State of New Mexico
Oil Conservation Division

Incident ID	NCLB0525654437
District RP	NA
Facility ID	NA
Application ID	NA

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	46 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NCLB0525654437
District RP	NA
Facility ID	NA
Application ID	NA

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Gene Choquette
Title: MCBU Sr. Environmental Specialist

Signature: Gene Choquette
Date: 07/14/2023

email: gchoquette@chevron.com
Telephone: 713-372-2100

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Nelson Velez
Date: 07/14/2023

Mr. Nelson Velez
Environmental Specialist
EMNRD - Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Date: April 18, 2023
Subject: Soil Remediation Work Plan/Variance Request
Old Indian Draw Gathering Line Southern Area
Incident# NCLB0525654437

Eddy County, New Mexico

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Mr. Velez
NMOCD
April 18, 2023

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Mr. Velez
NMOCD
April 18, 2023

Dear Mr. Velez,

Arcadis U.S., Inc. (Arcadis) has prepared this Soil Remediation Work Plan/Variance Request on behalf of Chevron U.S.A. Inc. (Chevron), for soil remediation activities at the Old Indian Draw Gathering Line Southern Area (Site), located in Eddy County, New Mexico.

Background

The Site is located approximately 8-miles southeast of the City of Carlsbad in Unit Letter J, Section 18, Township 22 South, Range 28 East. Old Indian Draw Gathering Line Site is an inactive pasture location as of March 17, 2023. The Site is located on land owned by the United States Department of the Interior and administered by the Bureau of Land Management (BLM). The site location map is depicted on **Figure 1**.

On June 24, 2005, an equipment failure caused a release of approximately 15 barrels (bbls) of crude oil and 35 bbls of produced water, of which 13 bbls of crude oil and 32 bbls of produced water were recovered. A C-141 Form was not located for this incident, but limited information pertaining to this incident was found on the New Mexico Oil Conservation Division (NMOCD) database. The release was assigned Incident Number NCLB0525654437. No remediation permit number was assigned. The information available from the NMOCD database for this release is included in **Appendix A**.

Initial Site Investigation

On June 14-15, 2021, Larson & Associates, Inc. (Larson) began assessing the release area to depths of approximately 10 feet below ground surface (bgs) at 3 locations within the release area boundaries and at 4 additional locations surrounding the release area utilizing air rotary drilling methods to evaluate the horizontal extent of the release area.

Soil samples were submitted to Eurofins/Xenco Laboratories in Midland, Texas, for analyses of chloride; benzene, toluene, ethylbenzene, and xylenes (BTEX); and total petroleum hydrocarbons (Total TPH). Analytical results were reported below the applicable NMOCD regulatory limits for a site with groundwater less than 50 feet bgs for total TPH (100 milligrams per kilogram (mg/kg)); BTEX (50 mg/kg); and benzene (10 mg/kg) from all soil samples collected. Analytical results indicated chloride concentrations ranged from 9.07 mg/kg in S-10 at 0.5 feet bgs to 2,470 mg/kg in S-3 at 5 feet bgs.

Larson returned to the Site on March 10, 2022, to continue vertical delineation activities utilizing air rotary drilling methods at 2 of the previously drilled locations (S-1 and S-2). Soil samples collected previously from this location were reported above the NMOCD regulatory limit of 600 mg/kg for chloride at a depth of approximately 10 feet bgs. The 2 subsequent borings were installed to approximately 15 feet bgs. Analytical results indicated chloride concentrations of 107 mg/kg in S-1 and 180 mg/kg in S-2 at 15 feet bgs. Vertical delineation of the release area was completed during this assessment, but additional horizontal delineation assessment activities were determined warranted.

Analytical results from the Larson assessment are depicted in **Table 1**. Soil boring locations completed by Larson are depicted on **Figure 2**.

Mr. Velez
NMOCD
April 18, 2023

Additional Field Activities Summary

Arcadis began additional horizontal delineation assessment activities on January 31, 2023, with a stainless-steel hand auger within the affected area. During the assessment, a resilient rock layer was encountered approximately 1-foot bgs at all locations. Arcadis collected 13 soil samples (L-9 through L-21) at depths of approximately six inches bgs. Only 1 soil sample (L-18) from that assessment was reported above the applicable NMOCD closure criteria for chloride at a concentration of 612 mg/kg. Evaluation of soil data collected to date confirmed horizontal and vertical delineation of the southern release area was accomplished in conjunction with the initial Larson assessment activities.

On February 13, 2023, Arcadis oversaw installation of a temporary monitoring well (TW-2) approximately 0.1 mile east of the Site (see **Figure 2**). During the installation of the temporary monitoring well, soil samples were collected from the surface to the top of the groundwater bearing unit at 5-foot intervals to conduct field screening for chloride utilizing Hach testing strips and for volatile organic compounds (VOCs) utilizing a photoionization detector (PID). Field screening results from soil samples collected during the installation of the temporary monitoring well indicated no chloride or VOC impacts in soil from the ground surface down to the groundwater bearing unit encountered at approximately 47.5 feet bgs. No soil samples were submitted for laboratory analysis.

On February 16, 2023, the temporary monitoring well was developed utilizing Environmental Protection Agency (EPA) Standard Methods. Following development activities on the temporary monitoring well, a groundwater sample was collected and submitted to the laboratory for analysis of chloride and total dissolved solids (TDS) concentrations. Laboratory analytical results indicated chloride and TDS concentrations were below the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards of 250 milligrams per liter (mg/L) for chloride and 1,000 mg/L for TDS. Chloride was reported at 37.6 mg/L and TDS was reported at 328 mg/L. A copy of the Temporary Monitoring Well Boring Log is provided as **Appendix B**.

Evaluation of soil data collected to date confirm horizontal and vertical delineation of the release area were accomplished in conjunction with the initial Larson soil assessment activities, and that there is no chloride or TDS impact to groundwater proximate to the release area.

Analytical results from the subsequent Arcadis soil assessments can be found in **Table 2,** groundwater analytical results from groundwater samples collected from the temporary monitoring well can be found in **Table 3.** The soil sample locations completed by Arcadis are depicted on **Figure 2**. Laboratory analytical reports for soil and groundwater data collected are included in **Appendix C**.

Remediation Activities Summary

On March 8, 2023, Arcadis began excavation activities within the southern impacted area assuming the most stringent NMAC closure criteria for soil. A resilient calcrete rock layer was encountered across the release area at depths of approximately 1-foot bgs to 2.5 feet bgs. Repeated attempts to break through the resilient calcrete rock layer utilizing an excavator equipped with a trenching bucket and “rock teeth” yielded limited results.

