

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Fasken Oil and Ranch, Ltd	OGRID: 151416
Contact Name: Aaron Pachlhofer	Contact Telephone: 432-687-1777
Contact email: aaronp@forl.com	Incident # NCS2003132855
Contact mailing address: 6101 Holiday Hill Road, Midland , TX 79707	

Location of Release Source

Latitude 33.040968° Longitude -103.173078°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Denton No. 5 SWD Battery	Site Type: SWD Battery
Date Release Discovered 11/29/19	API# 30-025-05270

Unit Letter	Section	Township	Range	County
N	2	15S	37E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 850	Volume Recovered (bbls) 840
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Leak was inside of firewall at underground bypass 2" steel line that ties into gun barrel and to main SWD line. Leak ran inside firewall around battery. Leak was shut in immediately when discovered by relief pumper. 3 vacuum trucks were called to pick up water from ground.

Release volume is similar to the release due to standing water from heavy rainfall, Fasken field personnel reported that the area had received approximately 1 inch of rain the previous day. The battery has a high firewall around it and lies within a slight depression. There is no drainage from the battery area, no pasture was affected.

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release is a major release as defined by NMAC.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given via telephone by Aaron Pachlhofer to Fortner at 3:30 MST on 11/29/19.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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: <u>Aaron Pachlhofer</u>	Title: <u>Environmental Coordinator</u>
Signature: _____	Date: <u>1/31/2020</u>
email: <u>aaronp@forl.com</u>	Telephone: <u>432-687-1777</u>
<u>OCD Only</u> Received by: _____ Date: _____	

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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?	<u>Approx. 70</u> (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

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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: Aaron Pachlhofer Title: Environmental Coordinator

Signature: _____ Date: 1/31/2020

email: aaronp@forl.com Telephone: 432-687-1777

OCD Only

Received by: _____ Date: _____

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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.

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Printed Name: Aaron Pachlhofer Title: Environmental Coordinator

Signature: _____ Date: _____

email: aaronp@forl.com Telephone: 432-687-1777

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Form C-141

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Oil Conservation Division

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Aaron Pachlhofer Title: Environmental Coordinator

Signature:  Date: 3/13/2020

email: aaronp@forl.com Telephone: 432-687-1777

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



6101 Holiday Hill Road
Midland, TX 79707
(432) 687-1777
(432) 687-1570 (FAX)

March 13, 2020

Robert Hamlet
Environmental Specialist
Oil Conservation Division, District 2
811 South Francis Street
Artesia, New Mexico 88210

Site Closure request: Incident #NCS20033132855

Mr. Hamlet,

On November 29, 2019 a spill occurred at the Fasken Oil and Ranch (Fasken) Denton No.5 SWD battery when an underground 2-inch steel bypass line failed. The battery is located 33.040968°, -103.173078°. During the spill 850 barrels of produced water was released, and no crude oil was released. 840 barrels of produced water was recovered according to Fasken operations personnel. The large volume recovered was because the ground was already saturated due to heavy rain the day before, preventing the infiltration of the spilled produced water. The spill was confined to the firewall of the battery pad. No pasture was affected. Please refer to the site plan for the spill area as collected by GPS.

Potential Receptors

According to the New Mexico State Engineer's Office, there many water wells within 1/2 mile of the SWD battery. The closest and most recently gauged wells belong to Plains All American Pipeline, approximately 0.33 mile away at 33.038624°, -103.168008°. No gauging information is available from the from the State Engineers Office, but Camille Bryant of Plains All American Pipeline has stated that the depth to water in all wells in Section 2, T15S, R37E is 70 to 75 feet below ground surface. A copy of her email is included as an attachment. The data are consistent with Fasken monitoring wells approximately 1.5 mile to the southeast. These data are available upon request of the OCD.

Other potential receptors: There is no nearby surface water. There are no homes or occupied structures within 1 mile of the release. There are no other potential receptors such as a lakebed, sinkhole, playa lake, continually flowing watercourse, spring, fresh water well, or subsurface mine that have been identified within the distances specified on form C-141.

According to NMAC 19.15.29.12, Table 1, the chloride limit is 10,000 mg/kg

Sample Collection and Results

Following the initial spill response, preliminary samples were collected from location S-1 on December 8, 2019 at the surface, 1 foot and 2 feet. The result of these samples showed that the surface was affected over 10,000 mg/kg, and the deeper samples contained very low chlorides concentrations. December 17, 2019 samples collected from two additional locations S-2 and S-3, from the surface and 1 foot. The

results of the samples were similar to the samples collected from S-1: high chlorides at the surface, and low chlorides at 1 foot. The results of the three sample locations indicated that collecting samples from the surface and 1 foot would delineate the spill area to the limit of 10,000 mg/kg. A request was made to Robert Hamlet of NMOCD-Artesia to reduce the number of samples. Fasken was directed by Mr. Hamlet to collect no less than 35 sample locations would be required by the NMOCD. On January 28, 2020, the remaining samples were collected at locations S-4 through S-36. All locations had surface and 1 foot samples collected for chlorides laboratory analysis. BTEX and TPH were also requested at four sample locations: S-26, S-29, S-32, and S-34. Laboratory result showed that no 1-foot samples contained chlorides above the 10,000 mg/kg limit. Twelve surface sample contained chlorides above the limit: S-1, S-4, S-8, S-10, S-14, S-15, S-16, S-18, S-21, S-24, S-26, and S-29. Over limit chlorides results ranged from 10,700 mg/kg to 19,700 mg/kg chloride. No BTEX was detected in any sample above the method detection limit, and TPH was detected in very low concentrations in six of the eight sample locations where it was requested for laboratory analysis. The highest TPH result was 750 mg/kg. Please refer to the analytical summary tables for a summary of all laboratory results and the attached sight plan for sample locations.

Removal of Pad Material and Confirmation Sampling

Following the evaluation of laboratory results, all sample areas (noted above) over 10,000 mg/kg were excavated. Fasken personnel directed a backhoe to remove a minimum of six inches of material from the twelve sample locations above the OCD limit. Each sample location was marked to ensure that the entire area represented by the sample was excavated. Please refer to the Excavation site plan for all areas excavated.

Following excavation, a confirmation sample was collected from each sample location to ensure that no chlorides above 10,000 mg/kg remained. Laboratory results show that the confirmation sample range from 80.6 mg/kg to 4010 mg/kg.

RECCOMENDATION

Fasken recommends closing this release. All concentrations are below the Table 1 limits for groundwater 51 to 100 feet below ground surface.

If there are any questions or comments, please do not hesitate to contact Aaron Pachlhofer at the letterhead address or 432-687-1777 or aaronp@forl.com.

