.156**	**0.161**	**0.165**	**0.175**	**0.162**	**0.193**	**0.153**	**0.165**	**0.148**	**0.150**	**0.178**	**0.184**	**0.172**
Vanadium	mg/L	0.026	NA	0.00270 J	**0.0006**	0.00295 J	<0.0006	0.000689 J	<0.0006	**0.0139**	0.00204 J	<0.0006	0.00312 J	0.00303 J	**0.00562**	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Zinc	mg/L	1.1	**0.255**	**0.320**	**0.202**	**0.203**	**0.798**	**0.0237**	**0.0981**	**0.166**	**0.170**	**0.151**	**1.65**	**0.123**	**0.202**	**0.276**	**0.421**	**0.066**	**0.0385**	**0.0670**	**0.134**	**0.264**	**0.786**
Anions/Water Quality Parameters																							
Bicarbonate Alkalinity	mg/L	NS	**139**	**134**	**139**	**132**	**153**	**153**	**141**	**146**	**142**	**144**	**143**	**143**	**144**	**138**	**145**	**153**	**172**	**155**	**136**	**133**	**134**
Bromide	mg/L	NS	**0.102**	**0.105**	**0.19**	**0.179**	**0.156**	**0.118**	**0.106**	**0.122**	**0.126**	**0.152**	**0.215**	**0.108**	0.0891 J	0.0807 J	**0.160**	**0.150**	<0.03	**0.140**	**0.144**	**0.146**	**0.106**
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3	<3	<3	<3	<3	<3	<3	<3
Chloride[a]	mg/L	250	**52.8**	**55.6**	**52.8**	**52.6**	**59.6**	**57.5**	**54.5**	**56.9**	**57.4**	**56.8**	**56.7**	**56.4**	**51.2**	**49.9**	**53.8**	**56.0**	**67.3**	**56.2**	**48.0**	**51.7**	**49.3**
Sulfate[a]	mg/L	250	<0.2	0.286 J	**0.574**	**0.608**	0.277 J	0.462 J	0.300 J	0.491 J	0.297 J	0.322 J	0.317 J	0.304 J	0.306 J	0.212 J	**0.536**	0.414 J	<0.2	<0.2	0.272 J	0.288 J	<0.2
Total Dissolved Solids (TDS)[a]	mg/L	500	**274**	**250**	**284**	**244**	**308**	**270**	**270**	**236**	**268**	**200**	**294**	**304**	**268**	**234**	**228**	**242**	**230**	**224**	**512**	**286**	240 H
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	**1.38**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	NA	NA	7.63 H	7.30 H	7.91 H	7.32 H	7.44 H	7.63 H	7.29 H	7.49 H	7.59 H	7.46 H	7.77 H	7.50 H	7.07 H	7.86 H	7.61 H	7.92 H	7.88 H	7.38 H	6.99 H
pH (field)	SI	6.5 - 8.5	**7.67**	**5.73**	**7.06**	NA	**6.28**	**7.05**	NA	**6.05**	**6.63**	**6.94**	**6.47**	**6.53**	**7.06**	**6.14**	**7.06**	NA	**7.35**	NA	NA	NA	NA
Sulfides																							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.28**	<0.5	<0.5	<0.5	<0.5 H
Sulfide	mg/L	NS	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.20 J	<1.2	<1.2	<1.2	<1.2 H
Volatile Organic Compounds																							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																							
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333	<0.0333	0.0362 J	<0.0333
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0433 J	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	**0.0132**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																							
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample ID			MW-1																			
Sample Location			MW-1-200										MW-1-500									
Sample Interval (ft)			162-172'										503-513'									
Sample Date			12/28/23	3/27/24	4/22/24	5/21/24	6/19/24	7/23/24	8/20/24	9/26/24	10/21/24	11/18/24	12/16/24	3/27/24	4/22/24	5/22/24	6/18/24	7/23/24	8/20/24	9/23/24	10/21/24	11/18/24	12/16/24
Sampler			ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Monitoring Wells**																				
Total Metals		**RECAP GWSS**																					
Arsenic	mg/L	0.01	**0.00881**	**0.0137**	**0.0146**	**0.0123**	**0.0145**	**0.012**	**0.0102**	**0.0125**	**0.0119**	**0.0109**	**0.0108**	**0.00493**	**0.00431**	<0.0004	0.00174 J	0.00106 J	0.000455 J	0.000655 J	0.000559 J	<0.0004	<0.0004
Barium	mg/L	2	**0.231**	**0.187**	**0.245**	**0.214**	**0.267**	**0.229**	**0.223**	**0.276**	**0.259**	**0.248**	**0.279**	**0.108**	**0.128**	**0.327**	**0.246**	**0.223**	**0.260**	**0.246**	**0.257**	**0.274**	**0.229**
Cadmium	mg/L	0.005	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**22.6**	**16.9**	**21.4**	**18.0**	**22.3**	**18.4**	**15.6**	**21.7**	**20.6**	**18.5**	**20.2**	**18.0**	**20.2**	**8.08**	**14.4**	**12.9**	**8.65**	**11.4**	**10.6**	**9.97**	**9.07**
Chromium	mg/L	0.1	0.00178 J	<0.0004	0.000540 J	<0.0004	0.000457 J	0.000684 J	<0.0004	0.000925 J	0.000503 J	<0.0004	<0.0004	0.00257 J	<0.0004	0.00106 J	0.000503 J	0.000955 J	0.000710 J	0.000826 J	0.000610 J	0.000606 J	<0.0004
Iron[a]	mg/L	0.3	**9.33**	0.179 J	**0.360**	**0.248**	**0.221**	**0.373**	**0.243**	**0.242**	**0.374**	**0.292**	0.184 J	**1.89**	**1.91**	**2.41**	**0.733**	**2.33**	**1.33**	**1.27**	**1.84**	**0.833**	**0.807**
Lead	mg/L	0.015	0.00163 J	<0.0006	0.00193 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**8.82**	**7.74**	**9.54**	**8.46**	**10.00**	**8.79**	**7.98**	**9.91**	**9.61**	**8.88**	**9.76**	**4.65**	**5.28**	**3.11**	**4.52**	**4.27**	**3.26**	**3.85**	**4.04**	**4.07**	**3.89**
Manganese[a]	mg/L	0.05	**0.176**	**0.0321**	**0.0526**	**0.0477**	**0.0735**	**0.0575**	**0.0494**	**0.0685**	**0.0668**	**0.0574**	**0.0606**	**0.0774**	**0.0725**	**0.0368**	**0.0506**	**0.0467**	**0.0304**	**0.0296**	**0.0317**	**0.0238**	**0.0220**
Mercury	mg/L	0.002	<0.00003	**0.000293**	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	**0.0065**	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00153 J	<0.0006	0.000676 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000852 J
Potassium	mg/L	NS	**2.33**	**2.81**	**2.93**	**2.30**	**2.31**	**2.21**	**1.86**	**2.21**	**2.18**	**2.01**	**2.23**	**2.93**	**3.28**	**3.76**	**3.65**	**3.59**	**3.78**	**4.36**	**4.52**	**4.68**	**4.80**
Selenium	mg/L	0.05	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**91.9**	**95.4**	**109**	**90.2**	**103**	**89.7**	**82.9**	**98.1**	**97.6**	**89.5**	**101**	**67.0**	**69.9**	**44.6**	**51.5**	**46.1**	**42.3**	**44.4**	**45.0**	**45.5**	**43.5**
Strontium	mg/L	NS	**0.225**	**0.224**	**0.274**	**0.221**	**0.259**	**0.241**	**0.225**	**0.273**	**0.255**	**0.241**	**0.254**	**0.218**	**0.259**	**0.248**	**0.263**	**0.249**	**0.232**	**0.243**	**0.234**	**0.236**	**0.213**
Vanadium	mg/L	0.026	0.00335 J	0.00163 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00206 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Zinc	mg/L	1.1	**0.00801**	0.00272 J	**0.00675**	**0.00688**	**0.00422**	**0.0131**	<0.002	<0.002	0.00240 J	<0.002	<0.002	**0.00577**	**0.00489**	**0.00402**	**0.00613**	**0.00478**	**0.0117**	0.00379 J	0.00245 J	0.00216 J	0.00204 J
Anions/Water Quality Parameters																							
Bicarbonate Alkalinity	mg/L	NS	**268**	**250**	**249**	**250**	**273**	**251**	**301**	**280**	**261**	**255**	**273**	**208**	**197**	**98.2**	**139**	**134**	**145**	**118**	**116**	**112**	**123**
Bromide	mg/L	NS	<0.03	<0.03	<0.03	**0.125**	**0.126**	**0.124**	<0.03	**0.112**	**0.122**	**0.119**	0.0843 J	<0.03	<0.03	**0.131**	**0.118**	**0.121**	<0.03	**0.106**	**0.117**	**0.114**	0.0759 J
Carbonate Alkalinity	mg/L	NS	<3.5	**6.20**	**13.6**	**12.2**	**5.80**	**12.4**	**16.0**	<3	**10.4**	**13.0**	**8.60**	<3.5	<3	4.80 J	**6.20**	**12.00**	5 J	**7.40**	<3.5	**9.60**	4.40 J
Chloride[a]	mg/L	250	**41.0**	**40.7**	**34.4**	**33.7**	**34.7**	**32.6**	**38.4**	**35.4**	**36.1**	**37.0**	**37.5**	**24.8**	**22.1**	**26.2**	**23.6**	**23.7**	**30.3**	**24.2**	**24.9**	**25.4**	**25.7**
Sulfate[a]	mg/L	250	**4.89**	**0.871**	0.487 J	**0.710**	**0.766**	0.458 J	<0.2	0.364 J	0.434 J	0.318 J	<0.2	**5.65**	**2.73**	0.425 J	**1.01**	0.457 J	<0.2	0.387 J	0.347 J	<0.2	<0.2
Total Dissolved Solids (TDS)[a]	mg/L	500	**272**	**328**	**310**	**286**	**286**	**256**	**272**	**352**	**370**	**348**	**336**	**296**	**264**	**152**	**230**	**158**	**166**	**148**	**214**	**160**	**170**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	8.29 H	8.40 H	8.53 H	8.32 H	8.15 H	8.40 H	8.27 H	8.38 H	8.35 H	8.17 H	8.08 H	8.17 H	8.21 H	8.68 H	8.42 H	8.72 H	**8.61**	8.59 H	8.59 H	8.55 H	8.31 H
pH (field)	SI	6.5 - 8.5	**8.38**	**8.07**	**8.95**	**8.47**	**8.17**	**8.42**	**8.54**	**7.46**	**6.43**	**8.34**	**8.23**	**7.72**	**8.47**	**8.25**	**8.38**	**8.61**	**8.60**	**7.93**	**8.44**	**9.06**	**8.49**
Sulfides																							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.34**	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.49**	**1.10**	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	**2.20**	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	**1.40**	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds																							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0011**	<0.0002	**0.007**	<0.0002	0.00034 J	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																							
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0109 J	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	0.0336 J	<0.0333	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.00769 J	<0.0333	0.0350 J	<0.0333
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.0333	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0214**	<0.025	<0.025	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0205**	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.025	<0.025	<0.025	0.0377 J	<0.025	<0.025	**0.0255**	<0.025	<0.025	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0241**	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.0333	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0138**	<0.025	<0.025	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0130**	<0.025	<0.025	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025
Stable Isotopes																							
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	MW-1									MW-2									
		Sample Location	MW-1-700									MW-2-200									
		Sample Interval (ft)	694-704'									230-240'									
		Sample Date	3/26/24	4/22/24	5/22/24	6/19/24	7/23/24	8/20/24	9/23/24	10/21/24	11/19/24	12/16/24	1/31/24	3/26/24	4/23/24	5/24/24	6/18/24	7/24/24	8/20/24	9/24/24	10/23/24	11/19/24	12/16/24
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Monitoring Wells**																				
Total Metals		**RECAP GWSS**																					
Arsenic	mg/L	0.01	0.00134 J	0.00118 J	0.000469 J	0.000955 J	0.00117 J	0.000525 J	0.000627 J	0.000731 J	0.000607 J	0.000651 J	0.000423 J	0.000644 J	0.000420 J	0.000524 J	0.00186 J	0.00125 J	0.000485 J	0.00141 J	**0.00248**	0.000671 J	0.000474 J
Barium	mg/L	2	**0.0616**	**0.0716**	**0.0973**	**0.111**	**0.0768**	**0.104**	**0.0950**	**0.0799**	**0.0892**	**0.0832**	**0.0759**	**0.0571**	**0.0490**	**0.0400**	**0.0593**	**0.0512**	**0.0316**	**0.0703**	**0.1030**	**0.0787**	**0.0885**
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**4.60**	**4.84**	**2.60**	**3.41**	**3.49**	**2.62**	**2.59**	**2.14**	**2.34**	**2.31**	**14.0**	**10.7**	**6.73**	**4.39**	**5.48**	**5.14**	**2.74**	**6.38**	**9.86**	**6.38**	**6.66**
Chromium	mg/L	0.1	**0.015**	0.000471 J	0.000437 J	<0.0004	0.000656 J	0.000443 J	0.00105 J	0.000687 J	0.000641 J	<0.0004	0000546 J	<0.0004	0.000561 J	0.000406 J	0.000554 J	<0.0004	0.000560 J	0.000654 J	0.000645 J	<0.0004	<0.0004
Iron[a]	mg/L	0.3	**0.530**	**0.574**	**1.58**	**1.92**	**0.885**	**1.33**	**1.00**	**1.12**	**0.809**	**1.40**	0.0782 J	**2.04**	0.175 J	0.0774 J	**0.236**	0.0168 J	0.0361 J	0.0277 J	**1.76**	0.0351 J	0.0288 J
Lead	mg/L	0.015	<0.0006	0.00150 J	<0.0006	**0.00728**	**0.00614**	**0.00517**	0.000660 J	**0.00320**	0.00108 J	**0.00299**	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**0.215**	**0.387**	**0.644**	**0.629**	**0.526**	**0.645**	**0.572**	**0.423**	**0.510**	**0.451**	**0.549**	**0.102**	0.140 J	0.0667 J	**0.400**	**0.575**	**0.034**	**1.19**	**2.1**	**1.70**	**2.14**
Manganese[a]	mg/L	0.05	**0.00804**	**0.00788**	**0.01720**	**0.01720**	**0.01370**	**0.01330**	**0.01190**	**0.0117**	**0.00912**	**0.0124**	**0.00714**	**0.0134**	0.00112 J	0.00106 J	0.00494 J	0.00197 J	0.00139 J	**0.00531**	**0.0208**	0.00450 J	**0.00576**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	**0.00838**	<0.0006	<0.0006	<0.0006	0.000776 J	<0.0006	<0.0006	<0.0006	<0.0006	0.000753 J	0.000895 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000673 J	<0.0006	<0.0006
Potassium	mg/L	NS	**2.79**	**2.98**	**1.95**	**2.18**	**2.38**	**1.98**	**2.26**	**1.87**	**2.51**	**2.51**	**6.58**	**6.55**	**5.95**	**5.49**	**4.97**	**4.86**	**4.28**	**3.99**	**4.43**	**4.58**	**4.40**
Selenium	mg/L	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**175**	**194**	**165**	**195**	**187**	**173**	**179**	**149**	**190**	**197**	**67.9**	**63.8**	**66.8**	**70.8**	**71.0**	**65.2**	**60.9**	**61.4**	**76.1**	**72.3**	**73.1**
Strontium	mg/L	NS	**0.0652**	**0.0770**	**0.102**	**0.111**	**0.093**	**0.0989**	**0.0919**	**0.0726**	**0.0804**	**0.0769**	**0.250**	**0.328**	**0.319**	**0.224**	**0.209**	**0.184**	**0.159**	**0.206**	**0.258**	**0.254**	**0.247**
Vanadium	mg/L	0.026	0.00368 J	0.00306 J	<0.0006	0.000855 J	0.000834 J	<0.0006	<0.0006	<0.0006	<0.0006	0.000649 J	0.000751 J	0.000810 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00140 J	<0.0006	<0.0006
Zinc	mg/L	1.1	0.00292 J	**0.00653**	**0.00418**	0.00399 J	**0.00907**	**0.00394**	0.00310 J	0.00209 J	0.00274 J	**0.00406**	**0.00578**	0.00260 J	<0.002	0.00310 J	**0.0118**	**0.0046**	**0.00460**	0.00326 J	**0.00437**	0.00247 J	0.00251 J
Anions/Water Quality Parameters																							
Bicarbonate Alkalinity	mg/L	NS	**238**	**239**	**256**	**243**	**226**	**268**	**245**	**220**	**222**	**244**	**39.0**	**14.8**	**18.0**	**21.7**	**63.3**	**65.6**	**74.3**	<3	**132**	**138**	**141**
Bromide	mg/L	NS	<0.03	<0.03	**0.199**	**0.168**	**0.164**	<0.03	**0.154**	**0.172**	**0.178**	**0.144**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	NS	**56.0**	**48.6**	**37.4**	**38.2**	**61.8**	**58.0**	**50.2**	**51.6**	**60.2**	**56.4**	<3.5	**17.0**	**11.6**	**19.8**	**19.4**	**26.2**	**38.8**	**243**	**10.2**	**18.0**	**14.0**
Chloride[a]	mg/L	250	**105**	**99.9**	**104**	**103**	**105**	**131**	**105**	**105**	**112**	**111**	**36.5**	**38.4**	**34.6**	**32.8**	**30.4**	**30.7**	**32.4**	**26.9**	**26.2**	**26.9**	**26.6**
Sulfate[a]	mg/L	250	**13.9**	**11.2**	**0.538**	**2.67**	**1.87**	<0.2	0.395 J	0.436 J	0.357 J	<0.2	**127**	**146**	**119**	**92.2**	**73.7**	**56**	**52.0**	**30.8**	**25.2**	**20.9**	**13.1**
Total Dissolved Solids (TDS)[a]	mg/L	500	**494**	**444**	**468**	432 H	**396**	**464**	**442**	**478**	**472**	**456**	**274**	**260**	**216**	**198**	**190**	**184**	**170**	**186**	**242**	**296**	**340**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	9.12 H	8.98 H	9.04 H	8.91 H	9.27 H	**9.03**	9.14 H	9.43 H	9.00 H	9.35 H	7.99 H	9.68 H	9.28 H	10.0 H	9.49 H	9.46 H	9.35 H	8.05 H	8.80 H	8.95 H	8.99 H
pH (field)	SI	6.5 - 8.5	**9.29**	**9.36**	**9.00**	**8.93**	**8.88**	**9.13**	**8.28**	**7.11**	**11.04**	**9.15**	**9.67**	**9.91**	**10.32**	**9.95**	**9.34**	**9.27**	**9.32**	**8.08**	**8.49**	**10.60**	**8.73**
Sulfides																							
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	**1.28**	<0.5	**1.28**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.44**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	1.20 J	<1.2	1.20 J	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.36 J	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds																							
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0092**	0.00079 J	0.00036 J	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	**0.0010**	<0.005	**0.0026**	<0.0002	0.00039 J	<0.0002	<0.0002	<0.0002	0.00063 J	**0.00086**	<0.0002	**0.0011**	<0.0002	**0.0045**	0.00084 J	0.00061 J	0.00062 J	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	NA	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																							
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0102 J	<0.0333	<0.0333	<0.0333	<0.01	<0.01	<0.01	<0.01	<0.1	0.0394 J	<0.00688	<0.00688	<0.0333	<0.0333	<0.167
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.00599	<0.0333	0.0357 J	<0.0333	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.00599	<0.00599	<0.0333	0.0359 J	<0.167
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.1	<0.025	<0.025	<0.025	**0.0105**	<0.025	<0.025	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	**0.00282**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0283**	<0.025	<0.025	<0.002	<0.002	<0.025	0.0396 J	<0.025	0.0433 J	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	**0.0138**	<0.025	<0.025	0.0345 J	0.0355 J	<0.025	<0.025	**0.0240**	<0.025	0.0308 J	<0.008	<0.008	0.0709 J	**0.197**	0.0368 J	**0.134**	<0.025	<0.025	<0.025	0.0488 J	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.0333	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.018	<0.018	<0.0333	<0.0333	<0.167
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.025	<0.025	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025	<0.009	**0.00939**	0.0302 J	0.0554 J	<0.025	0.0424 J	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																							
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	MW-2																		
		Sample Location	MW-2-500										MW-2-700								
		Sample Interval (ft)	502-512'										680-690'								
		Sample Date	3/26/24	4/22/24	5/22/24	6/19/24	7/25/24	8/20/24	9/24/24	10/23/24	11/19/24	12/18/24	3/26/24	4/23/24	5/22/24	6/19/24	7/25/24	8/21/24	9/23/24	10/23/24	11/19/24	12/18/24
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Monitoring Wells**																			
Total Metals		**RECAP GWSS**																				
Arsenic	mg/L	0.01	**0.00396**	**0.00351**	**0.00388**	0.00174 J	0.000854 J	0.000601 J	0.000731 J	0.000915 J	0.00128 J	0.000698 J	0.00145 J	**0.00229**	**0.00209**	**0.00233**	0.00149 J	0.00569 J	0.000996 J	0.000907 J	0.00153 J	0.00106 J
Barium	mg/L	2	**0.143**	**0.138**	**0.164**	**0.126**	**0.0813**	**0.0835**	**0.0718**	**0.0777**	**0.077**	**0.0696**	**0.0507**	**0.0346**	**0.0477**	**0.0527**	**0.00643**	**0.00925**	**0.00889**	**0.00821**	**0.00873**	**0.00940**
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**19.3**	**20.0**	**24.2**	**8.57**	**2.64**	**3.75**	**3.05**	**3.93**	**2.84**	**2.35**	**32.4**	**22.4**	**24.1**	**21.7**	**1.31**	**0.80**	**1.68**	**1.02**	**0.993**	**1.10**
Chromium	mg/L	0.1	**0.00454**	0.000545 J	0.000791 J	0.000483 J	0.000604 J	**0.000678**	0.00119 J	0.000543 J	0.000490 J	0.000558 J	0.00399 J	0.000594 J	0.00324 J	0.000609 J	0.00134 J	0.0007 J	0.00149 J	<0.0004	0.000787 J	0.000781 J
Iron[a]	mg/L	0.3	**3.65**	**0.530**	**0.332**	0.0986 J	**0.747**	**0.0426**	**0.998**	**0.993**	**0.619**	0.0480 J	**0.272**	0.0258 J	**0.290**	**0.315**	**0.877**	**0.530**	**0.560**	**0.717**	**0.583**	**0.766**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**4.06**	**4.12**	**5.18**	**1.62**	**0.308**	**0.822**	**0.603**	**0.652**	**0.428**	**0.283**	0.104 J	0.199 J	**0.245**	**0.385**	0.0747 J	0.0342 J	0.0608 J	0.0354 J	0.0323 J	0.0336 J
Manganese[a]	mg/L	0.05	**0.0912**	**0.0802**	**0.0944**	**0.0174**	**0.0109**	**0.0023**	**0.0113**	**0.0157**	**0.00988**	0.00139 J	0.00404 J	<0.0007	**0.0298**	**0.00912**	**0.00935**	0.00355 J	0.00404 J	0.00372 J	0.00330 J	0.00356 J
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	**0.00294**	<0.0006	<0.0006	0.000681 J	0.00122 J	<0.0006	0.000923 J	0.000754 J	0.000898 J	<0.0006	**0.00274**	<0.0006	**0.00248**	0.00154 J	**0.00467**	**0.00339**	**0.00348**	**0.00238**	**0.00226**	**0.00217**
Potassium	mg/L	NS	**3.21**	**3.14**	**3.50**	**65.50**	**74.20**	**56.1**	**57.9**	**64.8**	**63.7**	**61.1**	**7.38**	**6.34**	**5.20**	**4.54**	**4.46**	**4.38**	**5.82**	**4.68**	**4.89**	**5.06**
Selenium	mg/L	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**70.0**	**59.9**	**70.0**	**89.6**	**80.8**	**71.0**	**70.6**	**78.2**	**77.9**	**73.2**	**168**	**148**	**166**	**214**	**177**	**152**	**232**	**166**	**172**	**177**
Strontium	mg/L	NS	**0.230**	**0.242**	**0.286**	**0.239**	**0.204**	**0.245**	**0.245**	**0.312**	**0.355**	**0.381**	**0.231**	**0.171**	**0.166**	**0.142**	**0.0206**	**0.0184**	**0.0246**	**0.0191**	**0.0190**	**0.0194**
Vanadium	mg/L	0.026	0.00106 J	<0.0006	<0.0006	<0.0006	0.000717 J	<0.0006	0.000980 J	<0.0006	0.000622 J	<0.0006	**0.0304**	**0.0257**	**0.0176**	**0.013**	0.00126 J	<0.0006	0.000785 J	0.000763 J	<0.0006	<0.0006
Zinc	mg/L	1.1	**0.00813**	<0.002	**0.00479**	**0.00659**	**0.00659**	0.00327 J	**0.00438**	0.00277 J	0.00237 J	0.00261 J	0.00286 J	<0.002	**0.00573**	0.00350 J	**0.0292**	0.00208 J	0.00294 J	0.00389 J	0.00327 J	0.00220 J
Anions/Water Quality Parameters																						
Bicarbonate Alkalinity	mg/L	NS	**169**	**168**	**168**	**82.7**	**53**	<30	<3	**102**	**7.50**	**18.9**	<3.5	<3	**33.3**	**82.1**	**84.0**	35.0 J	**14.9**	**93.2**	**51.4**	**83.9**
Bromide	mg/L	NS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**0.628**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**3.32**	**3.44**	<0.03	<0.03
Carbonate Alkalinity	mg/L	NS	<3.5	<3	3.40 J	**141**	**188**	**200**	**243**	**110**	**210**	**189**	**144**	**166**	**204**	**169**	**146**	**208**	**10.2**	**136**	**180**	**180**
Chloride[a]	mg/L	250	**36.6**	**33.4**	**34.3**	**38.5**	**37.7**	**41.3**	**37.0**	**37.0**	**37.6**	**37.4**	**138**	**137**	**156**	**158**	**108**	**111**	**107**	**99.7**	**102**	**106**
Sulfate[a]	mg/L	250	**14.4**	**4.10**	**2.17**	**5.94**	**6.54**	<0.2	**4.86**	**4.66**	**4.60**	**2.96**	**82.0**	**51.5**	**36.8**	**27.9**	**43.1**	**35.6**	**24.1**	**14.4**	**5.6**	**0.531**
Total Dissolved Solids (TDS)[a]	mg/L	500	**296**	**240**	**234**	**298**	**306**	**276**	**286**	**350**	**242**	**298**	**594**	**484**	**514**	**822**	**392**	**410**	**386**	**476**	**416**	**388**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	8.09 H	8.09 H	8.16 H	10.2 H	10.6 H	10.4 H	10.4 H	10.9 H	10.9 H	11.0 H	11.1 H	10.5 H	10.3 H	10.0 H	10.4 H	10.4 H	10.2 H	10.5 H	10.4 H	10.6 H
pH (field)	SI	6.5 - 8.5	**7.95**	**8.14**	**8.06**	**10.12**	**10.61**	**10.2**	**9.44**	**10.15**	**10.91**	**10.86**	**10.85**	**10.89**	**10.31**	**9.80**	**10.37**	**10.6**	**9.16**	**9.92**	**12.04**	**10.23**
Sulfides																						
Hydrogen Sulfide	mg/L	NS	<0.5	0.552 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.49**	<0.5	**3.57**	**3.57**	**1.62**
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.4 J	<1.2	**3.36**	**3.36**	1.52 J
Volatile Organic Compounds																						
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00033 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	**0.0012**	<0.0002	**0.0028**	<0.0002	0.00056 J	0.00085 J	<0.0002	0.00076 J	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0021**	0.00052 J	0.00041 J	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	0.0011 J	0.0012 J	<0.0005	0.0012 J	0.0013 J	0.0016 J	0.0014 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	**0.0012**	**0.0012**	<0.0003	**0.0013**	**0.0015**	**0.0016**	**0.0015**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00036 J	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	0.0023 J	0.0024 J	<0.0003	0.0025 J	0.0028 J	**0.0032**	0.0029 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00036 J	<0.0003	<0.0003	<0.0003
TPH Fractions																						
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.1	0.0371 J	0.0115 J	0.0125 J	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0159 J	<0.0333	<0.0333	<0.167
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	0.0335 J	0.0114 J	0.0109 J	0.0417 J	0.0397 J	<0.167	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.00726 J	<0.0333	0.0394 J	<0.167
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.025	0.0319 J	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	**0.0289**	0.0567 J	0.0982 J	0.0535 J	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	0.0484 J	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.167
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Stable Isotopes																						
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	MW-3																		
		Sample Location	MW-3-200										MW-3-500								
		Sample Interval (ft)	228-238'										464-474'								
		Sample Date	3/27/24	4/23/24	5/23/24	6/20/24	7/24/24	8/21/24	9/24/24	10/22/24	11/20/24	12/17/24	3/27/24	4/23/24	5/23/24	6/20/24	7/24/24	8/21/24	9/25/24	10/22/24	11/20/24	12/17/24
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Monitoring Wells**																			
Total Metals		**RECAP GWSS**																				
Arsenic	mg/L	0.01	**0.00364**	**0.00334**	**0.00351**	**0.00384**	**0.00283**	**0.00272**	**0.00300**	**0.00304**	**0.00264**	**0.00289**	0.000750 J	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00100 J	0.000437 J
Barium	mg/L	2	**0.0225**	**0.0320**	**0.0628**	**0.0807**	**0.0614**	**0.0567**	**0.0714**	**0.0971**	**0.124**	**0.0725**	**0.215**	**0.230**	**0.215**	**0.195**	**0.149**	**0.157**	**0.173**	**0.159**	**0.159**	**0.158**
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NS	**2.02**	**2.99**	**6.76**	**9.11**	**7.10**	**5.30**	**6.31**	**9.32**	**11.2**	**6.14**	**170**	**165**	**165**	**233**	**212**	**149**	**194**	**163**	**147**	**145**
Chromium	mg/L	0.1	0.00249 J	0.000974 J	0.000989 J	0.000827 J	0.000556 J	0.000832 J	0.00148 J	0.00111 J	<0.0004	0.000961 J	0.00154 J	0.000775 J	0.00190 J	0.00103 J	0.00101 J	0.000918 J	0.00187 J	0.000975 J	0.00132 J	0.000807 J
Iron[a]	mg/L	0.3	**0.506**	**1.11**	**2.67**	0.136 J	**0.447**	**0.238**	**2.90**	**1.39**	**0.643**	**1.67**	**1.15**	**6.25**	**2.72**	**6.92**	**2.52**	**4.06**	**1.47**	**1.34**	**1.91**	**0.897**
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	**0.227**	0.0811 J	**0.426**	**0.590**	**0.638**	**0.431**	**0.616**	**1.20**	**1.66**	**0.782**	**22.0**	**23.4**	**20.4**	**24.6**	**21.5**	**19.5**	**22.1**	**21.9**	**21.2**	**21.3**
Manganese[a]	mg/L	0.05	0.00270 J	**0.00657**	**0.0198**	0.00186 J	0.00301 J	0.00170 J	**0.0177**	**0.0122**	**0.00688**	**0.0109**	**0.0823**	**0.0586**	**0.0479**	**0.311**	**0.291**	**0.0729**	**0.1450**	**0.0649**	**0.0371**	**0.0163**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	**0.00203**	0.00117 J	0.00181 J	0.000666 J	0.000765 J	0.000633 J	0.00113 J	0.000846 J	0.000910 J	0.00121 J	0.000670 J	<0.0006	0.000881 J	0.000740 J	0.000815 J	0.000639 J	<0.0006	0.000616 J	0.000709 J	<0.0006
Potassium	mg/L	NS	**62.3**	**53.1**	**48.5**	**45.7**	**53.8**	**69.1**	**68.4**	**55.9**	**56.8**	**85.6**	**15.1**	**20.7**	**22.5**	**15.3**	**12.0**	**19.4**	**26.8**	**28.3**	**26.8**	**29.1**
Selenium	mg/L	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NS	**139**	**120**	**129**	**138**	**112**	**124**	**116**	**118**	**117**	**123**	**666**	**671**	**831**	**793**	**739**	**760**	**812**	**802**[b]	**803**	**784**
Strontium	mg/L	NS	**0.0947**	**0.108**	**0.173**	**0.203**	**0.176**	**0.173**	**0.205**	**0.224**	**0.270**	**0.221**	**4.52**	**4.41**	**5.21**	**5.29**	**4.97**	**4.95**	**5.32**	**4.94**[b]	**5.02**	**4.60**
Vanadium	mg/L	0.026	**0.01**	0.00171 J	0.00320 J	0.000836 J	<0.0006	<0.0006	0.00110 J	<0.0006	<0.0006	<0.0006	0.00421 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Zinc	mg/L	1.1	**0.00474**	0.00294 J	**0.00675**	0.00337 J	0.00287 J	0.00264 J	**0.00696**	**0.00404**	0.00237 J	0.00328 J	0.00327 J	**0.0160**	**0.0172**	**0.0251**	**0.0080**	**0.013**	**0.005**	**0.00456**	**0.00483**	0.00291 J
Anions/Water Quality Parameters																						
Bicarbonate Alkalinity	mg/L	NS	<3.5	**16.9**	**133**	**207**	**47.8**	**246**	**265**	**197**	**192**	**187**	**36.3**	**18.6**	**14.6**	**151**	**139**	**81.1**	**68.7**	**25.3**	**14.0**	**9.60**
Bromide	mg/L	NS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**0.255**	<0.3	<0.06	<0.06	<0.03
Carbonate Alkalinity	mg/L	NS	**221**	**250**	**158**	**105**	**20.2**	**190**	**122**	**128**	**175**	**165**	<3.5	<3	<3	<3	**19.6**	<3	<3	<3.5	<3	4.20 J
Chloride[a]	mg/L	250	**31.4**	**27.1**	**24.6**	**23.5**	**23.6**	**25.8**	**22.7**	**22.8**	**23.4**	**22.9**	**1,260**	**1,070**	**1,080**	**1,190**	**1,330**	**1,470**	**1,260**	**1,300**	**1,380**	**1350**
Sulfate[a]	mg/L	250	**116**	**76.4**	**35.8**	**19.2**	**20.0**	**11.1**	**14.8**	**11.3**	**14.1**	**9.40**	**603**	**480**	**424**	**505**	**462**	**469**	**409**	**406**	**467**	**383**
Total Dissolved Solids (TDS)[a]	mg/L	500	**552**	**488**	**420**	**382**	**338**	**420**	**438**	**430**	**456**	**628**	**2,220**	**2,280**	**2,140**	**2,080**	**1,990**	**2,380**	**1,670**	**1,680**	**2,640**	**3,130**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.NA	NA	NA	NA	NA	NA	NA	NA
pH[a]	SI	6.5 - 8.5	11.1 H	10.4 H	9.89 H	9.42 H	9.68 H	9.88 H	9.66 H	9.76 H	9.91 H	8.25 H	7.75 H	7.83 H	8.57 H	7.69 H	8.54 H	7.4 H	7.81 H	7.66 H	8.94 H	9.13 H
pH (field)	SI	6.5 - 8.5	**10.88**	**11.08**	**10.06**	**9.29**	**9.01**	**9.41**	**8.63**	**8.98**	**9.81**	**9.43**	**8.08**	**8.92**	**9.00**	**6.79**	**8.34**	**8.85**	**7.20**	**9.41**	**9.65**	**9.38**
Sulfides																						
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	**1.10**	<0.5	<0.5	<0.5	<0.5	**1.62**	<0.5	<0.5	<0.5	<0.5	**2.17**	**4.12**	**1.91**	<0.5	**2.12**	**4.25**	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.52 J	<1.2	<1.2	<1.2	<1.2	**2.04**	**3.88**	1.80 J	<1.2	**2.00**	**4.00**	<1.2
Volatile Organic Compounds																						
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	0.00041 J	<0.0002	<0.0002	0.00026 J	0.00050 J	<0.0002	<0.0002	**0.0017**	**0.0016**	**0.0015**	**0.0015**	**0.0010**	<0.01	**0.0012**	<0.005	**0.0015**	**0.0011**
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.015	<0.0003	<0.0075	<0.0003	<0.0003
Toluene	mg/L	1	**0.0062**	<0.0002	**0.0011**	<0.0002	**0.0069**	<0.0002	0.00034 J	<0.0002	<0.0002	0.00083 J	**0.010**	**0.0031**	**0.0039**	<0.0002	**0.0085**	<0.010	**0.0046**	<0.005	**0.0065**	**0.0052**
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.025	<0.0005	<0.012	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.015	<0.0003	<0.0075	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.015	<0.0003	<0.0075	<0.0003	<0.0003
TPH Fractions																						
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.00688	<0.0333	<0.0333	<0.167	**0.419**	**0.164**	<0.01	**1.17**	**1.16**	**1.45**	**1.61**	**1.52**	1.61 J	**0.795**
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.00599	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	<0.0333	0.0144 J	0.0170 J	<0.0333	<0.0333	<0.167
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.025	<0.025	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.025	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.025	<0.025	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.025	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.018	<0.018	<0.0333	<0.0333	<0.167
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0154**	<0.025	<0.025	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.025	0.0337 J
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.0143**	<0.025	<0.025	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.025	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.025	<0.025
Stable Isotopes																						
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[a] - EPA Secondary MCL (No RECAP standard)
[b] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	**MW-3**														
		Sample Location	**MW-3-700**												**019-13434Z**	**019-1261**	**019-13785Z**
		Sample Interval (ft)	680-690'												180-190'	170-175'	240-260'
		Sample Date	3/27/24	4/24/24	5/23/24	6/20/24	7/24/24	8/21/24	9/24/24	10/22/24	11/20/24	12/17/24			12/28/23	12/28/23	1/31/24
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM			ERM	ERM	ERM
Constituent	**Units**		**Monitoring Wells**												**Residential Wells**		
Total Metals		**RECAP GWSS**															
Arsenic	mg/L	0.01	0.000760 J	<0.0008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004			**0.0165**	0.00115 J	**0.00342**
Barium	mg/L	2	**2.46**	**2.31**	**2.50**	**2.50**	**2.10**	**1.77**	**2.18**	**2.15**	**1.74**	**1.78**			**0.288**	**0.203**	**0.276**
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<0.0002	<0.0002	<0.0002
Calcium	mg/L	NS	**207**	**181**	**107**	**129**	**122**	**96.8**	**111**	**126**	**112**	**108**			**21.1**	**26.7**	**25.8**
Chromium	mg/L	0.1	0.00175 J	0.00387 J	0.00232 J	0.00164 J	0.00235 J	0.00122 J	0.00217 J	0.00131 J	0.00126 J	0.00123 J			0.00223 J	0.000654 J	0.000634 J
Iron[(a)]	mg/L	0.3	**2.21**	0.274 J	**1.54**	**0.679**	**2.65**	**0.442**	**0.815**	**0.515**	**0.759**	**0.627**			0.0804 J	0.0962 J	**0.335**
Lead	mg/L	0.015	<0.0006	<0.001	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006			<0.0006	<0.0006	0.000918 J
Magnesium	mg/L	NS	**36.6**	**31.7**	**28.7**	**34.1**	**23.6**	**24.9**	**24.8**	**26.6**	**25.0**	**23.2**			**6.94**	**7.29**	**9.20**
Manganese[(a)]	mg/L	0.05	**0.613**	**0.112**	**0.072**	**0.0642**	**0.0597**	**0.0428**	**0.0444**	**0.0466**	**0.0493**	**0.0453**			**0.132**	**0.0887**	**0.0868**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003			<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	0.00164 J	**0.00421**	0.00116 J	0.000624 J	0.00144 J	<0.0006	0.000623 J	0.000749 J	0.00183 J	<0.0006			<0.0006	0.000964 J	<0.0006
Potassium	mg/L	NS	**18.7**	**26.2**	**15.2**	**18.2**	**18.3**	**14.6**	**16.0**	**18.1**	**17.6**	**18.1**			**1.04**	**1.22**	**1.21**
Selenium	mg/L	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<0.0011	<0.0011	<0.0011
Silver	mg/L	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<0.0002	<0.0002	<0.0002
Sodium	mg/L	NS	**1,320**	**1,100**	**1,250**	**1,320**	**1,190**	**1,040**	**1,130**	**1,160**	**785**	**929**			**68.9**	**59.7**	**64.2**
Strontium	mg/L	NS	**4.31**	**3.63**	**3.16**	**3.28**	**3.14**	**2.8**	**2.96**	**3.23**	**2.42**	**2.56**			**0.228**	**0.230**	**0.307**
Vanadium	mg/L	0.026	0.00141 J	<0.0012	<0.0006	<0.0006	0.00114 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006			0.00178 J	0.00133 J	0.00146 J
Zinc	mg/L	1.1	**0.0581**	<0.004	0.00366 J	**0.00711**	**0.00553**	**0.00454**	0.00279 J	0.00299 J	0.00254 J	0.00251 J			**0.0782**	**0.0595**	**0.0291**
Anions/Water Quality Parameters																	
Bicarbonate Alkalinity	mg/L	NS	**163**	**29.7**	**26.0**	**24.2**	**16.8**	**24.2**	**17.8**	**25.0**	**19.8**	**25.0**			**208**	**214**	**213**
Bromide	mg/L	NS	**3.41**	**1.36**	**4.12**	**4.00**	**2.58**	**1.76**	**2.10**	**2.33**	**2.46**	**2.44**			<0.03	0.0980 J	**0.101**
Carbonate Alkalinity	mg/L	NS	<3.5	<3	<3	<3	**3.2**	<3	4.00 J	<3	<3	<3			<3.5	<3.5	<3.5
Chloride[(a)]	mg/L	250	**2,750**	**2,320**	**2,150**	**2,590**	**2,240**	**2,780**	**2,170**	**2,080**	**2,010**	**2,090**			**19.1**	**17.3**	**42.2**
Sulfate[(a)]	mg/L	250	**2.81**	**3.63**	<0.400	0.873 J	**1.25**	<0.400	<0.4	**1.53**	<0.4	<0.4			0.468 J	<0.200	0.380 J
Total Dissolved Solids (TDS)[(a)]	mg/L	500	**4,320**	**4,800**	**3,160**	**2,560**	**2,500**	**3,320**	**1,840**	**2,180**	**3,060**	**3,160**			**212**	**226**	**298**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA	NA
pH[(a)]	SI	6.5 - 8.5	7.89 H	7.62 H	8.59 H	8.76 H	8.54 H	8.48 H	8.89 H	9.08 H	8.87 H	8.35 H			7.76 H	7.67 H	8.08 H
pH (field)	SI	6.5 - 8.5	**8.25**	**11.23**	**8.49**	**8.44**	**8.63**	**8.95**	**8.00**	**9.50**	**8.90**	**8.65**			NA	NA	NA
Sulfides																	
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	**1.10**	<0.5	<0.5	0.680 J	<0.5	**1.19**	0.552 J			<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2			<1.2	<1.2	<1.2
Volatile Organic Compounds																	
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	**0.0016**	<0.0002	**0.0053**	**0.0013**	0.00076 J	**0.0011**	0.00098 J	0.00098 J			<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
TPH Fractions																	
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0104 J	<0.0333	<0.0333	<0.167			<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.00770 J	0.0448 J	0.0547 J	<0.167			**0.0373**	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.025	<0.025	<0.025	0.0275 J	<0.025	<0.025	<0.025	<0.025	<0.025			<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	7.3	<0.008	**0.275**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			<0.008	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.018	<0.0333	<0.0333	<0.167			**0.0286**	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			**0.0181**	<0.001	<0.001
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			<0.004	<0.009	<0.009
Stable Isotopes																	
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA	NA
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[(a)] - EPA Secondary MCL (No RECAP standard)
[(b)] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

