

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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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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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.

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: _____

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 Pachihofe Title: Environmental Coordinator

Signature:  Date: 6/24/2020

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)

June 16, 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. Additionally, supporting well information from the New Mexico Office of the State Engineer for Plains monitoring well 18 (at 33.038808°, -103.167895°, 0.33 mile away from spill) is included as an attachment. The attachment includes depth to water and well construction information.

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.

On May 28, 2020, confirmation BTEX/TPH samples were collected from each of the twelve excavation areas and eight delineation samples were collected. Delineation samples were analyzed for BTEX/TPH and chlorides. In delineation samples chlorides ranged from 261 mg/kg to 95.1 mg/kg. all BTEX results were less than 1.0 mg/kg. The maximum benzene result was 0.00289 mg/kg. TPH ranged from 118 mg/kg to less than the method detection limit. In all delineation samples collected on May 28, BTEX was detected in two samples at less than 1.0 mg/kg. Benzene was not detected above the method detection limit in any sample. TPH ranged from 451 mg/kg to less than the method detection limit.

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

From: [Camille J Bryant](#)
To: [Aaron Pachlhofer](#)
Subject: DTW
Date: Wednesday, November 07, 2018 4:22:50 PM

Aaron,

As per our discussion this morning regarding depth to groundwater in Section 2, T15S, R37E in Lea County, New Mexico, the depth to water in this area should approximately 70 to 75 feet bgs. This depth is based on monitor wells in the area.

Thanks,

Camille J. Bryant
Remediation Supervisor
Plains All American
505 N. Big Spring, Suite 600
Midland, Texas 79701
Office: 432.221.7924
Cell: 575.441.1099

Attention:

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This footnote also confirms that this email message has been scanned for Viruses and Content and cleared.




New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	L 13629 POD13	2	1	2	11	15S	37E	671093	3657074 

x

Driller License: 1456 **Driller Company:** WHITE DRILLING COMPANY

Driller Name: WHITE, JOHNNOWN.GENER

Drill Start Date: 03/10/2020	Drill Finish Date: 04/16/2020	Plug Date:
Log File Date: 04/28/2020	PCW Rcv Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size: 4.00	Depth Well: 90 feet	Depth Water: 70 feet