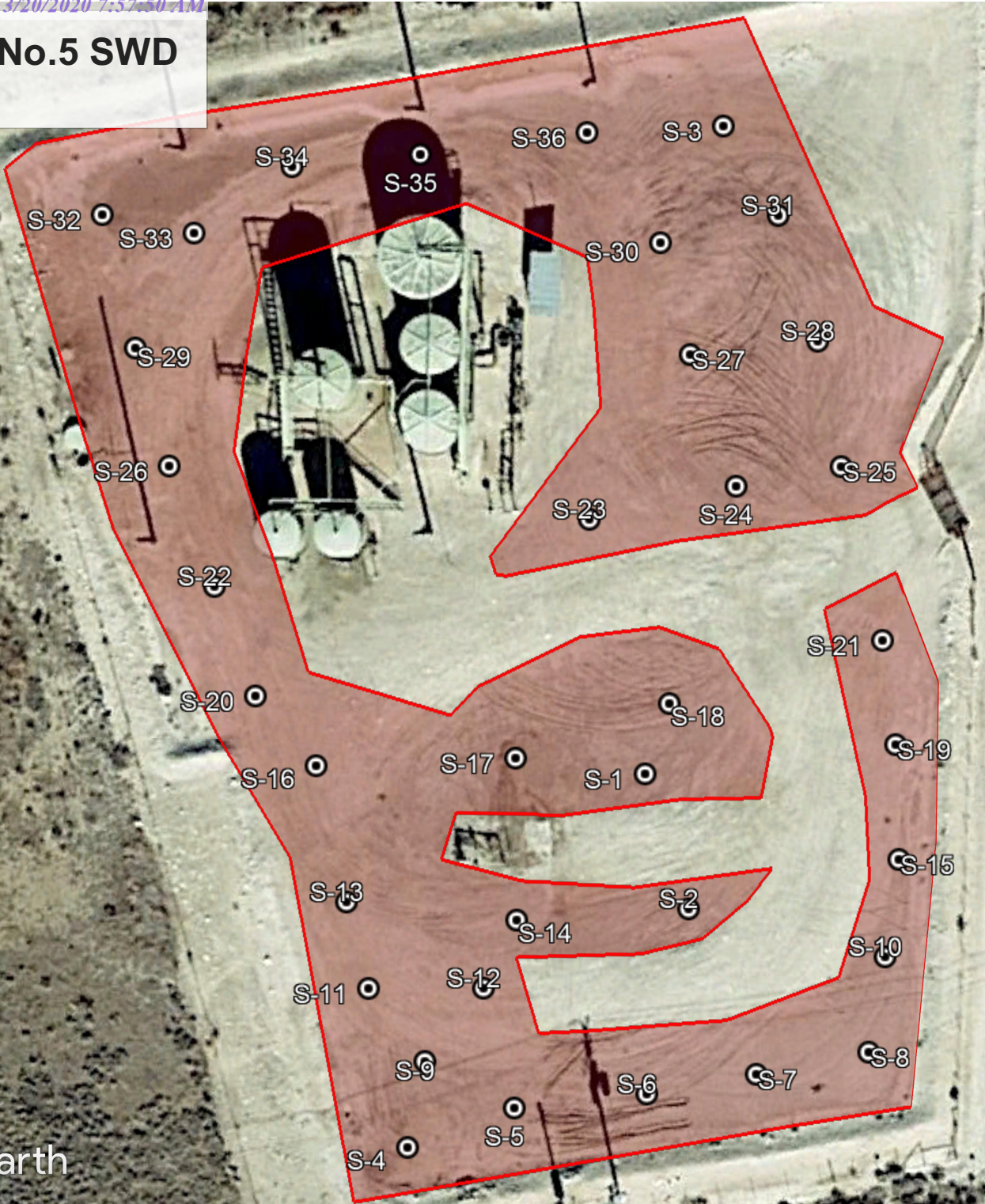
Thank You,

Aaron Pachlhofer, P.G.
Environmental Coordinator

Denton No.5 SWD

Legend

 Denton 5 SWD spill



Google Earth



100 ft

Denton No.5 SWD

Sample Locations over 10,000 mg/kg Chloride



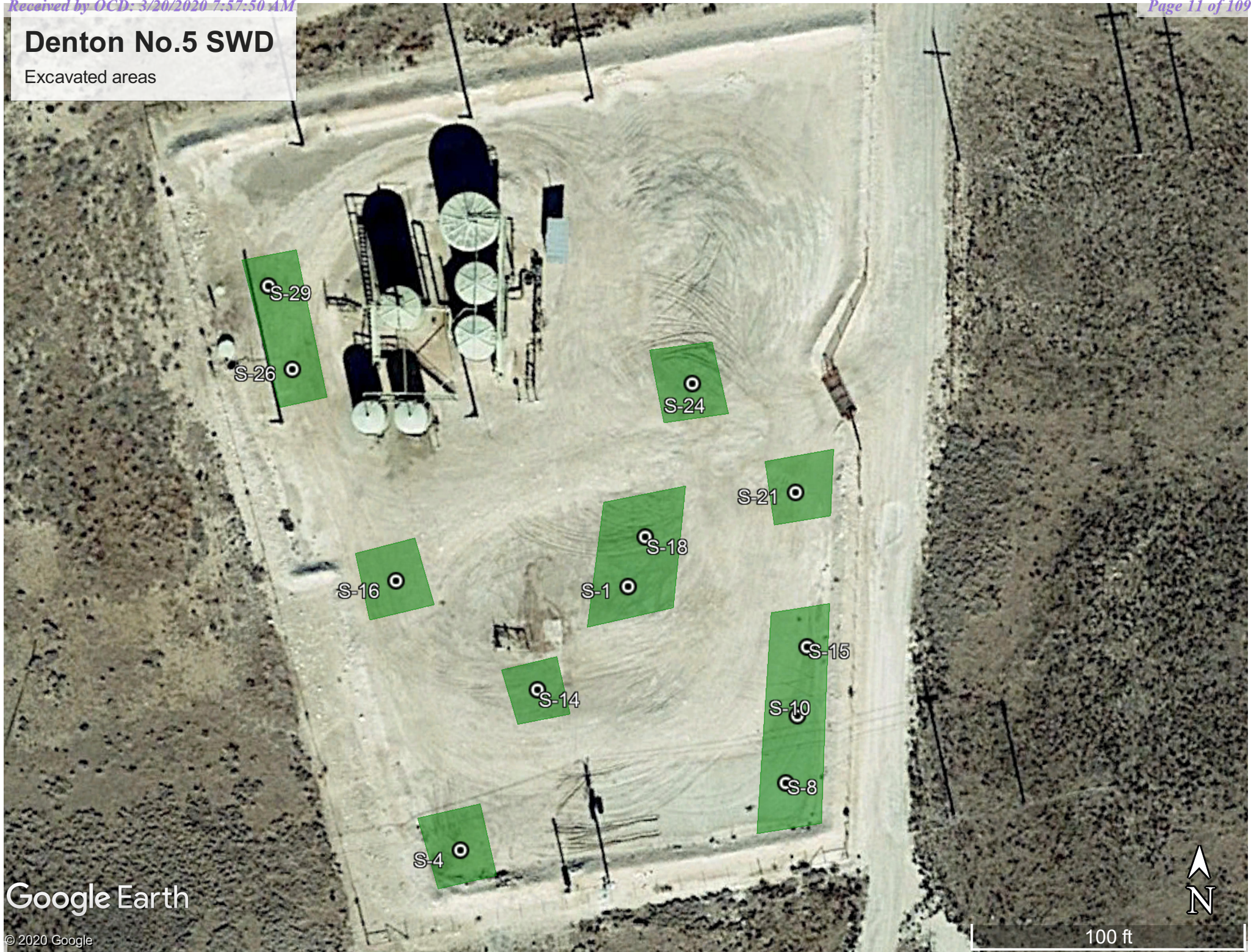
Google Earth

© 2020 Google

100 ft

Denton No.5 SWD

Excavated areas



Denton No. 5 SWD Analytical Summary Table - Assessment

Date	Location	Depth	Cl-	Benzene	Toluene	Ethylbensene	Xylene	TPH
12/8/2019	S-1	Surface	15700	---	---	---	---	---
12/8/2019	S-1	1'	290	---	---	---	---	---
12/8/2019	S-1	2'	28.5	---	---	---	---	---
12/17/2019	S-2	Surface	9680	---	---	---	---	---
12/17/2019	S-2	1'	3370	---	---	---	---	---
12/17/2019	S-3	Surface	9560	---	---	---	---	---
12/17/2019	S-3	1'	185	---	---	---	---	---
1/28/2020	S-4	Surface	10700	---	---	---	---	---
1/28/2020	S-4	1'	265	---	---	---	---	---
1/28/2020	S-5	Surface	5310	---	---	---	---	---
1/28/2020	S-5	1'	115	---	---	---	---	---
1/28/2020	S-6	Surface	3590	---	---	---	---	---
1/28/2020	S-6	1'	144	---	---	---	---	---
1/28/2020	S-7	Surface	5690	---	---	---	---	---
1/28/2020	S-7	1'	232	---	---	---	---	---
1/28/2020	S-8	Surface	15400	---	---	---	---	---
1/28/2020	S-8	1'	219	---	---	---	---	---
1/28/2020	S-9	Surface	1270	---	---	---	---	---
1/28/2020	S-9	1'	81.3	---	---	---	---	---
1/28/2020	S-10	Surface	13000	---	---	---	---	---
1/28/2020	S-10	1'	130	---	---	---	---	---
1/28/2020	S-11	Surface	1630	---	---	---	---	---
1/28/2020	S-11	1'	66.6	---	---	---	---	---
1/28/2020	S-12	Surface	7080	---	---	---	---	---
1/28/2020	S-12	1'	377	---	---	---	---	---
1/28/2020	S-13	1'	8330	---	---	---	---	---
1/28/2020	S-13	Surface	454	---	---	---	---	---
1/28/2020	S-14	1'	16300	---	---	---	---	---
1/28/2020	S-14	Surface	59.7	---	---	---	---	---
1/28/2020	S-15	1'	12400	---	---	---	---	---
1/28/2020	S-15	Surface	408	---	---	---	---	---
1/28/2020	S-16	Surface	19700	---	---	---	---	---
1/28/2020	S-16	1'	131	---	---	---	---	---
1/28/2020	S-17	Surface	855	---	---	---	---	---
1/28/2020	S-17	1'	80	---	---	---	---	---
1/28/2020	S-18	Surface	18900	---	---	---	---	---
1/28/2020	S-18	1'	503	---	---	---	---	---
1/28/2020	S-19	Surface	7900	---	---	---	---	---
1/28/2020	S-19	1'	65.5	---	---	---	---	---
1/28/2020	S-20	Surface	2280	---	---	---	---	---
1/28/2020	S-20	1'	81.7	---	---	---	---	---
1/28/2020	S-21	Surface	14300	---	---	---	---	---
1/28/2020	S-21	1'	301	---	---	---	---	---

Denton No. 5 SWD Analytical Summary Table - Assessment

Date	Location	Depth	Cl-	Benzene	Toluene	Ethylbensene	Xylene	TPH
1/28/2020	S-22	Surface	469	---	---	---	---	---
1/28/2020	S-22	1'	507	---	---	---	---	---
1/28/2020	S-23	Surface	1100	---	---	---	---	---
1/28/2020	S-23	1'	503	---	---	---	---	---
1/28/2020	S-24	Surface	15900	---	---	---	---	---
1/28/2020	S-24	1'	1620	---	---	---	---	---
1/28/2020	S-25	Surface	8580	---	---	---	---	---
1/28/2020	S-25	1'	288	---	---	---	---	---
1/28/2020	S-26	Surface	11000	ND	ND	ND	ND	305
1/28/2020	S-26	1'	1310	ND	ND	ND	ND	35.7
1/28/2020	S-27	Surface	7340	---	---	---	---	---
1/28/2020	S-27	1'	576	---	---	---	---	---
1/28/2020	S-28	Surface	4970	---	---	---	---	---
1/28/2020	S-28	1'	599	---	---	---	---	---
1/28/2020	S-29	Surface	14400	ND	ND	ND	ND	207.4
1/28/2020	S-29	1'	674	ND	ND	ND	ND	ND
1/28/2020	S-30	Surface	9540	---	---	---	---	---
1/28/2020	S-30	1'	4790	---	---	---	---	---
1/28/2020	S-31	Surface	8050	---	---	---	---	---
1/28/2020	S-31	1'	672	---	---	---	---	---
1/28/2020	S-32	Surface	4010	ND	ND	ND	ND	195.9
1/28/2020	S-32	1'	1380	ND	ND	ND	ND	ND
1/28/2020	S-33	Surface	8620	---	---	---	---	---
1/28/2020	S-33	1'	348	---	---	---	---	---
1/28/2020	S-34	Surface	7470	ND	ND	ND	ND	750
1/28/2020	S-34	1'	1630	ND	ND	ND	ND	99.8
1/28/2020	S-35	Surface	7950	---	---	---	---	---
1/28/2020	S-35	1'	1830	---	---	---	---	---
1/28/2020	S-36	Surface	340	---	---	---	---	---
1/28/2020	S-36	1'	107	---	---	---	---	---

Denton No. 5 SWD Analytical Summary Table - Post Excavation Confirmation samples

Date	Location	Depth	Cl-
3/2/2020	S-1a	6"	1330
3/2/2020	S-4a	6"	80.6
3/2/2020	S-8a	6"	5240
3/2/2020	S-10a	6"	2500
3/2/2020	S-14a	6"	2380
3/2/2020	S-15a	6"	2890
3/2/2020	S-16a	6"	574
3/2/2020	S-18a	6"	2820
3/2/2020	S-21a	6"	4010
3/2/2020	S-24a	6"	1630
3/2/2020	S-26a	6"	1070
3/2/2020	S-29a	6"	3540

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Aaron Pachlhofer
Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707

Project: Denton NO.5 SWD

Project Number: [none]

Location: Lea County, NM

Lab Order Number: 9L06001



NELAP/TCEQ # T104704516-18-9

Report Date: 12/11/19

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 Surface	9L06001-01	Soil	12/04/19 12:00	12-05-2019 17:30
S-1 1'	9L06001-02	Soil	12/04/19 12:05	12-05-2019 17:30
S-1 2'	9L06001-03	Soil	12/04/19 12:05	12-05-2019 17:30

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-1 Surface
9L06001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	15700	62.5	mg/kg dry	1	P9L0701	12/07/19	12/08/19	EPA 300.0
% Moisture	16.0	0.1	%	1	P9L0613	12/06/19	12/06/19	ASTM D2216

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-1 1'

9L06001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	290	1.16	mg/kg dry	1	P9L0701	12/07/19	12/08/19	EPA 300.0
% Moisture	14.0	0.1	%	1	P9L0613	12/06/19	12/06/19	ASTM D2216

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-1 2'

9L06001-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	28.5	1.16	mg/kg dry	50	P9L0701	12/07/19	12/08/19	EPA 300.0
% Moisture	20.0	0.1	%	1	P9L0613	12/06/19	12/06/19	ASTM D2216

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9L0613 - * DEFAULT PREP *****

Blank (P9L0613-BLK1)		Prepared & Analyzed: 12/06/19								
% Moisture	ND	0.1	%							
Duplicate (P9L0613-DUP1)		Source: 9L05009-49		Prepared & Analyzed: 12/06/19						
% Moisture	4.0	0.1	%		3.0			28.6	20	
Duplicate (P9L0613-DUP2)		Source: 9L05012-04		Prepared & Analyzed: 12/06/19						
% Moisture	10.0	0.1	%		10.0			0.00	20	
Duplicate (P9L0613-DUP3)		Source: 9L06003-19		Prepared & Analyzed: 12/06/19						
% Moisture	5.0	0.1	%		4.0			22.2	20	

Batch P9L0701 - * DEFAULT PREP *****

Blank (P9L0701-BLK1)		Prepared: 12/07/19 Analyzed: 12/08/19								
Chloride	ND	0.100	mg/kg wet							
LCS (P9L0701-BS1)		Prepared: 12/07/19 Analyzed: 12/08/19								
Chloride	418	1.00	mg/kg wet	400		105	80-120			
LCS Dup (P9L0701-BSD1)		Prepared: 12/07/19 Analyzed: 12/08/19								
Chloride	393	1.00	mg/kg wet	400		98.3	80-120	6.16	20	
Calibration Blank (P9L0701-CCB1)		Prepared: 12/07/19 Analyzed: 12/08/19								
Chloride	0.00		mg/kg wet							
Calibration Blank (P9L0701-CCB2)		Prepared: 12/07/19 Analyzed: 12/08/19								
Chloride	0.00		mg/kg wet							