		Sample ID	**6X Brine**	**007-B Brine**		**Starks Brine**		**SN 973224**	**SN 973365**	**SN 974245**	**Sulphur Prod**	**Tank Battery**	**189416**	
		Sample Location	**SN 57788**	**SN 67270**	**7B-Brine**	**Starks Tie-In**	**Starks Brine**	**Brine Well 18**	**Brine Well 21**	**Brine Well 22**	**Sulphur Prod**	**Produced Water**	**SN 189416**	
		Sample Interval (ft)	Brine	3,000'	3,000'								1,300'	2,700'
		Sample Date	1/25/23	2/16/23	7/27/23	10/30/23	9/25/24	10/30/23	10/30/23	10/30/23	9/25/24	5/25/23	8/28/23	8/28/23
		Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**		**Brine**									**Produced Water**		
Total Metals		**RECAP GWSS**												
Arsenic	mg/L	0.01	0.0300 J	<0.04	<0.04	NA	<0.02	NA	NA	NA	<0.02	<0.008	<0.008	<0.008
Barium	mg/L	2	**0.220**	<0.19	<0.19	NA	**0.285**	NA	NA	NA	**0.217**	**60.1**	**67.4**	**80.6**
Cadmium	mg/L	0.005	<0.01	<0.02	<0.02	NA	NA	NA	NA	NA	NA	<0.004	<0.004	<0.004
Calcium	mg/L	NS	**722**	**1,320**	**1,360**	NA	**558**	NA	NA	NA	**543**	**2,940**	**2,920**	**3,050**
Chromium	mg/L	0.1	**0.243**	**0.722**	0.114 J	NA	0.0610 J	NA	NA	NA	0.0540 J	0.0717 J	0.0593 J	0.0606 J
Iron[(a)]	mg/L	0.3	**25.7**	9.65 J	2.78 J	NA	1.63 J	NA	NA	NA	3.71 J	1.94 J	**31.1**	**32.4**
Lead	mg/L	0.015	<0.03	<0.06	<0.06	NA	<0.03	NA	NA	NA	<0.03	<0.012	**0.0839**	0.0342 J
Magnesium	mg/L	NS	8.16 J	8.64 J	9.30 J	NA	7.20 J	NA	NA	NA	8.00 J	**971**	**832**	**843**
Manganese[(a)]	mg/L	0.05	**0.953**	0.487 J	0.361 J	NA	0.235 J	NA	NA	NA	**0.266**	**1.43**	**6.78**	**6.60**
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	NA	<0.00003	NA	NA	NA	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	**0.211**	NA	<0.03	NA	NA	NA	<0.03	<0.012	**0.124**	**0.125**
Potassium	mg/L	NS	**14.4**	13.8 J	14.0 J	NA	**12.5**	NA	NA	NA	9.61 J	**185**	**182**	**190**
Selenium	mg/L	0.05	<0.0550	<0.11	<0.11	NA	NA	NA	NA	NA	NA	<0.022	<0.022	<0.022
Silver	mg/L	0.18	<0.01	<0.02	<0.02	NA	NA	NA	NA	NA	NA	<0.004	<0.004	<0.004
Sodium	mg/L	NS	**100,000**	**82,600**	**91,900**	NA	**99,000**	NA	NA	NA	**67,900**	**44,000**	**45,400**	**47,900**
Strontium	mg/L	NS	**2.66**	**11.0**	**10.7**	NA	**1.84**	NA	NA	NA	**1.82**	**134**	**149**	**162**
Vanadium	mg/L	0.026	NA	NA	<0.06	NA	<0.03	NA	NA	NA	<0.03	<0.012	<0.012	<0.012
Zinc	mg/L	1.1	**0.481**	**1.70**	**1.55**	NA	<0.1	NA	NA	NA	<0.1	0.0695 J	**7.10**	**1.54**
Anions/Water Quality Parameters														
Bicarbonate Alkalinity	mg/L	NS	**159**	**140**	**124**	NA	**234**	NA	NA	NA	**322**	**204**	**95.9**	**94.0**
Bromide	mg/L	NS	<3	<7.5	<15	NA	<7.5	NA	NA	NA	<7.5	**79.5**	**96.4**	**95.7**
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	NA	<3	NA	NA	NA	<3	<5	<5	<5
Chloride[(a)]	mg/L	250	**213,000**	**201,000**	**179,000**	NA	**194,000**	NA	NA	NA	**184,000**	**79,900**	**70,500**	**72,600**
Sulfate[(a)]	mg/L	250	**1,380**	**3,060**	**3,270**	NA	**966**	NA	NA	NA	**1,120**	**1,340**	<10	<10
Total Dissolved Solids (TDS)[(a)]	mg/L	500	**239,000**	**300,000**	**255,000**	NA	**187,000**	NA	NA	NA	**199,000**	**161,000**	**159,000**	**149,000**
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH[(a)]	SI	6.5 - 8.5	NA	NA	6.75 H	NA	7.27 H	NA	NA	NA	6.63 H	6.97 H	8.10 H	8.06 H
pH (field)	SI	6.5 - 8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfides														
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	NA	<0.5	NA	NA	NA	<0.5	**1.7**	**23.1**	**23.3**
Sulfide	mg/L	NS	<1	<1	<1.7	NA	<1.2	NA	NA	NA	<1.2	<1.7	<1.7	<1.7
Volatile Organic Compounds														
Benzene	mg/L	0.005	**0.170**	**0.092**	**0.360**	NA	**0.0038**	NA	NA	NA	**0.0040**	<0.0002	<0.005	<0.005
Ethylbenzene	mg/L	0.7	0.0075 J	<0.0003	**0.0059**	NA	**0.0018**	NA	NA	NA	0.00030 J	<0.0003	<0.0075	<0.0075
Toluene	mg/L	1	**0.110**	**0.025**	**0.130**	NA	**0.011**	NA	NA	NA	**0.0033**	<0.0002	<0.005	<0.005
m,p-Xylene	mg/L	10	0.013 J	<0.0005	**0.0079**	NA	**0.0036**	NA	NA	NA	0.00081 J	<0.0005	<0.012	<0.012
o-Xylene	mg/L	10	0.0091 J	<0.0003	**0.0079**	NA	**0.0027**	NA	NA	NA	0.00053 J	<0.0003	<0.0075	<0.0075
Xylenes, Total	mg/L	10	**0.022**	<0.0003	**0.016**	NA	**0.0063**	NA	NA	NA	0.0013 J	<0.0003	<0.0075	<0.0075
TPH Fractions														
Aliphatics >C6-C8	mg/L	3.2	**0.0997**	**0.0803**	**0.147**	NA	<0.833	NA	NA	NA	<0.0333	**0.144**	**1.08**	<1
Aliphatics >C8-C10	mg/L	0.15	<0.01	**0.107**	<0.01	NA	<0.833	NA	NA	NA	<0.0333	**0.0131**	**2.58**	<1
Aliphatics >C10-C12	mg/L	0.15	<0.001	NA	<0.00192	NA	<0.025	NA	NA	NA	<0.025	**0.969**	**5.78**	**3.05**
Aliphatics >C12-C16	mg/L	0.15	<0.002	NA	**0.0288**	NA	<0.025	NA	NA	NA	<0.025	**3.77**	**37.4**	**20.2**
Aliphatics >C16-C35	mg/L	7.3	<0.008	NA	**0.774**	NA	<0.025	NA	NA	NA	<0.025	**4.44**	**118**	**65.3**
Aromatics >C8-C10	mg/L	0.15	**0.0284**	**0.422**	**0.0373**	NA	<0.833	NA	NA	NA	<0.0333	**0.0557**	**1.23**	<1
Aromatics >C10-C12	mg/L	0.15	<0.001	NA	**0.00293**	NA	<0.025	NA	NA	NA	<0.0250	**0.211**	**1.62**	**0.714**
Aromatics >C12-C16	mg/L	0.15	<0.004	NA	**0.0109**	NA	<0.025	NA	NA	NA	<0.0250	**1.29**	**12.8**	**5.52**
Aromatics >C16-C21	mg/L	0.15	<0.003	NA	**0.0281**	NA	<0.025	NA	NA	NA	<0.0250	**1.09**	**19.5**	**9.75**
Aromatics >C21-C35	mg/L	0.15	<0.009	NA	**0.161**	NA	<0.025	NA	NA	NA	<0.0250	**1.05**	**38.2**	**20.3**
Stable Isotopes														
δD	‰	NS	NA	NA	NA	**-19.9**	**-20.0**	**-17.7**	**-17.5**	**-16.9**	**-19.1**	NA	**-11.8**	**-12.8**
δ18O	‰	NS	NA	NA	NA	**-4.18**	**-4.20**	**-3.95**	**-4.03**	**-4.00**	**-4.08**	NA	**1.06**	**1.04**
$\delta^{13}C$ (DIC)	‰	NS	NA	NA	NA	**-13.2**	NA	**-14.0**	**-14.1**	**-13.9**	NA	NA	NA	NA

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.
NA - Not Analyzed
NS - No Standard
[(a)] - EPA Secondary MCL (No RECAP standard)
[(b)] - Duplicate sample result (discrepancy with original)
Blue shaded values exceed standard

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 1									LDNR 3									
Sample Date		1/25/23	5/18/23	12/11/23	3/26/24	6/17/24	9/23/24	10/22/24	11/21/24	12/16/24	1/30/23	5/22/23	9/18/23	12/11/23	3/26/24	6/18/24	9/24/24	10/21/24	11/20/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																		
Total Metals																				
Arsenic	mg/L	0.00149 J	**0.00594**	0.00135 J	**0.00261**	**0.00249**	**0.00880**	**0.00544**	0.00193 J	**0.00253**	0.000862 J	0.00113 J	**0.00442**	0.00142 J	0.000986 J	0.00117 J	0.00135 J	0.00174 J	0.00148 J	0.00132 J
Barium	mg/L	**0.300**	**0.317**	**0.122**	**0.172**	**0.103**	**0.430**	**0.610**	**0.233**	**0.182**	**0.160**	**0.156**	**0.453**	**0.344**	**0.127**	**0.133**	**0.353**	**0.293**	**0.321**	**0.278**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**71.2**	**83.5**	**98.2**	**183**	**51.5**	**166**	**254**	**241**	**247**	**75.3**	**65.9**	**88.2**	**174**	**108**	**57.4**	**96.0**	**88.7**	**92.5**	**103.0**
Chromium	mg/L	0.000847 J	0.00159 J	0.000590 J	<0.0004	0.000988 J	0.00160 J	0.00221 J	0.000670 J	<0.0004	<0.0004	0.00201 J	0.000602 J	0.000578 J	<0.0004	0.000493 J	0.00152 J	0.00106 J	0.000542 J	0.000723 J
Iron	mg/L	**1.14**	**3.04**	**0.879**	**2.30**	**1.10**	**6.11**	**1.98**	**0.793**	0.156 J	0.132 J	0.118 J	**0.254**	**1.06**	**0.628**	**0.247**	**0.218**	0.0199 J	0.151 J	0.0218 J
Lead	mg/L	**0.00208**	**0.00466**	<0.0006	0.000678 J	0.00174 J	0.000756 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000710 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**19.8**	**16.1**	**25.9**	**48.7**	**9.71**	**44.7**	**76.4**	**58.6**	**65.2**	**15.0**	**12.0**	**25.4**	**41.8**	**21.2**	**9.8**	**20.0**	**21.5**	**22.2**	**25.4**
Manganese	mg/L	**0.797**	**1.75**	**1.34**	**2.76**	**0.502**	**2.37**	**3.28**	**2.45**	**3.38**	**0.266**	**0.389**	**0.859**	**0.977**	**0.195**	**1.15**	**2.01**	**0.505**	**0.423**	**0.389**
Mercury	mg/L	<0.00003	0.0000990 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	**0.00641**	**0.00473**	**0.00733**	**0.00394**	**0.00393**	**0.00578**	**0.00462**	**0.00430**	NA	0.00114 J	**0.00212**	**0.00838**	0.00120 J	0.000878 J	0.00173 J	0.00145 J	0.00172 J	0.00182 J
Potassium	mg/L	**2.57**	**2.83**	**2.81**	**3.79**	**2.59**	**4.18**	**17.4**	**7.73**	**9.99**	**2.90**	**2.17**	**4.09**	**5.28**	**2.61**	**2.52**	**4.30**	**3.01**	**2.86**	**3.15**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**156**	**123**	**161**	**288**	**76.8**	**268**	**352**	**290**	**273**	**174**	**155**	**534**	**630**	**288**	**100**	**250**	**274**	**305**	**317**
Strontium	mg/L	**0.619**	**0.598**	**0.622**	**1.22**	**0.339**	**1.16**	**1.90**	**1.53**	**1.55**	**0.556**	**0.479**	**0.894**	**1.32**	**0.709**	**0.398**	**0.664**	**0.711**	**0.788**	**0.790**
Vanadium		NA	**0.00639**	0.00189 J	0.00222 J	0.00300 J	0.00377 J	0.00171 J	<0.0006	0.00267 J	NA	0.00324 J	**0.0115**	**0.00626**	0.00275 J	0.00177 J	0.00476 J	0.00347 J	**0.00556**	0.00275 J
Zinc	mg/L	**0.00857**	**0.0179**	**0.0135**	**0.0386**	**0.0177**	**0.246**	**0.0464**	**0.0127**	**0.00465**	**0.00452**	**0.0448**	**0.0243**	**0.0395**	0.00319 J	**0.00599**	**0.0125**	0.00291 J	**0.00924**	**0.00466**
Anions/Water Quality Parameters																				
Bicarbonate Alkalinity	mg/L	**269**	**178**	**84.9**	**249**	**135**	**343**	**392**	**222**	**307**	**241**	**149**	**206**	**114**	**110**	**141**	**218**	**192**	**155**	**175**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	**0.313**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3	<5	<5	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3
Chloride	mg/L	**317**	**213**	**346**	**592**	**111**	**585**	**770**	**809**	**712**	**308**	**322**	**928**	**1,110**	**472**	**181**	**383**	**486**	**545**	**543**
Sulfate	mg/L	**45.2**	**70.3**	**179**	**327**	**60.3**	**42.1**	**126**	**449**	**396**	**113**	**89.6**	**74.9**	**473**	**324**	**85.5**	**73.4**	**90.2**	**148**	**170**
Total Dissolved Solids (T	mg/L	**676**	**760**	**716**	**1,680**	**390**	**900**	**1,970**	**2,390**	**2,000**	**80.0**	**880**	**1,990**	**2,500**	**1,200**	**488**	**912**	**984**	**984**	**1,000**
pH	SI	NA	7.20 H	7.18 H	7.41 H	7.16 H	7.98 H	7.60 H	7.15 H	7.23 H	NA	7.75 H	6.97 H	7.41 H	7.50 H	7.02 H	7.74 H	7.52 H	7.69 H	7.69 H
Sulfides																				
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	**1.44**	**3.57**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.68**	**5.70**	**3.40**	0.552 J	<0.5
Sulfide	mg/L	<1	<1.7	<1.7	<1.2	1.36 J	**3.36**	<1.2	<1.2	<1.2	<1	<1.7	<1.7	<1.7	<1.2	**2.52**	**5.36**	**3.20**	<1.2	<1.2
Volatile Organic Compounds																				
Benzene	mg/L	**0.00120**	<0.0002	0.00066 J	<0.0002	<0.0002	<0.0002	<0.0002	0.00055 J	<0.0002	<0.0002	<0.0002	0.00046 J	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	0.00058 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	0.00079 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0011**	<0.0002	<0.0002	<0.000475	0.00041 J	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	0.00066 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	0.00066 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																				
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.1	<0.833	0.0607 J	0.0351 J	<0.833	<0.01	<0.01	**0.134**	<0.01	<0.01	<0.1	<0.167	0.0381 J	<0.0333	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.1	<0.833	<0.0333	<0.0333	<0.833	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.167
Aliphatics >C10-C12	mg/L	<0.001	**0.0202**	<0.001	<0.01	<0.025	0.0293 J	**0.0117**	<0.025	0.0372 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	**0.0746**	**0.234**	<0.001	**0.0354**	<0.025	**0.313**	**0.0483**	<0.025	**0.153**	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.002	<0.025	<0.025
Aliphatics >C16-C35	mg/L	**0.249**	**0.876**	**0.0367**	**0.117**	<0.025	**2.30**	**0.203**	**0.127**	**0.508**	<0.008	<0.008	**0.0546**	<0.008	<0.008	<0.025	<0.025	<0.008	<0.025	0.0289 J
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.1	<0.833	<0.0333	<0.0333	<0.833	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.01	<0.001	<0.001	<0.025	<0.025	**0.00646**	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	**0.00476**	<0.025	<0.025
Aromatics >C12-C16	mg/L	**0.0417**	**0.0179**	**0.0146**	**0.0153**	<0.025	0.0471 J	**0.0327**	<0.025	0.0323 J	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	**0.0102**	<0.025	<0.025
Aromatics >C16-C21	mg/L	**0.121**	**0.0535**	**0.0259**	**0.0281**	<0.025	**0.343**	**0.0627**	<0.025	**0.101**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	**0.00705**	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	**0.0511**	**0.0197**	**0.0470**	<0.025	**0.894**	**0.124**	<0.025	**0.176**	<0.009	<0.009	**0.0290**	<0.009	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time (15 min from sampling).
< - Not Detected at the reporting limit shown.
Bolded values deteted in the sample.