x

Casing Perforations:	Top	Bottom
	60	90

x

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/15/20 9:57 AM

POINT OF DIVERSION SUMMARY

Photos

























Photos


























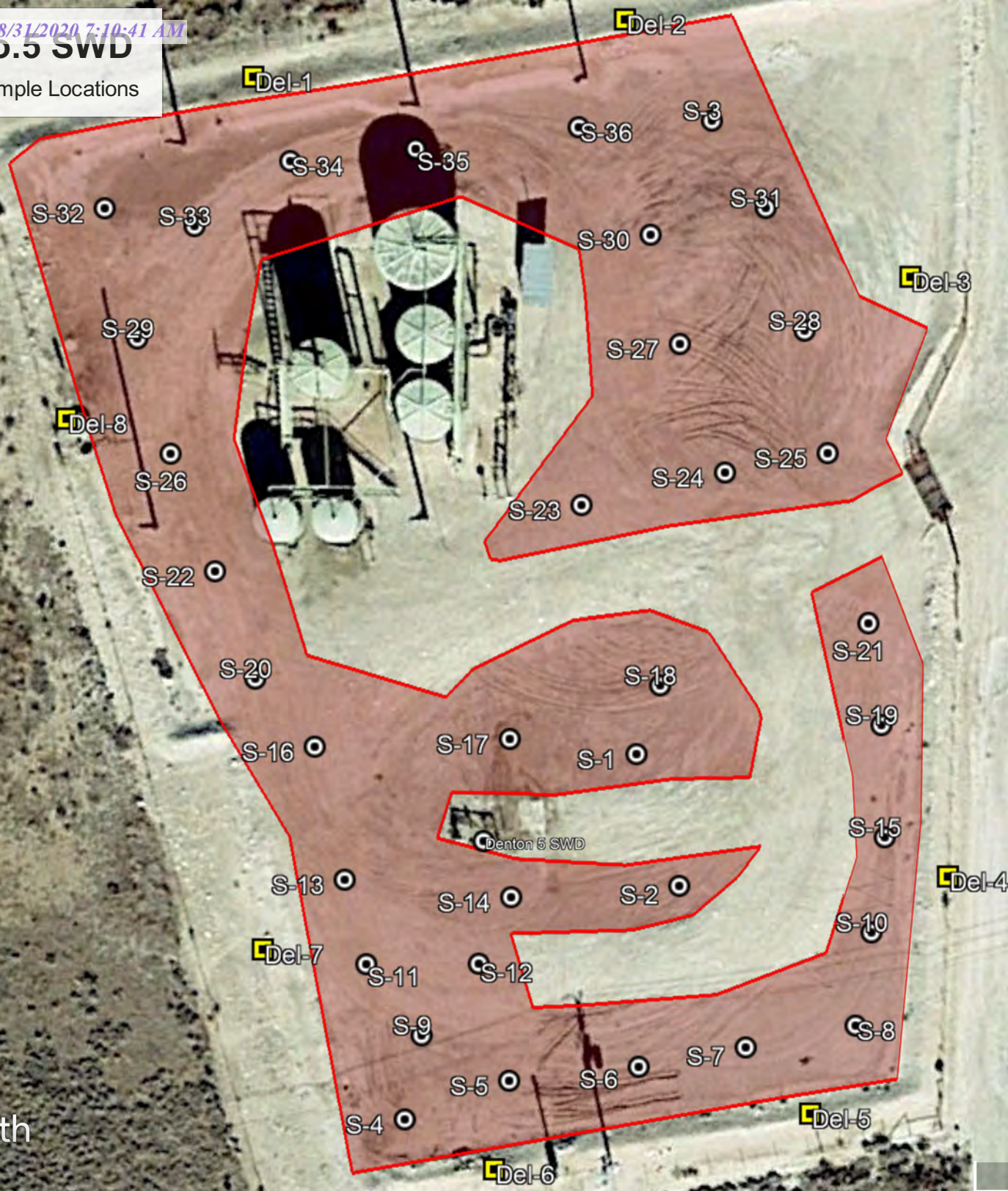
Denton No.5 SWD

Spill Area and Sample Locations

Legend

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 Denton 5 SWD spill



Denton No.5 SWD

Sample Locations over 10,000 mg/kg Chloride



Google Earth

Denton No.5 SWD

Excavated areas



Denton No. 5 SWD Analytical Summary Table - Assessment

Date	Location	Depth	Cl-	Benzene	Toluene	Ethylbenzene	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	Ethylbenzene	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 - Delineation

Date	Location	Depth	Cl-	Benzene	Toluene	Ethylbenzene	Xylene	TPH
5/28/2020	Del-1	6"	261	0.00289	0.0102	ND	ND	118
5/28/2020	Del-2	6"	182	0.00146	0.0064	ND	ND	30.8
5/28/2020	Del-3	6"	115	0.00155	0.0073	ND	ND	ND
5/28/2020	Del-4	6"	95.1	0.00135	0.0066	ND	ND	ND
5/28/2020	Del-5	6"	128	ND	ND	ND	ND	ND
5/28/2020	Del-6	6"	210	ND	ND	ND	ND	ND
5/28/2020	Del-7	6"	143	ND	ND	ND	ND	ND
5/28/2020	Del-8	6"	166	ND	ND	ND	ND	ND