Arcadis collected composite confirmation soil samples from the excavation area in accordance with Table I of part 19.15.29.12 NMAC. Sidewall and base composite confirmation soil samples were collected within 200 square feet sampling areas throughout the excavation area. Composite confirmation base samples were collected from the calcrete rock layer. A total of 42 composite confirmation soil samples were collected.

- All sidewall composite confirmation soil samples were reported below the applicable NMAC closure criteria stipulated in Table I of part 19.15.29.12 for a site with depth to groundwater less than 50 feet bgs for chloride, Total TPH, BTEX, and benzene.
- 22 of the 38 base composite confirmation soil samples were reported below the applicable NMAC closure criteria for chloride. Reported chloride concentrations above the applicable NMAC closure criteria of 600 mg/kg ranged from 602 mg/kg up to 2,190 mg/kg. No base composite confirmation soil samples were reported above the applicate NMAC closure criteria for a site with depth to groundwater less than 50 feet bgs for Total TPH, BTEX, or benzene.

Five-point composite sidewall sample locations are depicted on **Figure 2**, and the composite base sample locations are depicted on **Figure 3**. Current site conditions and the resilient rock layer encountered are documented in the attached **Photographic Log.** Impacted soil excavated to date have been transported to a NMOCD approved disposal facility. Waste manifests are available upon request.

Variance Request

Repeated attempts to break through the resilient calcrete rock layer utilizing an excavator equipped with a trenching bucket and “rock teeth” yielded limited results. Continued excavation activities are believed not practicable based on the site’s geologic conditions. Analytical data collected during assessment activities confirm the release area has been horizontally and vertically defined. As such, Arcadis is requesting approval of the following Variance:

- Due to the resilient calcrete rock layer encountered at shallow depths across the release area, Arcadis is requesting a variance to limit excavation activities to include only removing impacted soil affected above the NMOCD Reclamation Standards present within the release area to the maximum extent practicable (to the surface of the calcrete layer).
- Following excavation of impacted soil affected above the NMOCD closure criteria, a layer of gypsum and/or a desalination product will be installed on the floor of the excavated area. This control is designed to inhibit the downward migration of chloride remaining in-situ.
- Arcadis requests approval to install a geosynthetic liner atop impacted areas exhibiting BTEX, TPH, and/or chloride concentrations above the NMOCD Closure Criteria remaining in-situ. The liner will be installed atop the resilient calcrete rock layer. This engineering control is designed to inhibit the vertical migration of chloride in soil to groundwater along with the upward migration of chloride to further support revegetation of the remediated area.
- Upon installing the geosynthetic liner, the excavated area will be backfilled with locally sourced, non-impacted “like” material.
- Upon completion of remediation activities, the area will be reseeded with a BLM approved seed mixture during the first favorable growing season following closure of the Site.

Upon completion of the remediation and reclamation activities, a *Remediation Summary and Soil Closure Request* will be submitted to the NMOCD, containing a detailed summary of the field activities and laboratory analytical results.

Mr. Velez
NMOCD
April 18, 2023

If you have any questions or comments with regards to this work plan and variance request, please do not hesitate to contact Scott Foord at 713.953.4853 or by e-mail at William.Foord@arcadis.com.

Sincerely,

Arcadis U.S., Inc.

Scott Foord, PG

Program Manager

Tables

Table 1
2021/2022 Soil Analytical Results
Old Indian Draw Gathering Line Southern Area
Eddy County, New Mexico
32° 23' 34.90" North, 104° 07' 31.40" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100**	**600**
S-1	1	6/14/2021	Removed	<0.00200	<0.00401	<49.7	<49.7	<49.7	<49.7	511
	3	6/14/2021	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	445
	5	6/14/2021	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	**736**
	10	6/14/2021	In-Situ	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	**760**
	15	3/10/2022	In-Situ	--	--	--	--	--	--	107
S-2	1	6/14/2021	Removed	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	**911**
	3	6/14/2021	In-Situ	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	**1,050**
	5	6/14/2021	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**642**
	10	6/14/2021	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	**808**
	15	3/10/2022	In-Situ	--	--	--	--	--	--	180
S-3	1	6/15/2021	Removed	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	72.6
	3	6/15/2021	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	315
	5	6/15/2021	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	**2,470**
	10	6/15/2021	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	418
S-4	1	6/15/2021	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	245
	3	6/15/2021	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	467
	5	6/15/2021	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	9.79
	10	6/15/2021	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	239
S-9	0.5	6/14/2021	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	276
S-10	0.5	6/14/2021	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	9.07
S-11	0.5	6/14/2021	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	217

Notes: Analysis performed by Xenco Laboratories (Xenco) in Midland, Texas by EPA SW-846 8021B (BTEX), 8015M (TPH), and 300E (Chloride)
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
<: denotes concentration less than analytical method reporting limit
Bold and Highlighted exceeds OCD remediation action limits

Chevron
Table 2
2023 Soil Analytical Results
Old Indian Draw Gathering Line Southern
Incident No NCLB0525654437
Eddy County, New Mexico