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 4								LDNR 5									
Sample Date		1/30/23	5/22/23	12/11/23	3/26/24	6/17/24	9/23/24	11/20/24	12/17/24	1/30/23	5/17/23	9/19/23	12/13/23	3/26/24	6/17/24	9/24/24	10/22/24	11/21/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																	
Total Metals																			
Arsenic	mg/L	0.000868 J	0.00110 J	**0.00211**	0.00125 J	0.00122 J	0.00186 J	0.00116 J	0.00158 J	0.000769 J	0.00139 J	0.00168 J	0.00151 J	0.00105 J	0.00116 J	0.00112 J	0.00147 J	0.00101 J	0.00101 J
Barium	mg/L	**0.367**	**0.276**	**0.201**	**0.139**	**0.199**	**0.747**	**0.401**	**0.362**	**0.155**	**0.216**	**0.413**	**0.385**	**0.134**	**0.144**	**0.279**	**0.290**	**0.293**	**0.251**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**64.2**	**69.6**	**175**	**111**	**65.0**	**95.1**	**86.1**	**101**	**77.7**	**73.3**	**74.5**	**147**	**114**	**66.5**	**77.3**	**96.6**	**91.3**	**102**
Chromium	mg/L	<0.0004	<0.0004	0.00159 J	<0.0004	0.000751 J	0.00131 J	<0.0004	0.00105 J	<0.0004	0.000998 J	<0.0004	0.00274 J	0.000460 J	0.000714 J	0.000664 J	0.000736 J	<0.0004	0.000678 J
Iron	mg/L	0.0258 J	0.0647 J	**8.23**	**0.904**	0.144 J	0.159 J	0.0422 J	**0.229**	0.125 J	0.160 J	0.0875 J	0.0794 J	**0.217**	0.130 J	0.0335 J	0.0428 J	0.0272 J	0.0271 J
Lead	mg/L	<0.0006	<0.0006	0.00103 J	<0.0006	<0.0006	<0.0006	<0.0006	0.00105 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**12.6**	**13.6**	**42.6**	**22.1**	**13.0**	**19.9**	**20.7**	**21.5**	**15.0**	**14.7**	**28.0**	**40.1**	**23.5**	**13.4**	**16.3**	**23.4**	**21.7**	**24.4**
Manganese	mg/L	**0.458**	**0.747**	**3.15**	**0.477**	**1.60**	**2.07**	**0.155**	**0.852**	**0.232**	**2.28**	**0.523**	**0.145**	**0.206**	**1.50**	**0.900**	**0.251**	**0.269**	**0.228**
Mercury	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	**0.00385**	**0.00519**	0.00132 J	0.00146 J	0.00145 J	0.000866 J	0.00121 J	NA	0.00168 J	0.000849 J	**0.00322**	0.00160 J	0.00143 J	0.00101 J	0.00142 J	0.00107 J	0.00169 J
Potassium	mg/L	**2.58**	**2.34**	**5.52**	**2.77**	**3.03**	**4.51**	**2.73**	**2.98**	**2.86**	**2.53**	**4.25**	**4.78**	**2.66**	**3.14**	**2.89**	**3.22**	**2.77**	**3.03**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**166**	**176**	**581**	**288**	**134**	**289**	**283**	**268**	**19.1**	**203**	**571**	**792**	**275**	**136**	**214**	**330**	**297**	**298**
Strontium	mg/L	**0.482**	**0.532**	**1.21**	**0.72**	**0.469**	**0.720**	**0.742**	**0.775**	**0.578**	**0.552**	**0.883**	**1.19**	**0.761**	**0.491**	**0.599**	**0.781**	**0.781**	**0.760**
Vanadium		NA	0.00181 J	**0.00569**	0.00316 J	0.00193 J	0.00356 J	0.00264 J	0.00293 J	NA	0.00207 J	0.00499 J	**0.00628**	0.00274 J	0.00100 J	0.00170 J	0.00401 J	0.00167 J	0.00175 J
Zinc	mg/L	0.00213 J	0.00289 J	**0.0186**	**0.015**	**0.0247**	**0.00451**	<0.002	**0.00769**	**0.00748**	0.00250 J	0.00357 J	**0.0297**	**0.0176**	**0.0057**	**0.0614**	**0.00408**	<0.002	**0.0362**
Anions/Water Quality Parameters																			
Bicarbonate Alkalinity	mg/L	**238**	**164**	**105**	**113**	**141**	**202**	**157**	**170**	**245**	**150**	**107**	**146**	**107**	**147**	**205**	**189**	**158**	**162**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<3.5	<3.5	<3	<3	<3	<3	<5	<5	**13.8**	<3.5	<3.5	<3	<3	<3	<3	<3
Chloride	mg/L	**296**	**340**	**1,140**	**462**	**203**	**401**	**510**	**488**	**343**	**332**	**982**	**1,140**	**507**	**211**	**389**	**477**	**525**	**537**
Sulfate	mg/L	**111**	**83.5**	**531**	**311**	**95.7**	**73**	**137**	**177**	**135**	**82.9**	**105**	**388**	**356**	**98.9**	**81.9**	**91.6**	**146**	**164**
Total Dissolved Solids (T	mg/L	**512**	**864**	**2,940**	**1,230**	**508**	**912**	**980**	**1,070**	**892**	**792**	**1,990**	**2,870**	**1,160**	**520**	**948**	**1,070**	**992**	888 H
pH	SI	NA	7.66 H	6.93 H	7.45 H	7.12 H	7.84 H	7.43 H	6.27 H	NA	7.79 H	8.61 H	7.85 H	7.81 H	7.26 H	7.30 H	8.05 H	7.61 H	7.55 H
Sulfides																			
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	**3.23**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 H
Sulfide	mg/L	<1	<1.7	<1.7	<1.2	<1.2	**3.04**	<1.2	<1.2	<1	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2 H
Volatile Organic Compounds																			
Benzene	mg/L	<0.0002	<0.0002	**0.0011**	<0.0002	<0.0002	<0.0002	0.00025 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	0.00087 J	<0.0002	<0.0002	0.00044 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																			
Aliphatics >C6-C8	mg/L	<0.01	<0.01	**0.0645**	<0.01	<0.1	0.0193 J	<0.167	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.1	<0.00599	0.178 J	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	**0.0083**	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	**0.0177**	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	<0.008	<0.025	<0.025	<0.025	0.0325 J	<0.008	<0.008	<0.008	**0.0193**	**0.0341**	<0.025	0.0311 J	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.1	<0.018	<0.167	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	**0.0167**	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	**0.0145**	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 6										LDNR 7									
Sample Date		2/28/23	5/18/23	9/19/23	12/12/23	3/26/24	6/18/24	9/25/24	10/23/24	11/21/24	12/18/24	2/28/23	5/17/23	9/19/23	12/12/23	3/27/24	6/18/24	9/25/24	10/23/24	11/19/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																			
Total Metals																					
Arsenic	mg/L	0.000784 J	0.00108 J	**0.00200**	0.00134 J	0.00106 J	0.000982 J	0.00141 J	0.00133 J	0.00110 J	0.00106 J	0.000886 J	0.00118 J	**0.00206**	0.00129 J	0.00108 J	0.00112 J	0.00131 J	0.00145 J	0.00169 J	0.00105 J
Barium	mg/L	**0.116**	**0.152**	**0.446**	**0.37**	**0.129**	**0.138**	**0.289**	**0.289**	**0.305**	**0.237**	**0.119**	**0.194**	**0.451**	**0.355**	**0.136**	**0.161**	**0.274**	**0.306**	**0.299**	**0.242**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**66.3**	**66.3**	**82.8**	**142**	**113**	**59.2**	**75.8**	**86.8**	**95.8**	**96.2**	**65.8**	**66.3**	**74.5**	**132**	**116**	**66.3**	**79.6**	**96.7**	**92.5**	**98.7**
Chromium	mg/L	<0.0004	0.000731 J	<0.0004	0.00196 J	0.000500 J	0.000400 J	0.000751 J	<0.0004	0.000462 J	0.000801 J	<0.0004	0.000695 J	<0.0004	0.00179 J	0.000719 J	0.000631 J	0.000749 J	0.000591 J	0.00110 J	0.000682 J
Iron	mg/L	0.0485 J	0.0249 J	0.0871 J	0.0757 J	0.0920 J	**0.215**	0.0566 J	0.0256 J	0.0409 J	0.0293 J	0.0546 J	0.0565 J	0.0248 J	0.0657 J	0.0612 J	0.134 J	0.0254 J	0.0328 J	0.0246 J	0.0248 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**11.7**	**12.4**	**31.1**	**38.8**	**23.1**	**10.6**	**16.3**	**21.1**	**24.0**	**22.2**	**11.5**	**13.2**	**29.7**	**35.8**	**23.9**	**12.3**	**16.8**	**23.2**	**23.0**	**23.7**
Manganese	mg/L	**0.813**	**0.645**	**1.18**	**0.19**	**0.0905**	**1.58**	**0.778**	**0.494**	**0.275**	**0.308**	**1.03**	**2.36**	**0.435**	**0.194**	**0.123**	**2.47**	**0.807**	**0.289**	**0.278**	**0.266**
Mercury	mg/L	<0.00003	0.0000670 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.000133 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00124 J	0.00128 J	**0.00265**	0.00129 J	0.00101 J	0.00116 J	0.00110 J	0.00108 J	0.00132 J	NA	0.00130 J	0.000966 J	**0.00255**	0.00149 J	0.000964 J	0.00110 J	0.00121 J	0.00121 J	0.00139 J
Potassium	mg/L	**2.31**	**2.18**	**4.63**	**4.71**	**2.60**	**2.62**	**2.93**	**2.81**	**3.00**	**2.85**	**2.36**	**2.19**	**4.31**	**4.30**	**2.64**	**2.96**	**3.02**	**3.01**	**2.94**	**3.00**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**142**	**161**	**598**	**649**	**300**	**113**	**233**	**284**	**320**	**294**	**140**	**171**	**591**	**592**	**302**	**129**	**232**	**286**	**340**	**304**
Strontium	mg/L	**0.441**	**0.496**	**0.930**	**1.14**	**0.76**	**0.40**	**0.599**	**0.713**	**0.805**	**0.744**	**0.426**	**0.509**	**0.895**	**1.07**	**0.787**	**0.458**	**0.624**	**0.778**	**0.780**	**0.769**
Vanadium		NA	0.00171 J	**0.00667**	**0.00593**	0.00235 J	0.00161 J	0.00223 J	0.00254 J	0.00198 J	0.00182 J	NA	0.00226 J	**0.00588**	**0.00568**	0.00274 J	0.000979 J	0.00241 J	0.00320 J	0.00174 J	0.00200 J
Zinc	mg/L	<0.002	0.00307 J	0.00336 J	**0.00469**	**0.0604**	**0.00808**	**0.00498**	0.00313 J	**0.00403**	**0.0127**	<0.002	**0.0171**	0.00219 J	**0.00463**	**0.00401**	**0.00416**	0.00270 J	0.00327 J	**0.00721**	**0.0172**
Anions/Water Quality Parameters																					
Bicarbonate Alkalinity	mg/L	**148**	**143**	**116**	**146**	**109**	**133**	**377**	**193**	**160**	**160**	**162**	**147**	**116**	**144**	**118**	**129**	**187**	**189**	**163**	**163**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<5	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<5	<5	<3.5	<3.5	<3	<3	<3	<3	<3
Chloride	mg/L	**253**	**302**	**957**	**1,150**	**464**	**203**	**386**	**482**	**532**	**540**	**253**	**333**	**975**	**1,170**	**476**	**209**	**375**	**477**	**552**	**551**
Sulfate	mg/L	**96.8**	**90.7**	**101**	**386**	**309**	**94.9**	**82.4**	**89.2**	**146**	**176**	**95.1**	**85.7**	**101**	**386**	**319**	**97.9**	**81.9**	**89.5**	**149**	**181**
Total Dissolved Solids (T	mg/L	**710**	**784**	**2,030**	**2,810**	**1,220**	**512**	**7,550**	**1,070**	**1,100**	**1,030**	**712**	**832**	**1,890**	**2,530**	**1,180**	**556**	**1,050**	**1,110**	**1,050**	**1,240**
pH	SI	NA	7.96 H	7.84 H	7.96 H	8.07 H	7.20 H	7.47 H	7.95 H	7.57 H	7.69 H	NA	7.95 H	8.01 H	7.83 H	7.99 H	7.21 H	7.48 H	8.00 H	7.57 H	7.91 H
Sulfides																					
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**3.57**	**1.62**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.552 J	<0.5	<0.5	<0.5	**1.40**
Sulfide	mg/L	<1	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	**3.36**	1.52 J	<1.2	<1	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	1.32 J
Volatile Organic Compounds																					
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																					
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.333	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.167	<0.01	<0.01	**0.0118**	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.333	<0.167
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	**0.0242**	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	**0.0288**	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	**0.0207**	**0.0483**	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	**0.0102**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.167	**0.0103**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.333	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	**0.0379**	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	**0.0243**	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 8										LDNR 9									LDNR 10
Sample Date		2/28/23	5/18/23	9/19/23	12/12/23	3/27/24	6/18/24	9/25/24	10/23/24	11/19/24	12/18/24	2/10/23	5/18/23	12/13/23	3/28/24	6/19/24	9/26/24	10/24/24	11/21/24	12/17/24	2/10/23
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																			
Total Metals																					
Arsenic	mg/L	0.000975 J	0.00150 J	0.00189 J	0.00134 J	0.00104 J	0.00109 J	0.00153 J	0.00140 J	0.00156 J	0.00104 J	0.00176 J	**0.00419**	0.00154 J	**0.00212**	**0.00641**	**0.00456**	**0.00484**	0.00146 J	0.00130 J	0.000896 J
Barium	mg/L	**0.127**	**0.224**	**0.475**	**0.388**	**0.125**	**0.14**	**0.291**	**0.295**	**0.276**	**0.257**	**0.118**	**0.168**	**0.037**	**0.0233**	**0.147**	**0.0513**	**0.252**	**0.126**	**0.122**	**0.0594**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002
Calcium	mg/L	**68.1**	**74**	**80.1**	**140**	**114**	**63**	**97.1**	**92.2**	**84.9**	**103**	**38.6**	**50.2**	**303**	**113**	**37.2**	**23.2**	**68.9**	**94.8**	**103**	**55.8**
Chromium	mg/L	<0.0004	0.000627 J	0.000472 J	0.00238 J	<0.0004	<0.0004	0.00156 J	<0.0004	0.000823 J	0.000617 J	<0.0004	0.000513 J	0.00192 J	0.000866 J	0.000569 J	0.00142 J	0.000633 J	<0.0004	0.000589 J	<0.0004
Iron	mg/L	0.166 J	**0.27**	0.0310 J	0.0580 J	0.0505 J	0.0896 J	0.0310 J	0.0224 J	0.0339 J	0.0201 J	**0.609**	**0.694**	**1.83**	**1.24**	**0.658**	0.196 J	**1.76**	0.143 J	0.143 J	0.0432 J
Lead	mg/L	<0.0006	0.000694 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**12**	**14.7**	**30.7**	**37.9**	**22.6**	**11.9**	**20.5**	**22.3**	**21.4**	**24.7**	**4.2**	**5.93**	**26.5**	**12.7**	**5.75**	**5.28**	**10.6**	**11.6**	**11.4**	**5.64**
Manganese	mg/L	**0.972**	**2.15**	**0.602**	**0.146**	**0.113**	**1.58**	**1.07**	**0.383**	**0.345**	**0.253**	**0.204**	**0.614**	**0.11**	**0.135**	**3.00**	**0.0612**	**2.82**	0.142 J	**0.243**	**0.0295**
Mercury	mg/L	<0.00003	0.000109 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00179 J	0.00106 J	**0.00254**	0.00139 J	0.000779 J	0.00140 J	0.00110 J	0.00119 J	0.00129 J	NA	0.00192 J	**0.00504**	**0.0023**	0.000631 J	0.000715 J	0.00113 J	0.00142 J	0.00170 J	NA
Potassium	mg/L	**2.39**	**2.54**	**4.51**	**4.47**	**2.63**	**2.82**	**3.53**	**2.88**	**2.69**	**3.11**	**1.17**	**2.39**	**3.45**	**0.669**	**3.71**	**1.16**	**3.76**	**2.09**	**2.36**	**2.44**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002
Sodium	mg/L	**144**	**196**	**631**	**653**	**303**	**130**	**222**	**302**	**325**	**310**	**64.6**	**83.4**	**334**	**166**	**47.6**	**128**	**251**	**163**	**169**	**37.6**
Strontium	mg/L	**0.457**	**0.56**	**0.951**	**1.15**	**0.712**	**0.436**	**0.642**	**0.745**	**0.713**	**0.795**	**0.243**	**0.35**	**1.4**	**0.711**	**0.265**	**0.241**	**0.532**	**0.623**	**0.594**	**0.237**
Vanadium		NA	0.00434 J	**0.00532**	**0.00599**	0.00232 J	0.000874 J	0.00243 J	0.00336 J	0.00154 J	0.00205 J	NA	**0.0105**	0.00487 J	0.00316 J	0.00102 J	0.00133 J	0.00228 J	<0.0006	<0.0006	NA
Zinc	mg/L	**0.0658**	**0.0171**	**0.0296**	**0.0823**	**0.00633**	**0.00406**	**0.0422**	0.00208 J	0.00350 J	**0.00991**	**0.00496**	**0.0221**	**0.0516**	**0.00406**	**0.0335**	**0.00924**	**0.0244**	0.0026 J	**0.00410**	**0.00654**
Anions/Water Quality Parameters																					
Bicarbonate Alkalinity	mg/L	**144**	**148**	**99.4**	**144**	**113**	**132**	**209**	**196**	**168**	**170**	**163**	**188**	**71.0**	**63.6**	**146.0**	**62.8**	**322.0**	**130.0**	**148.0**	**107**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**0.136**	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	**14.0**	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<5	<3.5	<3.5	<3	**25.1**	<3	<3	<3	<5
Chloride	mg/L	**251**	**333**	**1,010**	**1,180**	**481**	**227**	**390**	**482**	**526**	**539**	**95.8**	**117**	**241**	**175**	**50.8**	**175**	**285**	**224**	**197**	**47.0**
Sulfate	mg/L	**96.2**	**84.9**	**105**	**388**	**339**	**98.1**	**82.2**	**89.9**	**140**	**169**	**16.5**	**13.3**	**1,170**	**503**	**12**	**35.1**	**8.10**	**300**	**255**	**133**
Total Dissolved Solids (T	mg/L	**748**	**836**	**1,770**	**2,770**	**1,160**	**576**	**828**	**1,090**	**1,000**	**1,050**	**290**	**416**	**1,640**	**890**	**540**	**440**	**888**	**778**	1180 H	**412**
pH	SI	NA	8.00 H	8.69 H	7.84 H	7.95 H	7.23 H	7.40 H	8.03 H	7.63 H	7.82 H	NA	8.09 H	7.76 H	8.02 H	7.36 H	9.03 H	7.45 H	7.50 H	7.71 H	NA
Sulfides																					
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	**1.19**	NA	**2.51**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.978 J	<0.5	**3.23**	**1.62**	<0.5 H	**23.9**
Sulfide	mg/L	<1	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	**2.36**	<1.2	<1.2	<1	<1.7	<1.7	<1.2	<1.2	<1.2	**3.04**	1.52 J	<1.2 H	<1
Volatile Organic Compounds																					
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	0.00097 J	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																					
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	0.0655 J	<0.833	<0.833	<0.01
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.833	<0.833	<0.01
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	**0.0125**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	**0.0259**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	**0.0176**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002
Aliphatics >C16-C35	mg/L	<0.008	<0.008	**0.0334**	<0.008	**0.0406**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	**0.0319**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008
Aromatics >C8-C10	mg/L	**0.0101**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.833	<0.833	<0.01
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	**0.00424**	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	**0.0137**	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 12													LDNR 13						
Sample Date		2/28/23	5/18/23	9/19/23	12/12/23	1/9/24	1/9/24	1/31/24	3/27/24	6/18/24	9/23/24	10/22/24	11/19/24	12/18/24	12/13/23	3/27/24	6/18/24	9/25/24	10/23/24	11/19/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Bottom	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																			
Total Metals																					
Arsenic	mg/L	0.000861 J	0.00121 J	**0.00217**	0.00135 J	NA	NA	NA	0.00104 J	0.00100 J	0.00124 J	0.00140 J	0.00161 J	0.00104 J	0.00152 J	0.00102 J	0.00117 J	0.00132 J	0.00126 J	0.00170 J	0.00102 J
Barium	mg/L	**0.119**	**0.168**	**0.440**	**0.411**	NA	NA	NA	**0.144**	**0.148**	**0.277**	**0.272**	**0.300**	**0.242**	**0.407**	**0.155**	**0.156**	**0.299**	**0.290**	**0.304**	**0.252**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**66.9**	**70.2**	**80.7**	**151**	NA	NA	NA	**121**	**61.1**	**82.8**	**84.5**	**93.9**	**99.7**	**152**	**123**	**69.1**	**83.5**	**89.3**	**99.8**	**105**
Chromium	mg/L	<0.0004	0.000565 J	0.000960 J	0.00236 J	NA	NA	NA	0.000659 J	0.000510 J	0.00130 J	0.000862 J	0.00116 J	0.000650 J	0.00260 J	0.00106 J	0.000468 J	0.00123 J	0.000537 J	0.00104 J	0.000590 J
Iron	mg/L	0.0570 J	0.0237 J	0.0404 J	0.0689 J	NA	NA	NA	0.0544 J	0.0945 J	0.0357 J	0.0182 J	0.0229 J	0.0209 J	0.0712 J	0.132 J	0.0877 J	0.0301 J	0.0402 J	0.0542 J	0.0194 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	NA	NA	NA	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**11.9**	**14.2**	**32.6**	**41.4**	NA	NA	NA	**24.8**	**11.3**	**17.2**	**20.7**	**23.3**	**24.4**	**41.0**	**24.8**	**12.3**	**18.0**	**21.5**	**23.9**	**24.8**
Manganese	mg/L	**0.885**	**0.732**	**0.768**	**0.159**	NA	NA	NA	**0.14**	**2.45**	**0.686**	**0.210**	**0.230**	**0.251**	**0.134**	**0.336**	**2.10**	**0.703**	**0.390**	**0.303**	**0.288**
Mercury	mg/L	<0.00003	**0.000206**	<0.00003	<0.00003	NA	NA	NA	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00126 J	0.00137 J	**0.00255**	NA	NA	NA	0.00148 J	0.000903 J	0.00129 J	0.00127 J	0.00128 J	0.00137 J	**0.0034**	0.00160 J	0.00108 J	0.00116 J	0.00131 J	0.00124 J	0.00190 J
Potassium	mg/L	**2.30**	**2.33**	**4.79**	**4.93**	NA	NA	NA	**2.74**	**2.74**	**3.11**	**2.76**	**2.98**	**3.03**	**4.85**	**2.88**	**3.06**	**3.09**	**2.77**	**3.03**	**3.11**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**146**	**194**	**603**	**693**	NA	NA	NA	**318**	**120**	**272**	**293**	**363**	**305**	**626**	**318**	**145**	**210**	**287**	**349**	**344**
Strontium	mg/L	**0.451**	**0.533**	**0.947**	**1.25**	NA	NA	NA	**0.829**	**0.419**	**0.627**	**0.710**	**0.799**	**0.780**	**1.24**	**0.828**	**0.474**	**0.650**	**0.719**	**0.802**	**0.801**
Vanadium		NA	0.00202 J	**0.00636**	**0.00592**	NA	NA	NA	0.00264 J	0.000865 J	0.00271 J	0.00384 J	0.00172 J	0.00194 J	**0.00506**	0.00311 J	0.00133 J	0.00269 J	0.00291 J	0.00192 J	0.00158 J
Zinc	mg/L	**0.0445**	0.00299 J	**0.0118**	**0.0134**	NA	NA	NA	**0.0237**	**0.00565**	**0.00468**	<0.002	0.00216 J	0.00254 J	**0.00759**	**0.0111**	**0.0177**	**0.00900**	**0.00512**	0.00279 J	**0.00425**
Anions/Water Quality Parameters																					
Bicarbonate Alkalinity	mg/L	**142**	**146**	**107**	**148**	NA	NA	NA	**112**	**133**	**180**	**184**	**166**	**167**	**144**	**120**	**131**	**205**	**195**	**166**	**177**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<5	<3.5	NA	NA	NA	<3.5	<3	<3	<3.5	<3	<3	<3.5	<3.5	<3	<3	<3	<3	<3
Chloride	mg/L	**257**	**327**	**972**	**1,170**	**834**	**816**	**337**	**504**	**211**	**375**	**476**	**529**	**545**	**1,170**	**493**	**228**	**396**	**477**	**531**	**570**
Sulfate	mg/L	**96.5**	**84.9**	**103**	**385**	**393**	**385**	**236**	**339**	**96.5**	**81.3**	**91.3**	**142**	**170**	**391**	**316**	**93.1**	**80.3**	**90.6**	**143**	**171**
Total Dissolved Solids (T	mg/L	**712**	**802**	**2,210**	**2,510**	**2,190**	**2,020**	**960**	**1,100**	**524**	**884**	**1,020**	**1,010**	**1,040**	**1,970**	**1,190**	**532**	**896**	**195**	**1,100**	**916**
pH	SI	NA	8.07 H	8.15 H	7.87 H	6.89 H	6.79 H	NA	7.93 H	7.24 H	8.04 H	8.07 H	7.70 H	7.93 H	7.85 H	7.58 H	7.23 H	7.42 H	7.99 H	7.73 H	7.73 H
Sulfides																					
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	<0.5	0.978 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.552 J	NA	<0.5	0.850 J	<0.5
Sulfide	mg/L	<1	<1.7	<1.7	<1.7	NA	NA	NA	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.7	<1.2	<1.2	1.20 J	<1.2	<1.2	<1.2
Volatile Organic Compounds																					
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	NA	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																					
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.1	0.00729 J	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.01	**0.0123**	<0.01	NA	NA	NA	<0.01	<0.1	<0.00599	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	<0.002	<0.025	<0.025	<0.002	<0.025	<0.025	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	<0.008	NA	NA	NA	<0.008	<0.025	<0.025	<0.008	<0.025	<0.025	<0.008	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	**0.0102**	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.1	<0.018	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.1	<0.333	<0.0333	<0.167	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	NA	NA	NA	<0.004	<0.025	<0.025	<0.004	<0.025	<0.025	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	NA	NA	NA	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 14							LDNR 17									
Sample Date		12/13/23	3/27/24	6/18/24	9/25/24	10/23/24	11/19/24	12/18/24	2/28/23	5/17/23	9/20/23	12/13/23	3/26/24	6/17/24	9/24/24	10/21/24	11/21/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																
Total Metals																		
Arsenic	mg/L	0.00133 J	0.000983 J	0.000965 J	0.00109 J	0.00139 J	0.00163 J	0.000930 J	0.000797 J	0.00130 J	0.00192 J	0.00140 J	0.000926 J	0.00111 J	0.00130 J	0.00153 J	0.00101 J	0.00117 J
Barium	mg/L	**0.371**	**0.142**	**0.135**	**0.265**	**0.300**	**0.304**	**0.244**	**0.118**	**0.188**	**0.475**	**0.400**	**0.114**	**0.154**	**0.294**	**0.284**	**0.294**	**0.267**
Cadmium	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**147**	**118**	**60.1**	**73.1**	**94.5**	**99.7**	**99.2**	**65.8**	**71.3**	**77.5**	**156**	**101**	**65.2**	**79.5**	**90.9**	**93.6**	**109**
Chromium	mg/L	0.00227 J	0.00251 J	<0.0004	0.000980 J	0.000403 J	0.00103 J	0.000526 J	<0.0004	0.00127 J	<0.0004	0.00200 J	<0.0004	0.000616 J	0.000846 J	0.000828 J	<0.0004	0.000890 J
Iron	mg/L	0.0460 J	0.107 J	0.0719 J	0.0196 J	0.0225 J	0.0503 J	0.0257 J	0.0795 J	0.0852 J	0.0764 J	0.162 J	0.181 J	**0.214**	0.0575 J	0.0134 J	0.0522 J	0.0812 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**38.2**	**24.2**	**10.8**	**15.8**	**22.9**	**23.8**	**23.7**	**11.5**	**14.1**	**29.0**	**42.1**	**20.2**	**12.9**	**16.6**	**21.8**	**22.7**	**25.5**
Manganese	mg/L	**0.233**	**0.234**	**1.70**	**0.591**	**0.387**	**0.303**	**0.304**	**1.00**	**1.29**	**0.785**	**0.195**	**0.171**	**1.43**	**0.936**	**0.180**	**0.245**	**0.342**
Mercury	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	**0.000338**	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	**0.00238**	0.00200 J	0.000802 J	0.00114 J	0.00131 J	0.00138 J	0.00129 J	NA	0.00159 J	0.00123 J	**0.00398**	0.00122 J	0.00161 J	0.00110 J	0.00144 J	0.00106 J	**0.00299**
Potassium	mg/L	**4.71**	**2.78**	**2.69**	**2.76**	**2.97**	**3.02**	**2.95**	**2.36**	**2.42**	**4.07**	**5.00**	**2.36**	**3.01**	**2.89**	**2.92**	**2.80**	**3.25**
Selenium	mg/L	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**674**	**309**	**123**	**203**	**315**	**271**	**301**	**137**	**197**	**564**	**808**	**269**	**132**	**214**	**292**	**304**	**311**
Strontium	mg/L	**1.19**	**0.786**	**0.412**	**0.598**	**0.763**	**0.814**	**0.784**	**0.435**	**0.54**	**0.900**	**1.240**	**0.663**	**0.474**	**0.634**	**0.731**	**0.775**	**0.792**
Vanadium		**0.00527**	0.00229 J	0.000981 J	0.00243 J	0.00331 J	0.00187 J	0.00176 J	NA	0.00221 J	**0.00586**	**0.00637**	0.00273 J	0.00280 J	0.00234 J	0.00496 J	0.00175 J	0.00196 J
Zinc	mg/L	**0.00472**	**0.00932**	**0.00541**	0.00287 J	**0.00623**	0.00333 J	<0.002	**0.0119**	<0.002	**0.00505**	**0.0321**	**0.0156**	**0.0139**	**0.00931**	<0.002	<0.002	0.00373 J
Anions/Water Quality Parameters																		
Bicarbonate Alkalinity	mg/L	**144**	**114**	**122**	**197**	**182**	**160**	**180**	**144**	**149**	**130**	**143**	**114**	**152**	**209**	**199**	**160**	**163**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<5	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3
Chloride	mg/L	**1,130**	**503**	**219**	**391**	**497**	**543**	**559**	**248**	**328**	**984**	**1,170**	**428**	**203**	**381**	**488**	**551**	**527**
Sulfate	mg/L	**397**	**329**	**93.7**	**81.3**	**90.6**	**146**	**171**	**95.9**	**84.7**	**101**	**400**	**292**	**96.8**	**81.4**	**91.9**	**148**	**166**
Total Dissolved Solids (T	mg/L	**2,140**	**1,240**	**548**	**816**	**1,050**	**1,070**	**1,070**	**732**	**928**	**2,160**	**2,390**	**1,170**	**544**	**828**	**1,020**	**1,100**	1290 H
pH	SI	7.91 H	7.71 H	7.20 H	8.03 H	8.05 H	7.50 H	7.66 H	NA	7.84 H	7.74 H	7.85 H	7.66 H	7.19 H	7.21 H	7.86 H	7.53 H	7.36 H
Sulfides																		
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.66**	**2.08**	**1.28**	0.552 J	<0.5 H
Sulfide	mg/L	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1	<1.7	<1.7	<1.7	<1.2	1.56 J	1.96 J	1.20 J	<1.2	<1.2 H
Volatile Organic Compounds																		
Benzene	mg/L	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																		
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.002	<0.025	<0.025
Aliphatics >C16-C35	mg/L	**0.0173**	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	<0.008	<0.008	<0.025	<0.025	<0.008	<0.025	<0.025
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	**0.0101**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.004	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 18										LDNR 19							
Sample Date		2/28/23	5/17/23	9/19/23	12/13/23	3/26/24	6/17/24	9/25/24	10/23/24	11/19/24	12/18/24	2/28/23	5/18/23	12/11/23	3/28/24	6/19/24	9/26/24	11/21/24	12/17/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																	
Total Metals																			
Arsenic	mg/L	0.000916 J	0.00124 J	0.00195 J	0.00132 J	0.00102 J	0.000929 J	0.00150 J	0.00135 J	**0.00218**	0.00104 J	**0.00355**	<0.0004	0.00111 J	**0.00272**	**0.00341**	**0.00808**	0.00169 J	0.00118 J
Barium	mg/L	**0.125**	**0.183**	**0.450**	**0.405**	**0.126**	**0.129**	**0.295**	**0.282**	**0.282**	**0.261**	**0.127**	**0.149**	**0.0326**	**0.0379**	**0.099**	**0.0894**	**0.144**	**0.116**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA
Calcium	mg/L	**68.6**	**70.1**	**86.2**	**150**	**109**	**59.4**	**92.1**	**88.9**	**87.1**	**103**	**62**	**19.8**	**267**	**112**	**52.5**	**24.4**	**100**	**97.2**
Chromium	mg/L	<0.0004	0.000762 J	<0.0004	0.00244 J	0.00128 J	<0.0004	0.00132 J	<0.0004	0.000894 J	0.000726 J	<0.0004	0.000530 J	<0.0004	0.000985 J	0.000457 J	0.00100 J	<0.0004	0.000451 J
Iron	mg/L	0.0686 J	0.0526 J	0.0298 J	0.0896 J	0.111 J	0.105 J	0.0416 J	0.0162 J	0.0438 J	0.0654 J	0.102 J	**2.43**	**0.657**	**0.769**	**0.528**	**1.06**	**0.348**	0.0613 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**12.0**	**14.0**	**32.9**	**41.0**	**22.7**	**11.9**	**19.5**	**21.0**	**21.2**	**24.8**	**4.36**	**6.72**	**23.7**	**12.4**	**3.06**	**5.14**	**11.8**	**10.8**
Manganese	mg/L	**1.03**	**1.43**	**0.484**	**0.134**	**0.113**	**1.29**	**0.887**	**0.254**	**0.297**	**0.251**	**0.24**	**0.314**	**0.0462**	**0.0348**	**0.444**	**0.112**	**0.122**	**0.254**
Mercury	mg/L	<0.00003	0.0000970 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	**0.000407**	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00144 J	0.00102 J	**0.0029**	0.00150 J	0.00106 J	0.00128 J	0.00102 J	0.00126 J	0.00118 J	NA	<0.0006	**0.00384**	**0.00229**	<0.0006	0.00115 J	0.00154 J	0.00187 J
Potassium	mg/L	**2.42**	**2.35**	**4.66**	**4.84**	**2.55**	**2.72**	**3.27**	**2.73**	**2.80**	**3.08**	**0.962**	**3.03**	**3.22**	**0.619**	**0.846**	**1.11**	**2.13**	**2.23**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA
Sodium	mg/L	**143**	**189**	**594**	**843**	**287**	**120**	**236**	**285**	**320**	**296**	**71.2**	**58.3**	**200**	**168**	**22.9**	**131**	**171**	**164**
Strontium	mg/L	**0.452**	**0.536**	**0.975**	**1.24**	**0.743**	**0.435**	**0.654**	**0.723**	**0.738**	**0.774**	**0.338**	**0.17**	**1.36**	**0.709**	**0.272**	**0.251**	**0.655**	**0.586**
Vanadium		NA	0.00207 J	**0.00646**	**0.00609**	0.00194 J	0.000779 J	0.00306 J	0.00307 J	0.00213 J	0.00196 J	NA	<0.0006	0.00105 J	0.00378 J	0.000796 J	0.00469 J	<0.0006	<0.0006
Zinc	mg/L	<0.002	**0.00659**	<0.002	**0.00572**	**0.0119**	**0.00578**	**0.00446**	<0.002	**0.00429**	0.00302 J	**0.00535**	**0.132**	**0.0121**	**0.0198**	**0.0308**	**0.0185**	**0.00672**	0.00392 J
Anions/Water Quality Parameters																			
Bicarbonate Alkalinity	mg/L	**148**	**146**	**106**	**146**	**111**	**147**	**201**	**196**	**161**	**163**	**240**	**159**	**73.5**	**71.4**	**160**	**67**	**138**	**154**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**0.144**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	**17.6**	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<5	<3.5	<3.5	<3	**16.7**	<3	<3
Chloride	mg/L	**248**	**331**	**971**	**1,140**	**475**	**206**	**395**	**481**	**524**	**550**	**98.4**	**30.1**	**221**	**171**	**23.7**	**184**	**220**	**207**
Sulfate	mg/L	**95.9**	**83.8**	**102**	**379**	**322**	**99.3**	**82.8**	**90.9**	**156**	**169**	**6.72**	**7.5**	**1,110**	**478**	**24.4**	**26.4**	**290**	**281**
Total Dissolved Solids (T	mg/L	**706**	**748**	**1,950**	**2,330**	**1,130**	**512**	**828**	**1,090**	**1,000**	1190 H	**408**	**286**	**1,640**	**864**	**182**	**444**	**724**	**632**
pH	SI	NA	7.94 H	8.73 H	7.90 H	7.85 H	7.29 H	8.06 H	8.05 H	7.73 H	7.50 H	NA	8.03 H	7.72 H	8.13 H	7.35 H	9.11 H	7.48 H	7.75 H
Sulfides																			
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	**1.15**	**2.51**	NA	<0.5	0.638 J	<0.5	<0.5	<0.5	<0.5	<0.5	**1.83**	<0.5	**1.62**	**1.62**
Sulfide	mg/L	<1	<1.7	<1.7	<1.7	<1.2	**2.36**	1.20 J	<1.2	<1.2	<1.2	<1	<1.7	<1.7	<1.2	1.72 J	<1.2	1.52 J	1.52 J
Volatile Organic Compounds																			
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003
TPH Fractions																			
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333 Q	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.333	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0377 B J	<0.0333 Q	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.333	<0.167
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	**0.0148**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0278**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	<0.008	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	**0.0101**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0333 J5	<0.0333 Q	**0.0105**	<0.01	<0.01	<0.01	<0.1	<0.167	<0.333	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 21										LDNR 22									
Sample Date		3/30/23	5/17/23	9/19/23	12/13/23	3/26/24	6/17/24	9/25/24	10/23/24	11/21/24	12/18/24	3/30/23	5/17/23	9/19/23	12/13/23	3/26/24	6/18/24	9/24/24	10/22/24	11/19/24	12/18/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																			
Total Metals																					
Arsenic	mg/L	0.000855 J	0.00115 J	0.00184 J	0.00138 J	0.000873 J	0.000974 J	0.00118 J	0.00142 J	0.00101 J	0.00114 J	0.000998 J	0.00120 J	0.00186 J	0.00136 J	0.000841 J	0.000963 J	0.00126 J	0.00145 J	0.00165 J	0.00110 J
Barium	mg/L	**0.116**	**0.163**	**0.400**	**0.395**	**0.126**	**0.143**	**0.293**	**0.281**	**0.279**	**0.266**	**0.135**	**0.175**	**0.496**	**0.388**	**0.121**	**0.131**	**0.293**	**0.291**	**0.310**	**0.259**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**78.4**	**65.5**	**77.7**	**146**	**110**	**64.4**	**81.6**	**89.7**	**88.7**	**109**	**89.2**	**71.9**	**78.8**	**155**	**102**	**61.3**	**77.6**	**94.7**	**97.6**	**105**
Chromium	mg/L	<0.0004	0.000779 J	<0.0004	0.00271 J	0.00239 J	0.000634 J	0.00101 J	<0.0004	<0.0004	0.000620 J	<0.0004	0.000811 J	<0.0004	0.00231 J	<0.0004	<0.0004	0.000733 J	0.00103 J	0.00139 J	0.000910 J
Iron	mg/L	0.0273 J	0.0315 J	0.0291 J	0.0827 J	0.145 J	0.125 J	0.0336 J	0.0254 J	0.0268 J	0.0269 J	0.0375 J	0.0302 J	**0.330**	0.0448 J	0.0693 J	0.0807 J	0.0325 J	0.0502 J	0.0315 J	0.0244 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**13.9**	**13.1**	**29.2**	**39.8**	**23.0**	**13.0**	**17.5**	**21.0**	**22.0**	**25.9**	**15.9**	**14.4**	**29.2**	**40.7**	**21.1**	**11.5**	**16.1**	**22.4**	**24.5**	**24.9**
Manganese	mg/L	**0.445**	**0.99**	**0.540**	**0.142**	**0.152**	**1.450**	**0.973**	**0.283**	**0.253**	**0.265**	**0.43**	**1.04**	**1.03**	**0.196**	**0.12**	**1.25**	**0.910**	**0.246**	**0.233**	**0.260**
Mercury	mg/L	<0.00003	0.000151 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00143 J	0.000935 J	**0.00298**	**0.00219**	0.00112 J	0.00153 J	0.00117 J	0.00101 J	0.00135 J	NA	0.00142 J	0.00103 J	**0.00267**	**0.0094**	0.000872 J	0.00153 J	0.00140 J	0.00131 J	0.00138 J
Potassium	mg/L	**2.15**	**2.21**	**4.16**	**4.71**	**2.53**	**2.99**	**3.01**	**2.74**	**2.73**	**3.25**	**2.45**	**2.37**	**4.30**	**4.93**	**2.35**	**2.74**	**2.90**	**3.00**	**3.11**	**3.13**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**186**	**169**	**570**	**664**	**296**	**133**	**244**	**298**	**285**	**315**	**211**	**195**	**534**	**679**	**268**	**120**	**236**	**291**	**362**	**314**
Strontium	mg/L	**0.495**	**0.501**	**0.898**	**1.20**	**0.741**	**0.475**	**0.653**	**0.703**	**0.734**	**0.798**	**0.559**	**0.545**	**0.919**	**1.24**	**0.690**	**0.427**	**0.608**	**0.757**	**0.811**	**0.780**
Vanadium		NA	0.00184 J	0.00473 J	**0.00592**	0.00254 J	0.00108 J	0.00208 J	0.00396 J	0.00167 J	0.00195 J	NA	0.00197 J	**0.00528**	**0.00583**	0.00232 J	0.00101 J	0.00225 J	0.00400 J	0.00180 J	0.00194 J
Zinc	mg/L	<0.002	**0.0657**	0.00372 J	**0.0139**	**0.0319**	**0.00608**	**0.00863**	0.00298 J	0.00342 J	**0.0113**	**0.00431**	**0.0368**	**0.00635**	**0.0143**	**0.00793**	0.00268 J	0.00351 J	**0.00828**	**0.00554**	0.00209 J
Anions/Water Quality Parameters																					
Bicarbonate Alkalinity	mg/L	**162**	**147**	**106**	**148**	**106**	**145**	**209**	**192**	**161**	**160**	**162**	**148**	**124**	**142**	**108**	**132**	**188**	**191**	**167**	**167**
Bromide	mg/L	<0.03	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	**13.2**	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<5	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3
Chloride	mg/L	**342**	**334**	**921**	**1,120**	**460**	**205**	**386**	**488**	**549**	**536**	**343**	**330**	**999**	**1,170**	**476**	**206**	**348**	**491**	**524**	**534**
Sulfate	mg/L	**93.9**	**83.6**	**100**	**375**	**312**	**99.6**	**82.1**	**90.8**	**152**	**164**	**94.1**	**83.7**	**105**	**400**	**320**	**99.5**	**81.4**	**91.8**	**142**	**162**
Total Dissolved Solids (T	mg/L	**872**	**776**	**2,000**	**2,460**	**1,220**	**556**	**868**	**980**	**1,020**	1240 H	**812**	**812**	**2,300**	**2,680**	**1,250**	**572**	**868**	**1,020**	**1,120**	1260 H
pH	SI	7.74 H	7.88 H	8.62 H	7.87 H	7.82 H	7.20 H	7.36 H	8.04 H	7.66 H	7.60 H	7.70 H	7.98 H	8.02 H	7.88 H	7.82 H	7.29 H	7.40 H	8.03 H	7.78 H	7.75 H
Sulfides																					
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	**2.51**	**1.62**	<0.5 H	<0.5	<0.5	<0.5	<0.5	<0.5	**1.19**	**1.02**	<0.5	<0.5	<0.5 H
Sulfide	mg/L	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	**2.36**	1.52 J	<1.2 H	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2 H
Volatile Organic Compounds																					
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																					
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333 Q	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333 Q	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	**0.0227**	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	**0.0183**	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	**0.0172**	<0.008	<0.025	0.0302 J	<0.008	<0.025	<0.025
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333 Q	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.167	<0.0333	<0.0333	<0.0333 Q
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.004	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	**0.0374**	<0.009	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 23										LDNR 24							
Sample Date		3/30/23	5/18/23	9/19/23	12/12/23	3/27/24	6/18/24	9/25/24	10/23/24	11/21/24	12/18/24	5/22/23	12/11/23	3/26/24	6/17/24	9/23/24	10/21/24	11/20/24	12/17/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																	
Total Metals																			
Arsenic	mg/L	0.000930 J	0.00126 J	**0.00250**	0.00142 J	0.00106 J	0.00106 J	0.00142 J	0.00146 J	0.00108 J	0.00112 J	0.00124 J	0.00173 J	0.00105 J	0.000943 J	0.00180 J	**0.00268**	0.00116 J	**0.00295**
Barium	mg/L	**0.132**	**0.18**	**0.460**	**0.393**	**0.147**	**0.151**	**0.307**	**0.302**	**0.292**	**0.247**	**0.226**	**0.327**	**0.122**	**0.118**	**0.320**	**0.395**	**0.315**	**0.362**
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**84.1**	**73.1**	**85.9**	**149**	**126**	**63.5**	**85.4**	**89.1**	**92.6**	**98.4**	**71.8**	**192**	**99.7**	**58.3**	**84.2**	**89.1**	**89.6**	**103**
Chromium	mg/L	<0.0004	0.000789 J	<0.0004	0.00248 J	0.000831 J	0.000514 J	0.00112 J	<0.0004	0.000472 J	0.000536 J	<0.0004	0.00100 J	<0.0004	0.000559 J	0.000954 J	0.00144 J	0.000423 J	0.00105 J
Iron	mg/L	0.0270 J	0.0654 J	0.0343 J	0.0799 J	**0.245**	0.104 J	0.0337 J	0.0248 J	0.0978 J	0.0293 J	**0.327**	**2.56**	**0.554**	0.0953 J	0.151 J	**0.463**	0.179 J	0.0602 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000602 J	<0.0006	<0.0006	<0.0006	0.00198 J	<0.0006	<0.0006
Magnesium	mg/L	**14.8**	**13.7**	**32.5**	**40.5**	**25.7**	**11.5**	**18.3**	**21.7**	**22.9**	**23.6**	**12.5**	**40.2**	**19.5**	**10.9**	**17.6**	**21.2**	**21.1**	**24.4**
Manganese	mg/L	**0.379**	**1.08**	**0.696**	**0.216**	**0.148**	**2.08**	**0.888**	**0.446**	**0.318**	**0.272**	**0.574**	**2.22**	**0.177**	**0.809**	**1.07**	**1.10**	**0.329**	**0.87**
Mercury	mg/L	<0.00003	0.000124 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	0.00147 J	0.00119 J	**0.00277**	0.00155 J	0.000936 J	0.00109 J	0.00119 J	0.00142 J	0.00129 J	0.000869 J	**0.0041**	0.00144 J	0.000800 J	0.00185 J	**0.00243**	0.000945 J	**0.00206**
Potassium	mg/L	**2.33**	**2.51**	**5.03**	**4.9**	**2.91**	**2.82**	**3.19**	**2.87**	**2.84**	**3.00**	**2.6**	**7.04**	**2.37**	**2.62**	**3.88**	**3.27**	**2.83**	**3.26**
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**205**	**175**	**586**	**661**	**327**	**121**	**213**	**299**	**297**	**293**	**161**	**385**	**272**	**114**	**262**	**239**	**288**	**325**
Strontium	mg/L	**0.542**	**0.546**	**0.937**	**1.20**	**0.849**	**0.436**	**0.668**	**0.742**	**0.748**	**0.762**	**0.519**	**1.28**	**0.666**	**0.394**	**0.626**	**0.724**	**0.768**	**0.813**
Vanadium		NA	0.00167 J	**0.00711**	**0.00612**	0.00182 J	0.00105 J	0.00254 J	0.00292 J	0.00249 J	0.00203 J	0.00246 J	0.00442 J	0.00331 J	0.00151 J	0.00451 J	**0.00807**	0.00158 J	0.00462 J
Zinc	mg/L	0.00291 J	**0.0588**	0.00284 J	**0.00868**	<0.002	0.00249 J	**0.00491**	0.00284 J	**0.00421**	0.00273 J	0.00278 J	**0.0428**	**0.102**	**0.00824**	**0.00409**	**0.0412**	**0.00454**	**0.00489**
Anions/Water Quality Parameters																			
Bicarbonate Alkalinity	mg/L	**162**	**148**	**120**	**146**	**112**	**126**	**197**	**183**	**155**	**164**	**176**	**197**	**111**	**127**	**184**	**217**	**159**	**154**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<5	<3.5	<3.5	<3	<3	<3	<3	<3	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3
Chloride	mg/L	**346**	**312**	**960**	**1,160**	**489**	**201**	**388**	**478**	**549**	**545**	**314**	**905**	**480**	**195**	**378**	**516**	**529**	**581**
Sulfate	mg/L	**94**	**89.1**	**99.3**	**387**	**328**	**95.6**	**79.9**	**89.6**	**150**	**170**	**79.9**	**492**	**323**	**94.6**	**76.9**	**76.3**	**143**	**181**
Total Dissolved Solids (T	mg/L	**844**	**1,540**	**1,810**	**2,580**	**1,250**	**540**	**780**	**1,070**	**936**	**1,040**	**840**	**1,570**	**1,150**	**524**	**840**	**1,110**	**1,190**	**1,060**
pH	SI	7.58 H	7.79 H	7.94 H	7.89 H	7.77 H	7.25 H	8.07 H	7.97 H	7.40 H	7.33 H	7.58 H	7.24 H	7.45 H	7.12 H	7.70 H	7.31 H	7.23 H	7.19 H
Sulfides																			
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.978 J	NA	**2.08**	0.552 J	<0.5	<0.5	<0.5	<0.5	<0.5	**7.48**	**5.52**	**1.62**	<0.5
Sulfide	mg/L	<1.7	<1.7	<1.7	<1.7	<1.2	<1.20	1.96 J	1.96 J	<1.2	<1.2	<1.7	<1.7	<1.2	<1.2	**7.04**	**5.20**	1.52 J	<1.2
Volatile Organic Compounds																			
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	0.00074 J	**0.0037**	<0.0002	<0.00046	**0.0013**	**0.0016**	0.00072 J	0.00050 J
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00044 J	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000475	0.00034 J	<0.0002	<0.0002	<0.0002	**0.0011**	**0.0050**	<0.0002	<0.000475	**0.0012**	**0.0022**	0.00073 J	0.00066 J
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																			
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	**0.0758**	**0.719**	**0.0125**	<0.1	**0.526**	**0.588**	**0.196**	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	0.0114 J	<0.0333	0.0379 BJ	<0.167
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.025	<0.025	<0.002	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	**0.0197**	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	<0.008	<0.008	0.0371 J	0.0252 J	<0.008	<0.025	<0.025
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.1	<0.018	<0.0333	<0.0333	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.025	<0.025	<0.004	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	**0.0366**	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 25								LDNR 26								
Sample Date		9/20/23	12/12/23	3/27/24	6/18/24	9/25/24	10/22/24	11/21/24	12/18/24	7/17/23	9/18/23	12/11/23	3/26/24	6/18/24	9/24/24	10/21/24	11/20/24	12/17/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**																
Total Metals																		
Arsenic	mg/L	**0.00215**	0.00143 J	0.000945 J	0.00103 J	0.00119 J	0.00139 J	0.00101 J	0.00101 J	**0.00246**	0.00130 J	0.00190 J	0.00166 J	0.00186 J	0.00172 J	0.00151 J	0.00178 J	**0.00203**
Barium	mg/L	**0.393**	**0.386**	**0.145**	**0.137**	**0.264**	**0.275**	**0.287**	**0.241**	**1.07**	**0.540**	**0.504**	**0.400**	**0.461**	**0.375**	**0.424**	**0.456**	**0.452**
Cadmium	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**83.7**	**151**	**119**	**59.4**	**72.9**	**89.9**	**94.0**	**102**	**11.5**	**9.70**	**10.20**	**8.50**	**9.36**	**8.65**	**8.63**	**8.95**	**8.72**
Chromium	mg/L	0.00101 J	0.00224 J	0.000726 J	<0.0004	0.000722 J	0.000562 J	<0.0004	0.000541 J	0.00322 J	<0.0004	0.000515 J	<0.0004	0.000502 J	0.000524 J	0.000875 J	<0.0004	0.000803 J
Iron	mg/L	0.172 J	0.0452 J	0.0721 J	0.0858 J	0.0423 J	0.0203 J	0.0206 J	0.0269 J	**1.06**	0.0902 J	0.146 J	0.149 J	**0.208**	0.0748 J	0.111 J	0.182 J	0.121 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	**0.00946**	<0.0006	0.000846 J	<0.0006	0.00132 J	<0.0006	<0.0006	0.000709 J	<0.0006
Magnesium	mg/L	**33.5**	**40.6**	**24.7**	**10.6**	**15.2**	**22.4**	**23.2**	**24.2**	**1.90**	**1.70**	**1.91**	**1.53**	**1.68**	**1.63**	**1.66**	**1.66**	**1.60**
Manganese	mg/L	**0.557**	**0.181**	**0.224**	**1.59**	**0.557**	0.00128 J	**0.135**	**0.192**	**0.516**	**0.0277**	**0.0524**	**0.0264**	**0.0468**	**0.0256**	**0.0358**	**0.047**	**0.0383**
Mercury	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000500 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.00115 J	**0.00249**	0.00139 J	0.000804 J	0.00121 J	0.00128 J	0.00100 J	0.00120 J	**0.00271**	<0.0006	0.000815 J	0.000764 J	0.000969 J	0.000604 J	0.000764 J	0.000728 J	0.00127 J
Potassium	mg/L	**4.87**	**4.87**	**2.79**	**2.63**	**2.72**	**3.04**	**2.85**	**3.06**	**1.19**	**1.44**	**1.55**	**1.15**	**1.33**	**1.27**	**1.29**	**1.34**	**1.33**
Selenium	mg/L	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**609**	**685**	**313**	**126**	**229**	**326**	**320**	**319**	**30.8**	**38.7**	**37.1**	**27.6**	**30.4**	**29.9**	**31.7**	**31.4**	**30.9**
Strontium	mg/L	**1.01**	**1.22**	**0.819**	**0.409**	**0.575**	**0.743**	**0.782**	**0.797**	**0.174**	**0.161**	**0.153**	**0.123**	**0.130**	**0.138**	**0.136**	**0.139**	**0.133**
Vanadium		**0.00687**	**0.0058**	0.00214 J	0.00123 J	0.00214 J	0.00331 J	0.00187 J	0.00191 J	0.00483 J	0.00160 J	0.00248 J	0.00314 J	0.00297 J	0.000908 J	0.00141 J	0.00165 J	0.000967 J
Zinc	mg/L	0.00256 J	**0.00468**	0.00222 J	**0.00412**	0.00299 J	<0.002	**0.0331**	**0.00975**	**0.0638**	<0.002	**0.0438**	**0.00694**	**0.00635**	0.00267 J	**0.150**	0.00356 J	**0.00405**
Anions/Water Quality Parameters																		
Bicarbonate Alkalinity	mg/L	**104**	**148**	**111**	**130**	**205**	**183**	**151**	**167**	**48.8**	**44.4**	**40.9**	**38.3**	**36.3**	**37.7**	**38.3**	**38.9**	**39.4**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<3.5	<3.5	<3	<3	<3	4.60 J	<3	<5	<5	<3.5	<3.5	<3	<3	<3.5	<3	<3
Chloride	mg/L	**620**	**1,160**	**509**	**230**	**394**	**487**	**556**	**587**	**35.9**	**37.8**	**38.3**	**33.6**	**31.2**	**34.5**	**36.3**	**37.0**	**37.1**
Sulfate	mg/L	**96.2**	**391**	**340**	**92.3**	**80.1**	**91.7**	**149**	**188**	**16.1**	**16.6**	**21.7**	**24.6**	**20.2**	**18.6**	**19.6**	**20.3**	**20.2**
Total Dissolved Solids (T	mg/L	**2,280**	**2,600**	**1,140**	**552**	**1,390**	**1,050**	**1,180**	**1,020**	**180**	**120**	**140**	**150**	**100**	**120**	**138**	**136**	**250**
pH	SI	8.37 H	7.98 H	7.75 H	7.21 H	7.46 H	8.18 H	7.91 H	8.00 H	7.38 H	7.05 H	7.44 H	7.50 H	7.56 H	7.56 H	7.71 H	7.53 H	7.23 H
Sulfides																		
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	**1.83**	**3.40**	**1.44**	**1.62**	0.552 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**3.40**	<0.5	<0.5
Sulfide	mg/L	<1.7	<1.7	<1.2	1.72 J	**3.20**	1.36 J	1.52 J	<1.2	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	**3.20**	<1.2	<1.2
Volatile Organic Compounds																		
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00046	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.000475	0.00031 J	<0.0002	<0.0002	<0.0002	0.00051 J	<0.0002	<0.0002	<0.0002	<0.000475	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.000502	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																		
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	0.0354 BJ	0.0336 J
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.001	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002	<0.002	<0.002	<0.025	<0.025	<0.002	<0.025	0.0323 J
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.008	**0.0405**	<0.008	<0.008	<0.025	<0.025	<0.008	<0.025	**0.131**
Aromatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.167	<0.01	<0.01	<0.01	<0.01	<0.1	<0.0333	<0.0333	<0.0333	<0.0333
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	**0.00826**	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.004	<0.004	<0.004	<0.004	<0.025	<0.025	**0.00867**	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.003	<0.003	<0.003	<0.025	<0.025	<0.003	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.009	<0.009	<0.009	<0.009	<0.025	<0.025	<0.009	<0.025	<0.025