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P9L0701 - * DEFAULT PREP *****

Calibration Check (P9L0701-CCV1)

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	19.5		mg/kg	20.0		97.6	0-200			
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Calibration Check (P9L0701-CCV2)

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	20.6		mg/kg	20.0		103	0-200			
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Calibration Check (P9L0701-CCV3)

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	19.6		mg/kg	20.0		98.0	0-200			
----------	------	--	-------	------	--	------	-------	--	--	--

Matrix Spike (P9L0701-MS1)

Source: 9L06001-03

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	24800	62.5	mg/kg dry	7500	15700	121	80-120			
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Matrix Spike (P9L0701-MS2)

Source: 9K26021-02

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	595	5.43	mg/kg dry	543	96.4	91.7	80-120			
----------	-----	------	-----------	-----	------	------	--------	--	--	--

Matrix Spike Dup (P9L0701-MSD1)

Source: 9L06001-03

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	23600	62.5	mg/kg dry	7500	15700	105	80-120	5.16	20	
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Matrix Spike Dup (P9L0701-MSD2)

Source: 9K26021-02

Prepared: 12/07/19 Analyzed: 12/08/19

Chloride	615	5.43	mg/kg dry	543	96.4	95.4	80-120	3.33	20	
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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date: 12/11/2019

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

PBBLAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin HWY
Midland, Texas 79701

Phone: 432-686-7235

Project Manager:

Aaron Packhofer

Project Name:

Denton 5 SWD

Company Name

Foster

Project #:

Company Address:

Project Loc:

Lee County, NM

City/State/Zip:

PO #:

Telephone No:

Fax No:

Report Format

☐ Standard☐ TRRP☐ NPDES

Sampler Signature:

[Signature]

e-mail:

aaronp@foster.com

(lab use only)

ORDER #:

9106001

LAB # (lab use only)

FIELD CODE

Beginning Depth

Ending Depth

Date Sampled

Time Sampled

Field Filtered

Total #. of Containers

Ice

HNO₃

HCl

H₂SO₄

NaOH

Na₂S₂O₃

None

Other (Specify)

DW=Drinking Water SL=Sludge

GW = Groundwater S=Soil/Solid

NP=Non-Potable Specify Other

TPH: TX 1005 TX 1006

Anions (CO₃, SO₄, Alkalinity)

BTEX 8021 B/5030 or BTEX 8260

Preservation & # of Containers

Matrix

Analyze For:

TC:P:
TOTAL:

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Standard TAT

Special Instructions:

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Laboratory Comments:

Sample Containers intact?

VOCs Free of Headspace?

Labels on containers?

Custody seals on containers?

Custody seals on containers?

Sample Hand Delivered?

by Courier?

Temperature Upon Receipt:

Adjusted

Y

Y

Y

Y

Y

Y

Y

Y

Y

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Aaron Pachlhofer
Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707

Project: Denton NO.5 SWD

Project Number: [none]

Location: Lea County, NM

Lab Order Number: 0A07002



NELAP/TCEQ # T104704516-18-9

Report Date: 01/09/20

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S2 Surface	0A07002-01	Soil	12/17/19 10:00	12-27-2019 07:32
S2 1 Foot	0A07002-02	Soil	12/17/19 10:10	12-27-2019 07:32
S3 Surface	0A07002-03	Soil	12/17/19 10:25	12-27-2019 07:32
S3 1 Foot	0A07002-04	Soil	12/17/19 10:25	12-27-2019 07:32

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S2 Surface
0A07002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	9680	11.2	mg/kg dry	10	P0A0709	01/07/20 15:45	01/07/20 17:29	EPA 300.0	
% Moisture	11.0	0.1	%	1	P0A0801	01/08/20 09:29	01/08/20 09:31	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S2 1 Foot
0A07002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	3370	5.62	mg/kg dry	5	P0A0709	01/07/20 15:45	01/07/20 18:15	EPA 300.0	
% Moisture	11.0	0.1	%	1	P0A0801	01/08/20 09:29	01/08/20 09:31	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S3 Surface
0A07002-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	9560	11.2	mg/kg dry	10	P0A0709	01/07/20 15:45	01/07/20 18:30	EPA 300.0	
% Moisture	11.0	0.1	%	1	P0A0801	01/08/20 09:29	01/08/20 09:31	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S3 1 Foot
0A07002-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	185	1.25	mg/kg dry	1	P0A0709	01/07/20 15:45	01/07/20 18:45	EPA 300.0	
% Moisture	20.0	0.1	%	1	P0A0801	01/08/20 09:29	01/08/20 09:31	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0A0709 - *** DEFAULT PREP ***										
Blank (P0A0709-BLK1)				Prepared & Analyzed: 01/07/20						
Chloride	ND	0.100	mg/kg wet							
LCS (P0A0709-BS1)				Prepared & Analyzed: 01/07/20						
Chloride	386	1.00	mg/kg wet	400		96.4	80-120			
LCS Dup (P0A0709-BSD1)				Prepared & Analyzed: 01/07/20						
Chloride	371	1.00	mg/kg wet	400		92.8	80-120	3.81	20	
Calibration Blank (P0A0709-CCB1)				Prepared & Analyzed: 01/07/20						
Chloride	0.00		mg/kg wet							
Calibration Blank (P0A0709-CCB2)				Prepared & Analyzed: 01/07/20						
Chloride	0.00		mg/kg wet							
Calibration Check (P0A0709-CCV1)				Prepared & Analyzed: 01/07/20						
Chloride	17.9		mg/kg	20.0		89.4	0-200			
Calibration Check (P0A0709-CCV2)				Prepared & Analyzed: 01/07/20						
Chloride	19.0		mg/kg	20.0		95.1	0-200			
Calibration Check (P0A0709-CCV3)				Prepared & Analyzed: 01/07/20						
Chloride	19.3		mg/kg	20.0		96.5	0-200			
Matrix Spike (P0A0709-MS1)				Source: 0A07002-01		Prepared & Analyzed: 01/07/20				
Chloride	10800	11.2	mg/kg dry	1120	9680	95.9	80-120			
Matrix Spike (P0A0709-MS2)				Source: 0A07008-03		Prepared & Analyzed: 01/07/20				
Chloride	2930	11.5	mg/kg dry	1150	1730	104	80-120			

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P0A0709 - * DEFAULT PREP *****

Matrix Spike Dup (P0A0709-MSD1)	Source: 0A07002-01			Prepared & Analyzed: 01/07/20						
Chloride	10900	11.2	mg/kg dry	1120	9680	112	80-120	1.63	20	
Matrix Spike Dup (P0A0709-MSD2)	Source: 0A07008-03			Prepared & Analyzed: 01/07/20						
Chloride	2920	11.5	mg/kg dry	1150	1730	104	80-120	0.157	20	

Batch P0A0801 - * DEFAULT PREP *****

Blank (P0A0801-BLK1)	Prepared & Analyzed: 01/08/20									
% Moisture	ND	0.1	%							
Duplicate (P0A0801-DUP1)	Source: 0A07006-01			Prepared & Analyzed: 01/08/20						
% Moisture	15.0	0.1	%		15.0			0.00	20	
Duplicate (P0A0801-DUP2)	Source: 0A07013-04			Prepared & Analyzed: 01/08/20						
% Moisture	17.0	0.1	%		17.0			0.00	20	
Duplicate (P0A0801-DUP3)	Source: 0A07014-30			Prepared & Analyzed: 01/08/20						
% Moisture	17.0	0.1	%		17.0			0.00	20	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Notes and Definitions

BULK Samples received in Bulk soil containers
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date:

1/9/2020

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

PERMA LAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-686-7235

Permian Basin Environmental Lab, LP
1400 Rankin HWY
Midland, Texas 79701

Project Manager:

Aaron Pack Hofe

Project Name:

Denton #5 SWD

Company Name

Foster

Project #:

Company Address:

Project Loc:

Leo County, NM

City/State/Zip:

PO #:

Telephone No:

Report Format:

☐ Standard☐ TRRP☐ NPDES

Sampler Signature:

[Signature]

e-mail:

(lab use only)

ORDER #: OA07002

LAB # (lab use only)

FIELD CODE

Beginning Depth

Ending Depth

Date Sampled

Time Sampled

Field Filtered

Total #. of Containers

Ice

HNO₃

HCl

H₂SO₄

NaOH

Na₂S₂O₃

None

Other (Specify)

DW=Drinking Water SL=Sludge

GW=Groundwater S=Soil/Solid

NP=Non-Potable Specify Other

TPH: TX 1005 TX 1006

Anions (Cl, SO₄, Alkalinity)

BTEX 8021B/5030 or BTEX 8260

Preservation & # of Containers

Matrix

Analyze For:

TCLP:

TOTAL:

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Standard TAT

Special Instructions:

Relinquished by:

Aaron Pack Hofe

Date

12/27/19 12:00

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Relinquished by:

Aaron Pack Hofe

Date

12/27/19 12:00

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Relinquished by:

Aaron Pack Hofe

Date

12/27/19 12:00

Received by:

Date

12/27/19 12:00

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Date

12/27/19 12:00

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Received by:

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12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

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Relinquished by:

Aaron Pack Hofe

Date

12/27/19 12:00

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Received by:

Date

12/27/19 12:00

Time

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on containers?

Custody seals on containers?

Custody seals on covers?

Sample Hand Delivered?

by Courier?

by Sampler/Client Rep?

Temperature Upon Receipt:

Adjusted:

41.2

°C Factor:

1



Permian Basin Environmental Lab, LP
1400 Rankin HWY
Midland, TX 79701
432-686-7235

Analytical Report

Prepared for:

Aaron Pachlhofer
Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707



[PBELAB Certification Information](#)

Project: Denton NO.5 SWD

Project Number: [none]