Location ID	Depth (Feet)	Date Collected	Sample Name	Soil Status	BTEX					TPH				Gen Chem
					Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes, Total mg/kg	Total BTEX mg/kg	Gasoline Range Organics (GRO)-C6-C10 mg/kg	Diesel Range Organics (Over C10-C28) mg/kg	Oil Range Organics (Over C28-C36) mg/kg	Total TPH mg/kg	Chloride, Dissolved mg/kg
NMAC Screening Limits					10	- -	- -	- -	50	- -	- -	- -	100	600
L-09	0.5	01/31/2023	L-9-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	<4.96
L-10	0.5	01/31/2023	L-10-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	149
L-11	0.5	01/31/2023	L-11-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	17.2
L-12	0.5	01/31/2023	L-12-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	31.3
L-13	0.5	01/31/2023	L-13-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	211
L-14	0.5	01/31/2023	L-14-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	571
L-15	0.5	01/31/2023	L-15-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	378
L-16	0.5	01/31/2023	L-16-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	15.9
L-17	0.5	01/31/2023	L-17-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	27.2
L-18	0.5	01/31/2023	L-18-S-0-6" 20230131	Removed	--	--	--	--	--	--	--	--	--	**612**
L-19	0.5	01/31/2023	L-19-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	232
L-20	0.5	01/31/2023	L-20-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	121
L-21	0.5	01/31/2023	L-21-S-0-6" 20230131	In-Situ	--	--	--	--	--	--	--	--	--	<4.99
B-22	1	03/09/2023	B-22-S-1'-20230309	In-Situ	0.000468J	<0.000455	<0.000564	<0.00101	<0.00101	36.0J B	27.7J B	<15.0	63.7	238B
B-23	1	03/09/2023	B-23-S-1'-20230309	In-Situ	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	24.6J B	43.4J B	17.6J	85.6	**700B**
B-24	1	03/09/2023	B-24-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	17.7J F2	<15.0	<15.0	17.7J	208B
B-25	1	03/09/2023	B-25-S-1'-20230309	In-Situ	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	41.4J	15.7J	<15.0	57.1	342B
B-26	1	03/09/2023	B-26-S-1'-20230309	In-Situ	<0.000389	<0.000461	<0.000571	<0.00102	<0.00102	<15.0	<15.0	<15.0	<15.0	202B
B-27	1	03/09/2023	B-27-S-1'-20230309	In-Situ	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	18.7J	<15.0	<15.0	18.7J	142B
B-28	1	03/09/2023	B-28-S-1'-20230309	In-Situ	0.00184J	<0.000453	0.00156J	0.00422	0.00762	30.0J	<15.0	<15.0	30.0J	133B F1
B-29	1	03/09/2023	B-29-S-1'-20230309	In-Situ	0.000766J	<0.000455	0.000640J	0.00194J	0.00335J	19.9J	15.0J	<15.0	34.9J	462B
B-30	1	03/09/2023	B-30-S-1'-20230309	In-Situ	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	26.1J	37.5J	<15.0	63.6	212B
B-31	1	03/09/2023	B-31-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	<15.0	<15.0	<15.0	118B
B-32	1	03/09/2023	B-32-S-1'-20230309	In-Situ	0.000530J	<0.000459	<0.000568	<0.00102	<0.00102	<15.0	31.2J	<15.0	31.2J	**1090B**
B-33	1	03/09/2023	B-33-S-1'-20230309	In-Situ	<0.000389	<0.000461	<0.000571	<0.00102	<0.00102	<15.0	21.7J	<15.0	21.7J	481B
B-34	1	03/09/2023	B-34-S-1'-20230309	In-Situ	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<15.0	17.4J	<15.0	17.4J	**830B**
B-35	1	03/09/2023	B-35-S-1'-20230309	In-Situ	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	16.8J	28.0J	<15.0	44.8J	118B
B-36	1	03/09/2023	B-36-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	37.6J	16.1J	53.7	198B
B-37	1	03/09/2023	B-37-S-1'-20230309	In-Situ	0.000450J	<0.000459	<0.000568	<0.00102	<0.00102	<15.0	21.6J	<15.0	21.6J	**1450B**
B-38	1	03/09/2023	B-38-S-1'-20230309	In-Situ	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	16.5J	<15.0	<15.0	16.5J	**1620B F1**
B-39	1	03/09/2023	B-39-S-1'-20230309	In-Situ	<0.000383	<0.000454	0.000577J	<0.00101	0.00148J	18.0J	<15.0	<15.0	18.0J	**2190B**
B-40	1	03/09/2023	B-40-S-1'-20230309	In-Situ	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<15.0	<15.0	<15.0	<15.0	**1360B**
B-41	1	03/09/2023	B-41-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	<15.0	<15.0	<15.0	289B
B-42	1	03/09/2023	B-42-S-1'-20230309	In-Situ	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	<15.0	<15.0	<15.0	<15.0	**985B**
B-43	1	03/09/2023	B-43-S-1'-20230309	In-Situ	0.000837J	<0.000454	0.00265	0.00370J	0.00719	<15.0	<15.0	<15.0	<15.0	**918B**
B-44	1	03/09/2023	B-44-S-1'-20230309	In-Situ	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	20.3J B *-	<15.0	<15.0	20.3J	129B
B-45	1	03/09/2023	B-45-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	22.7J B *-	<15.0	<15.0	22.7J	298B
B-46	1	03/09/2023	B-46-S-1'-20230309	In-Situ	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	26.0J B *-	<15.0	<15.0	26.0J	213B
B-47	1	03/09/2023	B-47-S-1'-20230309	In-Situ	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	24.0J B *-	<15.0	<15.0	24.0J	**674B**
B-48	1	03/09/2023	B-48-S-1'-20230309	In-Situ	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	25.5J B *-	<15.0	<15.0	25.5J	**755B**
B-49	1	03/09/2023	B-49-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	41.7J B *-	<15.0	<15.0	41.7J	357B
B-50	1	03/09/2023	B-50-S-1'-20230309	In-Situ	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	23.1J B *-	<15.0	<15.0	23.1J	**1040B**
B-51	1	03/09/2023	B-51-S-1'-20230309	In-Situ	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	27.6J B *-	<15.0	<15.0	27.6J	272B
B-52	1	03/09/2023	B-52-S-1'-20230309	In-Situ	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	25.7J B *-	<15.0	<15.0	25.7J	168B
B-53	1	03/09/2023	B-53-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	25.3J B *-	<15.0	<15.0	25.3J	**602B**
B-54	1	03/09/2023	B-54-S-1'-20230309	In-Situ	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	29.2J B *-	<15.0	<15.0	29.2J	**814B**
B-55	1	03/09/2023	B-55-S-1'-20230309	In-Situ	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	17.7J B *-	<15.0	<15.0	17.7J	141B
B-56	1	03/09/2023	B-56-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	22.2J B *-	<15.0	<15.0	22.2J	**1670B**
B-57	1	03/09/2023	B-57-S-1'-20230309	In-Situ	0.000448J	0.000716J	0.00139J	0.00207J	0.00462	24.9J B *-	<15.0	<15.0	24.9J	183B
B-58	1	03/09/2023	B-58-S-1'-20230309	In-Situ	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	24.0J B *-	<15.0	<15.0	24.0J	212
B-59	1	03/09/2023	B-59-S-1'-20230309	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	26.3J B *-	<15.0	<15.0	26.3J	**699**
SW-4	1	03/09/2023	SW-4-S-0-1'-20230309	In-Situ	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	20.7	20.2	<49.9	40.9	68.7
SW-5	1	03/09/2023	SW-5-S-0-1'-20230309	In-Situ	<0.00200	<0.00200	<0.00200	<0.00399	<0.00401	19.3	16.3	<50.0	35.6	122
SW-6	1	03/09/2023	SW-6-S-0-1'-20230309	In-Situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	41.0	24.2	<49.9	65.2	548
SW-7	1	03/09/2023	SW-7-S-0-1'-20230309	In-Situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	28.0	18.1	<49.9	46.1	512