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		PPG 7A BS		PPG 7B BS									LDNR 2		Central Pond	BS 24-oily water
Sample Date		1/25/23	12/11/23	2/16/23	5/18/23	9/18/23	12/12/23	3/28/24	6/19/24	9/26/24	11/21/24	12/16/24	1/25/23	1/9/24	1/25/23	2/26/24
Sample Interval (ft)		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Bubble Site (Surface Water)**											**Surface Water - Central Pond**			
Total Metals																
Arsenic	mg/L	0.000767 J	0.00192 J	0.0202 J	<0.0004	0.000799 J	<0.002	0.00136 J	<0.002	<0.002	<0.0004	0.00197 J	0.00141 J	NA	0.00192 J	NA
Barium	mg/L	**0.232**	**0.133**	**1.23**	**0.118**	**3.71**	**1.04**	**1.48**	**2.38**	**0.345**	**0.368**	**0.548**	**0.0832**	NA	**0.146**	NA
Cadmium	mg/L	<0.0002	0.000664 J	<0.01	<0.0002	0.000336 J	<0.001	NA	NA	NA	NA	NA	<0.0002	NA	<0.0004	NA
Calcium	mg/L	**24.5**	**29.8**	**141**	**23.8**	**65.6**	**61.9**	**46.4**	**62.3**	**37.9**	**34.4**	**53.1**	**58.2**	NA	**149**	NA
Chromium	mg/L	0.000474 J	0.00218 J	0.114 J	0.00175 J	0.000523 J	0.00341 J	**0.00659**	0.00373 J	0.00525 J	0.00113 J	<0.0004	0.00101 J	NA	0.00458 J	NA
Iron	mg/L	0.0406 J	**0.267**	3.34 J	**0.98**	**1.43**	**1.35**	**1.29**	**2.4**	0.285 J	0.168 J	0.0552 J	**0.207**	NA	**2.07**	NA
Lead	mg/L	<0.0006	**0.00251**	<0.03	**0.00245**	**0.00300**	0.00409 J	0.00110 J	0.00442 J	<0.003	0.000920 J	<0.003	<0.0006	NA	<0.00120	NA
Magnesium	mg/L	**1.54**	**2.29**	2.85 J	**1.73**	**1.78**	**1.77**	**1.97**	**1.90**	**1.19**	**1.66**	**1.57**	**5.44**	NA	**37.8**	NA
Manganese	mg/L	**0.0215**	**0.0205**	**0.509**	**0.161**	**0.211**	**0.324**	**0.215**	**0.333**	**0.21**	**0.342**	**0.316**	**0.00934**	NA	**0.847**	NA
Mercury	mg/L	<0.00003	<0.00003	<0.00003	**0.000358**	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	NA	<0.00003	NA
Nickel	mg/L	NA	**0.0033**	NA	**0.00417**	**0.00268**	0.00858 J	**0.0067**	0.00728 J	0.00572 J	**0.0057**	**0.00589**	NA	NA	NA	NA
Potassium	mg/L	**1.02**	**1.42**	1.78 J	**1.30**	**2.13**	**3.58**	**1.00**	**1.30**	**1.51**	**1.96**	**1.97**	**2.86**	NA	**3.22**	NA
Selenium	mg/L	<0.0011	<0.0011	<0.055	<0.0011	0.00156 J	<0.0055	NA	NA	NA	NA	NA	<0.0011	NA	<0.0022	NA
Silver	mg/L	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.001	NA	NA	NA	NA	NA	<0.0002	NA	<0.0004	NA
Sodium	mg/L	**8.45**	**6.20**	**26,400**	**1,390**	**27,400**	**11,200**	**5,420**	**11,400**	**4,080**	**1,990**	**9,010**	**158**	NA	**1,080**	NA
Strontium	mg/L	**0.167**	**0.186**	**0.678**	**0.160**	**0.683**	**0.427**	**0.606**	**0.630**	**0.342**	**0.290**	**0.393**	**0.341**	NA	**0.941**	NA
Vanadium		NA	**0.00830**	NA	0.00113 J	<0.0006	<0.003	0.00447 J	<0.003	<0.003	<0.0006	0.00316 J	NA	NA	NA	NA
Zinc	mg/L	**0.0466**	**0.209**	**1.97**	**0.451**	**0.291**	**0.427**	**0.259**	**0.618**	**0.621**	**0.883**	**0.921**	**0.0153**	NA	**0.0258**	NA
Anions/Water Quality Parameters																
Bicarbonate Alkalinity	mg/L	**159**	**67.3**	**128**	**78.4**	**241**	**112**	**152**	**153**	**109**	**98.5**	**104**	**210**	NA	**495**	NA
Bromide	mg/L	<0.03	<0.03	<1.5	<0.06	<1.5	<0.3	<0.3	**5.87**	<0.150	<0.06	<0.3	<0.03	<0.03	<0.06	NA
Carbonate Alkalinity	mg/L	<5	<3.5	<5	<5	<5	<3.5	<3.5	<3	<3	<3	<3	<5	NA	<5	NA
Chloride	mg/L	**6.45**	**5.60**	**55,900**	**2,400**	**48,000**	**16,500**	**8,540**	**16,300**	**5,810**	**3,410**	**16,100**	**215**	**149**	**2,090**	**400**
Sulfate	mg/L	**2.97**	**13.3**	**243**	**14.2**	**155**	**57.0**	**24.9**	**40.6**	**25.5**	**15.9**	**63.8**	**92.1**	**47.5**	**183**	**285**
Total Dissolved Solids (T	mg/L	**320**	**70.0**	**97,400**	**4,840**	**67,200**	**45,200**	**12,300**	**23,600**	**6,060**	**4,820**	**26,200**	**498**	**406**	**3,600**	**1,060**
pH	SI	NA	7.82 H	NA	7.65 H	7.93 H	7.34 H	7.93 H	8.11 H	7.98 H	7.45 H	7.48 H	NA	7.37 H	NA	NA
Sulfides																
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	**1.62**	<0.5	<0.5	NA	<0.5	NA
Sulfide	mg/L	<1	<1.7	<1	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	1.52 J	<1.2	<1	NA	<1	NA
Volatile Organic Compounds																
Benzene	mg/L	0.00034 J	0.00059 J	0.00075 J	<0.0002	0.00080 J	**0.0030**	0.00038 J	<0.00046	<0.0002	0.00026 J	<0.0002	<0.0002	NA	<0.0002	NA
Ethylbenzene	mg/L	**0.00180**	**0.0020**	**0.0023**	<0.0003	0.00086 J	**0.0034**	<0.0003	<0.000385	<0.0003	<0.0003	<0.0003	<0.0003	NA	<0.0003	NA
Toluene	mg/L	0.00055 J	**0.0018**	0.0073 J	<0.0002	<0.0002	**0.0010**	<0.0002	<0.000475	<0.0002	0.0042 J	<0.0002	<0.0002	NA	<0.0002	NA
m,p-Xylene	mg/L	0.0020 J	**0.0024**	**0.0030**	<0.0005	0.0013 J	**0.0061**	<0.0005	<0.00124	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005	NA
o-Xylene	mg/L	<0.0003	0.00052 J	**0.0020**	<0.0003	**0.0010**	**0.0045**	<0.0003	0.000531 J	<0.0003	<0.0003	<0.0003	<0.0003	NA	<0.0003	NA
Xylenes, Total	mg/L	**0.00200**	**0.0029**	**0.0050**	<0.0003	**0.0024**	**0.011**	<0.0003	<0.00124	<0.0003	<0.0003	<0.0003	<0.0003	NA	<0.0003	NA
TPH Fractions																NA
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.833	<0.333	<0.01	NA	<0.01	NA
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.833	<0.333	<0.01	NA	<0.01	NA
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.001	NA	<0.001	NA
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	**0.0242**	<0.025	<0.025	<0.025	<0.025	<0.002	NA	<0.002	NA
Aliphatics >C16-C35	mg/L	<0.008	**0.0217**	**0.239**	<0.008	**0.137**	**0.0824**	**0.0992**	<0.025	<0.025	**0.135**	**0.141**	<0.008	NA	<0.008	NA
Aromatics >C8-C10	mg/L	**0.0285**	<0.01	**0.0192**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.333	<0.833	<0.333	<0.01	NA	<0.01	NA
Aromatics >C10-C12	mg/L	<0.001	<0.001	**0.00551**	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.001	NA	<0.001	NA
Aromatics >C12-C16	mg/L	<0.004	<0.004	**0.0225**	<0.004	<0.004	<0.004	**0.0137**	<0.025	<0.025	<0.025	<0.025	<0.004	NA	<0.004	NA
Aromatics >C16-C21	mg/L	<0.003	<0.003	**0.0188**	<0.003	<0.003	<0.003	**0.0145**	<0.025	<0.025	<0.025	<0.025	<0.003	NA	<0.003	NA
Aromatics >C21-C35	mg/L	<0.009	<0.009	**0.079**	<0.009	<0.009	<0.009	**0.0217**	<0.025	<0.025	<0.025	<0.025	<0.009	NA	<0.009	NA

Notes
J - Estimated Value reported below t
H - pH is received at the lab outside
< - Not Detected at the reporting limi
Bolded values deteted in the sample