Location: Lea County, NM

Lab Order Number: 0A29007

Report Date: 02/19/20

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-4 Surface	0A29007-01	Soil	01/28/20 09:00	01-29-2020 12:00
S-4 @ 1'	0A29007-02	Soil	01/28/20 09:05	01-29-2020 12:00
S-5 Surface	0A29007-03	Soil	01/28/20 09:07	01-29-2020 12:00
S-5 @ 1'	0A29007-04	Soil	01/28/20 09:10	01-29-2020 12:00
S-6 Surface	0A29007-05	Soil	01/28/20 09:11	01-29-2020 12:00
S-6 @ 1'	0A29007-06	Soil	01/28/20 09:15	01-29-2020 12:00
S-7 Surface	0A29007-07	Soil	01/28/20 09:18	01-29-2020 12:00
S-7 @ 1'	0A29007-08	Soil	01/28/20 09:22	01-29-2020 12:00
S-8 Surface	0A29007-09	Soil	01/28/20 09:25	01-29-2020 12:00
S-8 @ 1'	0A29007-10	Soil	01/28/20 09:30	01-29-2020 12:00
S-9 Surface	0A29007-11	Soil	01/28/20 09:35	01-29-2020 12:00
S-9 @ 1'	0A29007-12	Soil	01/28/20 09:39	01-29-2020 12:00
S-10 Surface	0A29007-13	Soil	01/28/20 09:42	01-29-2020 12:00
S-10 @ 1'	0A29007-14	Soil	01/28/20 09:46	01-29-2020 12:00
S-11 Surface	0A29007-15	Soil	01/28/20 09:50	01-29-2020 12:00
S-11 @ 1'	0A29007-16	Soil	01/28/20 09:55	01-29-2020 12:00
S-12 Surface	0A29007-17	Soil	01/28/20 09:59	01-29-2020 12:00
S-12 @ 1'	0A29007-18	Soil	01/28/20 10:04	01-29-2020 12:00
S-13 Surface	0A29007-19	Soil	01/28/20 10:10	01-29-2020 12:00
S-13 @ 1'	0A29007-20	Soil	01/28/20 10:15	01-29-2020 12:00
S-14 Surface	0A29007-21	Soil	01/28/20 10:16	01-29-2020 12:00
S-14 @ 1'	0A29007-22	Soil	01/28/20 10:21	01-29-2020 12:00
S-15 Surface	0A29007-23	Soil	01/28/20 10:30	01-29-2020 12:00
S-15 @ 1'	0A29007-24	Soil	01/28/20 10:36	01-29-2020 12:00
S-16 Surface	0A29007-25	Soil	01/28/20 11:00	01-29-2020 12:00
S-16 @ 1'	0A29007-26	Soil	01/28/20 11:10	01-29-2020 12:00
S-17 Surface	0A29007-27	Soil	01/28/20 11:20	01-29-2020 12:00
S-17 @ 1'	0A29007-28	Soil	01/28/20 11:27	01-29-2020 12:00
S-18 Surface	0A29007-29	Soil	01/28/20 11:35	01-29-2020 12:00
S-18 @ 1'	0A29007-30	Soil	01/28/20 11:41	01-29-2020 12:00
S-19 Surface	0A29007-31	Soil	01/28/20 13:14	01-29-2020 12:00
S-19 @ 1'	0A29007-32	Soil	01/28/20 13:20	01-29-2020 12:00
S-20 Surface	0A29007-33	Soil	01/28/20 13:30	01-29-2020 12:00
S-20 @ 1'	0A29007-34	Soil	01/28/20 13:35	01-29-2020 12:00

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Page 2 of 34

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-21 Surface	0A29007-35	Soil	01/28/20 13:21	01-29-2020 12:00
S-21 @ 1'	0A29007-36	Soil	01/28/20 13:25	01-29-2020 12:00
S-22 Surface	0A29007-37	Soil	01/28/20 13:35	01-29-2020 12:00
S-22 @ 1'	0A29007-38	Soil	01/28/20 13:40	01-29-2020 12:00
S-23 Surface	0A29007-39	Soil	01/28/20 14:44	01-29-2020 12:00
S-23 @ 1'	0A29007-40	Soil	01/28/20 14:53	01-29-2020 12:00
S-24 Surface	0A29007-41	Soil	01/28/20 14:55	01-29-2020 12:00
S-24 @ 1'	0A29007-42	Soil	01/28/20 15:00	01-29-2020 12:00
S-25 Surface	0A29007-43	Soil	01/28/20 15:04	01-29-2020 12:00
S-25 @ 1'	0A29007-44	Soil	01/28/20 15:08	01-29-2020 12:00
S-26 Surface	0A29007-45	Soil	01/28/20 13:47	01-29-2020 12:00
S-26 @ 1'	0A29007-46	Soil	01/28/20 13:53	01-29-2020 12:00
S-27 Surface	0A29007-47	Soil	01/28/20 15:05	01-29-2020 12:00
S-27 @ 1'	0A29007-48	Soil	01/28/20 15:10	01-29-2020 12:00
S-28 Surface	0A29007-49	Soil	01/28/20 15:15	01-29-2020 12:00
S-28 @ 1'	0A29007-50	Soil	01/28/20 15:20	01-29-2020 12:00
S-29 Surface	0A29007-51	Soil	01/28/20 13:55	01-29-2020 12:00
S-29 @ 1'	0A29007-52	Soil	01/28/20 14:00	01-29-2020 12:00
S-30 Surface	0A29007-53	Soil	01/28/20 15:19	01-29-2020 12:00
S-30 @ 1'	0A29007-54	Soil	01/28/20 15:23	01-29-2020 12:00
S-31 Surface	0A29007-55	Soil	01/28/20 14:30	01-29-2020 12:00
S-31 @ 1'	0A29007-56	Soil	01/28/20 15:35	01-29-2020 12:00
S-32 Surface	0A29007-57	Soil	01/28/20 14:07	01-29-2020 12:00
S-32 @ 1'	0A29007-58	Soil	01/28/20 14:12	01-29-2020 12:00
S-33 Surface	0A29007-59	Soil	01/28/20 14:14	01-29-2020 12:00
S-33 @ 1'	0A29007-60	Soil	01/28/20 14:20	01-29-2020 12:00
S-34 Surface	0A29007-61	Soil	01/28/20 14:23	01-29-2020 12:00
S-34 @ 1'	0A29007-62	Soil	01/28/20 14:30	01-29-2020 12:00
S-35 Surface	0A29007-63	Soil	01/28/20 14:35	01-29-2020 12:00
S-35 @ 1'	0A29007-64	Soil	01/28/20 14:40	01-29-2020 12:00
S-36 Surface	0A29007-65	Soil	01/28/20 14:40	01-29-2020 12:00
S-36 @ 1'	0A29007-66	Soil	01/28/20 15:45	01-29-2020 12:00

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General Chemistry Parameters by EPA / Standard Methods
Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-4 Surface (0A29007-01RE1) Soil										
Chloride	10700		54.3	mg/kg dry	5	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-4 @ 1' (0A29007-02RE1) Soil										
Chloride	265		11.6	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-5 Surface (0A29007-03RE1) Soil										
Chloride	5310		53.2	mg/kg dry	5	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-5 @ 1' (0A29007-04RE1) Soil										
Chloride	115		12.7	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-6 Surface (0A29007-05RE1) Soil										
Chloride	3590		56.2	mg/kg dry	5	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-6 @ 1' (0A29007-06RE1) Soil										
Chloride	144		15.2	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-7 Surface (0A29007-07RE1) Soil										
Chloride	5690		64.1	mg/kg dry	5	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-7 @ 1' (0A29007-08RE1) Soil										
Chloride	232		10.4	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-8 Surface (0A29007-09RE1) Soil										
Chloride	15400		281	mg/kg dry	25	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-8 @ 1' (0A29007-10RE1) Soil										
Chloride	219		12.7	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	

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General Chemistry Parameters by EPA / Standard Methods

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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-9 Surface (0A29007-11RE1) Soil										
Chloride	1270		10.8	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-9 @ 1' (0A29007-12RE1) Soil										
Chloride	81.3		11.5	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-10 Surface (0A29007-13RE1) Soil										
Chloride	13000		269	mg/kg dry	25	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-10 @ 1' (0A29007-14RE1) Soil										
Chloride	130		12.2	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-11 Surface (0A29007-15RE1) Soil										
Chloride	1630		10.9	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-11 @ 1' (0A29007-16RE1) Soil										
Chloride	66.6		11.6	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-12 Surface (0A29007-17RE1) Soil										
Chloride	7080		105	mg/kg dry	10	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-12 @ 1' (0A29007-18RE1) Soil										
Chloride	377		12.0	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-13 Surface (0A29007-19RE1) Soil										
Chloride	8330		106	mg/kg dry	10	P0B1801	02/18/20	02/18/20	EPA 300.0	
S-13 @ 1' (0A29007-20RE1) Soil										
Chloride	454		12.8	mg/kg dry	1	P0B1801	02/18/20	02/18/20	EPA 300.0	

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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-14 Surface (0A29007-21RE1) Soil										
Chloride	16300		27.5	mg/kg dry	25	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-14 @ 1' (0A29007-22RE1) Soil										
Chloride	59.7		1.22	mg/kg dry	1	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-15 Surface (0A29007-23RE1) Soil										
Chloride	12400		10.6	mg/kg dry	10	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-15 @ 1' (0A29007-24RE1) Soil										
Chloride	408		6.25	mg/kg dry	5	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-16 Surface (0A29007-25RE1) Soil										
Chloride	19700		29.1	mg/kg dry	25	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-16 @ 1' (0A29007-26RE1) Soil										
Chloride	131		1.11	mg/kg dry	1	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-17 Surface (0A29007-27RE1) Soil										
Chloride	855		1.08	mg/kg dry	1	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-17 @ 1' (0A29007-28RE1) Soil										
Chloride	80.0		1.27	mg/kg dry	1	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-18 Surface (0A29007-29RE1) Soil										
Chloride	18900		27.5	mg/kg dry	25	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-18 @ 1' (0A29007-30RE1) Soil										
Chloride	503		1.25	mg/kg dry	1	P0B1802	02/18/20	02/18/20	EPA 300.0	

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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-19 Surface (0A29007-31RE1) Soil										
Chloride	7900		10.9	mg/kg dry	10	P0B1802	02/18/20	02/18/20	EPA 300.0	
S-19 @ 1' (0A29007-32RE1) Soil										
Chloride	65.5		1.27	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-20 Surface (0A29007-33RE1) Soil										
Chloride	2280		5.26	mg/kg dry	5	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-20 @ 1' (0A29007-34RE1) Soil										
Chloride	81.7		1.23	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-21 Surface (0A29007-35RE1) Soil										
Chloride	14300		26.6	mg/kg dry	25	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-21 @ 1' (0A29007-36RE1) Soil										
Chloride	301		1.22	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-22 Surface (0A29007-37RE1) Soil										
Chloride	469		1.02	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-22 @ 1' (0A29007-38RE1) Soil										
Chloride	507		1.23	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-23 Surface (0A29007-39RE1) Soil										
Chloride	1100		5.43	mg/kg dry	5	P0B1802	02/18/20	02/19/20	EPA 300.0	
S-23 @ 1' (0A29007-40RE1) Soil										
Chloride	503		1.23	mg/kg dry	1	P0B1802	02/18/20	02/19/20	EPA 300.0	

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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-24 Surface (0A29007-41RE1) Soil										
Chloride	15900		26.9	mg/kg dry	25	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-24 @ 1' (0A29007-42RE1) Soil										
Chloride	1620		1.69	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-25 Surface (0A29007-43RE1) Soil										
Chloride	8580		11.1	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-25 @ 1' (0A29007-44RE1) Soil										
Chloride	288		1.16	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-26 Surface (0A29007-45RE1) Soil										
Chloride	11000		11.9	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-26 @ 1' (0A29007-46RE1) Soil										
Chloride	1310		5.62	mg/kg dry	5	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-27 Surface (0A29007-47RE1) Soil										
Chloride	7340		11.1	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-27 @ 1' (0A29007-48RE1) Soil										
Chloride	576		1.19	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-28 Surface (0A29007-49RE1) Soil										
Chloride	4970		10.6	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-28 @ 1' (0A29007-50RE1) Soil										
Chloride	599		1.18	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	

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General Chemistry Parameters by EPA / Standard Methods

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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-29 Surface (0A29007-51RE1) Soil										
Chloride	14400		27.5	mg/kg dry	25	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-29 @ 1' (0A29007-52RE1) Soil										
Chloride	674		1.18	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-30 Surface (0A29007-53RE1) Soil										
Chloride	9540		26.9	mg/kg dry	25	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-30 @ 1' (0A29007-54RE1) Soil										
Chloride	4790		13.0	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-31 Surface (0A29007-55RE1) Soil										
Chloride	8050		10.9	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-31 @ 1' (0A29007-56RE1) Soil										
Chloride	672		1.15	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-32 Surface (0A29007-57RE1) Soil										
Chloride	4010		5.15	mg/kg dry	5	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-32 @ 1' (0A29007-58RE1) Soil										
Chloride	1380		1.18	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-33 Surface (0A29007-59RE1) Soil										
Chloride	8620		10.4	mg/kg dry	10	P0B1803	02/18/20	02/18/20	EPA 300.0	
S-33 @ 1' (0A29007-60RE1) Soil										
Chloride	348		1.19	mg/kg dry	1	P0B1803	02/18/20	02/18/20	EPA 300.0	