Legend:
Analytes exceedng NMAC standards are indicated in **bold** and grey
F1: MS and/or MSD recovery exceeds control limits
814B: Compound was found in the blank and sample
'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)
mg/kg: Milligram per Kilogram
NMAC : New Mexico Administration Code
bgs: Below ground surface
B-45: Base sample
L: Shallow soil sample
SW : Sidewall sample

Notes:
1. Chloride analyzed by EPA Method 300
2. TPH analyzed by EPA Method 8015 M
3. BTEX analyzed by EPA Method 8260B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)
NMOCD: New Mexico Oild Conservation Division
--: No individual standard

Chevron
Table 3
2023 Groundwater Analytical Results
Old Indian Draw Gathering Line Southern
Incident# NCLB0525654437
Eddy County, New Mexico

Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride	Total Dissolved Solids
New Mexico Water Quality Control Commission Groundwater Standard							
		0.005[1]	1.0[1]	0.7[1]	0.62[1]	250[2]	1,000
TW-2	2/16/23	NA	NA	NA	NA	37.6	328

Notes:

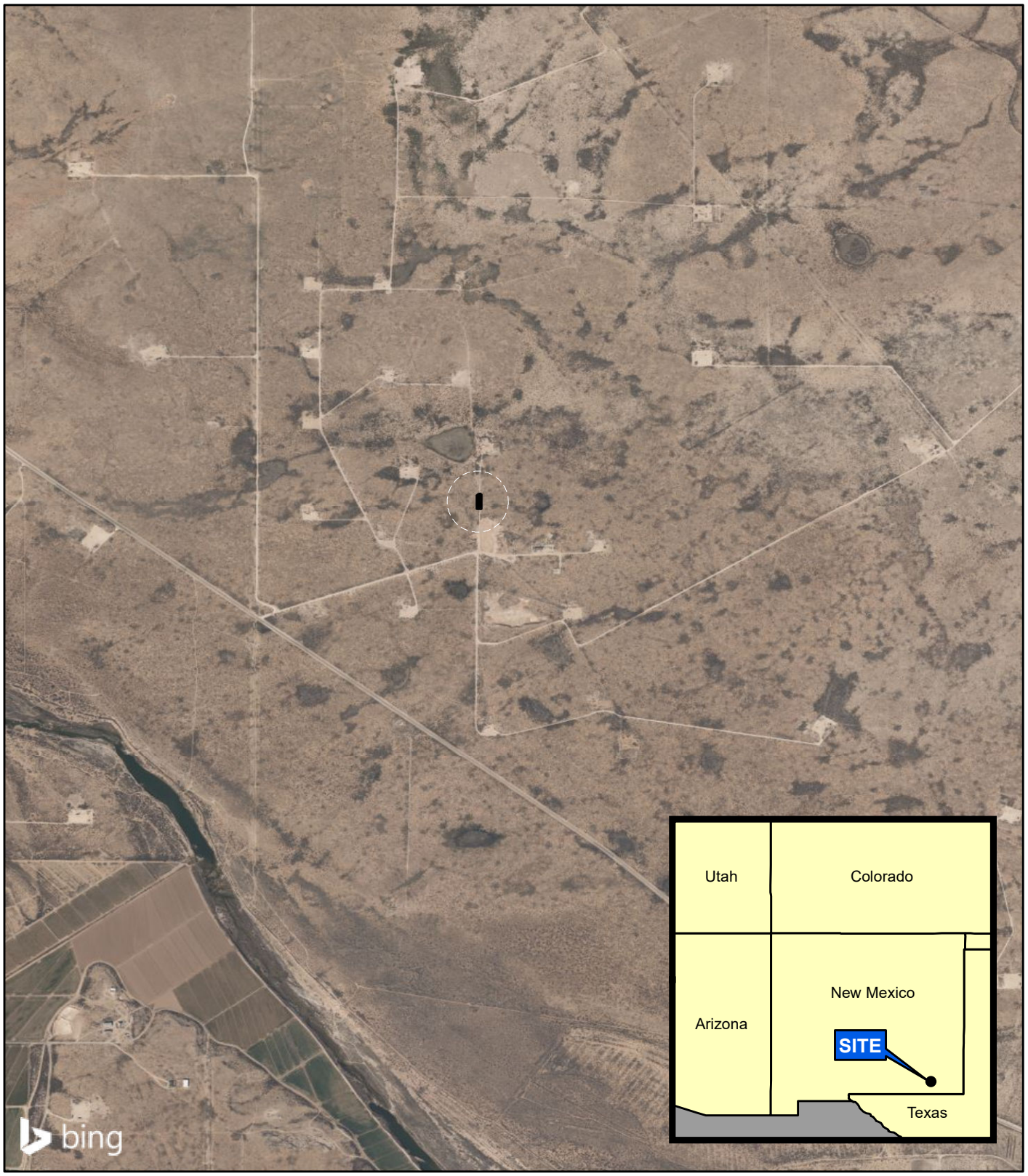
Results shown in mg/L.

[1]Human Health Standards for Groundwater.

[2]Other Standards for Domestic Water Supply.

NA = Not Analyzed

Figures



LEGEND:

Site Boundary

NOTES:
Datum: D_WGS_1984
Source: Bing Map
Site Location: 32.3925°, -104.1253°

0 2,000 4,000 Feet

GRAPHIC SCALE

MCBU
OLD INDIAN DRAW ~ GATHERING LINE SOUTH
INCIDENT NUMBER: NCLB0525654437
EDDY COUNTY, NEW MEXICO

SITE LOCATION MAP

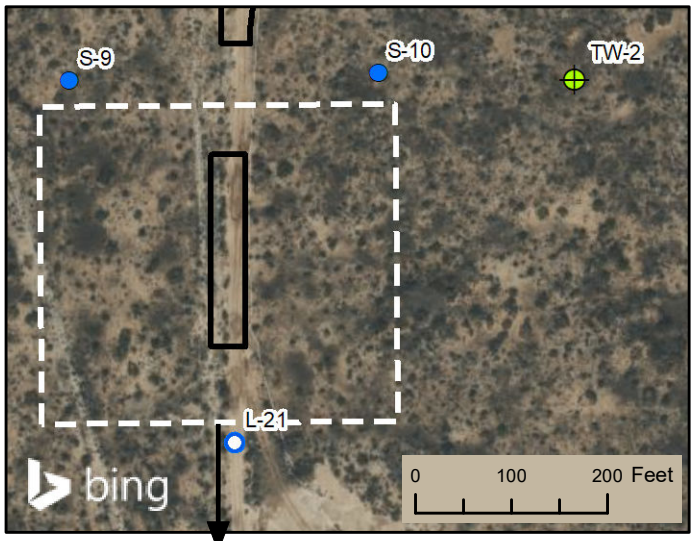
ARCADIS

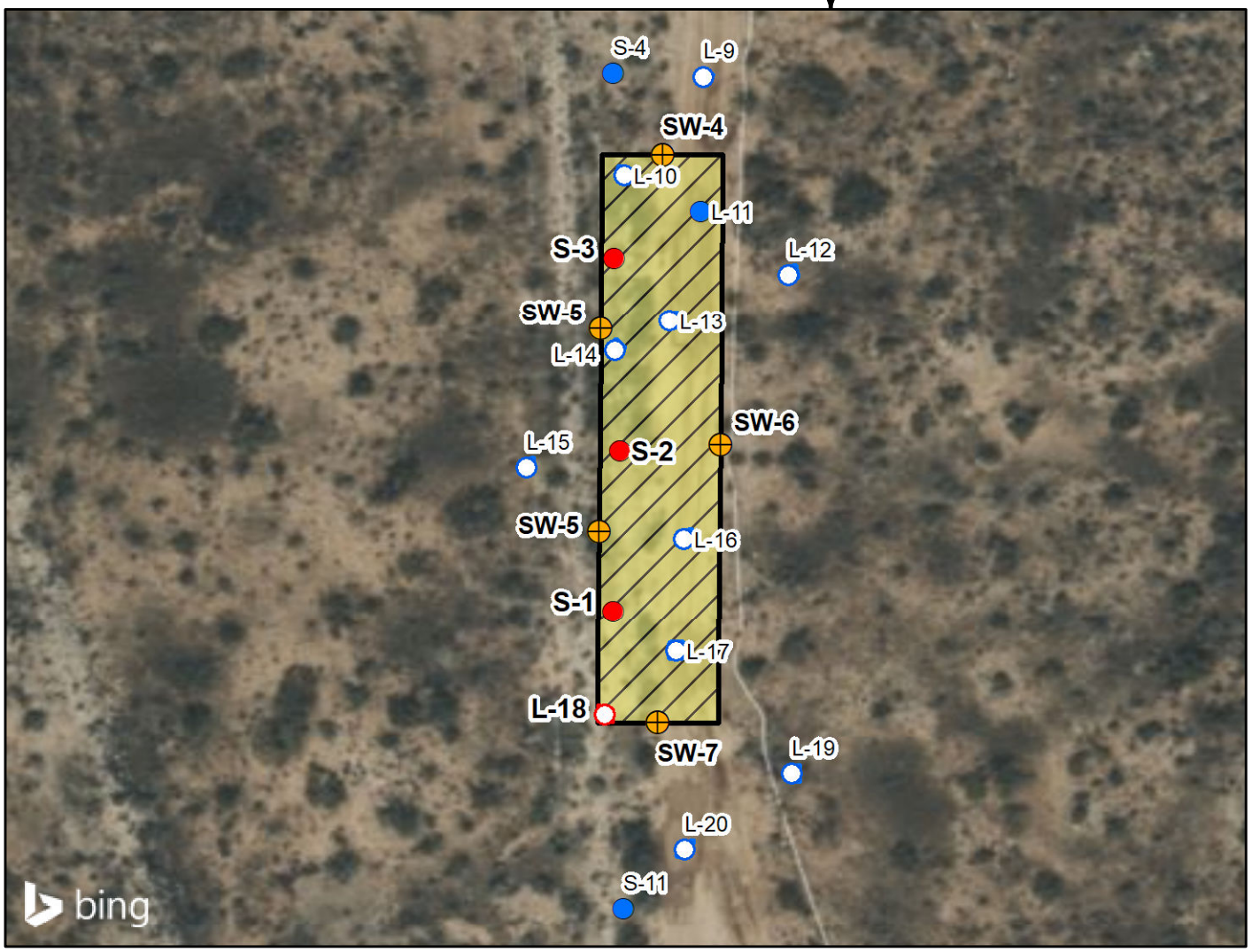
FIGURE 1

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: wberry ; Client (Project #)
D:_Arcadis\Land Services\Chevron\Old_Indian_Draw\GIS\MXD_Confirmation\OID GL-S_Fig1.mxd 3/15/2023 11:53:55 AM

Legend

- Sidewall Sample Location
- Excavated Area
- 2021/2022 Sample Locations (above 600 mg/kg chloride)
- 2021/2022 Sample Locations (below 600 mg/kg chloride)
- 2023 Field Screening Sample locations (above 600 mg/kg chloride)
- 2023 Sample locations (below 600 mg/kg chloride)
- Temporary Monitor Well





NOTES:
Datum: D_WGS_1984
Source: Google Earth Map
Site Location: 32.3932°, -104.1252°