Table 2
Surface Water Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

LDNR Sample No.		LDNR 20	Salt Lake Bckgrd	SL-01 Top	SL-01 Bott	SL-02 Top	SL-02 Bott	SL-03 Top	SL-03 Bott	SL-04 Top	SL-04 Bott	SL-05 Top	SL-05 Bott
Sample Date		3/9/23	10/24/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24	11/20/24
Sample Interval (ft)		Surface	Surface	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	**Units**	**Surface Water - Salt Lake**											
Total Metals													
Arsenic	mg/L	0.00109 J	0.00181 J	0.00179 J	0.00182 J	0.00180 J	0.00176 J	0.00174 J	0.00180 J	0.00188 J	0.00173 J	0.00170 J	0.00177 J
Barium	mg/L	**0.43**	**0.395**	**0.453**	**0.448**	**0.425**	**0.443**	**0.444**	**0.446**	**0.439**	**0.428**	**0.399**	**0.43**
Cadmium	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	**8.98**	**10.9**	**9.45**	**9.21**	**8.97**	**9.13**	**9.26**	**9.21**	**9.04**	**8.87**	**8.58**	**9.25**
Chromium	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Iron	mg/L	0.148 J	0.153 J	0.0840 J	0.132 J	0.0982 J	0.0936 J	0.108 J	0.0969 J	0.117 J	0.103 J	0.0910 J	0.121 J
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	**1.60**	**1.87**	**1.79**	**1.75**	**1.69**	**1.71**	**1.71**	**1.73**	**1.69**	**1.70**	**1.61**	**1.75**
Manganese	mg/L	**0.0163**	**0.0462**	**0.0323**	**0.0404**	**0.0311**	**0.0317**	**0.0333**	**0.0334**	**0.031**	**0.0301**	**0.0286**	**0.0313**
Mercury	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	NA	**0.00237**	<0.0006	0.000702 J	0.000643 J	<0.0006	<0.0006	0.000650 J	0.000650 J	<0.0006	<0.0006	0.000614 J
Potassium	mg/L	**1.20**	**1.40**	**1.41**	**1.37**	**1.34**	**1.36**	**1.39**	**1.39**	**1.35**	**1.32**	**1.27**	**1.39**
Selenium	mg/L	<0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	**27.5**	**32.8**	**33.4**	**32.6**	**31.9**	**32.1**	**32.4**	**32.8**	**31.9**	**31.5**	**30.5**	**33.3**
Strontium	mg/L	**0.134**	**0.147**	**0.149**	**0.144**	**0.142**	**0.143**	**0.144**	**0.148**	**0.142**	**0.141**	**0.133**	**0.144**
Vanadium		NA	**0.00811**	0.00107 J	0.00137 J	0.00104 J	0.00112 J	0.00113 J	0.00109 J	0.00115 J	0.00104 J	0.000937 J	0.00112 J
Zinc	mg/L	<0.002	<0.002	**0.002**	**0.002**	**0.0115**	<0.002	0.00210 J	0.00326 J	**0.0134**	**0.0103**	<0.002	0.00214 J
Anions/Water Quality Parameters													
Bicarbonate Alkalinity	mg/L	**37.4**	**46.0**	**38.0**	**38.8**	**38.9**	**38.6**	**39.2**	**38.4**	**38.2**	**38.3**	**38.0**	**37.9**
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Chloride	mg/L	**31.8**	**35.2**	**36.2**	**36.1**	**36.1**	**36.1**	**36.0**	**36.0**	**36.1**	**36.3**	**36.0**	**36.0**
Sulfate	mg/L	**17.2**	**19.1**	**19.8**	**19.9**	**19.8**	**19.8**	**19.6**	**19.7**	**19.8**	**19.9**	**19.8**	**19.8**
Total Dissolved Solids (T	mg/L	**148**	**154**	**130**	**128**	**132**	**148**	**146**	**118**	**148**	**106**	**166**	**148**
pH	SI	NA	8.34 H	7.50 H	7.44 H	7.74 H	7.79 H	7.65 H	7.71 H	7.85 H	7.55 H	7.79 H	7.70 H
Sulfides													
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.552 J	<0.5	**1.62**	<0.5
Sulfide	mg/L	<1.7	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1.52 J	<1.2
Volatile Organic Compounds													
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions													
Aliphatics >C6-C8	mg/L	<0.01	<0.0333	<0.0333	<0.0333	<0.833	<0.167	<0.833	<0.167	<0.0333	<0.833	<0.167	<0.167
Aliphatics >C8-C10	mg/L	<0.01	<0.0333	<0.0333	<0.0333	<0.833	<0.167	<0.833	<0.167	<0.0333	<0.833	<0.167	<0.167
Aliphatics >C10-C12	mg/L	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C12-C16	mg/L	<0.002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aliphatics >C16-C35	mg/L	<0.008	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C8-C10	mg/L	**0.012**	<0.0333	<0.0333	<0.0333	<0.833	<0.167	<0.833	<0.167	<0.0333	<0.833	<0.167	<0.167
Aromatics >C10-C12	mg/L	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C12-C16	mg/L	<0.004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C16-C21	mg/L	<0.003	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Aromatics >C21-C35	mg/L	<0.009	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025

Notes
J - Estimated Value reported below t
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Bolded values deteted in the sample

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

1/30/2023	LDNR #4 (water depth 2.55 ft)				
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
0.5	6.14	1317	31	17.5	NR
2.55	6.3	1321	-4	17.1	NR

5/22/2023	LDNR #5 (water depth 5.0 ft)				
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
0	6.95	1509	59	30.1	1058
1	6.95	1513	69	30.1	1058
2	6.96	1515	77	30	1057
3	6.94	1513	83	29.7	1059
4	6.96	1513	84	29.6	1057
5	6.77	1522	-64	28.7	1065

6/15/2023	13:55	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.55	1665	113	34.3	1238
3	7.02	1671	137	34.7	1241
5	7.52	1692	39	33.7	1254

6/16/2023	12:58	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.67	1792	205	33.5	1256
3	7.70	1786	174	33.3	1254
5	7.30	1902	-240	33.4	1352

6/23/2023	8:13	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.53	NR	165	27.7	NR
3	7.56	NR	155	291	1291
5	7.54	1814	-186	29.8	1282

6/30/2023	13:40	Water Column Station (water depth 5.15 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.60	1883	64	36.1	1322
3	7.50	1878	84	34.8	1325
5	7.50	1876	94	35.0	1320

7/7/2023	8:45	Water Column Station (water depth 5.0 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.60	1910	103	29.3	1355
3	7.61	1951	107	29.6	1389
5	7.59	1916	113	29.7	1364

7/14/2023	13:00	Water Column Station (water depth 5.0 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.85	NR	161	35.2	NR
3	7.65	2032	148	34.2	1449
5	7.59	1962	140	331	1529

7/21/2023	9:10	Water Column Station (water depth 4.8 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.72	2123	168	31.6	1515
3	7.67	2117	162	31.7	1514
5	7.70	2104	155	31.4	1509

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

7/28/2023	7:15	Water Column Station (water depth 5.8 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.66	2238	168	29.3	1609
3	7.61	2106	165	29.9	1513
5	7.48	2185	151	29.5	1568

8/4/2023	9:25	Water Column Station (water depth 5.6 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.62	2328	161	32.4	1678
3	7.56	2317	149	32.5	1669
5	7.47	2317	79	32.6	1670

8/11/2023	7:30	Water Column Station (water depth 5.45 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.64	2648	101	29.7	1935
3	7.75	2588	18	30.6	1888
5	7.58	2593	-147	31.1	1885

8/18/2023	7:30	Water Column Station (water depth 5.25 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.71	2871	141	28.9	2116
3	7.58	2813	103	30.1	2067
5	7.54	2747	-48	30.3	2023

8/25/2023	9:00	Water Column Station (water depth 4.1 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.71	3071	149	29.6	2253
3	7.69	3034	121	30.3	2215
5	7.58	3038	-8	30.2	2219

9/1/2023	10:00	Water Column Station (water depth NR)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.06	3233	34	31.1	2371
3	8.10	3203	25	29.4	2357
5	7.62	3216	-13	29.6	2366

9/8/2023	7:45	Water Column Station (water depth NR)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.06	3373	109	28.9	2486
3	8.16	3337	87	30.1	2458
5	7.87	3341	-32	30.4	2457

9/15/2023	7:20	Water Column Station (water depth 3'5")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.04	3554	149	25	2650
3	7.96	3416	144	26.2	2545
5	7.55	3426	-81	26.2	2549

9/22/2023	8:15	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.19	3625	146	28.6	2699
3	8.23	3570	131	28.7	2652
5	7.50	3587	-114	28.5	2660

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

9/29/2023	7:30	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.43	3614	152	26.5	2684
3	7.42	3601	121	27.1	2689
5	7.41	3603	-32	27.3	2685

10/6/2023	8:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	3584	103	24.3	2681
3	7.44	3572	96	24.8	2671
5	7.55	3558	10	24.7	2660

10/13/2023	9:42	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.95	3555	146	22.8	2665
3	7.92	3641	148	23.6	2733
5	7.94	3646	135	23.7	2737

10/20/2023	8:00	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.88	3775	109	21	2854
3	7.97	3738	116	21.4	2823
5	7.92	3770	119	21.7	2846

10/27/2023	8:42	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.19	4035	80	26.9	3036
3	7.96	3990	26.7	26.7	2995
5	7.92	3946	26.3	26.3	2962

11/3/2023	9:00	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.83	4025	208	16.2	3086
3	7.77	4060	161	19.3	3116
5	7.72	4035	186	15.7	3088

11/10/2023	10:17	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.7	4150	164	22.1	3160
3	7.63	4179	128	22	3187
5	7.55	4161	2	21.8	3178

11/17/2023	9:45	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.52	4115	192	20.5	3144
3	7.45	4119	160	20.9	3143
5	7.46	4113	84	20.8	3136

11/24/2023	8:01	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.75	4238	181	15.6	3758
3	7.76	4220	146	15.4	3239
5	7.70	4209	96	15.3	3240

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

12/1/2023	8:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.85	4132	-41	17.8	3171
3	7.81	4144	21	17.3	3173
5	7.75	4204	39	17.6	3237

12/8/2023	9:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.66	4275	141	16.7	3288
3	7.72	4175	109	16.7	3203
5	7.61	4276	75	16.9	3294

12/15/2023	9:00	Water Column Station (water depth 4'4")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.62	4287	-66	14.5	3311
3	7.77	4301	-32	15.1	3315
5	7.68	4300	5	15.5	3310

12/22/2023	8:30	Water Column Station (water depth 4'5")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.74	4296	65	18.1	3311
3	7.76	4305	32	18	28
5	7.69	4289	77	17.9	3301

1/4/2024	13:35	Water Column Station (water depth 5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.63	4040	115	15.7	3092
3	7.59	4041	97	14.3	2101
5	7.70	4044	227	14.9	3127

1/12/2024	8:48	Water Column Station (water depth 5.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	5.50	3236	69	15.6	2486
3	7.51	3303	61	16.0	2544
5	7.54	3268	89	16.3	2509

1/18/2024	12:39	Water Column Station (water depth 5.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	3141	94	11.6	2416
3	7.54	3235	69	10.7	2492
5	7.50	3240	-45	10.3	2507

1/26/2024	9:08	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.35	2464	-21	16.3	1860
3	7.28	2616	13	15.7	1988
5	7.33	2731	-114	15.0	2081

2/2/2024	9:03	Water Column Station (water depth 5.8')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.19	1578	68	16.7	1151
3	7.14	1616	62	16.2	1183
5	7.39	2359	-132	17.4	1773

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

2/9/2024	8:35	Water Column Station (water depth 5.5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.34	1570	58	18.7	1143
3	7.27	1572	76	18.5	1144
5	7.29	1607	14	18.5	1171

2/16/2024	9:00	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.42	1690	184	17.8	1237
3	7.31	1664	111	18.2	1217
5	7.35	1700	47	17.1	1245

2/23/2024	12:45	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.75	1766	146	20.5	1289
3	7.65	1767	137	21.1	1286
5	7.70	1782	115	20.9	1299

3/1/2024	9:06	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.48	1900	182	15.7	1405
3	7.4	1887	133	15.4	1396
5	7.32	1910	55	15.5	1414

3/7/2024	12:40	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.59	1956	164	24.0	1443
3	7.53	1950	108	24.6	1431
5	7.59	1988	-17	24.1	1463

3/14/2024	8:40	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.69	2059	171	22.6	1519
3	7.63	2044	152	22.4	1507
5	7.53	2073	-135	22.5	1532

3/22/2024	9:20	Water Column Station (water depth 5.2')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.53	2078	189	18.7	1543
3	7.48	2076	133	18.5	1545
5	7.54	2107	-117	19.0	1548

3/28/2024	9:26	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.68	2120	37	18.4	1578
3	7.57	2117	80	18.6	1575
5	7.50	2118	-90	18.5	1580

4/5/2024	10:15	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.87	2212	92	23.3	1636
3	7.69	2211	102	22.9	1639
5	7.63	2271	-172	23.4	1684

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

4/12/2024	7:38	Water Column Station (water depth 5.5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	2021	135	20.5	1498
3	7.45	2034	116	20.0	1506
5	7.53	2031	-38	20.7	1503

4/19/2024	8:00	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.92	2125	37	26.0	1566
3	7.68	2126	4	26.2	1568
5	7.16	2197	-254	26.0	1625

4/26/2024	9:52	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.69	2181	107	25.5	1612
3	7.62	2169	103	25.3	1605
5	7.45	2199	-104	25.1	1626

5/3/2024	11:45	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.49	1761	81	23.7	1280
3	7.57	1795	62	25.0	1305
5	7.42	1823	-104	23.9	1233

5/10/2024	10:33	Water Column Station (water depth 6.8')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.39	1503	29	27.8	1074
3	7.34	1589	-21	27.4	1141
5	6.96	2119	-251	26.8	1557

5/16/2024	8:20	Water Column Station (water depth 6.9')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.37	1461	50	26.8	1042
3	7.19	1465	7	26.6	1045
5	6.88	1868	-225	26.2	1362

5/24/2024	8:10	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.49	1314	120	27.7	929.4
3	7.46	1324	-15	27.9	937.1
5	7.12	1730	-226	26.1	1252

5/31/2024	7:34	Water Column Station (water depth 6.1')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.41	1282	80	25.4	907.2
3	7.29	1283	26	25.7	908.7
5	7.13	1420	-195	25.9	1011

6/7/2024	8:41	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.39	1079	73	28.0	756.0
3	7.17	1051	-48	27.9	736.0
5	6.48	1547	-223	28.2	1107

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

6/14/2024	7:40	Water Column Station (water depth 6.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.40	1070	24	28.7	753.0
3	7.35	1063	-53	28.8	29.3
5	7.12	1540	-185	29.3	1098

6/21/2024	9:03	Water Column Station (water depth 5.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.42	1154	64	29.1	810.2
3	7.44	1152	44	29.2	808.6
5	7.34	1207	-50	29.4	848.2

6/28/2024	10:31	Water Column Station (water depth 5.7')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.39	1220	-9	32.0	845.3
3	7.34	1208	-36	32.0	844.3
5	7.18	1232	-122	32.1	861.7

7/5/2024	10:00	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.31	1231	102	31	892.3
3	7.26	1268	-25	31.2	891.1
5	6.90	1527	-203	30.9	1088

7/12/2024	10:00	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.36	1344	101	29.1	947.6
3	7.35	1341	69	29.5	947.2
5	7.17	1438	-154	29.8	1020

7/18/2024	12:49	Water Column Station (water depth 5.1')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.41	1421	77	30.8	1004
3	7.33	1414	43	30.5	998.5
5	7.13	1463	-93	30.6	1036

8/2/2024	8:22	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.25	1267	90	30.7	892.5
3	7.22	1256	-69	30.4	885.6
5	7.08	1566	-161	30.0	1117

8/16/2024	10:26	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.33	1459	122	33.3	1031
3	7.24	1457	-16	33.4	1028
5	7.06	1571	-106	33.9	1115

8/23/2024	8:05	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.35	1555	82	30.1	1109
3	7.33	1552	50	30.3	1106
5	6.98	1639	-89	30.3	1174

Table 3
Central Lake Water Column Profile
Sulphur Dome
Calcasieu Parish, Louisiana

8/30/2024	12:45	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.37	1592	90	27.5	1144
3	7.36	1600	30	27.8	1144
5	7.28	1612	51	277	1156

9/6/2024	7:50	Water Column Station (water depth 5.8')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.34	1596	156	26.6	1145
3	7.36	1541	42	27.1	1103
5	7.23	1569	38	27.2	1123

9/12/2024	8:15	Water Column Station (water depth 5.1')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.25	1521	228	25.4	1092
3	7.23	1519	130	25.6	1090
5	7.19	1560	62	25.8	1121

9/20/2024	10:00	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.31	1627	176	30.4	1168
3	7.29	1618	117	30.6	1157
5	6.79	1867	-99	31.0	1352

9/27/2024	8:50	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.27	1719	237	26.7	1244
3	7.38	1715	178	26.5	1238
5	7.31	1744	125	26.9	1260

10/4/2024	7:30	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.60	1813	262	26.6	1315
3	7.45	1806	204	27.0	1306
5	7.49	1833	140	26.8	1328

10/11/2024	13:30	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.80	1900	196	26.7	1390
3	7.69	1870	174	26.1	1363
5	7.70	1893	90	26.4	1384

Notes:
Readings were recorded with an Ultrameter II, hand-held meter
NR - Not Recorded

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 1										LDNR 3									
	Sample ID																				
	Sample Date	1/25/23*	5/18/23*	9/20/23	12/11/23	3/26/24*	6/17/24	9/23/24	10/22/24	11/21/24	12/17/24	1/30/203*	5/22/23	9/18/23	12/11/23	3/26/24	6/18/24	9/24/24	10/21/24	11/20/24	12/16/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	ND	**0.18**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	**0.0053**	ND	NA	**0.0049**	**0.0039**	**0.0061**	**0.0050**	**0.0047**	NA	ND	ND	ND	ND	**0.0041**	**0.0029**	**0.0050**	**0.0049**	**0.0031**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.35**	**1.31**	**0.0612**	**0.669**	**1.42**	**0.115**	**0.0972**	**0.101**	**0.573**	**0.0441**	**1.04**	**0.0448**	**0.917**	**0.543**	**0.648**	**0.0704**	**0.0701**	**0.0726**	**0.100**	**0.0397**
Oxygen	mol%	**0.47**	**17.47**	**0.96**	**14.23**	ND	**1.88**	**1.39**	**1.77**	**12.34**	**0.10**	**8.91**	**0.086**	**20.38**	**2.87**	**14.22**	**0.65**	**0.86**	**1.25**	**2.00**	**0.45**
Nitrogen	mol%	**61.78**	**64.5**	**4.41**	**61.50**	**88.37**	**8.29**	**6.90**	**7.93**	**46.80**	**2.29**	**45.65**	**2.11**	**77.1**	**15.08**	**52.31**	**4.10**	**4.73**	**5.55**	**7.92**	**1.90**
Carbon Dioxide	mol%	**7.47**	**6.37**	**2.57**	**0.46**	**10.05**	**2.15**	**2.14**	**2.16**	**1.08**	**2.56**	**3.58**	**2.14**	**0.089**	**2.02**	**0.68**	**2.15**	**2.61**	**2.26**	**2.07**	**1.93**
Methane	mol%	**28.45**	**10.00**	**89.73**	**22.56**	**0.137**	**85.46**	**87.36**	**85.96**	**38.28**	**92.76**	**40.41**	**94.46**	**1.49**	**78.53**	**31.77**	**91.97**	**90.70**	**89.87**	**86.95**	**94.64**
Ethane	mol%	**0.287**	**0.110**	**1.50**	**0.382**	**0.0014**	**1.38**	**1.40**	**1.34**	**0.616**	**1.46**	**0.261**	**0.673**	**0.0108**	**0.575**	**0.221**	**0.646**	**0.631**	**0.593**	**0.573**	**0.613**
Ethylene	mol%	ND	ND	**0.0006**	**0.0002**	ND	**0.0009**	**0.0005**	**0.0006**	**0.0002**	**0.0007**	**0.0097**	**0.0286**	**0.003**	**0.0178**	**0.0075**	**0.0139**	**0.0148**	**0.0139**	**0.0122**	**0.0132**
Propane	mol%	**0.0926**	**0.0412**	**0.414**	**0.107**	**0.0075**	**0.391**	**0.396**	**0.390**	**0.175**	**0.418**	**0.0702**	**0.198**	**0.0036**	**0.159**	**0.0619**	**0.176**	**0.173**	**0.167**	**0.161**	**0.177**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0216**	**0.0070**	**0.0977**	**0.0255**	**0.0037**	**0.0942**	**0.0950**	**0.0935**	**0.0416**	**0.102**	**0.0259**	**0.0751**	**0.0013**	**0.0608**	**0.0238**	**0.0680**	**0.0668**	**0.0639**	**0.0617**	**0.0683**
N-butane	mol%	**0.0216**	**0.0070**	**0.106**	**0.0277**	**0.0028**	**0.100**	**0.0992**	**0.0995**	**0.0430**	**0.108**	**0.0189**	**0.0647**	**0.0016**	**0.0519**	**0.0197**	**0.0568**	**0.0555**	**0.0533**	**0.0512**	**0.0571**
Iso-pentane	mol%	**0.0083**	**0.0017**	**0.0410**	**0.0112**	**0.0014**	**0.0398**	**0.0389**	**0.0399**	**0.0167**	**0.0432**	**0.0083**	**0.0356**	**0.0009**	**0.0286**	**0.0108**	**0.0316**	**0.0315**	**0.0303**	**0.0290**	**0.0329**
N-pentane	mol%	**0.0055**	**0.0012**	**0.0308**	**0.0093**	**0.0005**	**0.0306**	**0.0262**	**0.0294**	**0.0119**	**0.0297**	**0.0051**	**0.0262**	**0.0008**	**0.0223**	**0.0081**	**0.0231**	**0.0231**	**0.0224**	**0.0214**	**0.0245**
Hexanes +	mol%	**0.0449**	**0.0064**	**0.0685**	**0.0227**	**0.0103**	**0.0686**	**0.0590**	**0.0728**	**0.0227**	**0.0685**	**0.0083**	**0.0548**	**0.0020**	**0.0411**	**0.0154**	**0.0405**	**0.0422**	**0.0439**	**0.0398**	**0.0464**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-33.03**	**-24.86**	**-39.25**	**-39.09**	NA	**-39.17**	**-39.10**	**-39.06**	**-39.00**	**-38.94**	**-34.2**	**-34.66**	**-31.24**	**-33.88**	**-33.97**	**-34.38**	**-33.50**	**-34.37**	**-34.25**	**-34.26**
δD (CH_4)	‰	**-129.6**	**-81.1**	**-158.6**	**-158.7**	NA	**-153.9**	**-151.3**	**-151.8**	**-152.1**	**-151.5**	**-147.2**	**-141.0**	**-138.7**	**-151.6**	**-141.1**	**-139.8**	**-143.1**	**-143.0**	**-141.5**	**-142.5**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	<0.1	**13.0**	**0.7**	**49.0**	NA	NA	NA	NA	NA	NA	**592.8**	**113.7**	**111.7**	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 4										LDNR 5									
	Sample ID																				
	Sample Date	1/30/23*	5/22/23	9/20/23	12/11/23	3/26/24	6/18/24	9/23/24	10/21/24	11/20/24	12/17/24	1/30/23*	5/17/23*	9/20/23	12/13/23	3/26/24	6/18/24	9/24/24	10/22/24	11/19/24	12/16/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.099**	ND	ND	ND	ND	ND	ND	ND	nd
Helium	mol%	NA	ND	ND	ND	ND	**0.0035**	**0.0038**	**0.0026**	**0.0041**	**0.0033**	NA	NA	ND	ND	ND	**0.0043**	**0.0037**	**0.0047**	**0.0049**	**0.0052**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	nd
Argon	mol%	**0.905**	**0.0360**	**0.550**	**0.0266**	**0.0872**	**0.122**	**0.0302**	**0.412**	**0.0916**	**0.0282**	**1.54**	**1.12**	**0.540**	**0.131**	**0.797**	**0.0794**	**0.130**	**0.106**	**0.180**	**0.0874**
Oxygen	mol%	**15.5**	**0.16**	**8.93**	**0.23**	**1.63**	**2.16**	**0.15**	**9.00**	**1.87**	**0.14**	**21.68**	**15.89**	**11.11**	**2.44**	**17.71**	**0.88**	**2.26**	**2.25**	**3.63**	**1.57**
Nitrogen	mol%	**65.33**	**1.87**	**41.87**	**1.73**	**6.81**	**8.95**	**1.72**	**33.53**	**7.61**	**1.57**	**69.85**	**73.83**	**40.07**	**8.90**	**64.69**	**4.57**	**9.71**	**8.14**	**13.85**	**3.97**
Carbon Dioxide	mol%	**1.29**	**1.56**	**1.55**	**1.75**	**1.39**	**1.47**	**1.90**	**1.17**	**1.46**	**1.63**	**2.47**	**2.79**	**0.52**	**0.59**	**0.17**	**1.41**	**1.61**	**1.27**	**1.08**	**0.51**
Methane	mol%	**16.69**	**94.48**	**46.17**	**94.44**	**88.44**	**85.66**	**94.39**	**54.84**	**87.34**	**94.81**	**4.39**	**6.20**	**46.82**	**86.34**	**16.34**	**91.38**	**84.76**	**86.72**	**79.88**	**92.25**
Ethane	mol%	**0.209**	**1.30**	**0.64**	**1.27**	**1.14**	**1.14**	**1.26**	**0.727**	**1.14**	**1.29**	**0.0472**	**0.0488**	**0.579**	**1.08**	**0.192**	**1.08**	**1.02**	**1.04**	**0.935**	**0.999**
Ethylene	mol%	**0.0067**	**0.0540**	**0.0223**	**0.0447**	**0.0409**	**0.0374**	**0.0379**	**0.0210**	**0.0329**	**0.0342**	**0.0022**	**0.0042**	**0.0874**	**0.0362**	**0.0132**	**0.0967**	**0.0538**	**0.0143**	**0.0153**	**0.107**
Propane	mol%	**0.0445**	**0.294**	**0.144**	**0.277**	**0.250**	**0.243**	**0.264**	**0.153**	**0.239**	**0.258**	**0.0128**	**0.0120**	**0.1590**	**0.272**	**0.0495**	**0.280**	**0.252**	**0.255**	**0.236**	**0.275**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0115**	**0.0819**	**0.0408**	**0.0790**	**0.0723**	**0.0717**	**0.0787**	**0.0452**	**0.0712**	**0.0773**	**0.0033**	**0.0030**	**0.0406**	**0.0741**	**0.0134**	**0.0763**	**0.0704**	**0.0713**	**0.0654**	**0.0786**
N-butane	mol%	**0.0091**	**0.0757**	**0.0372**	**0.0720**	**0.0651**	**0.0643**	**0.0710**	**0.0405**	**0.0640**	**0.0694**	**0.0028**	**0.0021**	**0.0387**	**0.0685**	**0.0121**	**0.0700**	**0.0639**	**0.0648**	**0.0592**	**0.0718**
Iso-pentane	mol%	**0.0032**	**0.0318**	**0.0158**	**0.0301**	**0.0274**	**0.0273**	**0.0309**	**0.0174**	**0.0278**	**0.0302**	**0.0006**	**0.0006**	**0.0133**	**0.0250**	**0.0045**	**0.0255**	**0.0240**	**0.0249**	**0.0221**	**0.0273**
N-pentane	mol%	**0.0019**	**0.0220**	**0.0111**	**0.0205**	**0.0185**	**0.0185**	**0.0214**	**0.0121**	**0.0191**	**0.0207**	ND	ND	**0.0092**	**0.0165**	**0.0030**	**0.0165**	**0.0154**	**0.0162**	**0.0141**	**0.0175**
Hexanes +	mol%	**0.0029**	**0.0341**	**0.0173**	**0.0291**	**0.0265**	**0.0251**	**0.0309**	**0.0183**	**0.0279**	**0.0291**	**0.0039**	**0.0009**	**0.0148**	**0.0261**	**0.0054**	**0.0232**	**0.0215**	**0.0239**	**0.0187**	**0.0238**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-38.37**	**-38.5**	**-37.03**	**-37.69**	**-37.29**	**-37.20**	**-37.06**	**-37.00**	**-37.04**	**-37.20**	**-35.45**	**-39.21**	**-37.16**	**-37.36**	**-36.87**	**-36.81**	**-36.55**	**-36.61**	**-36.44**	**-36.22**
δD (CH_4)	‰	**-160.5**	**-151.3**	**-145.0**	**-158.0**	**-149.6**	**-151.8**	**-150.7**	**-149.6**	**-152.1**	**-147.6**	**-143**	**-159.8**	**-147.9**	**-154.9**	**-146.6**	**-146.8**	**-144.4**	**-145.7**	**-147.5**	**-145.1**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	**114.0**	**3.4**	**11.5**	**15.9**	NA	NA	NA	NA	NA	NA	**3.0**	<0.1	**0.7**	**0.1**

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		LDNR 6										LDNR 7									
Sample ID																					
Sample Date		2/28/23*	5/18/23*	9/20/23*	12/12/23	3/26/24	6/18/24	9/25/24	10/21/24	11/19/24	12/16/24	2/28/23*	5/17/23*	9/20/23*	12/12/23	3/27/24	6/20/24	9/25/24	10/22/24	11/19/24	12/18/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	ND	**0.22**	**0.093**	ND	ND	ND	ND	ND	ND	ND	ND	**0.31**	**0.15**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	ND	**0.004**	**0.0034**	**0.0046**	**0.0043**	**0.0031**	NA	NA	NA	ND	ND	**0.0036**	**0.0029**	**0.0036**	**0.0038**	**0.0037**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.68**	**1.63**	**1.06**	**0.108**	**0.873**	**0.0859**	**0.132**	**0.102**	**0.101**	**0.117**	**1.66**	**1.64**	**1.2**	**0.365**	**0.140**	**0.174**	**0.188**	**0.209**	**0.161**	**0.260**
Oxygen	mol%	**21.86**	**21.22**	**23.75**	**1.78**	**19.55**	**0.76**	**2.31**	**1.93**	**1.60**	**2.40**	**22.94**	**17.64**	**24.65**	**6.63**	**2.62**	**1.64**	**2.98**	**3.93**	**2.03**	**4.84**
Nitrogen	mol%	**72.96**	**72.30**	**73.08**	**6.58**	**71.76**	**4.99**	**9.65**	**7.45**	**7.08**	**7.38**	**71.73**	**73.45**	**73.16**	**25.40**	**6.52**	**9.54**	**12.94**	**12.34**	**9.01**	**16.930**
Carbon Dioxide	mol%	**3.22**	**4.39**	**0.15**	**0.75**	**0.13**	**1.95**	**1.68**	**1.52**	**1.38**	**0.82**	**3.27**	**6.46**	**0.40**	**0.42**	**0.47**	**1.16**	**1.47**	**0.50**	**0.73**	**0.45**
Methane	mol%	**0.278**	**0.234**	**1.84**	**89.64**	**7.59**	**91.05**	**85.13**	**87.92**	**88.72**	**88.20**	**0.398**	**0.493**	**0.427**	**64.68**	**87.04**	**84.19**	**79.30**	**79.98**	**84.84**	**74.69**
Ethane	mol%	**0.0042**	**0.0014**	**0.0112**	**0.669**	**0.0549**	**0.698**	**0.663**	**0.633**	**0.671**	**0.626**	**0.0050**	**0.0057**	**0.0100**	**2.22**	**2.82**	**2.92**	**2.76**	**2.69**	**2.84**	**2.49**
Ethylene	mol%	ND	ND	**0.0007**	**0.0363**	**0.003**	**0.0394**	**0.0386**	**0.0409**	**0.0393**	**0.0387**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	**0.0014**	**0.0041**	**0.235**	**0.0185**	**0.226**	**0.208**	**0.209**	**0.212**	**0.211**	**0.0006**	ND	**0.0013**	**0.176**	**0.235**	**0.227**	**0.216**	**0.218**	**0.231**	**0.203**
Propylene	mol%	ND	ND	ND	ND	ND	**0.0001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	**0.0014**	**0.0831**	**0.0067**	**0.0823**	**0.0776**	**0.0778**	**0.0793**	**0.0811**	ND	ND	ND	**0.0452**	**0.0631**	**0.0574**	**0.0551**	**0.0576**	**0.0607**	**0.0536**
N-butane	mol%	ND	ND	**0.0010**	**0.0644**	**0.0053**	**0.0643**	**0.0621**	**0.0617**	**0.0632**	**0.0650**	ND	ND	ND	**0.0365**	**0.0506**	**0.0449**	**0.0451**	**0.0464**	**0.0491**	**0.0435**
Iso-pentane	mol%	ND	ND	**0.0003**	**0.0270**	**0.0023**	**0.0263**	**0.0263**	**0.0256**	**0.0265**	**0.0277**	ND	ND	ND	**0.0135**	**0.0189**	**0.0149**	**0.0163**	**0.0172**	**0.0183**	**0.0163**
N-pentane	mol%	ND	ND	ND	**0.0142**	**0.0013**	**0.014**	**0.0143**	**0.0136**	**0.0142**	**0.0149**	ND	ND	ND	**0.0072**	**0.0101**	**0.0075**	**0.0086**	**0.0091**	**0.0097**	**0.0088**
Hexanes +	mol%	**0.0012**	**0.0028**	**0.0018**	**0.0142**	**0.0028**	**0.0135**	**0.0147**	**0.0135**	**0.0143**	**0.0151**	**0.0013**	**0.0041**	**0.0024**	**0.0111**	**0.0148**	**0.0093**	**0.0128**	**0.0131**	**0.0149**	**0.0149**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	NA	NA	**-34.8**	**-34.83**	**-33.32**	**-35.08**	**-34.72**	**-34.75**	**-34.84**	**-34.67**	**-36.7**	**-48.9**	**-39.5**	**-45.00**	**-43.87**	**-44.24**	**-44.45**	**-43.88**	**-43.89**	**-43.94**
δD (CH_4)	‰	NA	NA	**-144**	**-150.0**	**-140.2**	**-142.8**	**-143.0**	**-140.3**	**-145.4**	**-144.3**	NA	NA	NA	**-189.4**	**-183.8**	**-181.8**	**-181.9**	**-179.1**	**-181.8**	**-182.1**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 8									LDNR 9								
	Sample ID																		
	Sample Date	2/28/23*	5/18/23*	9/20/23*	3/27/24	6/18/24*	9/24/24	10/23/24	11/19/24	12/16/24	2/10/23*	5/18/23*	12/13/23	3/28/24*	6/19/24*	9/26/24*	10/24/24	11/21/24	12/17/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																	
Carbon Monoxide	mol%	ND	**0.33**	**0.16**	ND	ND	ND	ND	ND	ND	**0.034**	**0.26**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	NA	**0.0037**	**0.0038**	**0.0045**	**0.0031**	NA	NA	ND	NA	NA	NA	**0.0029**	**0.0031**	**0.0026**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.31**	**1.71**	**1.19**	**0.117**	**1.08**	**0.132**	**0.158**	**0.153**	**0.101**	**1.14**	**1.50**	**0.700**	**1.27**	**1.63**	**0.971**	**0.167**	**0.122**	**0.0574**
Oxygen	mol%	**16.43**	**12.99**	**27.26**	**1.92**	**17.86**	**1.77**	**2.61**	**2.21**	**1.61**	**22.32**	**30.16**	**15.35**	**39.56**	**16.68**	**28.76**	**3.44**	**2.33**	**0.84**
Nitrogen	mol%	**57.26**	**75.89**	**71.03**	**5.57**	**77.32**	**8.71**	**9.97**	**9.36**	**4.86**	**75.05**	**63.88**	**62.75**	**56.50**	**70.29**	**70.18**	**13.38**	**9.45**	**2.97**
Carbon Dioxide	mol%	**2.88**	**7.63**	**0.28**	**0.45**	**1.92**	**1.87**	**0.76**	**0.80**	**0.58**	**0.61**	**2.70**	**0.63**	**1.58**	**6.95**	**0.023**	**3.08**	**2.33**	**2.22**
Methane	mol%	**21.89**	**1.44**	**0.0769**	**88.62**	**1.77**	**86.20**	**83.33**	**84.28**	**89.45**	**0.845**	**1.49**	**20.40**	**1.08**	**4.45**	**0.0682**	**79.31**	**85.10**	**93.18**
Ethane	mol%	**0.146**	**0.0040**	**0.0020**	**2.92**	**0.0432**	**0.877**	**2.79**	**2.81**	**3.00**	**0.0022**	**0.0032**	**0.121**	**0.0070**	**0.0079**	ND	**0.4630**	**0.495**	**0.534**
Ethylene	mol%	**0.0044**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0008**	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0482**	**0.0008**	**0.0007**	**0.242**	**0.0035**	**0.221**	**0.222**	**0.224**	**0.238**	**0.0004**	ND	**0.0238**	**0.0009**	**0.0012**	ND	**0.0814**	**0.087**	**0.0967**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0003**	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0158**	ND	ND	**0.0652**	**0.0009**	**0.0726**	**0.0605**	**0.0616**	**0.0659**	ND	ND	**0.0114**	ND	ND	ND	**0.0361**	**0.0399**	**0.0443**
N-butane	mol%	**0.0108**	ND	ND	**0.0521**	**0.0006**	**0.0629**	**0.0489**	**0.0493**	**0.0533**	ND	ND	**0.0051**	ND	ND	ND	**0.0119**	**0.0123**	**0.0142**
Iso-pentane	mol%	**0.0034**	ND	ND	**0.0199**	ND	**0.0303**	**0.0187**	**0.0191**	**0.0207**	ND	ND	**0.0037**	ND	ND	ND	**0.0087**	**0.0099**	**0.0110**
N-pentane	mol%	**0.0015**	ND	ND	**0.0108**	ND	**0.0211**	**0.0102**	**0.0104**	**0.0113**	ND	ND	**0.0022**	ND	ND	ND	**0.0025**	**0.0027**	**0.0032**
Hexanes +	mol%	**0.0030**	**0.0040**	**0.0031**	**0.0161**	**0.0005**	**0.0336**	**0.0146**	**0.0154**	**0.0162**	**0.0007**	**0.0040**	**0.0065**	ND	ND	ND	**0.0188**	**0.0227**	**0.0234**
Stable Isotopes																			
$\delta^{13}C$ (CH_4)	‰	**-34.96**	**-60.3**	NA	**-43.45**	**-42.7**	**-36.06**	**-43.71**	**-43.61**	**-43.68**	**-33.1**	**-38.9**	**-33.44**	**-31.2**	**-49.5**	NA	**-34.60**	**-34.91**	**-34.95**
δD (CH_4)	‰	**-143.1**	NA	NA	**-184.2**	**-175**	**-144.0**	**-178.0**	**-181.2**	**-180.1**	**-81**	NA	**-147.5**	NA	**-232**	NA	**-142.4**	**-145.3**	**-141.8**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																			
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	**0.5**	<0.1	<0.1	**0.5**	NA	NA	NA	NA	NA	NA	**10.8**	**0.2**	**14.9**