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General Chemistry Parameters by EPA / Standard Methods

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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-34 Surface (0A29007-61RE1) Soil										
Chloride	7470		11.0	mg/kg dry	10	P0B1804	02/18/20	02/18/20	EPA 300.0	
S-34 @ 1' (0A29007-62RE1) Soil										
Chloride	1630		1.22	mg/kg dry	1	P0B1804	02/18/20	02/18/20	EPA 300.0	
S-35 Surface (0A29007-63RE1) Soil										
Chloride	7950		10.8	mg/kg dry	10	P0B1804	02/18/20	02/18/20	EPA 300.0	
S-35 @ 1' (0A29007-64RE1) Soil										
Chloride	1830		1.23	mg/kg dry	1	P0B1804	02/18/20	02/18/20	EPA 300.0	
S-36 Surface (0A29007-65RE1) Soil										
Chloride	340		1.06	mg/kg dry	1	P0B1804	02/18/20	02/18/20	EPA 300.0	
S-36 @ 1' (0A29007-66RE1) Soil										
Chloride	107		1.12	mg/kg dry	1	P0B1804	02/18/20	02/18/20	EPA 300.0	

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Organics by GC
Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-26 Surface (0A29007-45) Soil										
Benzene	<0.00119		0.00119	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00119		0.00119	"	"	"	"	"	"	
Ethylbenzene	<0.00119		0.00119	"	"	"	"	"	"	
Xylene (p/m)	<0.00238		0.00238	"	"	"	"	"	"	
Xylene (o)	<0.00119		0.00119	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			99.0 %	75-125		"	"	"	"	
Surrogate: 1,4-Difluorobenzene			96.0 %	75-125		"	"	"	"	
S-26 @ 1' (0A29007-46) Soil										
Benzene	<0.00112		0.00112	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00112		0.00112	"	"	"	"	"	"	
Ethylbenzene	<0.00112		0.00112	"	"	"	"	"	"	
Xylene (p/m)	<0.00225		0.00225	"	"	"	"	"	"	
Xylene (o)	<0.00112		0.00112	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			99.7 %	75-125		"	"	"	"	
Surrogate: 1,4-Difluorobenzene			97.0 %	75-125		"	"	"	"	
S-29 Surface (0A29007-51) Soil										
Benzene	<0.00110		0.00110	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00110		0.00110	"	"	"	"	"	"	
Ethylbenzene	<0.00110		0.00110	"	"	"	"	"	"	
Xylene (p/m)	<0.00220		0.00220	"	"	"	"	"	"	
Xylene (o)	<0.00110		0.00110	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene			95.3 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			99.7 %	75-125		"	"	"	"	
S-29 @ 1' (0A29007-52) Soil										
Benzene	<0.00118		0.00118	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00118		0.00118	"	"	"	"	"	"	
Ethylbenzene	<0.00118		0.00118	"	"	"	"	"	"	
Xylene (p/m)	<0.00235		0.00235	"	"	"	"	"	"	
Xylene (o)	<0.00118		0.00118	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene			94.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			96.4 %	75-125		"	"	"	"	

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Organics by GC
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	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-32 Surface (0A29007-57) Soil										
Benzene	<0.00103		0.00103	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00103		0.00103	"	"	"	"	"	"	
Ethylbenzene	<0.00103		0.00103	"	"	"	"	"	"	
Xylene (p/m)	<0.00206		0.00206	"	"	"	"	"	"	
Xylene (o)	<0.00103		0.00103	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene			96.3 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			101 %	75-125		"	"	"	"	
S-32 @ 1' (0A29007-58) Soil										
Benzene	<0.00118		0.00118	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00118		0.00118	"	"	"	"	"	"	
Ethylbenzene	<0.00118		0.00118	"	"	"	"	"	"	
Xylene (p/m)	<0.00235		0.00235	"	"	"	"	"	"	
Xylene (o)	<0.00118		0.00118	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene			94.5 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			99.5 %	75-125		"	"	"	"	
S-34 Surface (0A29007-61) Soil										
Benzene	<0.00110		0.00110	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00110		0.00110	"	"	"	"	"	"	
Ethylbenzene	<0.00110		0.00110	"	"	"	"	"	"	
Xylene (p/m)	<0.00220		0.00220	"	"	"	"	"	"	
Xylene (o)	<0.00110		0.00110	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			98.2 %	75-125		"	"	"	"	
Surrogate: 1,4-Difluorobenzene			95.8 %	75-125		"	"	"	"	
S-34 @ 1' (0A29007-62) Soil										
Benzene	<0.00122		0.00122	mg/kg dry	1	P0B1004	02/10/20	02/11/20	EPA 8021B	
Toluene	<0.00122		0.00122	"	"	"	"	"	"	
Ethylbenzene	<0.00122		0.00122	"	"	"	"	"	"	
Xylene (p/m)	<0.00244		0.00244	"	"	"	"	"	"	
Xylene (o)	<0.00122		0.00122	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			102 %	75-125		"	"	"	"	
Surrogate: 1,4-Difluorobenzene			95.6 %	75-125		"	"	"	"	

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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-26 Surface (0A29007-45) Soil										
C6-C12	<29.8		29.8	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	198		29.8	"	"	"	"	"	"	
>C28-C35	107		29.8	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			84.4 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			106 %	70-130		"	"	"	"	
S-26 @ 1' (0A29007-46) Soil										
C6-C12	<28.1		28.1	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	<28.1		28.1	"	"	"	"	"	"	
>C28-C35	35.7		28.1	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			89.0 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			111 %	70-130		"	"	"	"	
S-29 Surface (0A29007-51) Soil										
C6-C12	<27.5		27.5	mg/kg dry	1	P0B1107	02/11/20	02/14/20	TPH 8015M	
>C12-C28	162		27.5	"	"	"	"	"	"	
>C28-C35	45.4		27.5	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			118 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			117 %	70-130		"	"	"	"	
S-29 @ 1' (0A29007-52) Soil										
C6-C12	<29.4		29.4	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	<29.4		29.4	"	"	"	"	"	"	
>C28-C35	<29.4		29.4	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			102 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			120 %	70-130		"	"	"	"	
S-32 Surface (0A29007-57) Soil										
C6-C12	<25.8		25.8	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	158		25.8	"	"	"	"	"	"	
>C28-C35	37.9		25.8	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			98.8 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			117 %	70-130		"	"	"	"	

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Project: Denton NO.5 SWD
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Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-32 @ 1' (0A29007-58) Soil										
C6-C12	<29.4		29.4	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	<29.4		29.4	"	"	"	"	"	"	
>C28-C35	<29.4		29.4	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			98.2 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			114 %	70-130		"	"	"	"	
S-34 Surface (0A29007-61) Soil										
C6-C12	<27.5		27.5	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	623		27.5	"	"	"	"	"	"	
>C28-C35	127		27.5	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			103 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			124 %	70-130		"	"	"	"	
S-34 @ 1' (0A29007-62) Soil										
C6-C12	<30.5		30.5	mg/kg dry	1	P0B1107	02/11/20	02/11/20	TPH 8015M	
>C12-C28	62.8		30.5	"	"	"	"	"	"	
>C28-C35	37.0		30.5	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>			98.3 %	70-130		"	"	"	"	
<i>Surrogate: o-Terphenyl</i>			115 %	70-130		"	"	"	"	

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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-4 Surface (0A29007-01) Soil										
% Moisture	8.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-4 @ 1' (0A29007-02) Soil										
% Moisture	14.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-5 Surface (0A29007-03) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-5 @ 1' (0A29007-04) Soil										
% Moisture	21.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-6 Surface (0A29007-05) Soil										
% Moisture	11.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-6 @ 1' (0A29007-06) Soil										
% Moisture	34.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-7 Surface (0A29007-07) Soil										
% Moisture	22.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-7 @ 1' (0A29007-08) Soil										
% Moisture	4.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-8 Surface (0A29007-09) Soil										
% Moisture	11.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-8 @ 1' (0A29007-10) Soil										
% Moisture	21.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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Project Manager: Aaron Pachlhofer

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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-9 Surface (0A29007-11) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-9 @ 1' (0A29007-12) Soil										
% Moisture	13.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-10 Surface (0A29007-13) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-10 @ 1' (0A29007-14) Soil										
% Moisture	18.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-11 Surface (0A29007-15) Soil										
% Moisture	8.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-11 @ 1' (0A29007-16) Soil										
% Moisture	14.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-12 Surface (0A29007-17) Soil										
% Moisture	5.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-12 @ 1' (0A29007-18) Soil										
% Moisture	17.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-13 Surface (0A29007-19) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-13 @ 1' (0A29007-20) Soil										
% Moisture	22.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-14 Surface (0A29007-21) Soil										
% Moisture	9.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-14 @ 1' (0A29007-22) Soil										
% Moisture	18.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-15 Surface (0A29007-23) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-15 @ 1' (0A29007-24) Soil										
% Moisture	20.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-16 Surface (0A29007-25) Soil										
% Moisture	14.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-16 @ 1' (0A29007-26) Soil										
% Moisture	10.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-17 Surface (0A29007-27) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-17 @ 1' (0A29007-28) Soil										
% Moisture	21.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-18 Surface (0A29007-29) Soil										
% Moisture	9.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-18 @ 1' (0A29007-30) Soil										
% Moisture	20.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
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Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-19 Surface (0A29007-31) Soil										
% Moisture	8.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-19 @ 1' (0A29007-32) Soil										
% Moisture	21.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-20 Surface (0A29007-33) Soil										
% Moisture	5.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-20 @ 1' (0A29007-34) Soil										
% Moisture	19.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-21 Surface (0A29007-35) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-21 @ 1' (0A29007-36) Soil										
% Moisture	18.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-22 Surface (0A29007-37) Soil										
% Moisture	2.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-22 @ 1' (0A29007-38) Soil										
% Moisture	19.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-23 Surface (0A29007-39) Soil										
% Moisture	8.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-23 @ 1' (0A29007-40) Soil										
% Moisture	19.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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Project: Denton NO.5 SWD
Project Number: [none]
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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-24 Surface (0A29007-41) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-24 @ 1' (0A29007-42) Soil										
% Moisture	41.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-25 Surface (0A29007-43) Soil										
% Moisture	10.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-25 @ 1' (0A29007-44) Soil										
% Moisture	14.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-26 Surface (0A29007-45) Soil										
% Moisture	16.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-26 @ 1' (0A29007-46) Soil										
% Moisture	11.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-27 Surface (0A29007-47) Soil										
% Moisture	10.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-27 @ 1' (0A29007-48) Soil										
% Moisture	16.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-28 Surface (0A29007-49) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-28 @ 1' (0A29007-50) Soil										
% Moisture	15.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-29 Surface (0A29007-51) Soil										
% Moisture	9.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-29 @ 1' (0A29007-52) Soil										
% Moisture	15.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-30 Surface (0A29007-53) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-30 @ 1' (0A29007-54) Soil										
% Moisture	23.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-31 Surface (0A29007-55) Soil										
% Moisture	8.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-31 @ 1' (0A29007-56) Soil										
% Moisture	13.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-32 Surface (0A29007-57) Soil										
% Moisture	3.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-32 @ 1' (0A29007-58) Soil										
% Moisture	15.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-33 Surface (0A29007-59) Soil										
% Moisture	4.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-33 @ 1' (0A29007-60) Soil										
% Moisture	16.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

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Project Manager: Aaron Pachlhofer

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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-34 Surface (0A29007-61) Soil										
% Moisture	9.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-34 @ 1' (0A29007-62) Soil										
% Moisture	18.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-35 Surface (0A29007-63) Soil										
% Moisture	7.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-35 @ 1' (0A29007-64) Soil										
% Moisture	19.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-36 Surface (0A29007-65) Soil										
% Moisture	6.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	
S-36 @ 1' (0A29007-66) Soil										
% Moisture	11.0		0.1	%	1	P0A3003	01/30/20	01/30/20	ASTM D2216	

Permian Basin Environmental Lab, L.P.