0 60 120 Feet
GRAPHIC SCALE

MCBU
OLD INDIAN DRAW ~ GATHERING LINE SOUTH
INCIDENT NUMBER: NCLB0525654437
EDDY COUNTY, NEW MEXICO

EXCAVATION SIDEWALL SOIL SAMPLE LOCATIONS

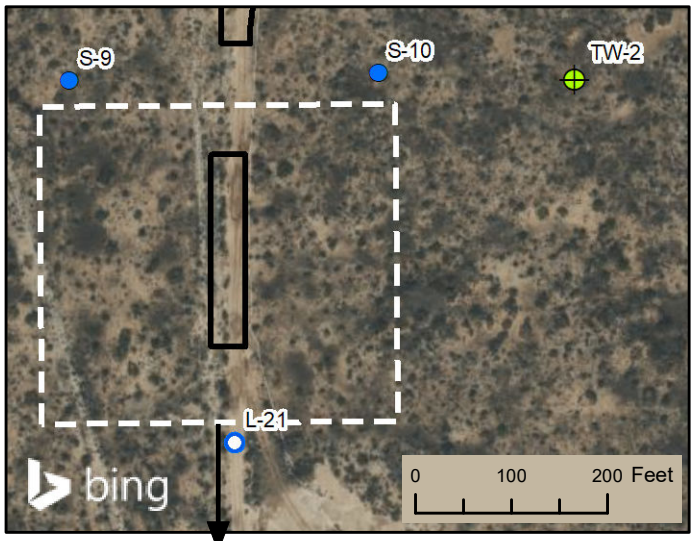
ARCADIS

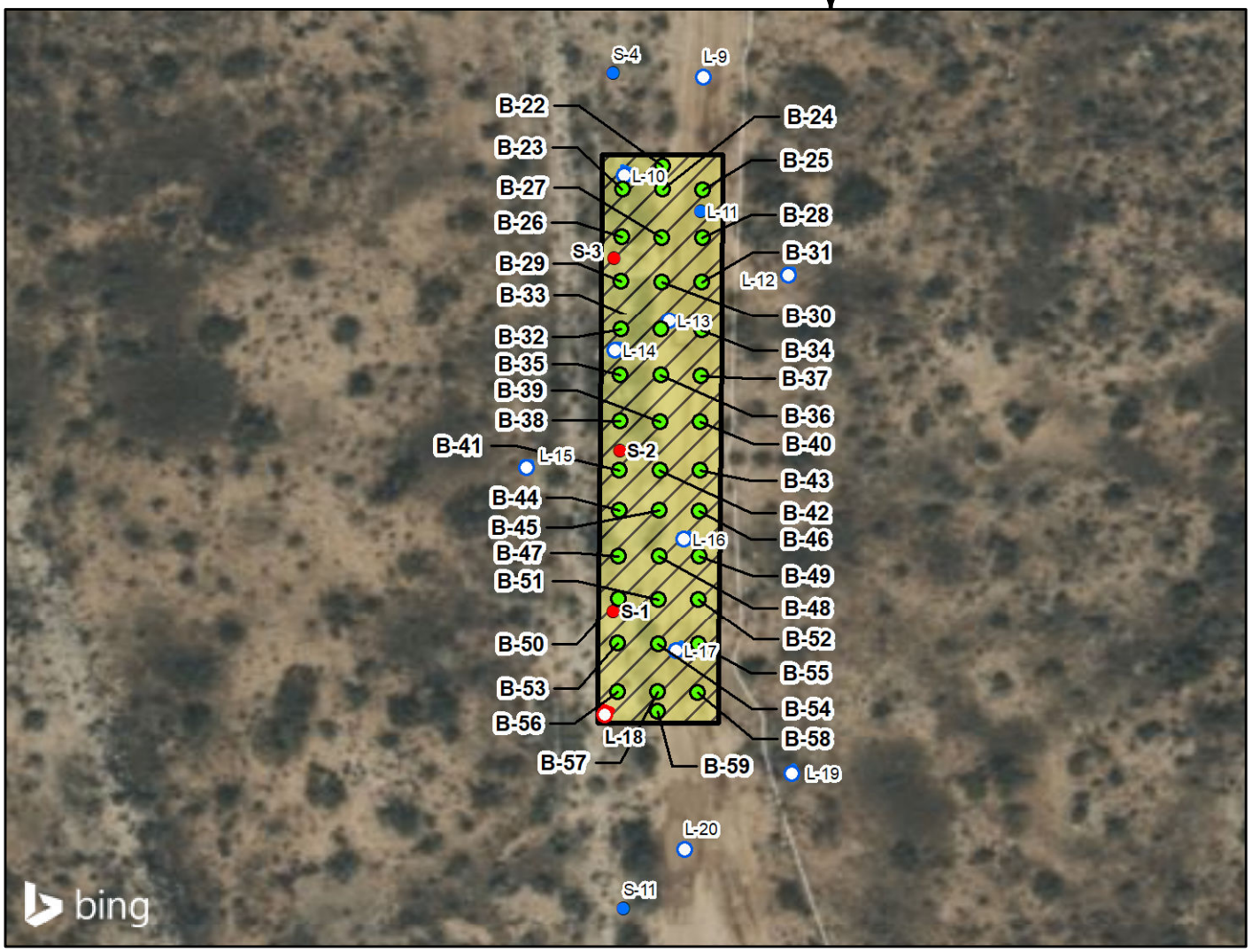
FIGURE 2

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: wberry ; Client (Project #) D:_Arcadis\Land Services\Chevron\Old_Indian_Draw\GIS\MXD_Confirmation\OID GL-S_Fig2.mxd 4/4/2023 3:38:15 PM

Legend

- Base Sample Location
- Excavated Area
- 2021/2022 Sample Locations (above 600 mg/kg chloride)
- 2021/2022 Sample Locations (below 600 mg/kg chloride)
- 2023 Field Screening Sample locations (above 600 mg/kg chloride)
- 2023 Sample locations (below 600 mg/kg chloride)
- Temporary Monitor Well





NOTES:
Datum: D_WGS_1984
Source: Google Earth Map
Site Location: 32.3932°, -104.1252°

0 60 120 Feet
GRAPHIC SCALE

MCBU
OLD INDIAN DRAW ~ GATHERING LINE SOUTH
INCIDENT NUMBER: NCLB0525654437
EDDY COUNTY, NEW MEXICO

EXCAVATION BASE SOIL SAMPLE LOCATIONS

ARCADIS

FIGURE 3

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: wberry ; Client (Project #) D:_Arcadis\Land Services\Chevron\Old_Indian_Draw\GIS\MXD_Confirmation\OID GL-S_Fig3.mxd 4/4/2023 3:38:51 PM

Photographic Log

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
Old Indian Draw Gathering Line Southern Area	Eddy County, NM	NCLB0525654437

Photo No.	Date:
1	02/24/2023

Direction Photo Taken:

Facing NW

Description:

View of calcrete rock layer in release area at 1 feet bgs.

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
Old Indian Draw Gathering Line Southern Area	Eddy County, NM	NCLB0525654437

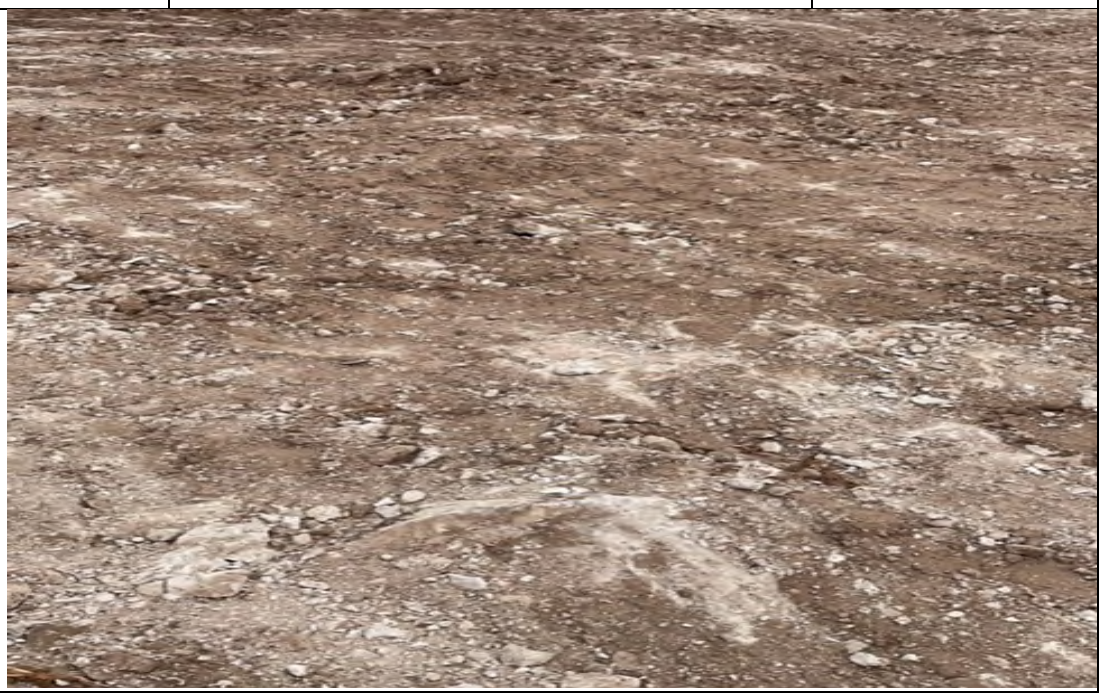
Photo No.	Date:
2	02/24/2023

Direction Photo Taken:

Facing N

Description:

Additional view of calcrete rock layer in release area around 1 feet bgs.



Appendix A

Incident #NCLB0525654437 NMOCD Database Information

NCLB0525654437 2005 MAJOR A OS @ FCLB0525651320

General Incident Information

Site Name:

Well:

Facility: [fCLB0525651320] Chesapeake Old Indian Draw Gaterhing Line

Operator: [147179] CHESAPEAKE OPERATING, INC.

Status: Closure Not Approved

Type: Oil Release

District: Artesia

Severity: Major

Surface Owner:

County: Eddy (15)

Incident Location: G-18-22S-28E 0 FL 0 FL

Lat/Long: 32.393027,-104.125388

Directions:

Notes

Source of Referral: Industry Rep

Resulted In Fire: ☐

Endangered Public Health: ☐

Fresh Water Contamination: ☐

Action / Escalation: Referred to Environmental Inspector

Will or Has Reached Watercourse: ☐

Property Or Environmental Damage: ☐

Contact Details

Contact Name:

Contact Title:

Event Dates

Date of Discovery: 06/24/2005

Extension Date: 11/15/2018

Initial C-141 Received:
Characterization Report Received:
Remediation Plan Received:

Closure Report Received:
OCD Notified of Major Release: 06/24/2005
Cancelled Date:

Characterization Report Approved:
Remediation Plan Approved:
Remediation Due:
Closure Report Approved:

Incidents Materials

Cause	Source	Material	Volume				Units
			Unk.	Spilled	Recovered	Lost	
Equipment Failure	Flow Line - Production	Crude Oil	☐	15	13	2	BBL
Equipment Failure	Flow Line - Production	Produced Water	☐	35	32	3	BBL

Incident Events

Date	Detail
09/13/2005	C-141: The structural integrity of the circulating line was compromised resulting in the release of approximately 50 barrels of fluid. The release area was exposed and clamps installed. Approximately 9390 square feet of surface area was impacted by the release. Saturated soil has been excavated and stockpiled on plastic on site until a remediation plan is developed. Once initial excavation activities are complete, samples will be collected to delineate the lateral and vertical extents of impacts associated with this release. Upon receipt of analytical results, the remediation plan will be developed and submitted to the NMOCD for approval. The excavated soil will be transported

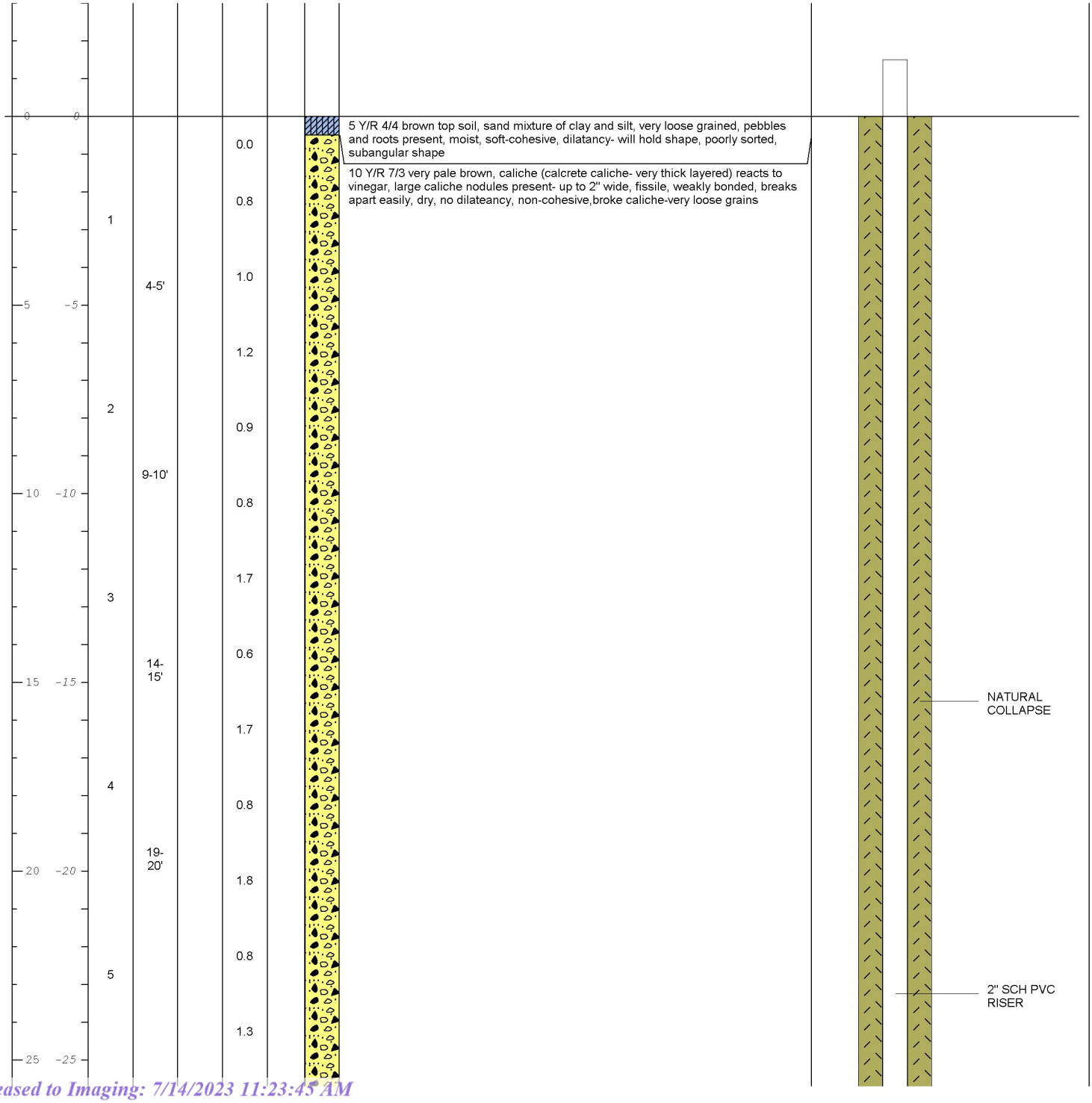
Date	Detail
	to an approved land treatment facility with any other federal, state, or local laws and/or regulations