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

Date	Location	Depth	Cl-	Benzene	Toluene	Ethylbensene	Xylene	TPH
6/2/2020	S-1b	6"	N/R	ND	ND	ND	ND	ND
6/2/2020	S-4b	6"	N/R	ND	ND	ND	ND	73.6
6/2/2020	S-8b	6"	N/R	ND	ND	ND	ND	ND
6/2/2020	S-10b	6"	N/R	ND	ND	ND	ND	224
6/2/2020	S-14b	6"	N/R	ND	ND	ND	ND	79.8
6/2/2020	S-15b	6"	N/R	ND	ND	ND	ND	85
6/2/2020	S-16b	6"	N/R	ND	ND	ND	ND	ND
6/2/2020	S-18b	6"	N/R	ND	ND	ND	ND	ND
6/2/2020	S-21b	6"	N/R	ND	ND	ND	ND	ND
6/2/2020	S-24b	6"	N/R	ND	ND	ND	ND	399
6/2/2020	S-26b	6"	N/R	ND	0.001	ND	ND	424
6/2/2020	S-29b	6"	N/R	ND	0.002	ND	ND	451

**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
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			
Calibration Check (P9L0701-CCV2)				Prepared: 12/07/19 Analyzed: 12/08/19						
Chloride	20.6		mg/kg	20.0		103	0-200			
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			
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	
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	

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	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							

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
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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
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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.

PERMAN BASIN

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-686-7235

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

Project Manager:

Avonack Hofe

Project Name:

Newton #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:



e-mail:

(lab use only)

ORDER #: 0A07002

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=Sediment

GW=Groundwater S=Soil/Solid

NP=Non-Potable Specify Other

TPH: TX 1005 TX 1006

Anions (Cl, SO₄, Alkalinity)

BTEX 8021B/5030 or BTEX 6200

Preservation & # of Containers

Matrix

Analyze For:

TCLP:

TOTAL:

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

Standard TAT

Special Instructions:

Relinquished by:

Avonack Hofe

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: Initial?

VOCs Free of Headspace?

Labels on containers?

Custody seals on containers?

Custody seals on covers?

Sample Hand Delivered?

by Courier? UPS DHL FedEx

Temperature Upon Receipt:

Adjusted: 41.2 °C Factor: 1.22



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

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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

Permian Basin Environmental Lab, L.P.

	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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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-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	

Permian Basin Environmental Lab, L.P.

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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-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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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-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

Permian Basin Environmental Lab, L.P.

	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	

Permian Basin Environmental Lab, L.P.

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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 (0A29007-61RE1) 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	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.0 %	75-125		"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene</i>			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	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			99.7 %	75-125		"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene</i>			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	"	"	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene</i>			95.3 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			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	"	"	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene</i>			94.0 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>			96.4 %	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
Permian Basin Environmental Lab, L.P.

	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		"	"	"	"	

Permian Basin Environmental Lab, L.P.

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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

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		"	"	"	"	

Permian Basin Environmental Lab, L.P.

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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

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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Project Number: [none]
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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-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 Number: [none]
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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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-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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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]
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-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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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-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	

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

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	

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

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.
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 - 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

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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 - 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:METROHM						
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:METROHM						
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			

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

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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 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

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
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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			
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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	
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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

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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
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	MQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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			

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.

PBBELAB

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: ☒ Standard☐ TRRP☐ NPDESSampler Signature: 

e-mail: aaronp@ford.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										RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	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-Potable 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 S	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260			Rci	N.O.R.M.	Glycol	
1	S-4 Surface			1/28/2020	9:00			X									S																X
2	S-4 1'			1/28/2020	9:05			X									S																X
3	S-5 Surface			1/28/2020	9:07			X									S																X
4	S-5 1'			1/28/2020	9:10			X									S																X
5	S-6 Surface			1/28/2020	9:11			X									S																X
6	S-6 1'			1/28/2020	9:15			X									S																X
7	S-7 Surface			1/28/2020	9:18			X									S																X
8	S-7 1'			1/28/2020	9:22			X									S																X
9	S-8 Surface			1/28/2020	9:25			X									S																X
10	S-8 1'			1/28/2020	9:30			X									S																X

Special Instructions:

Laboratory Comments:

Sample Containers Inadeq? ☐
VOCs Free of Headspace? ☐
Labels on container(s) ☐
Custody seals on container(s) ☐
Custody seals on cooler(s) ☐
Sample Hand Delivered ☐
by Sampler/Client Rep? ☐
by Courier? ☐ UPS ☐ DHL ☐ FedEx ☐ Lone Star
Temperature Upon Receipt ☐
Received ☐ °C
Adjusted ☐ °C Factor 1