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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

Permian Basin Environmental Lab, L.P.

	Result	SQL	MQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-26 Surface (0A29007-45) Soil										
Total Petroleum Hydrocarbon C6-C35	304		29.8	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-26 @ 1' (0A29007-46) Soil										
Total Petroleum Hydrocarbon C6-C35	35.7		28.1	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-29 Surface (0A29007-51) Soil										
Total Petroleum Hydrocarbon C6-C35	207		27.5	mg/kg dry	1	[CALC]	02/11/20	02/14/20	calc	
S-29 @ 1' (0A29007-52) Soil										
Total Petroleum Hydrocarbon C6-C35	<29.4		29.4	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-32 Surface (0A29007-57) Soil										
Total Petroleum Hydrocarbon C6-C35	196		25.8	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-32 @ 1' (0A29007-58) Soil										
Total Petroleum Hydrocarbon C6-C35	<29.4		29.4	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-34 Surface (0A29007-61) Soil										
Total Petroleum Hydrocarbon C6-C35	750		27.5	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	
S-34 @ 1' (0A29007-62) Soil										
Total Petroleum Hydrocarbon C6-C35	99.8		30.5	mg/kg dry	1	[CALC]	02/11/20	02/11/20	calc	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1801 - *** DEFAULT PREP ***				Analyst:METROHN						
Blank (P0B1801-BLK1)				Prepared & Analyzed: 02/18/20						
Chloride	ND	10.0	mg/kg wet							
LCS (P0B1801-BS1)				Prepared & Analyzed: 02/18/20						
Chloride	411	10.0	mg/kg wet	400		103	80-120			
LCS Dup (P0B1801-BSD1)				Prepared & Analyzed: 02/18/20						
Chloride	413	10.0	mg/kg wet	400		103	80-120	0.516	20	
Calibration Blank (P0B1801-CCB1)				Prepared & Analyzed: 02/18/20						
Chloride	0.495		mg/kg wet							
Calibration Blank (P0B1801-CCB2)				Prepared & Analyzed: 02/18/20						
Chloride	0.406		mg/kg wet							
Calibration Check (P0B1801-CCV1)				Prepared & Analyzed: 02/18/20						
Chloride	19.7		mg/kg	20.0		98.4	0-200			
Calibration Check (P0B1801-CCV2)				Prepared & Analyzed: 02/18/20						
Chloride	20.1		mg/kg	20.0		101	0-200			
Matrix Spike (P0B1801-MS1)				Source: 0A29007-01RE1		Prepared & Analyzed: 02/18/20				
Chloride	11800	54.3	mg/kg dry	1090	10700	102	80-120			
Matrix Spike (P0B1801-MS2)				Source: 0A29007-11RE1		Prepared & Analyzed: 02/18/20				
Chloride	1760	10.8	mg/kg dry	108	1270	459	80-120			QM-07
Matrix Spike Dup (P0B1801-MSD1)				Source: 0A29007-01RE1		Prepared & Analyzed: 02/18/20				
Chloride	11900	54.3	mg/kg dry	1090	10700	107	80-120	0.439	20	

Fasken Oil & Ranch, Ltd.
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Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1801 - *** DEFAULT PREP ***				Analyst:METROHN						
Matrix Spike Dup (P0B1801-MSD2)		Source: 0A29007-11RE1		Prepared & Analyzed: 02/18/20						
Chloride	1110	10.8	mg/kg dry	108	1270	NR	80-120	45.2	20	QM-07
Batch P0B1802 - *** DEFAULT PREP ***				Analyst: BB						
Blank (P0B1802-BLK1)		Prepared & Analyzed: 02/18/20								
Chloride	2.97	1.00	mg/kg wet							
LCS (P0B1802-BS1)		Prepared & Analyzed: 02/18/20								
Chloride	421	1.00	mg/kg wet	400		105	80-120			
LCS Dup (P0B1802-BSD1)		Prepared & Analyzed: 02/18/20								
Chloride	410	1.00	mg/kg wet	400		103	80-120	2.52	20	
Calibration Check (P0B1802-CCV1)				Prepared & Analyzed: 02/18/20						
Chloride	20.2		mg/kg	20.0		101	0-200			
Calibration Check (P0B1802-CCV2)				Prepared & Analyzed: 02/18/20						
Chloride	20.4		mg/kg	20.0		102	0-200			
Matrix Spike (P0B1802-MS1)		Source: 0A29007-21RE1		Prepared & Analyzed: 02/18/20						
Chloride	19800	27.5	mg/kg dry	2750	16300	126	80-120	QM-07		
Matrix Spike (P0B1802-MS2)		Source: 0A29007-31RE1		Prepared: 02/18/20 Analyzed: 02/19/20						
Chloride	8930	10.9	mg/kg dry	1090	7900	94.6	80-120			
Matrix Spike Dup (P0B1802-MSD1)		Source: 0A29007-21RE1		Prepared & Analyzed: 02/18/20						
Chloride	19600	27.5	mg/kg dry	2750	16300	121	80-120	0.669	20	QM-07

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1802 - *** DEFAULT PREP ***				Analyst:METROHN						
Matrix Spike Dup (P0B1802-MSD2)		Source: 0A29007-31RE1		Prepared: 02/18/20 Analyzed: 02/19/20						
Chloride	8900	10.9	mg/kg dry	1090	7900	92.2	80-120	0.289	20	
Batch P0B1803 - *** DEFAULT PREP ***				Analyst:METROHN						
Blank (P0B1803-BLK1)		Prepared & Analyzed: 02/18/20								
Chloride	ND	1.00	mg/kg wet							
LCS (P0B1803-BS1)		Prepared & Analyzed: 02/18/20								
Chloride	453	1.00	mg/kg wet	400		113	80-120			
LCS Dup (P0B1803-BSD1)		Prepared & Analyzed: 02/18/20								
Chloride	452	1.00	mg/kg wet	400		113	80-120	0.292	20	
Calibration Blank (P0B1803-CCB1)		Prepared & Analyzed: 02/18/20								
Chloride	0.0150		mg/kg wet							
Calibration Blank (P0B1803-CCB2)		Prepared & Analyzed: 02/18/20								
Chloride	0.0180		mg/kg wet							
Calibration Check (P0B1803-CCV1)		Prepared & Analyzed: 02/18/20								
Chloride	20.0		mg/kg	20.0		99.8	0-200			
Calibration Check (P0B1803-CCV2)		Prepared & Analyzed: 02/18/20								
Chloride	19.8		mg/kg	20.0		99.0	0-200			
Matrix Spike (P0B1803-MS1)		Source: 0A29007-41RE1		Prepared & Analyzed: 02/18/20						
Chloride	18700	26.9	mg/kg dry	2690	15900	105	80-120			

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1803 - *** DEFAULT PREP ***				Analyst:METROHN						
Matrix Spike (P0B1803-MS2)				Source: 0A29007-51RE1		Prepared & Analyzed: 02/18/20				
Chloride	17500	27.5	mg/kg dry	2750	14400	114	80-120			
Matrix Spike Dup (P0B1803-MSD1)				Source: 0A29007-41RE1		Prepared & Analyzed: 02/18/20				
Chloride	18800	26.9	mg/kg dry	2690	15900	106	80-120	0.199	20	
Matrix Spike Dup (P0B1803-MSD2)				Source: 0A29007-51RE1		Prepared & Analyzed: 02/18/20				
Chloride	17500	27.5	mg/kg dry	2750	14400	113	80-120	0.0487	20	
Batch P0B1804 - *** DEFAULT PREP ***				Analyst:METROHN						
Blank (P0B1804-BLK1)				Prepared & Analyzed: 02/18/20						
Chloride	ND	1.00	mg/kg wet							
LCS (P0B1804-BS1)				Prepared & Analyzed: 02/18/20						
Chloride	457	1.00	mg/kg wet	400		114	80-120			
LCS Dup (P0B1804-BSD1)				Prepared & Analyzed: 02/18/20						
Chloride	455	1.00	mg/kg wet	400		114	80-120	0.439	20	
Calibration Blank (P0B1804-CCB1)				Prepared & Analyzed: 02/18/20						
Chloride	0.0190		mg/kg wet							
Calibration Check (P0B1804-CCV1)				Prepared & Analyzed: 02/18/20						
Chloride	20.3		mg/kg	20.0		101	0-200			
Calibration Check (P0B1804-CCV2)				Prepared: 02/18/20 Analyzed: 02/19/20						
Chloride	19.9		mg/kg	20.0		99.6	0-200			

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
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General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1804 - *** DEFAULT PREP ***				Analyst:METROHN						
Matrix Spike (P0B1804-MS1)		Source: 0A29007-61RE1		Prepared & Analyzed: 02/18/20						
Chloride	8460	11.0	mg/kg dry	1100	7470	89.6	80-120			
Matrix Spike Dup (P0B1804-MSD1)		Source: 0A29007-61RE1		Prepared & Analyzed: 02/18/20						
Chloride	8490	11.0	mg/kg dry	1100	7470	92.6	80-120	0.387	20	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0B1004 - General Preparation (GC)

Analyst: BB/JLB

Blank (P0B1004-BLK1)

Prepared & Analyzed: 02/10/20

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.4	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.6	75-125			

LCS (P0B1004-BS1)

Prepared & Analyzed: 02/10/20

Benzene	0.102	0.00100	mg/kg wet	0.100		102	70-130			
Toluene	0.0998	0.00100	"	0.100		99.8	70-130			
Ethylbenzene	0.105	0.00100	"	0.100		105	70-130			
Xylene (p/m)	0.197	0.00200	"	0.200		98.7	70-130			
Xylene (o)	0.109	0.00100	"	0.100		109	70-130			
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		102	75-125			

LCS Dup (P0B1004-BSD1)

Prepared & Analyzed: 02/10/20

Benzene	0.104	0.00100	mg/kg wet	0.100		104	70-130	2.19	20	
Toluene	0.0980	0.00100	"	0.100		98.0	70-130	1.82	20	
Ethylbenzene	0.102	0.00100	"	0.100		102	70-130	2.70	20	
Xylene (p/m)	0.194	0.00200	"	0.200		97.2	70-130	1.52	20	
Xylene (o)	0.108	0.00100	"	0.100		108	70-130	1.02	20	
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120		100	75-125			

Calibration Blank (P0B1004-CCB1)

Prepared & Analyzed: 02/10/20

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		96.0	75-125			
Surrogate: 1,4-Difluorobenzene	0.112		"	0.120		93.0	75-125			

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0B1004 - General Preparation (GC)

Analyst: BB/JLB

Calibration Blank (P0B1004-CCB2)