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4
Gas Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample Location		LDNR 10										LDNR 12									
Sample ID																					
Sample Date		2/10/23*	5/22/23	9/20/23	12/12/23	3/28/24	6/19/24	9/26/24	10/23/24	11/20/24	12/17/24	2/28/23*	5/18/23*	9/20/23*	12/12/23	3/27/24	6/18/24*	9/23/24	10/22/24	11/19/24	12/18/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.23**	**0.13**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	NA	**0.0026**	**0.0037**	**0.0038**	**0.0036**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.837**	**0.970**	**0.910**	**0.748**	**0.942**	**0.952**	**0.935**	**0.932**	**0.933**	**0.909**	**1.62**	**1.68**	**1.12**	**0.315**	**0.101**	**1.53**	**0.206**	**0.290**	**0.147**	**0.144**
Oxygen	mol%	**14.68**	**21.72**	**16.81**	**15.67**	**21.12**	**20.95**	**21.03**	**20.91**	**20.97**	**20.33**	**19.99**	**20.99**	**24.67**	**6.00**	**1.74**	**15.6**	**3.42**	**6.04**	**1.97**	**2.43**
Nitrogen	mol%	**59.75**	**77.00**	**75.02**	**68.50**	**77.75**	**77.51**	**77.82**	**78.01**	**78.01**	**75.35**	**70.00**	**72.41**	**73.77**	**25.63**	**5.25**	**72.05**	**13.28**	**20.99**	**9.00**	**6.65**
Carbon Dioxide	mol%	**1.04**	**0.062**	**1.69**	**1.55**	**0.037**	**0.15**	**0.074**	**0.069**	**0.048**	**0.30**	**3.51**	**4.56**	**0.24**	**0.47**	**0.61**	**8.76**	**0.95**	**0.61**	**0.91**	**0.38**
Methane	mol%	**23.55**	**0.247**	**5.56**	**13.48**	**0.148**	**0.440**	**0.146**	**0.0754**	**0.0374**	**3.11**	**4.72**	**0.122**	**0.0650**	**65.00**	**88.92**	**2.02**	**79.04**	**69.40**	**84.74**	**87.18**
Ethane	mol%	**0.12**	**0.0004**	**0.0030**	**0.0470**	**0.0006**	**0.0003**	**0.0001**	**0.0001**	**0.0002**	**0.0104**	**0.138**	**0.0014**	**0.0015**	**2.29**	**2.98**	**0.0361**	**2.74**	**2.36**	**2.86**	**2.86**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0084**	ND	**0.0004**	**0.0017**	ND	ND	ND	ND	ND	**0.0005**	**0.0108**	**0.0007**	**0.0004**	**0.177**	**0.240**	**0.0039**	**0.215**	**0.184**	**0.225**	**0.224**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0112**	ND	**0.0009**	**0.0028**	ND	ND	ND	ND	ND	**0.0009**	**0.0025**	ND	ND	**0.0459**	**0.0629**	ND	**0.0587**	**0.0501**	**0.0611**	**0.0603**
N-butane	mol%	ND	ND	**0.0002**	ND	ND	ND	ND	ND	ND	ND	**0.0019**	ND	ND	**0.0359**	**0.0487**	ND	**0.0461**	**0.0391**	**0.0478**	**0.0446**
Iso-pentane	mol%	**0.0019**	ND	**0.0002**	**0.0004**	ND	ND	ND	ND	ND	**0.0002**	ND	ND	ND	**0.0137**	**0.0185**	ND	**0.0181**	**0.0157**	**0.0192**	**0.0165**
N-pentane	mol%	ND	ND	**0.0001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0073**	**0.0096**	ND	**0.0096**	**0.0084**	**0.0103**	**0.0082**
Hexanes +	mol%	**0.0012**	**0.0001**	**0.0006**	**0.0005**	**0.0004**	**0.0002**	**0.0001**	ND	**0.0002**	**0.0005**	**0.0038**	**0.0058**	**0.0023**	**0.0106**	**0.0148**	**0.0016**	**0.0141**	**0.0127**	**0.0160**	**0.0101**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-35.63**	**-25.78**	**-22.20**	**-30.02**	**-36.5**	**-21.31**	**-33.4**	**-27.4**	NA	**-21.18**	**-44.36**	NA	NA	**-44.36**	**-43.89**	**-40.7**	**-43.90**	**-43.72**	**-43.63**	**-43.81**
δD (CH_4)	‰	**-151.4**	**-107**	**-103.2**	**-134.9**	NA	**-74**	NA	NA	NA	**-127.2**	**-181**	NA	NA	**-182.8**	**-179.9**	NA	**-178.0**	**-177.4**	**-179.9**	**-183.9**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 13							LDNR 14						
	Sample ID														
	Sample Date	12/13/23*	3/27/24	6/20/24*	9/25/24*	10/22/24*	11/19/24*	12/18/24*	12/13/23*	3/27/24*	6/20/24*	9/25/24*	10/22/24*	11/19/24*	12/18/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)													
Carbon Monoxide	mol%	ND	ND	ND	ND	**0.28**	ND	ND	ND	ND	ND	ND	**0.12**	ND	ND
Helium	mol%	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.22**	**0.370**	**1.67**	**1.50**	**1.58**	**1.62**	**1.49**	**1.48**	**1.65**	**1.73**	**1.36**	**1.55**	**1.16**	**1.57**
Oxygen	mol%	**24.49**	**0.61**	**15.76**	**13.10**	**19.75**	**21.68**	**27.03**	**29.11**	**22.53**	**14.97**	**18.57**	**24.43**	**19.90**	**28.25**
Nitrogen	mol%	**73.05**	**19.41**	**74.89**	**78.18**	**71.72**	**72.07**	**68.99**	**66.00**	**72.05**	**75.85**	**74.08**	**70.17**	**77.11**	**67.66**
Carbon Dioxide	mol%	**1.17**	**6.77**	**7.22**	**6.46**	**6.25**	**4.46**	**2.33**	**1.98**	**3.55**	**6.98**	**5.80**	**3.32**	**1.76**	**2.36**
Methane	mol%	**0.0670**	**72.72**	**0.471**	**0.755**	**0.422**	**0.165**	**0.161**	**1.41**	**0.221**	**0.460**	**0.177**	**0.411**	**0.0686**	**0.161**
Ethane	mol%	**0.0011**	**0.119**	ND	ND	**0.0018**	**0.0010**	**0.0018**	**0.0231**	**0.0007**	ND	ND	**0.0026**	ND	**0.0026**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	**0.0002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	**0.0004**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	**0.0001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0013**	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	ND	**0.0008**	**0.0017**	**0.003**	**0.0036**	ND	**0.0012**	ND	**0.0015**	**0.0021**	**0.0011**	**0.0037**	ND	**0.0008**
Stable Isotopes															
$\delta^{13}C$ (CH_4)	‰	NA	**-67.98**	NA	**-54.1**	NA	NA	NA	**-66.5**	NA	NA	NA	**-49.1**	NA	NA
δD (CH_4)	‰	NA	**-277.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide															
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4
Gas Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample Location		LDNR 17										LDNR 18									
Sample ID																					
Sample Date		2/28/23*	5/17/23*	9/20/23*	12/13/23	3/26/24	6/18/24	9/24/24	10/21/24	11/21/24	12/16/24	2/28/23*	5/17/23*	9/20/23*	12/13/23	3/26/24*	6/20/24	9/25/24	10/22/24	11/19/24	12/18/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	ND	**0.17**	**0.3**	ND	ND	ND	ND	ND	ND	ND	ND	**0.066**	**0.27**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	ND	**0.0042**	**0.0027**	**0.0056**	**0.0037**	**0.0044**	NA	NA	NA	ND	ND	**0.0039**	**0.0032**	**0.0048**	**0.0033**	**0.0031**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.69**	**1.57**	**1.13**	**0.213**	**0.890**	**0.109**	**0.125**	**0.121**	**0.271**	**0.0810**	**1.21**	**1.09**	**1.28**	**0.134**	**0.895**	**0.101**	**0.198**	**0.145**	**0.150**	**0.173**
Oxygen	mol%	**16.22**	**17.08**	**31.25**	**2.84**	**19.89**	**1.07**	**1.72**	**2.21**	**3.80**	**1.10**	**14.38**	**16.45**	**34.44**	**2.48**	**20.03**	**1.13**	**2.90**	**2.83**	**2.50**	**2.58**
Nitrogen	mol%	**74.92**	**66.25**	**50.78**	**13.63**	**73.23**	**5.85**	**8.66**	**8.86**	**17.20**	**4.50**	**52.67**	**79.94**	**61.19**	**9.16**	**73.61**	**5.76**	**12.20**	**10.16**	**10.37**	**8.38**
Carbon Dioxide	mol%	**5.42**	**7.42**	**0.7**	**1.02**	**0.14**	**1.78**	**2.23**	**2.10**	**0.75**	**1.42**	**3.08**	**1.67**	**0.3**	**0.71**	**0.086**	**1.51**	**1.42**	**1.16**	**1.24**	**0.50**
Methane	mol%	**1.73**	**7.42**	**15.57**	**80.49**	**5.73**	**89.20**	**85.33**	**84.85**	**76.37**	**90.88**	**28.32**	**0.784**	**2.49**	**86.23**	**5.31**	**90.17**	**82.03**	**84.48**	**84.51**	**87.14**
Ethane	mol%	**0.0148**	**0.0714**	**0.225**	**1.45**	**0.0970**	**1.59**	**1.54**	**1.49**	**1.29**	**1.62**	**0.240**	**0.0028**	**0.0208**	**0.863**	**0.0470**	**0.882**	**0.848**	**0.795**	**0.798**	**0.797**
Ethylene	mol%	ND	ND	ND	**0.0002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0019**	ND	ND	ND	ND	ND
Propane	mol%	**0.0021**	**0.0090**	**0.0279**	**0.197**	**0.0136**	**0.221**	**0.214**	**0.204**	**0.175**	**0.216**	**0.0616**	**0.0007**	**0.0052**	**0.228**	**0.0125**	**0.230**	**0.204**	**0.212**	**0.211**	**0.217**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	**0.0025**	**0.0071**	**0.0620**	**0.0044**	**0.0692**	**0.0688**	**0.0650**	**0.0581**	**0.0702**	**0.176**	**0.0002**	**0.0015**	**0.0711**	**0.0038**	**0.0741**	**0.0685**	**0.0693**	**0.0696**	**0.0735**
N-butane	mol%	ND	**0.0016**	**0.0049**	**0.0448**	**0.0033**	**0.0511**	**0.0528**	**0.0487**	**0.0406**	**0.0520**	**0.132**	ND	**0.0012**	**0.0607**	**0.0033**	**0.0630**	**0.0562**	**0.0597**	**0.0599**	**0.0615**
Iso-pentane	mol%	ND	ND	**0.0015**	**0.0205**	**0.0016**	**0.0220**	**0.0238**	**0.0223**	**0.0187**	**0.0240**	**0.0044**	ND	ND	**0.0266**	**0.0015**	**0.0286**	**0.0281**	**0.0285**	**0.0290**	**0.0297**
N-pentane	mol%	ND	ND	**0.0009**	**0.0118**	**0.0010**	**0.0126**	**0.0143**	**0.0132**	**0.0107**	**0.0140**	**0.0024**	ND	ND	**0.0178**	**0.0010**	**0.0190**	**0.0188**	**0.0197**	**0.0201**	**0.0201**
Hexanes +	mol%	**0.0028**	**0.0025**	**0.0052**	**0.0187**	**0.0029**	**0.0176**	**0.0218**	**0.0223**	**0.0151**	**0.0221**	**0.0044**	**0.0006**	**0.0045**	**0.0235**	**0.0030**	**0.0260**	**0.0274**	**0.0315**	**0.0328**	**0.0278**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-44.2**	**-39.07**	**-40.39**	**-40.70**	**-36.79**	**-39.55**	**-39.10**	**-39.47**	**-39.14**	**-39.36**	**-36.62**	**-46.8**	**-37.5**	**-36.57**	**-35.54**	**-36.14**	**-35.99**	**-35.97**	**-36.03**	**-35.90**
δD (CH_4)	‰	**-175**	**-179**	**-161.9**	**-168.2**	**-151.9**	**-158.2**	**-155.4**	**-157.3**	**-155.4**	**-155.9**	**-154.9**	**-200**	**-145**	**-154.0**	**-144.1**	**-145.7**	**-145.3**	**-144.0**	**-145.6**	**-146.0**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	**87.0**	**28.9**	<0.1	<0.1	NA	NA	NA	NA	NA	NA	**1.3**	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 19								LDNR 21								
	Sample ID																	
	Sample Date	2/28/23*	5/18/23*	12/11/23	3/28/24*	6/19/24*	9/26/24	11/21/24	12/17/24	3/30/23*	5/17/23*	9/20/23*	12/13/23*	6/20/24	9/25/24	10/22/24	11/21/24	12/18/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																
Carbon Monoxide	mol%	ND	**0.26**	ND	ND	ND	ND	ND	ND	**0.11**	**0.25**	**0.12**	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	ND	NA	NA	ND	**0.0035**	ND	NA	NA	NA	NA	**0.0048**	**0.0026**	**0.0041**	**0.0062**	**0.0056**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.976**	**1.50**	**0.535**	**1.17**	**1.04**	**0.0935**	**0.0816**	**0.144**	**1.29**	**1.61**	**1.09**	**1.42**	**0.0755**	**0.311**	**0.105**	**0.250**	**0.156**
Oxygen	mol%	**29.18**	**28.03**	**10.73**	**38.25**	**20.21**	**1.70**	**1.17**	**2.40**	**20.65**	**18.44**	**26.85**	**25.21**	**0.86**	**5.34**	**1.95**	**3.65**	**2.56**
Nitrogen	mol%	**43.27**	**63.87**	**40.42**	**58.83**	**70.18**	**6.95**	**5.25**	**9.74**	**75.31**	**73.33**	**69.78**	**63.27**	**4.58**	**22.01**	**7.27**	**13.70**	**9.93**
Carbon Dioxide	mol%	**2.83**	**2.92**	**1.27**	**0.34**	**1.80**	**6.88**	**4.29**	**3.61**	**1.77**	**5.64**	**0.16**	**2.79**	**4.90**	**2.22**	**3.60**	**0.69**	**1.74**
Methane	mol%	**23.62**	**3.40**	**46.71**	**1.40**	**6.74**	**83.77**	**88.56**	**83.50**	**0.860**	**0.721**	**1.970**	**7.230**	**88.48**	**69.07**	**86.04**	**80.69**	**84.60**
Ethane	mol%	**0.106**	**0.0130**	**0.280**	**0.0089**	**0.0312**	**0.508**	**0.533**	**0.497**	**0.0080**	**0.0015**	**0.0194**	**0.0665**	**0.890**	**0.812**	**0.825**	**0.808**	**0.800**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0046**	ND	**0.0002**	ND
Propane	mol%	**0.093**	**0.0007**	**0.0258**	ND	**0.0032**	**0.0458**	**0.0459**	**0.0459**	**0.0011**	**0.0008**	**0.0032**	**0.0087**	**0.108**	**0.116**	**0.0914**	**0.0990**	**0.0912**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0034**	ND	**0.0164**	ND	**0.0016**	**0.0317**	**0.0326**	**0.0328**	**0.0004**	ND	**0.001**	**0.0036**	**0.0571**	**0.0501**	**0.0557**	**0.0573**	**0.0558**
N-butane	mol%	ND	ND	**0.0001**	ND	ND	**0.0001**	**0.0001**	**0.0003**	ND	ND	**0.0005**	ND	**0.0044**	**0.0208**	**0.0037**	**0.0086**	**0.0041**
Iso-pentane	mol%	**0.0004**	ND	**0.0044**	ND	ND	**0.0083**	**0.0085**	**0.0084**	ND	ND	ND	**0.0007**	**0.0215**	**0.0193**	**0.0228**	**0.0232**	**0.0230**
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	**0.0002**	ND	ND	ND	ND	**0.0003**	**0.0062**	**0.0004**	**0.0022**	**0.0004**
Hexanes +	mol%	**0.0021**	**0.0036**	**0.0095**	**0.0006**	**0.0006**	**0.0216**	**0.0264**	**0.0194**	**0.0018**	**0.0031**	**0.0017**	ND	**0.0193**	**0.0184**	**0.0261**	**0.0207**	**0.0246**
Stable Isotopes																		
$\delta^{13}C$ (CH_4)	‰	**-32.77**	**-36.1**	**-36.27**	**-32.3**	**-30.27**	**-36.13**	**-36.45**	**-36.51**	**-36.2**	**-48.0**	**-38.0**	**-38.00**	**-38.02**	**-37.51**	**-37.76**	**-37.70**	**-37.76**
δD (CH_4)	‰	**-109.4**	**-139**	**-146.2**	**-120**	**-113.6**	**-148.3**	**-147.4**	**-145.3**	**-122**	NA	**150**	**-147**	**-146.3**	**-148.3**	**-143.3**	**-145.0**	**-145.7**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																		
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	**110.0**	**14.0**	**1.1**	NA	NA	NA	NA	NA	**0.4**	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		LDNR 22										LDNR 23									
Sample ID																					
Sample Date		3/30/23*	5/17/23*	9/20/23*	12/12/23	3/26/24	6/20/24	9/24/24	10/22/24	11/21/24	12/16/24	3/30/23*	5/18/23*	9/20/23*	12/12/23*	3/27/24	6/20/24	9/24/24	10/21/24	11/19/24	12/18/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																			
Carbon Monoxide	mol%	**0.098**	**0.11**	**0.3**	ND	ND	ND	ND	ND	ND	NA	**0.040**	**0.25**	**0.24**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	ND	**0.0039**	ND	**0.0045**	**0.0052**	NA	NA	NA	NA	NA	ND	**0.0036**	**0.0028**	**0.0045**	**0.0052**	**0.0049**
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**0.0037**	ND
Argon	mol%	**1.43**	**1.25**	**1.33**	**0.126**	**0.875**	**0.190**	**0.471**	**0.107**	**0.148**	NA	**1.09**	**1.68**	**1.40**	**1.42**	**0.0492**	**0.114**	**0.259**	**0.128**	**0.137**	**0.217**
Oxygen	mol%	**20.90**	**16.79**	**32.90**	**2.25**	**19.51**	**1.22**	**9.69**	**1.99**	**2.37**	NA	**21.18**	**14.37**	**30.67**	**28.99**	**0.34**	**0.87**	**4.93**	**2.68**	**2.14**	**4.04**
Nitrogen	mol%	**71.96**	**79.02**	**62.91**	**8.79**	**71.62**	**10.70**	**36.72**	**7.52**	**8.78**	NA	**76.89**	**74.50**	**65.61**	**66.73**	**2.41**	**6.01**	**19.61**	**8.42**	**8.55**	**9.59**
Carbon Dioxide	mol%	**2.40**	**2.54**	**0.47**	**0.69**	**0.12**	**1.24**	**1.04**	**1.23**	**0.81**	NA	**0.69**	**6.71**	**0.45**	**2.30**	**1.31**	**1.40**	**1.67**	**0.79**	**0.86**	**0.35**
Methane	mol%	**3.16**	**0.288**	**2.06**	**86.33**	**7.73**	**85.05**	**51.03**	**87.29**	**86.09**	NA	**0.105**	**2.47**	**1.61**	**0.548**	**94.26**	**90.06**	**72.25**	**86.47**	**86.74**	**84.41**
Ethane	mol%	**0.410**	**0.0010**	**0.0253**	**1.34**	**0.111**	**1.20**	**0.778**	**1.43**	**1.40**	NA	**0.0013**	**0.0124**	**0.0131**	**0.0081**	**1.13**	**1.09**	**0.911**	**1.05**	**1.13**	**0.972**
Ethylene	mol%	**0.0005**	ND	ND	**0.0184**	**0.0014**	**0.0044**	**0.0082**	**0.0042**	**0.0018**	NA	ND	ND	ND	ND	ND	ND	ND	**0.0003**	ND	ND
Propane	mol%	**0.0064**	**0.0003**	**0.0045**	**0.233**	**0.0182**	**0.203**	**0.134**	**0.221**	**0.204**	NA	**0.0002**	**0.0044**	**0.0036**	**0.0008**	**0.253**	**0.238**	**0.188**	**0.223**	**0.220**	**0.202**
Propylene	mol%	ND	ND	ND	**0.0002**	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0015**	ND	**0.0012**	**0.0735**	**0.0057**	**0.0658**	**0.0428**	**0.0695**	**0.0657**	NA	ND	**0.0015**	**0.0011**	ND	**0.0809**	**0.0774**	**0.0622**	**0.0747**	**0.0735**	**0.0717**
N-butane	mol%	**0.0010**	ND	**0.0010**	**0.0646**	**0.0050**	**0.0541**	**0.0373**	**0.0600**	**0.0542**	NA	ND	**0.0007**	**0.0008**	ND	**0.0690**	**0.0642**	**0.0512**	**0.0623**	**0.0638**	**0.0550**
Iso-pentane	mol%	ND	ND	ND	**0.0296**	**0.0024**	**0.0255**	**0.0179**	**0.0288**	**0.0264**	NA	ND	ND	ND	ND	**0.0352**	**0.0319**	**0.0273**	**0.0339**	**0.0327**	**0.0308**
N-pentane	mol%	ND	ND	ND	**0.0208**	**0.0017**	**0.0167**	**0.0128**	**0.0200**	**0.0178**	NA	ND	ND	ND	ND	**0.0246**	**0.0217**	**0.0189**	**0.0241**	**0.0236**	**0.0208**
Hexanes +	mol%	**0.0020**	**0.0010**	**0.0073**	**0.0324**	**0.0034**	**0.0243**	**0.0209**	**0.0339**	**0.0261**	NA	**0.0007**	**0.0037**	**0.0038**	ND	**0.0338**	**0.0259**	**0.0241**	**0.0310**	**0.0286**	**0.0286**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-38.40**	**-44.40**	**-37.00**	**-38.50**	**-38.67**	**-39.86**	**-37.63**	**-38.32**	**-39.55**	NA	**-34.0**	**-33.0**	**-37.6**	**-35.7**	**-36.56**	**-36.75**	**-36.70**	**-36.80**	**-37.06**	**-36.81**
δD (CH_4)	‰	**-156**	NA	NA	**-154.7**	**-155.2**	**-163.7**	**-150.6**	**-154.1**	**-159.9**	NA	NA	**-99**	NA	NA	**-153.0**	**-148.5**	**-149.1**	**-147.4**	**-152.2**	**-151.1**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	<0.1	**0.6**	<0.1	<0.1	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	LDNR 24									LDNR 25							
	Sample ID																	
	Sample Date	5/22/23	9/20/23	12/11/23	3/26/24	6/18/24	9/23/24	10/21/24	11/20/24	12/17/24	9/20/23*	12/12/23*	3/27/24*	6/20/24*	9/25/24	10/22/24	11/21/24	12/18/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)																
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.20**	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	ND	ND	ND	ND	ND	**0.0028**	**0.0058**	**0.0048**	**0.0047**	NA	NA	NA	NA	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.0271**	**0.210**	**0.0269**	**0.491**	**0.780**	**0.276**	**0.0809**	**0.0636**	**0.0309**	**1.30**	**1.46**	**0.946**	**1.69**	**0.208**	**0.154**	**0.241**	**0.219**
Oxygen	mol%	**0.13**	**4.05**	**0.27**	**10.72**	**17.30**	**5.98**	**1.55**	**1.27**	**0.25**	**28.32**	**33.30**	**14.82**	**16.42**	**3.21**	**3.18**	**4.70**	**4.36**
Nitrogen	mol%	**1.37**	**16.04**	**1.66**	**39.50**	**62.91**	**22.31**	**6.49**	**5.30**	**1.73**	**69.58**	**63.82**	**41.82**	**73.51**	**13.75**	**8.98**	**16.47**	**9.45**
Carbon Dioxide	mol%	**2.26**	**2.35**	**2.51**	**1.23**	**0.61**	**2.17**	**2.41**	**2.69**	**2.51**	**0.40**	**1.18**	**2.04**	**7.71**	**2.15**	**1.76**	**1.14**	**0.49**
Methane	mol%	**94.64**	**76.08**	**94.02**	**47.33**	**18.12**	**68.19**	**88.13**	**89.31**	**94.00**	**0.195**	**0.233**	**39.39**	**0.671**	**78.54**	**83.86**	**75.60**	**84.14**
Ethane	mol%	**0.884**	**0.729**	**0.869**	**0.422**	**0.171**	**0.642**	**0.783**	**0.809**	**0.888**	**0.0027**	**0.0038**	**0.909**	ND	**1.92**	**1.85**	**1.66**	**1.25**
Ethylene	mol%	**0.150**	**0.110**	**0.133**	**0.0657**	**0.0236**	**0.0784**	**0.102**	**0.0942**	**0.0958**	ND	ND	ND	ND	**0.0001**	ND	ND	ND
Propane	mol%	**0.270**	**0.214**	**0.253**	**0.123**	**0.0471**	**0.175**	**0.222**	**0.227**	**0.241**	ND	ND	**0.0432**	ND	**0.131**	**0.121**	**0.109**	**0.0581**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0828**	**0.0663**	**0.0799**	**0.0388**	**0.0147**	**0.0561**	**0.0711**	**0.0728**	**0.0774**	ND	ND	**0.0134**	ND	**0.0366**	**0.0337**	**0.0312**	**0.0172**
N-butane	mol%	**0.0784**	**0.0623**	**0.0747**	**0.0351**	**0.0133**	**0.0507**	**0.0644**	**0.0662**	**0.0705**	ND	ND	**0.0072**	ND	**0.0295**	**0.0248**	**0.0247**	**0.0128**
Iso-pentane	mol%	**0.0347**	**0.0282**	**0.0347**	**0.0159**	**0.0061**	**0.0240**	**0.0310**	**0.0325**	**0.0346**	ND	ND	**0.0021**	ND	**0.0114**	**0.0106**	**0.0099**	**0.0052**
N-pentane	mol%	**0.0259**	**0.0214**	**0.0264**	**0.0120**	**0.0047**	**0.0183**	**0.0237**	**0.0252**	**0.0268**	ND	ND	**0.0010**	ND	**0.0064**	**0.0058**	**0.0057**	**0.0028**
Hexanes +	mol%	**0.0460**	**0.0378**	**0.0445**	**0.0188**	**0.0065**	**0.0270**	**0.0408**	**0.0404**	**0.0444**	**0.0038**	ND	**0.0046**	ND	**0.0090**	**0.0100**	**0.0081**	**0.0040**
Stable Isotopes																		
$\delta^{13}C$ (CH_4)	‰	**-35.9**	**-35.52**	**-35.28**	**-35.56**	**-35.61**	**-35.36**	**-35.56**	**-35.39**	**-35.50**	NA	NA	**-51.54**	**-44.5**	**-52.81**	**-54.76**	**-54.66**	**-61.02**
δD (CH_4)	‰	**-146.8**	**-145.7**	**-154.0**	**-147.6**	**-140.5**	**-143.2**	**-144.8**	**-143.9**	**-144.0**	NA	NA	**-191.4**	NA	**-204.0**	**-204.7**	**-209.7**	**-233.7**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																		
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	**106.1**	**120.4**	**54.8**	**10.7**	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		LDNR 26									LDNR 27					
Sample ID																
Sample Date		7/17/23*	9/18/23*	12/11/23	3/26/24	6/18/24	9/24/24	10/21/24	11/20/24	12/17/24	1/31/24*	3/28/24	6/19/24	9/26/24	10/24/24	11/20/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)														
Carbon Monoxide	mol%	ND	**0.063**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	ND	**0.0052**	**0.0054**	**0.0039**	**0.0055**	**0.0049**	**0.0059**	NA	ND	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.46**	**1.29**	**0.213**	**0.157**	**0.163**	**0.250**	**0.157**	**0.252**	**0.131**	**1.71**	**0.942**	**0.952**	**0.935**	**0.935**	**0.933**
Oxygen	mol%	**18.56**	**17.19**	**2.25**	**1.23**	**1.55**	**3.67**	**1.89**	**3.79**	**0.83**	**23.25**	**21.22**	**21.43**	**21.07**	**20.99**	**20.96**
Nitrogen	mol%	**66.42**	**75.71**	**13.90**	**8.79**	**9.60**	**17.12**	**10.24**	**17.67**	**7.53**	**73.42**	**77.78**	**77.53**	**77.94**	**78.02**	**78.05**
Carbon Dioxide	mol%	**7.87**	**3.62**	**1.39**	**1.14**	**1.30**	**1.23**	**1.43**	**0.94**	**1.20**	**1.51**	**0.052**	**0.091**	**0.048**	**0.057**	**0.047**
Methane	mol%	**5.68**	**2.12**	**81.36**	**87.76**	**86.46**	**76.87**	**85.39**	**76.55**	**89.38**	**0.106**	**0.0063**	**0.0012**	**0.0005**	**0.0003**	**0.0036**
Ethane	mol%	**0.0076**	**0.0116**	**0.723**	**0.748**	**0.766**	**0.702**	**0.738**	**0.659**	**0.758**	**0.0007**	ND	ND	ND	ND	**0.0001**
Ethylene	mol%	ND	ND	ND	ND	ND	**0.0001**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	**0.0009**	**0.0634**	**0.0634**	**0.0600**	**0.0562**	**0.0585**	**0.0531**	**0.0601**	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	**0.0006**	**0.0736**	**0.0779**	**0.0751**	**0.0705**	**0.0745**	**0.0683**	**0.0777**	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	**0.0030**	**0.0027**	**0.0025**	**0.0028**	**0.0025**	**0.0022**	**0.0024**	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	**0.0150**	**0.0155**	**0.0143**	**0.0143**	**0.0150**	**0.0135**	**0.0151**	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	**0.0001**	**0.0001**	**0.0002**	**0.0003**	**0.0002**	**0.0001**	**0.0001**	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0025**	**0.0027**	**0.0065**	**0.0074**	**0.0057**	**0.0065**	**0.0066**	**0.0041**	**0.0060**	ND	**0.0003**	**0.0001**	ND	**0.0004**	**0.0006**
Stable Isotopes																
$\delta^{13}C$ (CH_4)	‰	**-48.74**	**-40.8**	**-38.38**	**-38.14**	**-38.31**	**-37.82**	**-38.02**	**-37.95**	**-37.95**	NA	NA	NA	NA	NA	NA
δD (CH_4)	‰	**-242**	**-157**	**-155.6**	**-153.6**	**-151.6**	**-143.3**	**-147.9**	**-146.6**	**-149.9**	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	<0.1	<0.1	**1.4**	<0.1	NA	NA	NA	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		LDNR 28						SN 67269									
Sample ID								PPG 7A BS									
Sample Date		1/24/24*	3/28/24	6/19/24	9/26/24	11/20/24	12/17/24	1/25/23*	5/17/23	9/20/23	12/11/23	3/28/24	6/19/24	9/26/24	10/23/24	11/21/24	12/16/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)															
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND
Helium	mol%	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	**0.0048**	NA	ND	ND	**0.0058**
Hydrogen	mol%	ND	ND	**0.0027**	ND	ND	ND	ND	ND	ND	ND	ND	**0.0070**	NA	ND	ND	**0.0040**
Argon	mol%	**0.300**	**0.942**	**0.945**	**0.936**	**0.938**	**0.942**	**0.744**	**0.823**	**0.754**	**0.215**	**0.927**	**0.0740**	NA	**0.932**	**0.797**	**0.0762**
Oxygen	mol%	**1.95**	**21.21**	**21.24**	**21.08**	**19.93**	**18.90**	**16.39**	**18.25**	**15.34**	**3.92**	**20.72**	**0.89**	NA	**20.89**	**17.61**	**1.11**
Nitrogen	mol%	**16.00**	**77.75**	**76.86**	**77.93**	**78.55**	**77.80**	**41.21**	**66.37**	**61.16**	**16.65**	**76.20**	**5.39**	NA	**77.73**	**66.42**	**5.89**
Carbon Dioxide	mol%	**0.62**	**0.057**	**0.053**	**0.043**	**0.54**	**1.21**	**0.29**	**0.07**	**0.39**	**0.034**	**0.047**	**0.092**	NA	**0.066**	**0.091**	**0.087**
Methane	mol%	**80.47**	**0.0434**	**0.893**	**0.0071**	**0.0480**	**1.14**	**40.83**	**14.3**	**22.05**	**78.13**	**2.08**	**92.37**	NA	**0.378**	**14.90**	**91.70**
Ethane	mol%	**0.477**	**0.0003**	**0.0042**	ND	**0.0480**	**0.0041**	**0.397**	**0.132**	**0.216**	**0.733**	**0.0159**	**0.820**	NA	**0.0025**	**0.126**	**0.785**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	**0.0013**	**0.0001**	ND	**0.0007**	ND	**0.0002**	NA	ND	ND	**0.0001**
Propane	mol%	**0.107**	ND	**0.0007**	ND	ND	**0.0018**	**0.099**	**0.0372**	**0.0607**	**0.207**	**0.0047**	**0.231**	NA	**0.0007**	**0.0360**	**0.222**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND
Iso-butane	mol%	**0.0466**	ND	**0.0003**	ND	ND	**0.0018**	**0.0286**	**0.013**	**0.0207**	**0.0699**	**0.0017**	**0.0782**	NA	**0.0004**	**0.0122**	**0.0775**
N-butane	mol%	**0.0173**	ND	**0.0002**	ND	ND	**0.0004**	**0.0106**	**0.005**	**0.0080**	**0.0258**	**0.0006**	**0.0275**	NA	**0.0001**	**0.0043**	**0.0270**
Iso-pentane	mol%	**0.0051**	ND	ND	ND	ND	**0.0003**	**0.013**	**0.0011**	**0.0018**	**0.0052**	**0.0001**	**0.0060**	NA	ND	**0.0010**	**0.0063**
N-pentane	mol%	**0.0014**	ND	ND	ND	ND	ND	ND	**0.0003**	**0.0005**	**0.0013**	ND	**0.0015**	NA	ND	**0.0003**	**0.0017**
Hexanes +	mol%	**0.0007**	**0.0002**	**0.0002**	ND	**0.0002**	**0.0002**	**0.003**	**0.0022**	**0.0018**	**0.0037**	**0.0003**	**0.0037**	NA	**0.0002**	**0.0013**	**0.0045**
Stable Isotopes																	
$\delta^{13}C$ (CH_4)	‰	**-34.64**	NA	**-40.53**	NA	NA	**-19.78**	**-35.6**	**-34.94**	**-33.32**	**-31.20**	**-34.17**	**-35.42**	NA	**-27.33**	**-34.74**	**-34.77**
δD (CH_4)	‰	**-152.3**	NA	**-144.9**	NA	NA	**-93.0**	**-150.3**	**-144.2**	**-141.4**	**-146.7**	**-141.9**	**-143.4**	NA	**-139**	**-142.8**	**-137.0**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																	
Hydrogen Sulfide	ppmw	NA	NA	NA	<0.1	**0.3**	<0.1	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	SN 67270							Central Pond	LDNR 20
	Sample ID	PPG 7B BS								
	Sample Date	2/16/23*	5/18/23*	9/18/23*	3/28/24*	6/19/24*	9/26/24*	12/16/24*	1/25/23*	3/9/23*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Surface Water (Bubble Site)							Surface Water	
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	**0.26**	**0.023**
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.955**	**1.58**	**0.969**	**1.40**	**1.80**	**1.31**	**0.999**	**1.98**	**1.01**
Oxygen	mol%	**19.64**	**25.16**	**19.27**	**17.34**	**19.76**	**24.26**	**20.26**	**0.41**	**22.40**
Nitrogen	mol%	**76.59**	**68.50**	**79.45**	**79.85**	**70.63**	**67.17**	**76.71**	**84.79**	**76.38**
Carbon Dioxide	mol%	**0.51**	**1.69**	**0.30**	**0.64**	**1.36**	**1.68**	**0.33**	**12.25**	**0.16**
Methane	mol%	**2.26**	**3.00**	**0.0036**	**0.756**	**6.42**	**5.57**	**1.65**	**0.302**	**0.0245**
Ethane	mol%	**0.0333**	**0.0427**	**0.0001**	**0.0011**	**0.0018**	**0.0085**	**0.0414**	**0.0015**	ND
Ethylene	mol%	**0.0011**	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0085**	**0.0192**	**0.0013**	**0.0026**	**0.0038**	**0.0013**	**0.0089**	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0011**	**0.0043**	**0.0007**	**0.0026**	**0.0089**	ND	**0.0009**	ND	ND
N-butane	mol%	**0.0024**	**0.0043**	**0.0012**	**0.0037**	**0.0082**	ND	**0.0011**	ND	ND
Iso-pentane	mol%	**0.0005**	ND	**0.0003**	**0.0016**	**0.0051**	ND	ND	ND	ND
N-pentane	mol%	**0.0004**	ND	**0.0002**	**0.0005**	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.001**	**0.0028**	**0.0009**	**0.0011**	**0.002**	ND	**0.0002**	**0.0037**	**0.005**
Stable Isotopes										
$\delta^{13}C$ (CH_4)	‰	**-46.02**	**-38.20**	NA	**-74.1**	**-65.2**	**-39.8**	**-40.15**	NA	NA
δD (CH_4)	‰	**-183.6**	**-117.0**	NA	NA	**-275**	**-140**	**-143.6**	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide										
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	WW 11																			
	Sample ID	019-580																			
	Sample Date	1/26/23*	3/30/23*	4/27/23*	5/22/23*	6/16/23*	8/22/23*	9/20/23*	11/28/23*	12/14/23*	1/31/24*	2/20/24*	3/28/24*	4/23/24*	5/22/24*	6/18/24*	7/25/24*	8/21/24*	9/25/24*	10/23/24*	12/17/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.64**	**1.17**	**1.66**	**1.76**	**1.48**	**1.75**	**1.66**	**1.48**	**1.46**	**1.79**	**1.76**	**1.44**	**1.79**	**1.75**	**1.62**	**1.51**	**1.62**	**1.35**	**1.71**	**1.70**
Oxygen	mol%	**5.59**	**14.38**	**9.66**	**11.60**	**17.51**	**8.22**	**6.23**	**7.14**	**7.85**	**2.29**	**3.83**	**8.42**	**3.73**	**6.47**	**8.27**	**10.10**	**9.08**	**11.39**	**4.65**	**4.82**
Nitrogen	mol%	**79.08**	**80.66**	**76.17**	**72.37**	**73.84**	**75.69**	**80.38**	**84.09**	**83.27**	**84.45**	**83.13**	**82.49**	**83.25**	**79.17**	**77.83**	**76.68**	**77.68**	**78.10**	**78.50**	**80.11**
Carbon Dioxide	mol%	**13.23**	**3.75**	**11.99**	**14.23**	**7.13**	**13.80**	**11.30**	**7.24**	**7.39**	**11.42**	**11.27**	**7.62**	**11.18**	**12.59**	**12.23**	**11.66**	**11.58**	**9.13**	**13.87**	**13.32**
Methane	mol%	**0.456**	**0.0421**	**0.517**	**0.0348**	**0.0321**	**0.532**	**0.433**	**0.0336**	**0.0315**	**0.0504**	**0.0065**	**0.0339**	**0.055**	**0.0116**	**0.042**	**0.0454**	**0.0426**	**0.0255**	**1.27**	**0.0431**
Ethane	mol%	ND	ND	**0.0007**	ND	**0.0005**	ND	ND	ND	ND	**0.0006**	ND	ND	**0.0008**	ND	ND	ND	**0.0007**	ND	**0.0016**	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0042**	**0.0008**	**0.0039**	**0.0030**	**0.0041**	**0.0031**	**0.0031**	**0.0127**	**0.0004**	ND	**0.0018**	**0.0009**	**0.0011**	ND	ND	ND	ND	**0.0010**	**0.0009**	**0.0012**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-56.4**	NA	**-59.6**	NA	NA	**-56.6**	**-56.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**-59.3**	NA
δD (CH_4)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	**-19.21**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	WW 13																
	Sample ID	019-582																
	Sample Date	1/26/23*	3/30/23*	4/27/23*	5/22/23*	6/16/23*	8/22/23*	9/20/23*	11/28/23*	12/14/23*	1/31/24*	2/20/24*	3/28/24*	4/24/24*	5/22/24*	9/26/24*	10/23/24*	11/19/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells																
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.76**	**1.27**	**1.61**	**1.27**	**1.56**	**1.58**	**1.72**	**1.48**	**1.31**	**1.81**	**1.62**	**1.46**	**1.41**	**1.82**	**1.27**	**1.78**	**1.67**
Oxygen	mol%	**5.03**	**13.10**	**8.07**	**4.94**	**16.60**	**10.74**	**3.50**	**8.07**	**6.70**	**1.84**	**3.70**	**8.46**	**3.23**	**3.33**	**3.62**	**2.95**	**3.77**
Nitrogen	mol%	**82.36**	**80.92**	**80.13**	**88.21**	**73.36**	**74.73**	**79.67**	**83.08**	**84.49**	**84.35**	**84.88**	**81.68**	**87.79**	**83.12**	**86.96**	**83.68**	**82.25**
Carbon Dioxide	mol%	**10.83**	**4.66**	**9.64**	**5.26**	**8.46**	**12.76**	**13.9**	**7.32**	**7.46**	**11.93**	**9.59**	**8.35**	**7.52**	**11.71**	**8.12**	**10.73**	**11.99**
Methane	mol%	**0.0186**	**0.0516**	**0.547**	**0.313**	**0.0154**	**0.189**	**1.21**	**0.0474**	**0.0367**	**0.0713**	**0.207**	**0.0443**	**0.0469**	**0.0208**	**0.0246**	**0.851**	**0.314**
Ethane	mol%	ND	ND	**0.0022**	**0.0012**	ND	ND	**0.0029**	ND	ND	**0.0007**	**0.0009**	ND	**0.0005**	ND	ND	**0.003**	**0.0037**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0032**	**0.0023**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0018**	**0.0007**	**0.0027**	**0.0012**	**0.0023**	**0.0040**	**0.0034**	**0.0021**	ND	ND	**0.0052**	**0.0010**	ND	**0.0007**	ND	**0.0007**	ND
Stable Isotopes																		
$\delta^{13}C$ (CH_4)	‰	NA	NA	**-62.3**	NA	NA	NA	**-57.9**	NA	NA	NA	NA	NA	NA	NA	NA	**-79.9**	NA
δD (CH_4)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	**-20.51**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																		
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	WW 12																
	Sample ID	019-995																
	Sample Date	1/26/23*	3/30/23*	4/27/23*	5/22/23*	6/16/23*	8/22/23*	11/28/23*	12/14/23*	1/31/24*	2/20/24*	3/28/24*	4/23/24*	5/22/24*	6/18/24*	9/25/24*	10/23/24*	11/19/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells																
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.75**	**1.29**	**1.61**	**1.77**	**1.60**	**1.55**	**1.62**	**1.81**	**1.85**	**1.74**	**1.80**	**1.65**	**1.70**	**1.64**	**1.17**	**1.70**	**1.72**
Oxygen	mol%	**6.3**	**11.66**	**11.53**	**10.41**	**14.54**	**11.52**	**6.19**	**3.26**	**3.02**	**5.49**	**4.57**	**7.24**	**9.33**	**11.06**	**6.59**	**4.13**	**6.67**
Nitrogen	mol%	**80.84**	**81.99**	**77.35**	**76.58**	**75.78**	**76.96**	**82.94**	**82.26**	**82.91**	**81.38**	**77.39**	**82.06**	**74.07**	**74.81**	**79.63**	**79.31**	**78.43**
Carbon Dioxide	mol%	**10.81**	**4.83**	**9.19**	**10.71**	**8.00**	**9.95**	**9.23**	**12.52**	**12.09**	**11.00**	**16.23**	**9.05**	**14.7**	**12.37**	**12.53**	**13.21**	**12.76**
Methane	mol%	**0.294**	**0.231**	**0.313**	**0.532**	**0.0701**	**0.0162**	**0.0129**	**0.151**	**0.124**	**0.385**	**0.0089**	**0.0118**	**0.191**	**0.115**	**0.0765**	**1.65**	**0.410**
Ethane	mol%	ND	**0.0005**	ND	ND	**0.0016**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0027**	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	**0.0005**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0019**	**0.0018**	**0.0034**	**0.0020**	**0.0032**	**0.0031**	**0.0047**	ND	**0.0014**	**0.0013**	**0.0010**	ND	ND	ND	**0.0020**	**0.0018**	ND
Stable Isotopes																		
$\delta^{13}C$ (CH_4)	‰	NA	**-56.6**	**-68.7**	**-78.7**	NA	NA	NA	NA	NA	**-78.0**	NA	NA	NA	NA	NA	**-57.6**	**-64.9**
δD (CH_4)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**-114**	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	**-20.47**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																		
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	WW 19																			
	Sample ID	019-1055																			
	Sample Date	1/26/23*	3/30/23*	4/27/23*	5/18/23*	6/16/23*	8/22/23*	9/20/23*	11/28/23*	12/14/23*	1/31/24*	2/20/24*	4/23/24*	5/22/24*	6/18/24*	7/24/24*	8/21/24*	9/25/24*	10/23/24*	11/19/24*	12/17/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.39**	**1.23**	**1.68**	**1.64**	**1.55**	**1.55**	**1.66**	**1.50**	**1.43**	**1.78**	**1.73**	**1.55**	**1.69**	**1.60**	**1.53**	**1.44**	**1.60**	**1.71**	**1.50**	**1.65**
Oxygen	mol%	**9.78**	**13.74**	**9.15**	**11.70**	**15.55**	**8.81**	**4.65**	**8.45**	**8.51**	**2.06**	**2.62**	**7.32**	**5.68**	**8.63**	**10.57**	**11.07**	**4.92**	**5.21**	**3.70**	**4.79**
Nitrogen	mol%	**82**	**80.18**	**78.32**	**76.17**	**75.03**	**79.23**	**77.74**	**82.32**	**80.06**	**83.87**	**82.03**	**82.3**	**80.44**	**75.01**	**74.86**	**73.88**	**78.43**	**78.85**	**86.15**	**82.45**
Carbon Dioxide	mol%	**6.53**	**4.67**	**10.43**	**10.09**	**7.82**	**10.04**	**15.52**	**7.64**	**9.71**	**11.85**	**13.20**	**8.57**	**11.80**	**14.38**	**12.68**	**13.13**	**14.69**	**12.98**	**8.44**	**10.79**
Methane	mol%	**0.3**	**0.180**	**0.411**	**0.396**	**0.049**	**0.369**	**0.423**	**0.0854**	**0.291**	**0.435**	**0.418**	**0.261**	**0.390**	**0.375**	**0.360**	**0.312**	**0.366**	**1.260**	**0.209**	**0.315**
Ethane	mol%	**0.0013**	**0.0007**	**0.0017**	**0.0021**	**0.0005**	**0.0016**	**0.0021**	ND	**0.0015**	**0.0018**	**0.0020**	**0.0012**	**0.0018**	**0.0015**	**0.0017**	**0.0031**	**0.0018**	**0.0029**	**0.0011**	**0.0016**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0021**	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0017**	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0012**	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND
Hexanes +	mol%	**0.002**	**0.0015**	**0.0034**	**0.0021**	**0.0021**	**0.0027**	**0.0036**	**0.004**	ND	**0.0006**	**0.0040**	**0.0007**	ND	**0.001**	**0.0010**	**0.0014**	**0.0023**	**0.0009**	ND	**0.0024**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-53.9**	**-53.5**	**-52.7**	**-21.3**	NA	**-53.8**	**-52.8**	NA	**-51.2**	**-53.3**	**-52.8**	**-52.8**	**-52.1**	NA	**-52.2**	NA	NA	**-67.1**	NA	**-55.2**
δD (CH_4)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	**-20.10**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	WW 40										
	Sample ID	019-1603										
	Sample Date	3/30/23*	5/18/23*	6/16/23*	9/19/23*	12/14/23*	1/31/24*	3/28/24*	5/23/24*	10/23/24*	11/19/24*	12/18/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells										
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.26**	**1.57**	**1.56**	**1.12**	**1.77**	**1.51**	**1.95**	**1.71**	**1.55**	**1.09**	**1.31**
Oxygen	mol%	**11.67**	**10.06**	**13.05**	**15.46**	**5.29**	**8.5**	**3.05**	**6.74**	**6.88**	**11.22**	**10.43**
Nitrogen	mol%	**82.50**	**73.32**	**82.13**	**78.53**	**81.98**	**81.95**	**81.14**	**80.24**	**76.29**	**82.31**	**80.93**
Carbon Dioxide	mol%	**3.77**	**4.67**	**3.25**	**4.25**	**10.16**	**7.85**	**13.83**	**10.57**	**13.87**	**1.59**	**6.76**
Methane	mol%	**0.802**	**10.37**	**0.0095**	**0.641**	**0.799**	**0.193**	**0.0268**	**0.732**	**1.4**	**3.77**	**0.560**
Ethane	mol%	**0.0009**	**0.0075**	ND	**0.0014**	ND	**0.0004**	ND	**0.0011**	**0.0085**	**0.0032**	**0.0029**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0004**	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	**0.0007**	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0013**	**0.0035**	**0.0010**	**0.0012**	ND	ND	ND	ND	**0.0017**	**0.0002**	**0.0007**
Stable Isotopes												
$\delta^{13}C$ (CH_4)	‰	**-89.5**	**-57.53**	NA	**-60.3**	**-60.5**	NA	NA	**-65.2**	**-57.8**	**-82.86**	**-58.5**
δD (CH_4)	‰	**-282**	**-110.9**	NA	**-125**	NA	NA	NA	NA	NA	**-252.0**	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide												
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	Cottages Well																		
	Sample ID	019-17636Z																		
	Sample Date	4/27/23*	5/18/23*	6/16/23*	7/17/23*	8/22/23*	9/20/23*	11/28/23*	12/14/23*	1/31/24*	2/20/24*	3/28/24*	4/23/24*	5/22/24*	7/25/24*	8/21/24*	9/25/24*	10/23/24*	11/19/24*	12/18/24*
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Industrial Water Wells																		
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	**0.071**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0098**	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.43**	**1.58**	**1.33**	**1.50**	**1.34**	**1.35**	**1.68**	**1.73**	**1.79**	**1.72**	**1.26**	**0.96**	**1.74**	**1.22**	**1.51**	**1.21**	**1.56**	**1.34**	**1.60**
Oxygen	mol%	**20.30**	**17.31**	**18.77**	**16.60**	**13.82**	**10.78**	**4.95**	**2.30**	**2.05**	**2.41**	**10.17**	**18.84**	**4.85**	**24.90**	**12.38**	**2.79**	**0.34**	**8.70**	**2.48**
Nitrogen	mol%	**70.51**	**70.87**	**68.11**	**70.87**	**75.96**	**77.25**	**79.57**	**78.59**	**80.52**	**80.79**	**81.74**	**78.29**	**80.31**	**62.77**	**70.63**	**75.55**	**84.08**	**80.23**	**82.78**
Carbon Dioxide	mol%	**7.28**	**7.44**	**9.81**	**9.69**	**7.56**	**9.41**	**12.07**	**15.26**	**13.12**	**13.16**	**5.71**	**1.66**	**11.16**	**10.75**	**13.72**	**12.00**	**7.30**	**7.74**	**9.60**
Methane	mol%	**0.476**	**2.80**	**1.98**	**1.34**	**1.32**	**1.14**	**1.73**	**2.12**	**2.52**	**1.92**	**1.12**	**0.241**	**1.94**	**0.36**	**1.76**	**8.45**	**6.72**	**2.00**	**3.53**
Ethane	mol%	ND	ND	ND	ND	ND	**0.0017**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	**0.0009**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0015**	**0.0014**	**0.0030**	**0.0019**	**0.0030**	**0.0026**	**0.0039**	ND	ND	**0.0034**	**0.0006**	**0.0002**	**0.0008**	ND	ND	**0.0036**	ND	ND	**0.0024**
Stable Isotopes																				
$\delta^{13}C$ (CH_4)	‰	**-76.1**	**-94.4**	**-93.2**	**-78.3**	**-80.4**	**-80.2**	**-79.1**	**-82.0**	**-84.1**	**-79.7**	**-89.7**	**-92.6**	**-80.0**	NA	**-78.9**	**-95.6**	**-99.3**	**-94.4**	**-97.36**
δD (CH_4)	‰	NA	**-278**	**-265**	NA	**-164**	NA	**-159**	NA	**-198**	**-159**	**-231**	**-258**	**-155**	NA	NA	**-311**	**-286.5**	**-274**	**-293**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	**-22.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																				
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4
Gas Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample Location		MW-1																				
Sample ID		MW-1-200											MW-1-500									
Sample Date		12/28/23*	3/27/24*	4/22/24*	5/21/24*	6/19/24*	7/23/24*	8/20/24*	9/26/24*	10/21/24*	11/18/24*	12/16/24*	3/27/24*	4/22/24*	5/21/24*	6/18/24*	7/23/24*	8/20/24*	9/23/24*	10/21/24*	11/18/24*	12/16/24*
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Monitoring Wells																				
Carbon Monoxide	mol%	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.359**	**0.564**	**0.34**	**0.357**	**0.352**	**0.34**	**0.374**	**0.327**	**0.328**	**0.338**	**0.358**	**1.85**	**1.36**	**1.34**	**1.23**	**1.16**	**1.23**	**1.13**	**1.11**	**1.04**	**1.01**
Oxygen	mol%	**0.51**	**8.34**	**1.41**	**1.80**	**2.06**	**2.70**	**3.50**	**1.26**	**1.42**	**1.56**	**1.80**	**3.31**	**3.67**	**11.28**	**6.84**	**9.14**	**11.33**	**4.35**	**4.00**	**5.61**	**4.38**
Nitrogen	mol%	**16.92**	**39.44**	**14.49**	**15.41**	**14.85**	**15.01**	**16.05**	**14.22**	**14.34**	**15.25**	**17.40**	**84.03**	**60.04**	**74.16**	**57.21**	**53.97**	**57.68**	**52.02**	**50.48**	**47.20**	**45.08**
Carbon Dioxide	mol%	**0.55**	**0.25**	**0.35**	**0.33**	**0.48**	**0.46**	**0.51**	**0.81**	**0.64**	**0.27**	**0.37**	**2.48**	**1.05**	**0.10**	**0.29**	**0.25**	**0.35**	**0.17**	**0.24**	**0.30**	**0.20**
Methane	mol%	**81.63**	**51.39**	**83.37**	**82.07**	**82.23**	**81.46**	**79.43**	**83.34**	**83.23**	**82.55**	**80.04**	**8.33**	**33.87**	**13.12**	**34.43**	**35.48**	**29.14**	**42.33**	**44.17**	**45.85**	**49.34**
Ethane	mol%	**0.0323**	**0.0194**	**0.0322**	**0.0304**	**0.0326**	**0.0324**	**0.0395**	**0.0358**	**0.0332**	**0.0314**	**0.0290**	**0.0009**	ND	**0.0008**	**0.0007**	**0.0008**	**0.0065**	**0.0010**	**0.0009**	**0.0008**	**0.0008**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0002**	ND	ND	ND	ND	ND	**0.0037**	ND	ND	**0.0001**	ND	ND	ND	ND	ND	ND	**0.0051**	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	**0.0009**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0015**	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	**0.0017**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0037**	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	**0.0009**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0024**	**0.0007**	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND
Hexanes +	mol%	**0.0014**	**0.0003**	ND	**0.0002**	ND	ND	**0.0006**	ND	ND	**0.0002**	**0.0002**	ND	ND	ND	**0.0007**	ND	**0.0018**	ND	**0.0007**	ND	**0.0004**
Stable Isotopes																						
$\delta^{13}C$ (CH_4)	‰	**-56.2**	**-56.81**	**-56.68**	**-56.53**	**-55.65**	**-56.40**	**-56.31**	**-56.24**	**-56.38**	**-56.68**	**-56.46**	**-86.06**	**-75.80**	**-91.53**	**-65.00**	**-69.25**	**-77.02**	**-67.15**	**-72.46**	**-74.10**	**-72.94**
δD (CH_4)	‰	**-192.1**	**-191.1**	**-195.8**	**-191.8**	**-187.6**	**-192.1**	**-188.5**	**-185.6**	**-190.8**	**-191.7**	**-186.2**	**-353**	**-319.9**	**-312.9**	**-281.4**	**-309.7**	**-311.7**	**-309.1**	**-303.6**	**-309.9**	**-310.8**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																						
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4
Gas Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Sample Location		MW-1										MW-2										
Sample ID		MW-1-700										MW-2-200										
Sample Date		3/26/24*	4/22/24*	5/22/24*	6/19/24*	7/23/24*	8/20/24*	9/23/24*	10/21/24*	11/19/24*	12/16/24*	1/31/24*	3/26/24*	4/23/24*	5/24/24*	6/18/24*	7/23/24*	8/20/24*	9/24/24*	10/23/24*	11/19/24*	12/18/24*
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Monitoring Wells																				
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.0088**	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.60**	**1.67**	**1.26**	**1.51**	**1.42**	**1.33**	**1.33**	**1.44**	**1.42**	**1.35**	**0.25**	**0.331**	**0.316**	**0.291**	**0.364**	**0.316**	**0.368**	**0.328**	**0.849**	**0.256**	**0.533**
Oxygen	mol%	**2.01**	**3.12**	**11.64**	**5.82**	**8.58**	**13.05**	**6.51**	**5.04**	**5.05**	**4.40**	**1.23**	**1.72**	**0.84**	**2.40**	**4.36**	**3.89**	**6.80**	**3.36**	**18.60**	**2.03**	**9.88**
Nitrogen	mol%	**75.24**	**73.73**	**74.86**	**68.82**	**65.79**	**65.04**	**70.70**	**65.59**	**64.63**	**60.64**	**7.27**	**11.89**	**11.09**	**9.62**	**14.08**	**12.43**	**17.66**	**14.07**	**71.72**	**9.61**	**41.08**
Carbon Dioxide	mol%	**0.12**	**0.15**	**0.074**	**0.14**	**0.096**	**0.22**	**0.067**	**0.1**	**0.11**	**0.11**	ND	ND	ND	ND	ND	ND	ND	**0.071**	**0.044**	**0.094**	**0.063**
Methane	mol%	**21.02**	**21.32**	**12.17**	**23.71**	**24.1**	**20.07**	**21.38**	**27.82**	**28.78**	**33.50**	**91.12**	**85.97**	**87.67**	**87.58**	**81.1**	**83.28**	**75.02**	**82.09**	**8.78**	**87.94**	**48.41**
Ethane	mol%	**0.0043**	**0.0037**	**0.0017**	**0.0032**	**0.0035**	**0.0093**	**0.0027**	**0.0037**	**0.0035**	**0.0034**	**0.0964**	**0.0690**	**0.0685**	**0.0836**	**0.0731**	**0.0697**	**0.0678**	**0.0694**	**0.0067**	**0.0723**	**0.0412**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0014**	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	**0.0057**	ND	ND	ND	ND	**0.0214**	**0.0097**	**0.0094**	**0.0136**	**0.0105**	**0.0071**	**0.0062**	**0.0021**	**0.0001**	**0.0011**	**0.0006**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0003**	ND	ND	ND	ND	ND
Iso-butane	mol%	**0.0006**	**0.001**	**0.001**	**0.0019**	**0.002**	**0.0035**	**0.0020**	**0.0022**	**0.0021**	**0.0020**	**0.0113**	**0.0050**	**0.0051**	**0.0064**	**0.0047**	**0.0032**	**0.0027**	**0.0010**	ND	**0.0004**	ND
N-butane	mol%	ND	ND	ND	ND	ND	**0.0039**	ND	ND	ND	ND	**0.0029**	**0.0022**	**0.0015**	**0.0019**	**0.0013**	**0.0011**	**0.0018**	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	**0.0024**	**0.0164**	ND	ND	ND	**0.0008**	**0.0004**	**0.0004**	**0.0005**	**0.0003**	ND	**0.0009**	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND
Hexanes +	mol%	**0.0067**	ND	ND	**0.0015**	**0.0006**	**0.0020**	ND	**0.0010**	ND	**0.0008**	ND	**0.0004**	ND	ND	**0.0008**	**0.0005**	**0.0015**	ND	**0.0002**	**0.0004**	**0.0002**
Stable Isotopes																						
$\delta^{13}C$ (CH_4)	‰	**-81.93**	**-82.87**	**-85.90**	**-85.82**	**-86.12**	**-86.49**	**-86.74**	**-86.87**	**-87.87**	**-89.86**	**-47.6**	**-49.82**	**-49.33**	**-48.35**	**-48.45**	**-49.20**	**-48.99**	**-49.45**	**-49.58**	**-49.20**	**-49.11**
δD (CH_4)	‰	**-208.3**	**-210.6**	**-258.5**	**-233**	**-257.7**	**-257.1**	**-269.1**	**-264.1**	**-259.6**	**-266.3**	**-186.2**	**-183.6**	**-182.4**	**-177.6**	**-183**	**-175.7**	**-178.5**	**-187.6**	**-174.3**	**-179.1**	**-180.4**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																						
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		MW-2																			
Sample ID		MW-2-500										MW-2-700									
Sample Date		3/26/24*	4/22/24*	5/22/24*	6/19/24*	7/23/24*	8/20/24*	9/24/24*	10/23/24*	11/19/24*	12/18/24*	3/26/24*	4/23/24*	5/22/24*	6/19/24*	7/23/24*	8/21/24*	9/23/24*	10/23/24*	11/19/24*	12/18/24*
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Monitoring Wells																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**2.01**	**1.93**	**1.74**	**1.43**	**1.27**	**1.26**	**1.23**	**1.01**	**1.22**	**1.22**	**1.80**	**1.83**	**1.82**	**1.76**	**1.67**	**1.71**	**1.95**	**1.97**	**1.95**	**1.26**
Oxygen	mol%	**2.82**	**3.13**	**4.38**	**5.66**	**8.67**	**8.34**	**3.69**	**11.77**	**3.49**	**2.11**	**3.71**	**5.21**	**7.97**	**8.25**	**13.18**	**13.42**	**1.91**	**0.28**	**0.43**	**11.19**
Nitrogen	mol%	**92.24**	**86.68**	**78.33**	**67.01**	**63.28**	**61.69**	**58.11**	**71.62**	**56.52**	**56.45**	**85.21**	**83.34**	**80.10**	**80.25**	**80.35**	**80.14**	**89.36**	**90.82**	**90.51**	**84.57**
Carbon Dioxide	mol%	**2.19**	**2.05**	**1.72**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methane	mol%	**0.743**	**6.21**	**13.82**	**25.89**	**26.75**	**28.56**	**36.92**	**15.6**	**38.76**	**40.21**	**9.27**	**9.62**	**10.10**	**9.73**	**4.8**	**4.58**	**6.75**	**6.92**	**7.10**	**2.98**
Ethane	mol%	ND	**0.0008**	**0.0009**	**0.0127**	**0.0135**	**0.0131**	**0.0096**	**0.0035**	**0.0079**	**0.0072**	**0.0027**	**0.0025**	**0.0033**	**0.0033**	**0.0032**	**0.0058**	**0.0047**	**0.0056**	**0.0054**	**0.0020**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	**0.0006**	**0.0002**	ND	**0.0005**	ND	ND	ND	ND	ND	ND	ND	**0.0009**	**0.0009**	**0.0003**
Propane	mol%	ND	ND	ND	**0.0019**	**0.0019**	**0.0041**	**0.0015**	**0.0006**	**0.0013**	**0.0012**	**0.0013**	**0.0008**	**0.001**	**0.001**	**0.0012**	**0.0035**	**0.0017**	**0.0018**	**0.0018**	**0.0006**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	**0.0013**	**0.0015**	**0.0041**	**0.0041**	**0.0045**	**0.0039**	**0.0016**	**0.0034**	**0.0031**	ND	**0.001**	ND	**0.001**	**0.0023**	**0.0025**	**0.0028**	**0.0026**	**0.0023**	**0.0009**
N-butane	mol%	ND	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0019**	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	**0.0013**	**0.0228**	ND	ND	ND	ND	ND	ND	ND	ND	**0.0012**	**0.0200**	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND
Hexanes +	mol%	**0.0018**	**0.0018**	**0.0012**	**0.0010**	**0.0007**	**0.0016**	ND	**0.0010**	ND	**0.0005**	**0.0013**	**0.0018**	ND	ND	ND	**0.0038**	ND	**0.0011**	ND	ND
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-62.1**	**-77.1**	**-68.16**	**-57.0**	**-58.96**	**-63.60**	**-62.44**	**-66.24**	**-68.96**	**-71.06**	**-83.69**	**-83.68**	**-82.98**	**-82.27**	**-79.20**	**-78.3**	**-74.94**	**-70.85**	**-70.48**	**-72.92**
δD (CH_4)	‰	NA	**-319**	**-306.2**	**-252.3**	**-258.3**	**-285.9**	**-296.5**	**-289.5**	**-279.3**	**-292.8**	**-193.6**	**-187.8**	**-183.8**	**-192.8**	**-192**	**-192**	**-203**	**-203**	**-214**	**-206.8**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