Inquired by: Aaron Pachthofer	Date 1/28/20	Time 12:00	Received by:	Date	Time
Inquired by:	Date	Time	Received by:	Date	Time
Inquired by:	Date	Time	Received by:	Date	Time

PBB LAB

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

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 #: 0A29007

(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													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-Potable Specify Other	TPH: 418.1 8015M 80	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	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8	RCI	N.O.R.M.	Glycol	RUSH TAT (Pre-Schedule) 2	Standard TAT	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
11	S-9 Surface			1/28/2020	9:34.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Special Instructions:

Laboratory Comments:

Sample Containers Intact? ☒ Y ☐ N
VOCs Free of Headspace? ☒ Y ☐ N
Labels on container(s) ☒ Y ☐ N
Custody seals on container(s) ☒ Y ☐ N
Custody seals on copiers ☒ Y ☐ N
Sample Hand Delivered ☒ Y ☐ N
by Sampler/Client Rep? ☒ Y ☐ N
by Courier? ☒ Y ☐ N
by DHL ☒ Y ☐ N
FedEx ☒ Y ☐ N
Temperature Upon Receipt: 4/5 °C
Received: 4/5 °C
Adjusted: 1/2

Satisfied by:
Aaron Pachthofer

Satisfied by:

Satisfied by:

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

Received by:

Received by:

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



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 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

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	TOLP:	TOTAL:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Special Instructions:

Inquired by: Aaron Pachhofer	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:

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

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

4. f87

aaronp@forl.com

Special Instructions:

Adjusted χ^2

Relinquished by:

Date	Time
------	------

Received by

0-9
A
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Y
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Date: / /

time

Temperature

ure Upon Re

script:

100

PBL LAB

Phone: 432-686-7235

Project Name: Denton No. 5 SWD

Project #:

Project Loc: Lea County, NM

PO#:

Fax No: 432-687-1570

e-mail: aaronp@forl.com

(lab. use only)

ORDER #: 0A-29007

[illegible]

Special Instructions:

Laboratory Comments:

Sample Containers Intact? ☒

VOCs Free of Headspace? ☒

Labels on containers? ☒

Custody seals on containers? ☒

Custody seals on cooler(s)? ☒

Sample Hand Delivered? ☒

by Courier? ☒

Sample/Client Rep. ? ☒

UPS ? ☒

Temperature Upon Receipt: 41 °C

Adjusted: 5 °C

Relinquished by:
Baron Pachthofer

Relinquished by:

Relinquished by:

Received by:

Date _____

time

Received by:

Date _____

time

Received by _____

Date: _____

Time

Page 39 of 44

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

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
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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
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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
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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
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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	

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 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							

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 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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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: 3/6/2020

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.

PBMLAB

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 Pachhofer

Project Name: Denton No. 5 SWD

Company Name: Fasken Oil and Ranch, Ltd

Project #:

Company Address: 6101 Holiday Hill Road

Project Loc: Lee 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 #: 0603013

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	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-Potable Specify Other	TPH: 418.1 8015M 6015E	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	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	S-1a 6"			3/2/2020	14:09		X	X								S			X											X
2	S-4a 6"			3/2/2020	14:53		X	X								S			X											X
3	S-8a 6"			3/2/2020	13:53		X	X								S			X											X
4	S-10a 6"			3/2/2020	13:54		X	X								S			X											X
5	S-14a 6"			3/2/2020	14:49		X	X								S			X											X
6	S-15a 6"			3/2/2020	13:49		X	X								S			X											X
7	S-16a 6"			3/2/2020	14:10		X	X								S			X											X
8	S-18a 6"			3/2/2020	14:06		X	X								S			X											X
9	S-21a 6"			3/2/2020	13:47		X	X								S			X											X
10	S-24a 6"			3/2/2020	11:34		X	X								S			X											X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Aaron Pachhofer	3/3/20	12:00			