Prepared: 02/10/20 Analyzed: 02/11/20

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120		97.0	75-125			

Calibration Check (P0B1004-CCV1)

Prepared & Analyzed: 02/10/20

Benzene	0.101	0.00100	mg/kg wet	0.100		101	80-120			
Toluene	0.0945	0.00100	"	0.100		94.5	80-120			
Ethylbenzene	0.0960	0.00100	"	0.100		96.0	80-120			
Xylene (p/m)	0.185	0.00200	"	0.200		92.5	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.7	75-125			
Surrogate: 4-Bromofluorobenzene	0.123		"	0.120		103	75-125			

Calibration Check (P0B1004-CCV2)

Prepared: 02/10/20 Analyzed: 02/11/20

Benzene	0.0986	0.00100	mg/kg wet	0.100		98.6	80-120			
Toluene	0.0916	0.00100	"	0.100		91.6	80-120			
Ethylbenzene	0.0910	0.00100	"	0.100		91.0	80-120			
Xylene (p/m)	0.177	0.00200	"	0.200		88.6	80-120			
Xylene (o)	0.0996	0.00100	"	0.100		99.6	80-120			
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.5	75-125			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		99.9	75-125			

Calibration Check (P0B1004-CCV3)

Prepared: 02/10/20 Analyzed: 02/11/20

Benzene	0.0974	0.00100	mg/kg wet	0.100		97.4	80-120			
Toluene	0.0914	0.00100	"	0.100		91.4	80-120			
Ethylbenzene	0.0918	0.00100	"	0.100		91.8	80-120			
Xylene (p/m)	0.175	0.00200	"	0.200		87.6	80-120			
Xylene (o)	0.0989	0.00100	"	0.100		98.9	80-120			
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		96.1	75-125			
Surrogate: 4-Bromofluorobenzene	0.120		"	0.120		100	75-125			

Permian Basin Environmental Lab, L.P.

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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0B1004 - General Preparation (GC)

Analyst: BB/JLB

Matrix Spike (P0B1004-MS1)

Source: 0B07010-21

Prepared: 02/10/20 Analyzed: 02/11/20

Benzene	0.0700	0.00104	mg/kg dry	0.104	ND	67.2	80-120			QM-07
Toluene	0.0615	0.00104	"	0.104	ND	59.0	80-120			QM-07
Ethylbenzene	0.0731	0.00104	"	0.104	ND	70.2	80-120			QM-07
Xylene (p/m)	0.118	0.00208	"	0.208	ND	56.5	80-120			QM-07
Xylene (o)	0.0599	0.00104	"	0.104	ND	57.5	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	0.123		"	0.125		98.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.131		"	0.125		104	75-125			

Matrix Spike Dup (P0B1004-MSD1)

Source: 0B07010-21

Prepared: 02/10/20 Analyzed: 02/11/20

Benzene	0.0723	0.00104	mg/kg dry	0.104	ND	69.4	80-120	3.19	20	QM-07
Toluene	0.0578	0.00104	"	0.104	ND	55.5	80-120	6.18	20	QM-07
Ethylbenzene	0.0673	0.00104	"	0.104	ND	64.6	80-120	8.25	20	QM-07
Xylene (p/m)	0.107	0.00208	"	0.208	ND	51.1	80-120	9.95	20	QM-07
Xylene (o)	0.0558	0.00104	"	0.104	ND	53.6	80-120	7.09	20	QM-07
Surrogate: 4-Bromofluorobenzene	0.126		"	0.125		101	75-125			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.125		98.1	75-125			

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
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Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0B1107 - TX 1005

Analyst: bb/sg

Blank (P0B1107-BLK1)

Prepared & Analyzed: 02/11/20

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	95.8		"	100		95.8	70-130			
Surrogate: o-Terphenyl	55.3		"	50.0		111	70-130			

LCS (P0B1107-BS1)

Prepared & Analyzed: 02/11/20

C6-C12	955	25.0	mg/kg wet	1000		95.5	75-125			
>C12-C28	1160	25.0	"	1000		116	75-125			
Surrogate: 1-Chlorooctane	104		"	100		104	70-130			
Surrogate: o-Terphenyl	50.7		"	50.0		101	70-130			

LCS Dup (P0B1107-BSD1)

Prepared & Analyzed: 02/11/20

C6-C12	885	25.0	mg/kg wet	1000		88.5	75-125	7.64	20	
>C12-C28	1090	25.0	"	1000		109	75-125	5.96	20	
Surrogate: 1-Chlorooctane	107		"	100		107	70-130			
Surrogate: o-Terphenyl	47.4		"	50.0		94.8	70-130			

Calibration Blank (P0B1107-CCB1)

Prepared & Analyzed: 02/11/20

C6-C12	18.8		mg/kg wet							
>C12-C28	6.30		"							
Surrogate: 1-Chlorooctane	98.7		"	100		98.7	70-130			
Surrogate: o-Terphenyl	57.5		"	50.0		115	70-130			

Calibration Blank (P0B1107-CCB2)

Prepared & Analyzed: 02/11/20

C6-C12	16.7		mg/kg wet							
>C12-C28	16.0		"							
Surrogate: 1-Chlorooctane	88.6		"	100		88.6	70-130			
Surrogate: o-Terphenyl	51.1		"	50.0		102	70-130			

Permian Basin Environmental Lab, L.P.

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Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	ML	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0B1107 - TX 1005				Analyst: bb/sg						
Calibration Check (P0B1107-CCV1)				Prepared & Analyzed: 02/11/20						
C6-C12	532	25.0	mg/kg wet	500		106	85-115			
>C12-C28	556	25.0	"	500		111	85-115			
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	56.2		"	50.0		112	70-130			
Calibration Check (P0B1107-CCV2)				Prepared & Analyzed: 02/11/20						
C6-C12	443	25.0	mg/kg wet	500		88.7	85-115			
>C12-C28	493	25.0	"	500		98.6	85-115			
Surrogate: 1-Chlorooctane	99.1		"	100		99.1	70-130			
Surrogate: o-Terphenyl	48.0		"	50.0		96.1	70-130			
Calibration Check (P0B1107-CCV3)				Prepared: 02/11/20 Analyzed: 02/14/20						
C6-C12	ND	25.0	mg/kg wet	500			85-115			
>C12-C28	ND	25.0	"	500			85-115			
Surrogate: 1-Chlorooctane	0.00		"	100			70-130			
Surrogate: o-Terphenyl	0.00		"	50.0			70-130			
Matrix Spike (P0B1107-MS1)				Source: 0B07004-03		Prepared & Analyzed: 02/11/20				
C6-C12	1030	25.8	mg/kg dry	1030	16.5	98.0	75-125			
>C12-C28	1030	25.8	"	1030	120	88.2	75-125			
Surrogate: 1-Chlorooctane	126		"	103		122	70-130			
Surrogate: o-Terphenyl	56.2		"	51.5		109	70-130			
Matrix Spike Dup (P0B1107-MSD1)				Source: 0B07004-03		Prepared & Analyzed: 02/11/20				
C6-C12	1090	25.8	mg/kg dry	1030	16.5	104	75-125	6.18	20	
>C12-C28	1140	25.8	"	1030	120	99.3	75-125	11.8	20	
Surrogate: 1-Chlorooctane	103		"	103		100	70-130			
Surrogate: o-Terphenyl	57.8		"	51.5		112	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Page 32 of 34

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	ML	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0A3003 - *** DEFAULT PREP ***				Analyst: KC						
Blank (P0A3003-BLK1)				Prepared & Analyzed: 01/30/20						
% Moisture	ND	0.1	%							
Duplicate (P0A3003-DUP1)				Source: 0A29007-23 Prepared & Analyzed: 01/30/20						
% Moisture	7.0	0.1	%		6.0			15.4	20	
Duplicate (P0A3003-DUP2)				Source: 0A29007-50 Prepared & Analyzed: 01/30/20						
% Moisture	15.0	0.1	%		15.0			0.00	20	
Duplicate (P0A3003-DUP3)				Source: 0A29010-03 Prepared & Analyzed: 01/30/20						
% Moisture	11.0	0.1	%		10.0			9.52	20	
Duplicate (P0A3003-DUP4)				Source: 0A29012-01 Prepared & Analyzed: 01/30/20						
% Moisture	7.0	0.1	%		8.0			13.3	20	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Notes and Definitions

ROI	Received on Ice
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BULK	Samples received in Bulk soil containers
MQL	Method Quantitation Limit
SQL	Sample Quantitation Limit
UMQL	Unadjusted MQL = MQL / Dilution
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
MS	Matrix Spike
Dup	Duplicate

Report Approved By:



Date:

2/19/2020

Brent Barron, Laboratory Director/Corp. Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-686-7235

Project Manager: Aaron Pachhofer

Project Name: Denton No. 5 SWD

Company Name: Fasken Oil and Ranch, Ltd

Project #:

Company Address: 6101 Holiday Hill Road

Project Loc: Lea County, NM

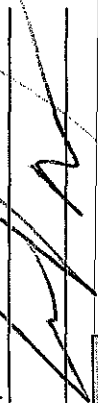
City/State/Zip: Midland, TX 79707

PO #:

Telephone No: 432-687-1777

Fax No: 432-687-1570

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: 

e-mail: aaronp@forl.com

(lab use only)
ORDER #: 0A29007

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers										Matrix	Analyze For:										Standard TAT					
								Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid		NP=Non-Probable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260		RCI	N.O.R.M.	Glycol		
21	S-14 Surface			1/28/2020	10:16			X									S				X													X
22	S-14 1'			1/28/2020	10:21			X									S				X													X
23	S-15 Surface			1/28/2020	10:30			X									S				X													X
24	S-15 1'			1/28/2020	10:36			X									S				X													X
25	S-16 Surface			1/28/2020	11:00			X									S				X													X
26	S-16 1'			1/28/2020	11:10			X									S				X													X
27	S-17 Surface			1/28/2020	11:20			X									S				X													X
28	S-17 1'			1/28/2020	11:27			X									S				X													X
29	S-18 Surface			1/28/2020	11:35			X									S				X													X
30	S-18 1'			1/28/2020	11:41			X									S				X													X

Special Instructions:

Inquired by: Aaron Pachhofer
Inquired by:
Inquired by:

Date: 1/29/20
Time: 12:00
Received by:
Received by:
Received by:

Date: 1/29/20
Time: 12:00
Received by: 

Laboratory Comments:

Sample Containers Intact? ☒
VOCs Free of Headspace? ☒
Labels on containers? ☒
Custody seals on container(s)? ☒
Custody seals on cooler(s)? ☒
Sample Hand Delivered? ☒
by Sampler/Client Rep? ☒
by Courier? ☒ GPS ☒ DHL ☒ FedEx ☒ Lone Star
Temperature Upon Receipt: 41.5 °C
Received: 1/29/20
Adjusted: 1.2

PBELLAB**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-686-7235

Project Manager: Aaron Pachthofer

Project Name: Denton No. 5 SWD

Company Name: Fasken Oil and Ranch, Ltd

Project #:

Company Address: 6101 Holiday Hill Road

Project Loc: Lea County, NM

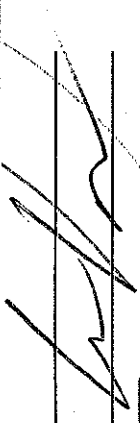
City/State/Zip: Midland, TX 79707

PO #:

Telephone No: 432-687-1777

Fax No: 432-687-1570

Report Format: X Standard

☐ TRRP☐ NPDESSampler Signature: 

e-mail: aaronp@forl.com

(lab use only)