Sample Location		MW-3																			
Sample ID		MW-3-200										MW-3-500									
Sample Date		3/27/24*	4/23/24*	5/23/24*	6/20/24*	7/24/24*	8/21/24*	9/24/24*	10/22/24*	11/20/24*	12/17/24*	3/27/24*	4/23/24*	5/23/24*	6/20/24*	7/24/24*	8/21/24*	9/25/24*	10/22/24*	11/20/24*	12/17/24*
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**	Monitoring Wells																			
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**0.411**	**0.324**	**0.470**	**0.320**	**0.269**	**0.368**	**0.300**	**0.271**	**0.335**	**0.260**	**0.873**	**0.859**	**0.872**	**0.829**	**0.804**	**0.839**	**0.811**	**0.809**	**0.821**	**0.798**
Oxygen	mol%	**0.92**	**0.44**	**7.34**	**4.63**	**4.19**	**5.60**	**2.51**	**2.48**	**1.29**	**1.11**	**7.47**	**1.24**	**4.37**	**0.047**	**0.13**	**0.10**	**0.38**	**0.47**	**0.32**	**1.10**
Nitrogen	mol%	**17.82**	**11.99**	**29.45**	**11.01**	**11.07**	**13.09**	**17.07**	**10.37**	**12.68**	**9.28**	**55.64**	**36.97**	**36.28**	**35.69**	**34.1**	**35.21**	**34.04**	**32.84**	**33.45**	**34.41**
Carbon Dioxide	mol%	ND	ND	ND	ND	**0.015**	ND	**0.028**	**0.029**	ND	**0.024**	**0.32**	**0.02**	ND	**1.95**	**2.24**	**1.20**	**0.91**	ND	ND	ND
Methane	mol%	**80.80**	**87.19**	**62.70**	**83.98**	**84.40**	**80.78**	**80.03**	**86.80**	**85.63**	**89.27**	**35.35**	**60.34**	**57.89**	**60.86**	**62.05**	**61.95**	**63.18**	**65.19**	**64.73**	**63.03**
Ethane	mol%	**0.0431**	**0.0493**	**0.0387**	**0.0533**	**0.0518**	**0.0566**	**0.0539**	**0.0513**	**0.0599**	**0.0544**	**0.299**	**0.509**	**0.519**	**0.56**	**0.605**	**0.602**	**0.620**	**0.606**	**0.630**	**0.594**
Ethylene	mol%	**0.0005**	**0.0004**	ND	ND	ND	ND	ND	ND	ND	ND	**0.0015**	**0.0027**	**0.0033**	**0.0019**	**0.0014**	**0.0025**	**0.0028**	**0.0029**	**0.0024**	**0.0024**
Propane	mol%	ND	ND	ND	ND	ND	**0.0016**	ND	ND	ND	ND	**0.0217**	**0.0318**	**0.0346**	**0.0306**	**0.0258**	**0.0327**	**0.0333**	**0.0312**	**0.0314**	**0.0283**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0004**	**0.0005**	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0066**	**0.0065**	**0.0074**	**0.0112**	**0.0117**	**0.0122**	**0.0120**	**0.0106**	**0.0125**	**0.0120**
N-butane	mol%	ND	ND	ND	ND	ND	**0.0012**	ND	ND	ND	ND	**0.0009**	**0.0007**	**0.0009**	**0.0009**	**0.0007**	**0.0011**	**0.0012**	**0.001**	**0.0012**	**0.0010**
Iso-pentane	mol%	ND	ND	ND	ND	ND	**0.0008**	ND	ND	ND	ND	ND	ND	ND	**0.0004**	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0026**	**0.0011**	ND	**0.0009**	ND	**0.0009**	ND	**0.0005**	**0.0006**	**0.0009**	**0.0173**	**0.0199**	**0.0248**	**0.0232**	**0.0337**	**0.0472**	**0.0117**	**0.0365**	**0.0081**	**0.0281**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-48.64**	**-47.5**	**-47.21**	**-47.05**	**-47.35**	**-47.01**	**-47.25**	**-47.34**	**-47.41**	**-47.33**	**-44.75**	**-44.71**	**-44.57**	**-44.84**	**-44.85**	**-44.64**	**-44.91**	**-44.75**	**-45.11**	**-45.00**
δD (CH_4)	‰	**-187.3**	**-186.8**	**-182.1**	**-182.7**	**-184.1**	**-184.1**	**-183.3**	**-186.7**	**-184.9**	**-180.4**	**-151.5**	**-156.4**	**-150.6**	**-149.4**	**-150.2**	**-150.7**	**-148.9**	**-154**	**-153.4**	**-159.4**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	MW-3										SN 57788	SN 32069			SN 37320					
	Sample ID	MW-3-700										6X Brine	Brine Well 2			Cavern 4					
	Sample Date	3/27/24*	4/24/24*	5/23/24*	6/20/24*	7/24/24*	8/21/24*	9/24/24*	10/22/24*	11/20/24*	12/17/24*	1/25/23*	5/22/23	9/18/23	3/28/24	9/20/23	5/29/24	8/10/24	8/10/24	8/10/24	8/10/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	Lonquist	Lonquist	Lonquist	Lonquist
Component	**Units**	Monitoring Wells										Brine									
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0466**	**0.0483**	**0.0136**	**0.0560**	**0.0056**	ND	ND	ND	ND
Argon	mol%	**1.12**	**1.29**	**1.35**	**1.26**	**1.17**	**1.20**	**1.20**	**1.24**	**1.24**	**1.21**	**1.91**	**0.0341**	**0.0547**	**0.0411**	**0.150**	**0.157**	**0.0478**	**0.0494**	**0.0477**	**0.0477**
Oxygen	mol%	**10.21**	**5.51**	**7.39**	**7.08**	**11.96**	**8.01**	**5.05**	**3.38**	**4.83**	**3.67**	**0.74**	**0.21**	**0.64**	**0.46**	**0.88**	**1.76**	**0.025**	**0.067**	**0.020**	**0.025**
Nitrogen	mol%	**63.14**	**53.69**	**55.6**	**57.54**	**55.37**	**53.67**	**55.83**	**56.78**	**55.18**	**54.75**	**79.17**	**10.9**	**12.99**	**7.32**	**65.43**	**71.48**	**89.27**	**89.26**	**89.26**	**89.25**
Carbon Dioxide	mol%	**1.00**	**0.28**	**0.07**	**0.03**	**0.040**	ND	ND	ND	ND	ND	**5.31**	**3.88**	**2.78**	**1.99**	**0.28**	**0.16**	**0.40**	**0.40**	**0.39**	**0.4**
Methane	mol%	**24.48**	**39.16**	**35.53**	**34.04**	**31.41**	**37.07**	**37.86**	**38.54**	**38.71**	**40.32**	**11.72**	**84.12**	**82.76**	**86.93**	**32.05**	**25.44**	**9.51**	**9.45**	**9.52**	**9.51**
Ethane	mol%	**0.0466**	**0.0733**	**0.0486**	**0.0462**	**0.0421**	**0.0468**	**0.0481**	**0.0467**	**0.0472**	**0.0432**	**0.462**	**0.339**	**0.300**	**0.433**	**0.173**	**0.166**	**0.0782**	**0.0779**	**0.0783**	**0.0782**
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0005**	**0.0193**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0052**	**0.0069**	**0.0042**	**0.0041**	**0.0035**	**0.0043**	**0.0044**	**0.0042**	**0.0041**	**0.0037**	**0.389**	**0.0587**	**0.0558**	**0.135**	**0.198**	**0.210**	**0.133**	**0.133**	**0.133**	**0.133**
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0006**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0312**	**0.0321**	**0.0260**	**0.0955**	**0.0719**	**0.0694**	**0.0479**	**0.0485**	**0.0482**	**0.0482**
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0893**	**0.123**	**0.0955**	**0.466**	**0.254**	**0.232**	**0.167**	**0.169**	**0.168**	**0.168**
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0162**	**0.0643**	**0.0548**	**0.389**	**0.1150**	**0.0917**	**0.0733**	**0.0756**	**0.0744**	**0.0742**
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0193**	**0.0837**	**0.0752**	**0.622**	**0.1520**	**0.1140**	**0.0963**	**0.0995**	**0.0984**	**0.0979**
Hexanes +	mol%	**0.0009**	ND	**0.0031**	**0.0011**	**0.001**	ND	**0.0024**	**0.001**	ND	ND	**0.12**	**0.105**	**0.117**	**1.10**	**0.191**	**0.123**	**0.156**	**0.171**	**0.169**	**0.166**
Stable Isotopes																					
$\delta^{13}C$ (CH_4)	‰	**-72.08**	**-71.75**	**-67.76**	**-66.42**	**-65.55**	**-64.93**	**-64.45**	**-64.83**	**-63.98**	**-63.22**	**-38.98**	**-34.64**	**-34.49**	**-34.22**	**-34.15**	**-34.11**	**-34.05**	**-33.90**	**-34.05**	**-34.10**
δD (CH_4)	‰	**-193.5**	**-200.7**	**-238.9**	**-240.5**	**-244.1**	**-250.7**	**-250.1**	**-256**	**-253.6**	**-266.2**	**-171.7**	**-144.9**	**-143.8**	**-145.6**	**-140.8**	**-143.1**	**-140.2**	**-140.9**	**-143.0**	**-141.2**
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																					
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 4