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? ☒ N

VOCs Free of Headspace? ☒ N

Labels on container(s)? ☒ N

Custody seals on container(s)? ☒ N

Sample Hand Delivered? ☒ N

by Courier? ☒ N

by UPS? ☒ N

by DHL? ☒ N

by FedEx? ☒ N

Temperature Upon Receipt: 5.0 °C

Adjusted: 6.0 °C

Factor: 1.22

PBBLAB**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 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

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: _____

Fax No: 432-687-1570
e-mail: aaronp@fort.com

(lab use only)

ORDER #: 0603013

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: 418.1 8015M 8015E

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

RCI

N.O.R.M.

Glycol

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

Standard TAT

Preservation & # of Containers

Matrix

TCLP:

TOTAL:

Analyze For:

Special Instructions:

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on containers?

Custody seals on containers?

Custody seals on coolers?

Sample Hand Delivered

by Courier?

UPS

DHL

FedEx

Lone Star

Relinquished by: Aaron Pachhofer

Date: 3/3/20

Time: 12:00

Received by:

Date:

Time:

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Temperature Upon Receipt:

5.0 °C

Adjusted:

6.0 °C Factor

1

42

**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:

Lab Order Number: 0F04011



NELAP/TCEQ # T104704516-17-8

Report Date: 06/11/20

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-1b	0F04011-01	Soil	06/02/20 13:20	06-02-2020 17:30
S-4b	0F04011-02	Soil	06/02/20 12:27	06-02-2020 17:30
S-8b	0F04011-03	Soil	06/02/20 12:40	06-02-2020 17:30
S-10b	0F04011-04	Soil	06/02/20 12:53	06-02-2020 17:30
S-14b	0F04011-05	Soil	06/02/20 13:15	06-02-2020 17:30
S-15b	0F04011-06	Soil	06/02/20 13:05	06-02-2020 17:30
S-16b	0F04011-07	Soil	06/02/20 13:50	06-02-2020 17:30
S-18b	0F04011-08	Soil	06/02/20 13:27	06-02-2020 17:30
S-21b	0F04011-09	Soil	06/02/20 13:34	06-02-2020 17:30
S-24b	0F04011-10	Soil	06/02/20 13:42	06-02-2020 17:30
S-26b	0F04011-11	Soil	06/02/20 13:59	06-02-2020 17:30
S-29b	0F04011-12	Soil	06/02/20 14:00	06-02-2020 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-1b
0F04011-01 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00111	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B
Toluene	ND	0.00556	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B
Ethylbenzene	ND	0.00556	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B
Xylene (p/m)	ND	0.00556	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B
Xylene (o)	ND	0.00556	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B
Surrogate: 4-Bromofluorobenzene		100 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B
Surrogate: 1,4-Difluorobenzene		99.0 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B

General Chemistry Parameters by EPA / Standard Methods

% Moisture	10.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M
>C12-C28	ND	27.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M
Surrogate: 1-Chlorooctane		90.2 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M
Surrogate: o-Terphenyl		102 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc

Permian Basin Environmental Lab, L.P.

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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-4b

0F04011-02 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00106	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Toluene	ND	0.00532	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Ethylbenzene	ND	0.00532	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (p/m)	ND	0.00532	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (o)	ND	0.00532	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		100 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	6.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.6	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	73.6	26.6	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		87.3 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		99.2 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	73.6	26.6	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-8b

0F04011-03 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00110	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Toluene	ND	0.00549	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Ethylbenzene	ND	0.00549	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (p/m)	ND	0.00549	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (o)	ND	0.00549	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.8 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	9.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		90.2 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-10b
0F04011-04 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Toluene	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Ethylbenzene	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (p/m)	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (o)	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		102 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	3.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	147	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	77.3	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		85.9 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		95.8 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	224	25.8	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-14b