ORDER # CA29007

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Matrix	Preservation & # of Containers	Analyze For:
										TCLP: TOTAL:
31	S-19 Surface			1/28/2020	13:14					TPH: 418.1 8015M 8015F TPH: TX 1005 TX 1006 Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Alkalinity) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles Semivolatiles BTEX 8021B/5030 or BTEX 8260 RUSH TAT (Pre-Schedule) 24, 48, 72 hrs
32	S-19 1'			1/28/2020	13:20			S	GW = Groundwater SL = Soil/Solid NP = Non-Potable Specify Other	
33	S-20 Surface			1/28/2020	13:30			S		
34	S-20 1'			1/28/2020	13:35			S		
35	S-21 Surface			1/28/2020	13:40			S		
36	S-21 1'			1/28/2020	13:45			S		
37	S-22 Surface			1/28/2020	13:45			S		
38	S-22 1'			1/28/2020	13:40			S		
39	S-23 Surface			1/28/2020	14:44			S		
40	S-23 1'			1/28/2020	14:53			S		

Special Instructions:

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Courier? UPS DHL

Temperature Upon Receipt

Received: 4/5 °C

Adjusted: 1 L2

Inquired by: for Pachthofer	Date 1/29/20	Time 12:00	Received by:	Date	Time
Inquired by:	Date	Time	Received by:	Date	Time
Inquired by:	Date	Time	Received by:	Date	Time

PBELAB**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Project Manager: Aaron Pachthofer

Company Name: Fasken Oil and Ranch, Ltd

Company Address: 6101 Holiday Hill Road

City/State/Zip: Midland, TX 79707

Telephone No: 432-687-1777

Sampler Signature: 

Fax No: 432-687-1570

e-mail: aaronp@forl.com

Project Name: Denton No. 5 SWD

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 04299007

(lab use only)

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers												Analyze For:														
								Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Portable Specify Other	TPH: 418.1 8015M	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Glycol	RUSH TAT (Pre-Schedule) 24	Standard TAT				
51	S-29 Surface			1/28/2020	13:55			X								S	S															X		
52	S-29 1'			1/28/2020	14:00			X								S	S															X		
53	S-30 Surface			1/28/2020	15:19			X								S	S															X		
54	S-30 1'			1/28/2020	15:23			X								S	S															X		
55	S-31 Surface			1/28/2020	14:30			X								S	S															X		
56	S-31 1'			1/28/2020	15:35			X								S	S															X		
57	S-32 Surface			1/28/2020	14:07			X								S	S															X		
58	S-32 1'			1/28/2020	14:12			X								S	S															X		
59	S-33 Surface			1/28/2020	14:14			X								S	S															X		
60	S-33 1'			1/28/2020	14:20																												X	

Special Instructions:**Laboratory Comments:**

Sample Containers Intact? ☒
VOCs Free of Headspace? ☒
Labels on container(s) ☒
Custody seals on container(s) ☒
Custody seals on cooler(s) ☒
Sample Hand Delivered ☒
by Sample/Guest Rep? ☒
by Counter? ☒
by UPS ☒
by DHL ☒
by FedEx ☒
by Lone Star ☒
Temperature Upon Receipt ☒
Received ☒
Adjusted ☒
°C Factor 1.22

Relinquished by: Aaron Pachthofer	Date: 1/29/20	Time: 12:00	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date: 1/29/20	Time: 12:00

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Aaron Pachlhofer
Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707

Project: Denton NO.5 SWD

Project Number: [none]

Location: Lea County, NM

Lab Order Number: 0C03013



NELAP/TCEQ # T104704516-18-9

Report Date: 03/06/20

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1a 6"	0C03013-01	Soil	03/02/20 14:09	03-03-2020 12:00
S-4a 6"	0C03013-02	Soil	03/02/20 14:53	03-03-2020 12:00
S-8a 6"	0C03013-03	Soil	03/02/20 13:53	03-03-2020 12:00
S-10a 6"	0C03013-04	Soil	03/02/20 13:54	03-03-2020 12:00
S-14a 6"	0C03013-05	Soil	03/02/20 14:49	03-03-2020 12:00
S-15a 6"	0C03013-06	Soil	03/02/20 13:49	03-03-2020 12:00
S-16a 6"	0C03013-07	Soil	03/02/20 14:10	03-03-2020 12:00
S-18a 6"	0C03013-08	Soil	03/02/20 14:06	03-03-2020 12:00
S-21a 6"	0C03013-09	Soil	03/02/20 13:47	03-03-2020 12:00
S-24a 6"	0C03013-10	Soil	03/02/20 11:34	03-03-2020 12:00
S-26a 6"	0C03013-11	Soil	03/02/20 10:50	03-03-2020 12:00
S-29a 6"	0C03013-12	Soil	03/02/20 10:53	03-03-2020 12:00

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-1a 6"
0C03013-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	1330	5.62	mg/kg dry	5	POC0315	03/03/20 15:00	03/04/20 06:26	EPA 300.0	
% Moisture	11.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-4a 6"

0C03013-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	80.6	1.10	mg/kg dry	1	POC0315	03/03/20 15:00	03/04/20 06:41	EPA 300.0	
% Moisture	9.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-8a 6"

0C03013-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	5240	29.1	mg/kg dry	25	POC0315	03/03/20 15:00	03/04/20 06:57	EPA 300.0	
% Moisture	14.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
---	---	------------------

S-10a 6"
0C03013-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	2500	11.4	mg/kg dry	10	POC0315	03/03/20 15:00	03/04/20 07:13	EPA 300.0	
% Moisture	12.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-14a 6"
0C03013-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	2380	11.4	mg/kg dry	10	POC0315	03/03/20 15:00	03/04/20 07:29	EPA 300.0	
% Moisture	12.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-15a 6"
0C03013-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	2890	11.5	mg/kg dry	10	POC0315	03/03/20 15:00	03/04/20 07:44	EPA 300.0	
% Moisture	13.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

S-16a 6"
0C03013-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	574	5.38	mg/kg dry	5	POC0315	03/03/20 15:00	03/04/20 08:00	EPA 300.0	
% Moisture	7.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
---	---	------------------

S-18a 6"
0C03013-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	2820	12.0	mg/kg dry	10	POC0315	03/03/20 15:00	03/04/20 08:16	EPA 300.0	
% Moisture	17.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
---	---	------------------

S-21a 6"
0C03013-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	4010	11.4	mg/kg dry	10	POC0315	03/03/20 15:00	03/04/20 08:32	EPA 300.0	
% Moisture	12.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
---	---	------------------

S-24a 6"
0C03013-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	1630	6.49	mg/kg dry	5	POC0312	03/03/20 16:00	03/04/20 10:15	EPA 300.0	
% Moisture	23.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
---	---	------------------

S-26a 6"
0C03013-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	1070	5.62	mg/kg dry	5	POC0312	03/03/20 16:00	03/04/20 10:30	EPA 300.0	
% Moisture	11.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

Fasken Oil & Ranch, Ltd. 6101 Holiday Hill Road Midland TX, 79707	Project: Denton NO.5 SWD Project Number: [none] Project Manager: Aaron Pachlhofer	Fax: 43-687-1570
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S-29a 6"
0C03013-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods									
Chloride	3540	27.8	mg/kg dry	25	POC0312	03/03/20 16:00	03/04/20 10:45	EPA 300.0	
% Moisture	10.0	0.1	%	1	POC0504	03/05/20 08:10	03/05/20 08:18	ASTM D2216	

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6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0C0312 - *** DEFAULT PREP ***										
Blank (P0C0312-BLK1)				Prepared & Analyzed: 03/03/20						
Chloride	ND	1.00	mg/kg wet							
LCS (P0C0312-BS1)				Prepared & Analyzed: 03/03/20						
Chloride	376	1.00	mg/kg wet	400		93.9	80-120			
LCS Dup (P0C0312-BSD1)				Prepared & Analyzed: 03/03/20						
Chloride	376	1.00	mg/kg wet	400		93.9	80-120	0.0639	20	
Calibration Blank (P0C0312-CCB1)				Prepared & Analyzed: 03/03/20						
Chloride	0.00		mg/kg wet							
Calibration Blank (P0C0312-CCB2)				Prepared: 03/03/20 Analyzed: 03/04/20						
Chloride	0.00		mg/kg wet							
Calibration Check (P0C0312-CCV2)				Prepared: 03/03/20 Analyzed: 03/04/20						
Chloride	16.2		mg/kg	20.0		80.8	0-200			
Matrix Spike (P0C0312-MS1)				Source: 0C02020-21		Prepared & Analyzed: 03/03/20				
Chloride	17100	56.8	mg/kg dry	5680	11500	98.0	80-120			
Matrix Spike Dup (P0C0312-MSD1)				Source: 0C02020-21		Prepared & Analyzed: 03/03/20				
Chloride	17000	56.8	mg/kg dry	5680	11500	97.5	80-120	0.173	20	
Batch P0C0315 - *** DEFAULT PREP ***										
Blank (P0C0315-BLK1)				Prepared: 03/03/20 Analyzed: 03/04/20						
Chloride	ND	1.00	mg/kg wet							

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Project: Denton NO.5 SWD
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Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0C0315 - * DEFAULT PREP *******LCS (P0C0315-BS1)**

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	396	1.00	mg/kg wet	400		99.0	80-120			
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LCS Dup (P0C0315-BSD1)

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	401	1.00	mg/kg wet	400		100	80-120	1.20	20	
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Calibration Blank (P0C0315-CCB1)

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	0.00		mg/kg wet							
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Calibration Blank (P0C0315-CCB2)

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	0.00		mg/kg wet							
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Calibration Check (P0C0315-CCV1)

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	19.8		mg/kg	20.0		99.2	0-200			
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Calibration Check (P0C0315-CCV2)

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	20.1		mg/kg	20.0		101	0-200			
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Matrix Spike (P0C0315-MS1)

Source: 0C02010-09

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	11900	51.5	mg/kg dry	5150	6720	101	80-120			
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Matrix Spike (P0C0315-MS2)

Source: 0C02012-02

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	1650	5.43	mg/kg dry	543	1010	119	80-120			
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Matrix Spike Dup (P0C0315-MSD1)

Source: 0C02010-09

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	12200	51.5	mg/kg dry	5150	6720	106	80-120	2.27	20	
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Matrix Spike Dup (P0C0315-MSD2)

Source: 0C02012-02

Prepared: 03/03/20 Analyzed: 03/04/20

Chloride	1650	5.43	mg/kg dry	543	1010	118	80-120	0.402	20	
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Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P0C0504 - * DEFAULT PREP *****

Blank (P0C0504-BLK1)

Prepared & Analyzed: 03/05/20

% Moisture	ND	0.1	%
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Duplicate (P0C0504-DUP1)

Source: 0C03014-06

Prepared & Analyzed: 03/05/20

% Moisture	17.0	0.1	%	17.0	0.00	20
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Duplicate (P0C0504-DUP2)

Source: 0C03022-11

Prepared & Analyzed: 03/05/20

% Moisture	6.0	0.1	%	5.0	18.2	20
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Duplicate (P0C0504-DUP3)

Source: 0C04003-05

Prepared & Analyzed: 03/05/20

% Moisture	4.0	0.1	%	9.0	76.9	20
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Duplicate (P0C0504-DUP4)

Source: 0C04007-06

Prepared & Analyzed: 03/05/20

% Moisture	7.0	0.1	%	7.0	0.00	20
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Midland TX, 79707

Project: Denton NO.5 SWD
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date: 3/6/2020

Brent Barron, Laboratory Director/Technical Director

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Photos