Gas Data Summary

Sulphur Dome

Calcasieu Parish, Louisiana

	Sample Location	Starks		SN 973224	SN 973365	SN 974245	Sulphur	SN 209459	SN 189416		SN 246792	BCKGRD ATM							
	Sample ID	Starks Tie-in	Brine	Brine Well 18	Brine Well 21	Brine Well 22	Production	Fee 1012	Fee 969		Fee 1026								
	Sample Date	10/30/23*	9/25/24*	10/30/23*	10/30/23*	10/30/23*	9/25/24*	5/2/23	5/25/23	8/29/23	5/25/23	12/13/23	3/28/24	6/19/24	9/26/24	10/24/24	10/24/24	11/18/24	12/16/24
	Sampler	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	**Units**				Brine			Oil Wells				Background							
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	ND	**0.0089**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	**1.40**	**0.02**	ND	**3.37**	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	**1.38**	**0.979**	**1.68**	**1.53**	**1.35**	**0.903**	**0.0086**	**0.0630**	**0.0400**	**0.0125**	**0.867**	**0.942**	**0.953**	**0.941**	**0.932**	**0.932**	**0.930**	**0.942**
Oxygen	mol%	**7.65**	**19.17**	**1.95**	**6.80**	**2.09**	**11.40**	**0.015**	**0.13**	**0.12**	**0.24**	**19.41**	**21.22**	**21.46**	**21.22**	**20.93**	**20.93**	**20.88**	**21.24**
Nitrogen	mol%	**72.47**	**56.65**	**75.33**	**77.42**	**61.67**	**41.19**	**0.38**	**9.27**	**3.71**	**0.83**	**79.64**	**77.79**	**77.52**	**77.80**	**78.08**	**78.08**	**78.15**	**77.76**
Carbon Dioxide	mol%	**13.83**	**18.36**	**12.71**	**8.33**	**10.68**	**41.77**	**1.34**	ND	**0.012**	ND	**0.062**	**0.51**	**0.063**	**0.039**	**0.061**	**0.061**	**0.043**	**0.050**
Methane	mol%	**4.65**	**4.84**	**8.28**	**5.77**	**23.80**	**4.71**	**88.34**	**89.63**	**93.74**	**89.59**	**0.0230**	**0.0006**	**0.0023**	**0.0004**	**0.0006**	**0.0006**	**0.0011**	**0.0041**
Ethane	mol%	**0.0033**	**0.0026**	**0.039**	**0.0966**	**0.332**	**0.0382**	**3.11**	**0.592**	**1.4**	**4.39**	**0.0006**	ND	ND	ND	ND	ND	ND	**0.003**
Ethylene	mol%	ND	ND	**0.0011**	**0.0015**	**0.0010**	ND	ND	**0.001**	**0.0003**	**0.0002**	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	**0.0013**	ND	**0.0038**	**0.0208**	**0.0468**	**0.0021**	**2.78**	**0.202**	**0.662**	**1.17**	**0.0003**	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	**0.0002**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	**0.0011**	**0.0077**	**0.0107**	ND	**0.701**	**0.0326**	**0.118**	**0.117**	**0.0001**	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	**0.0011**	**0.0073**	**0.0083**	ND	**0.905**	**0.0381**	**0.135**	**0.135**	**0.0002**	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	**0.0039**	**0.0024**	ND	**2.7**	**0.0072**	**0.0214**	**0.0273**	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	**0.0023**	**0.0015**	ND	**0.191**	**0.0053**	**0.0138**	**0.0789**	**0.0001**	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	**0.0114**	ND	**0.0059**	**0.0081**	**0.0073**	ND	**0.562**	**0.0069**	**0.0319**	**0.0948**	**0.0002**	**0.0002**	**0.0002**	ND	ND	ND	**0.0002**	**0.0001**
Stable Isotopes																			
$\delta^{13}C$ (CH_4)	‰	**-68.91**	**-62.1**	**-35.32**	**-36.62**	**-38.18**	**-38.8**	**-45.41**	**-53.33**	**-53.17**	**-47.78**	NA	NA	NA	NA	NA	NA	NA	NA
δD (CH_4)	‰	**-183**	**-190**	**-131.6**	**-132.62**	**-148.0**	**-157**	**-168.6**	**-174.4**	**-177.8**	**-179.8**	NA	NA	NA	NA	NA	NA	NA	NA
$\delta^{13}C$ (CO_2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen Sulfide																			
Hydrogen Sulfide	ppmw	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:
Bolded values deteted in the sample.
ND - Not Detected
NA - Not Analyzed (insufficient volume)
* - Dissolved Gas sample

Table 5

Oil Data Summary

Sulphur Dome

Calcalsieu Parish, Louisiana

		Cavern 7 Oil												Cavern 4 Oil	
	Sample ID	**Westlake 7B**	**Westlake 7B**	**Westlake 7B**	**Westlake 7B**	**Westlake 7B**	**7B Oil**	**Cavern 7B**	**7B Oil**	**7B Oil**	**Cavern 7 Oil**	**7B Oil**	**7B Oil**	**Cavern 4**	**PPG No. 004**
	Sample Date	5/11/22	6/14/22	8/16/22	11/2/22	1/18/23	3/30/23	5/25/23	6/16/23	10/25/23	2/7/24	9/26/24	12/18/24	5/25/23	8/10/24
	Location	Shore Tank @ Boardwalk Composite	Shore Tank @ Boardwalk Composite	Cavern 7	Cavern 7	Cavern 7	Cavern 7 frac tank	Cavern 7	Cavern 7	Cavern 7	Cavern 7	Cavern 7	Cavern 7	Cavern 4	Cavern 4
	Sampler	Intertek	Intertek	Intertek	Intertek	Intertek	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	Lonquist
Constituent	**Units**														
Average API Gravity	°	**30.3**	**32.8**	**34.1**	**32.8**	**34.0**	**33.6**	**33.52**	**33.98**	**33.85**	**34.09**	**33.98**	**33.82**	**31.21**	**31.44**
Sulfur	**Wt %**	**1.48**	**1.3788**	**1.36**	**1.38**	**1.4**	**1.37**	**1.401**	**1.350**	**1.362**	**1.336**	NA	**1.408**	**1.548**	**1.515**
Vanadium	**mg/kg**	**20.6**	**4.035**	**2.85**	**22.8**	**22.8**	**100**	**23**	**25**	**21**	**25**	**17**	**29.3**	**42**	**42**
Nickel	**mg/kg**	**26.2**	**1.401**	**0.986**	**6.11**	**5.88**	**26**	**6**	**6**	**5**	**6**	**5**	**7.66**	**9**	**9**
Iron	**mg/kg**	<0.1	**2.304**	**0.014**	**0.002**	**0**	**12**	<1	**1**	**1**	<1	<1	**0.308**	**4**	**15**
Salt	**lb/1000 bbl**	<1.0	**0.57**	**5**	<1.0	**2.1**	**18**	**5.0**	**10.6**	**23.2**	**20.0**	**16.0**	**9.0**	**10.4**	**883.3**
Organic Chloride	**mg/kg**	**5.1**	**4.5**	**6.9**	**4.8**	**2.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Total Chloride	**mg/kg**	**5.5**	**5.19**	**10.5**	**5.5**	**9.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganic Chloride	**mg/kg**	**0.4**	**0.69**	**3.7**	**0.7**	**7.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Specific Gravity	°	NA	NA	NA	NA	NA	**0.8571**	**0.8575**	**0.8551**	**0.8557**	**0.8545**	**0.8550**	**0.8559**	**0.8696**	**0.8684**
Density	**g/ml**	NA	NA	NA	NA	NA	**0.8562**	**0.8566**	**0.8542**	**0.8549**	**0.8537**	**0.8524**	**0.8550**	**0.8688**	**0.8675**

Notes:

< Not detected at the reporting limit shown.

Bolded values detected in sample

NA - Not Analyzed

Table 5

Oil Data Summary

Sulphur Dome

Calcalsieu Parish, Louisiana

		Produced Oil													Stock Tank	
	Sample ID	**Yellowrock 969**	**209459**		**185997**		**210185**	**Tank Battery**	**252112**	**109963**	**235998**	**41842**	**189416**		**Pad Oil**	**Pad Oil**
	Sample Date	11/2/22	5/2/23	6/16/23	5/2/23	6/16/23	5/25/23	5/25/23	6/16/23	6/16/23	8/17/23	8/17/23	8/29/23	8/29/23	1/18/23	6/16/23
	Location	SN 189416 Well Sample	SN 209459 Well Sample	SN 209459 Well Sample	SN 185997 Well Sample	SN 185997 Well Sample	SN 210185 Well Sample	Tank Battery	SN 252112 Well Sample	SN 109963 Well Sample	SN 235998 Well Sample	SN 41842 Well Sample	SN 189416 1,250'	SN 189416 170'	Pad Oil Pump Oil	Pad Oil Pump Oil
	Sampler	Intertek	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	Intertek	ERM
Constituent	**Units**															
Average API Gravity	°	**26.0**	**22.81**	**21.56**	**21.53**	**22.96**	**22.79**	**26.95**	**29.72**	**24.05**	**16.88**	**26.55**	**20.65**	**20.8**	**29.1**	**29.27**
Sulfur	**Wt %**	**0.302**	**0.435**	**0.433**	**0.407**	**0.411**	**0.476**	**0.327**	**0.295**	**0.431**	**0.747**	**0.403**	**0.450**	**0.447**	**1.17**	**1.265**
Vanadium	**mg/kg**	**1.23**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**2**	**2.3**	**2**	<0.1	<0.1	**19**	**18**
Nickel	**mg/kg**	**7.04**	**8**	**9**	**9**	**10**	**10**	**6**	**5**	**8**	**9.6**	**22.2**	**10.9**	**8.3**	**4.94**	**5**
Iron	**mg/kg**	**6.57**	**13**	**6**	**6**	**7**	**59**	**15**	**11**	**17**	**11.7**	**16.3**	**204**	**179**	**24.5**	**29**
Salt	**lb/1000 bbl**	**363.36**	**1,290**	**9.2**	**1,015**	**138.0**	**9.8**	**32.0**	**74.0**	**54.0**	**9,850.0**	**10.6**	**232.0**	**88.0**	**46.7**	**258.0**
Organic Chloride	**mg/kg**	**89.0**	<1	<1	<1	<1	<1.0	<1.0	<1	<1	<1	<1	**9.0**	**6.2**	**63.7**	**2.1**
Total Chloride	**mg/kg**	**146.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**202.9**	NA
Inorganic Chloride	**mg/kg**	**57.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**139.2**	NA
Specific Gravity	°	NA	**0.917**	**0.9245**	**0.9246**	**0.9161**	**0.9171**	**0.893**	**0.8887**	**0.9096**	**0.9536**	**0.8953**	**0.9300**	**0.9291**	NA	**0.8801**
Density	**g/ml**	NA	**0.9161**	**0.9235**	**0.9237**	**0.9152**	**0.9162**	**0.8921**	**0.8878**	**0.9087**	**0.9527**	**0.8944**	**0.9291**	**0.9282**	NA	**0.8793**

Notes:

< Not detected at the reporting limit shown.

Bolded values detected in sample

NA - Not Analyzed

Table 6
Survey Results and Groundwater Elevations
Sulphur Dome
Calcasieu Parish, Louisiana

Well ID	UTM X	UTM Y	Screened Interval	Screen Length	Top of Casing Elevation	Ground Elevation	Stickup	Total Depth	Mid Screen	Mid Screen Elevation	TDS	Calcuated Density	3/25-27/2024			4/22/2024			5/21/2024			6/18/2024		
													DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH
	m	m	ft bgs	ft	ft	ft	ft	ft btoc	ft bgs	ft	mg/L	kg/m^3	ft btoc	ft	ft	ft btoc	ft	ft	ft btoc	ft	ft	ft btoc	ft	ft
MW-1-200	460257.857	3347201.961	162-172	10	12.75	9.22	3.53	175.81	167	-158.06	328	998.434	23.83	-11.08	-11.05	23.83	-11.08	-11.05	23.39	-10.64	-10.61	23.12	-10.37	-10.34
MW-1-500	460260.314	3347203.590	503-513	10	12.11	9.30	2.81	515.90	508	-498.79	296	998.411	53.35	-41.24	-41.14	54.65	-42.54	-42.44	54.19	-42.08	-41.98	55.35	-43.24	-43.14
MW-1-700	460262.682	3347205.242	694-674	10	12.17	9.26	2.91	708.40	699	-691.23	494	998.553	52.90	-40.73	-40.50	54.08	-41.91	-41.68	53.57	-41.40	-41.17	54.71	-42.54	-42.31
MW-2-200	460190.048	3346592.350	230-240	10	14.56	11.40	3.16	243.06	235	-223.50	260	998.386	46.88	-32.32	-32.29	47.20	-32.64	-32.61	46.98	-32.42	-32.39	47.18	-32.62	-32.59
MW-2-500	460186.918	3346593.844	502-512	10	14.61	11.51	3.10	515.10	507	-495.49	296	998.411	57.19	-42.58	-42.48	58.66	-44.05	-43.95	58.49	-43.88	-43.78	59.96	-45.35	-45.25
MW-2-700	460198.229	3346589.473	680-690	10	14.69	11.09	3.60	694.60	685	-674.91	594	998.624	57.05	-42.36	-42.09	58.63	-43.94	-43.67	58.43	-43.74	-43.47	59.84	-45.15	-44.88
MW-3-200	460555.076	3346638.627	228-238	10	14.74	12.04	2.70	242.69	233	-222.95	552	998.594	50.35	-35.61	-35.54	51.49	-36.75	-36.68	51.35	-36.61	-36.54	51.96	-37.22	-37.15
MW-3-500	460555.867	3346635.699	464-474	10	15.08	11.64	3.44	475.95	469	-455.87	2,220	999.786	56.74	-41.66	-41.00	57.92	-42.84	-42.18	57.70	-42.62	-41.96	59.09	-44.01	-43.36
MW-3-700	460557.858	3346628.300	680-690	10	14.41	11.53	2.88	695.38	685	-675.97	4,320	1,001.286	56.64	-42.23	-40.27	57.75	-43.34	-41.38	57.49	-43.08	-41.12	58.96	-44.55	-42.60

Well ID	UTM X	UTM Y	Screened Interval	Screen Length	Top of Casing Elevation	Ground Elevation	Stickup	Total Depth	Mid Screen	Mid Screen Elevation	TDS	Calcuated Density	7/23/2024			8/20/2024			9/23/2024			10/21/2024		
													DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH
	m	m	ft bgs	ft	ft	ft	ft	ft btoc	ft bgs	ft	mg/L	kg/m^3	ft btoc	ft	ft	ft btoc	ft	ft	ft btoc	ft	ft	ft btoc	ft	ft
MW-1-200	460257.857	3347201.961	162-172	10	12.75	9.22	3.53	175.81	167	-158.06	328	998.434	23.19	-10.44	-10.41	23.23	-10.48	-10.45	23.16	-10.41	-10.38	23.60	-10.85	-10.82
MW-1-500	460260.314	3347203.590	503-513	10	12.11	9.30	2.81	515.90	508	-498.79	296	998.411	55.03	-42.92	-42.82	55.16	-43.05	-42.95	54.95	-42.84	-42.74	55.67	-43.56	-43.46
MW-1-700	460262.682	3347205.242	694-674	10	12.17	9.26	2.91	708.40	699	-691.23	494	998.553	54.45	-42.28	-42.05	54.56	-42.39	-42.16	54.34	-42.17	-41.94	55.03	-42.86	-42.63
MW-2-200	460190.048	3346592.350	230-240	10	14.56	11.40	3.16	243.06	235	-223.50	260	998.386	47.51	-32.95	-32.92	47.36	-32.80	-32.77	47.50	-32.94	-32.91	47.79	-33.23	-33.20
MW-2-500	460186.918	3346593.844	502-512	10	14.61	11.51	3.10	515.10	507	-495.49	296	998.411	59.33	-44.72	-44.62	59.44	-44.83	-44.73	59.26	-44.65	-44.55	60.03	-45.42	-45.32
MW-2-700	460198.229	3346589.473	680-690	10	14.69	11.09	3.60	694.60	685	-674.91	594	998.624	59.31	-44.62	-44.35	59.40	-44.71	-44.44	59.21	-44.52	-44.25	60.01	-45.32	-45.05
MW-3-200	460555.076	3346638.627	228-238	10	14.74	12.04	2.70	242.69	233	-222.95	552	998.594	52.56	-37.82	-37.75	52.48	-37.74	-37.67	52.53	-37.79	-37.72	53.00	-38.26	-38.19
MW-3-500	460555.867	3346635.699	464-474	10	15.08	11.64	3.44	475.95	469	-455.87	2,220	999.786	58.58	-43.50	-42.84	58.70	-43.62	-42.97	58.51	-43.43	-42.77	59.26	-44.18	-43.53
MW-3-700	460557.858	3346628.300	680-690	10	14.41	11.53	2.88	695.38	685	-675.97	4,320	1,001.286	58.43	-44.02	-42.07	58.54	-44.13	-42.18	58.37	-43.96	-42.01	59.12	-44.71	-42.76

Well ID	UTM X	UTM Y	Screened Interval	Screen Length	Top of Casing Elevation	Ground Elevation	Stickup	Total Depth	Mid Screen	Mid Screen Elevation	TDS	Calcuated Density	11/18/2024			12/16/2024		
													DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH
	m	m	ft bgs	ft	ft	ft	ft	ft btoc	ft bgs	ft	mg/L	kg/m^3	ft btoc	ft	ft	ft btoc	ft	ft
MW-1-200	460257.857	3347201.961	162-172	10	12.75	9.22	3.53	175.81	167	-158.06	328	998.434	23.61	-10.86	-10.83	23.85	-11.10	-11.07
MW-1-500	460260.314	3347203.590	503-513	10	12.11	9.30	2.81	515.90	508	-498.79	296	998.411	56.40	-44.29	-44.19	55.84	-43.73	-43.63
MW-1-700	460262.682	3347205.242	694-674	10	12.17	9.26	2.91	708.40	699	-691.23	494	998.553	55.42	-43.25	-43.02	55.19	-43.02	-42.79
MW-2-200	460190.048	3346592.350	230-240	10	14.56	11.40	3.16	243.06	235	-223.50	260	998.386	47.75	-33.19	-33.16	48.21	-33.65	-33.62
MW-2-500	460186.918	3346593.844	502-512	10	14.61	11.51	3.10	515.10	507	-495.49	296	998.411	60.45	-45.84	-45.74	60.33	-45.72	-45.62
MW-2-700	460198.229	3346589.473	680-690	10	14.69	11.09	3.60	694.60	685	-674.91	594	998.624	60.37	-45.68	-45.41	62.50	-47.81	-47.54
MW-3-200	460555.076	3346638.627	228-238	10	14.74	12.04	2.70	242.69	233	-222.95	552	998.594	52.94	-38.20	-38.13	53.50	-38.76	-38.69
MW-3-500	460555.867	3346635.699	464-474	10	15.08	11.64	3.44	475.95	469	-455.87	2,220	999.786	59.55	-44.47	-43.82	59.48	-44.40	-43.75
MW-3-700	460557.858	3346628.300	680-690	10	14.41	11.53	2.88	695.38	685	-675.97	4,320	1,001.286	59.51	-45.10	-43.15	59.40	-44.99	-43.04

Notes:
Coordinates, Top of Casing Elevation, and Ground elevation data from Mayeux Surveying.
All elevation data are referenced to NAVD '88 datum.
Depth to water (DTW) measurements are shown as depth below top of casing (btoc).
Density is calculated using Langevin, et al., 2003.
ft bgs = feet below ground surface
EFWH = Equivalent fresh water head (corrected for density based on TDS), based on Post, et al., 2007.

ATTACHMENT 1 LABORATORY REPORTS

ATTACHMENT 2 FIELD NOTES