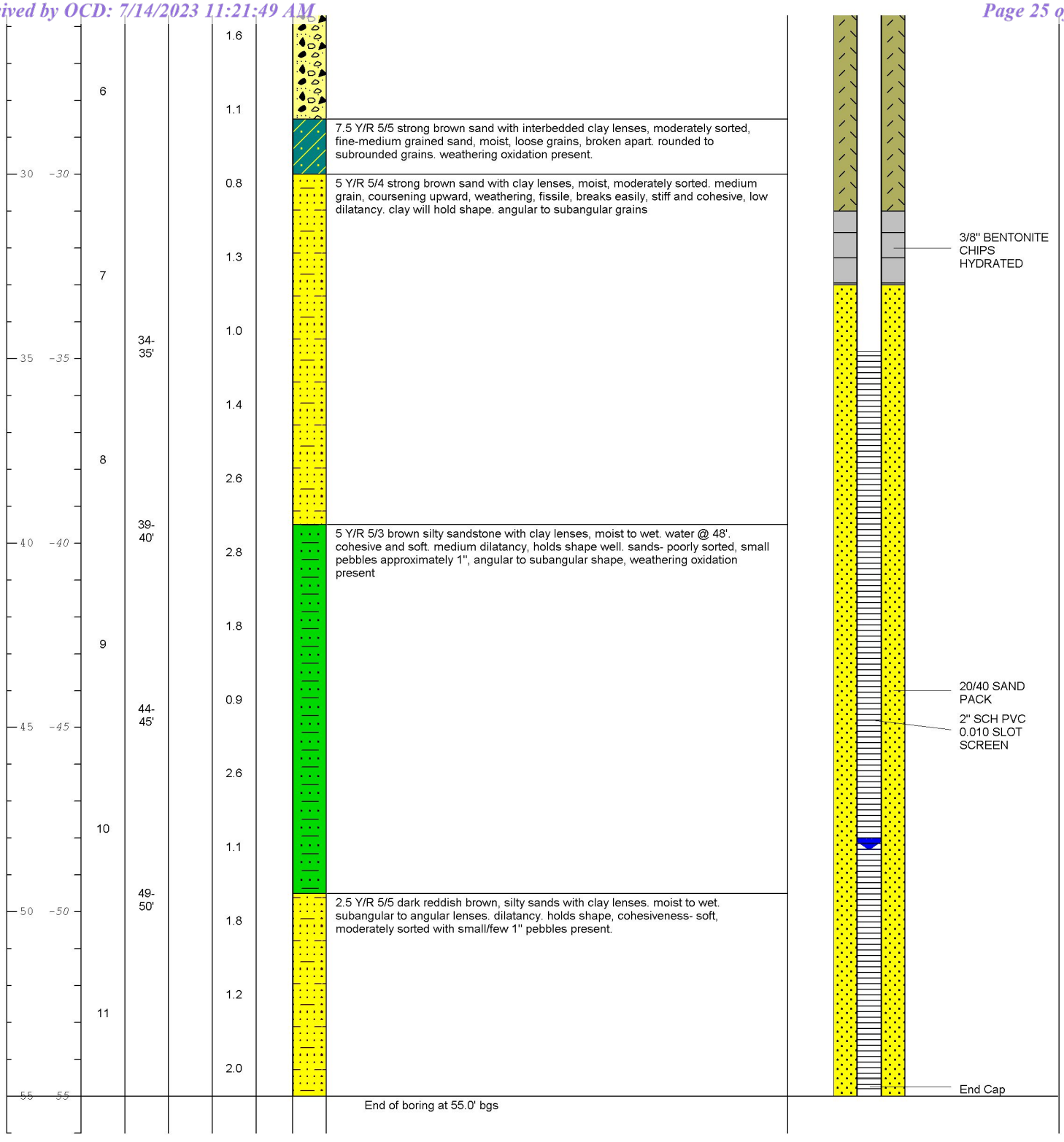
Appendix B

Temporary Monitoring Well Boring Log

Date Start/Finish: 2/13/2023 **Drilling Company:** White Drilling Company, Inc. **Driller's Name:** Bo Atkins **Drilling Method:** Air Rotary/ Split Spoon **Sampling Method:** Grab	**Latitude:** 32.392848 **Longitude:** -104.124242 **Casing Elevation:** NS **Borehole Depth:** 55' **Surface Elevation:** NS **Descriptions By:** Heather Dudley	**Well/Boring ID:** TW-2 **Client:** Chevron-MCBU **Location:** Old Indian Draw Unit #001 Carlsbad, New Mexico

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0				0.0			5 Y/R 4/4 brown top soil, sand mixture of clay and silt, very loose grained, pebbles and roots present, moist, soft-cohesive, dilatancy- will hold shape, poorly sorted, subangular shape	
0	1	4-5'		0.8			10 Y/R 7/3 very pale brown, caliche (calcrete caliche- very thick layered) reacts to vinegar, large caliche nodules present- up to 2" wide, fissile, weakly bonded, breaks apart easily, dry, no dilateancy, non-cohesive,broke caliche-very loose grains	
-5				1.0				
	2	9-10'		1.2				
-10				0.9				
	3	14-15'		0.8				
-15				1.7				
	4	19-20'		0.6				
-20				1.7				
	5			0.8				
-25				1.8				
				0.8				
				1.3				





ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs= below ground surface; TD= total depth; DTW= depth to water; ppm= parts per million; NS=not surveyed, N/A=not applicable/available, btoc= below top of casing

Project: 30166791 Template: LPTEMPLATE_Well_Construction_Final

Data File: Old Indian Draw Date: 2/21/2023 Created/Edited by: Trang Pham

Appendix C

Laboratory Analytical Reports

Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620
www.arcadis.com

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

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

CONDITIONS

Action 240396

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 240396
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Remediation plan is approved as written. Document can be found under NKMW1105550129 and within the incident file. 2. 90-day Remediation Due date updated to October 12, 2023. Chevron is required to submit a final closure report or a time extension request along with providing a status update of all remedial activities by this date.	7/14/2023