0F04011-05 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00105	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Toluene	ND	0.00526	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Ethylbenzene	ND	0.00526	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (p/m)	ND	0.00526	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Xylene (o)	ND	0.00526	mg/kg dry	1	P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125		P0F0509	06/05/20	06/05/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	5.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	79.8	26.3	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		90.3 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		102 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	79.8	26.3	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-15b
0F04011-06 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P0F0509	06/05/20	06/06/20	EPA 8021B	
Toluene	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/06/20	EPA 8021B	
Ethylbenzene	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/06/20	EPA 8021B	
Xylene (p/m)	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/06/20	EPA 8021B	
Xylene (o)	ND	0.00515	mg/kg dry	1	P0F0509	06/05/20	06/06/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		P0F0509	06/05/20	06/06/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		100 %	75-125		P0F0509	06/05/20	06/06/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	3.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	85.0	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		89.0 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	85.0	25.8	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-16b
0F04011-07 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		92.0 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.8 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	8.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		90.4 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		104 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-18b
0F04011-08 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.9 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		91.1 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	8.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		89.9 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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-21b

0F04011-09 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00110	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		90.4 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.2 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	9.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		90.0 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		99.3 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	06/05/20	06/07/20	calc	

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-24b**0F04011-10 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.**BTEX by 8021B**

Benzene	ND	0.00100	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.8 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		90.4 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	ND	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.0	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	289	25.0	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	110	25.0	mg/kg dry	1	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		102 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		117 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	399	25.0	mg/kg dry	1	[CALC]	06/05/20	06/07/20	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

S-26b

0F04011-11 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00101	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	0.00101	0.00101	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		73.7 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		108 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	1.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.0	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	294	25.0	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	130	25.0	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		83.2 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		134 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	424	25.0	mg/kg dry	10	[CALC]	06/05/20	06/07/20	calc	

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

S-29b

0F04011-12 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00116	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Toluene	0.00203	0.00116	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		72.2 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		114 %	75-125		P0F1002	06/10/20	06/10/20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

% Moisture	14.0	0.1	%	1	P0F0504	06/05/20	06/05/20	ASTM D2216	
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	27.3	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C12-C28	364	27.3	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
>C28-C35	87	27.3	mg/kg dry	10	P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: 1-Chlorooctane		77.8 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	
Surrogate: o-Terphenyl		132 %	70-130		P0F0502	06/05/20	06/07/20	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	451	27.3	mg/kg dry	10	[CALC]	06/05/20	06/07/20	calc	

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0509 - General Preparation (GC)**Blank (P0F0509-BLK1)**

Prepared & Analyzed: 06/05/20

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.00500	"							
Xylene (o)	ND	0.00500	"							
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.7	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120		96.8	75-125			

LCS (P0F0509-BS1)

Prepared & Analyzed: 06/05/20

Benzene	0.0991	0.00100	mg/kg wet	0.100		99.1	70-130			
Toluene	0.0960	0.00500	"	0.100		96.0	70-130			
Ethylbenzene	0.102	0.00500	"	0.100		102	70-130			
Xylene (p/m)	0.208	0.00500	"	0.200		104	70-130			
Xylene (o)	0.103	0.00500	"	0.100		103	70-130			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.114		"	0.120		95.1	75-125			

LCS Dup (P0F0509-BSD1)

Prepared & Analyzed: 06/05/20

Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130	5.38	20	
Toluene	0.103	0.00500	"	0.100		103	70-130	7.40	20	
Ethylbenzene	0.108	0.00500	"	0.100		108	70-130	5.02	20	
Xylene (p/m)	0.222	0.00500	"	0.200		111	70-130	6.37	20	
Xylene (o)	0.111	0.00500	"	0.100		111	70-130	7.16	20	
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		96.0	75-125			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		102	75-125			

Calibration Blank (P0F0509-CCB1)

Prepared & Analyzed: 06/05/20

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.440		"							
Xylene (o)	0.330		"							
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		95.5	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0509 - General Preparation (GC)

Calibration Blank (P0F0509-CCB2)

Prepared & Analyzed: 06/05/20

Benzene	0.00		mg/kg wet							
Toluene	0.720		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.300		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.117		"	0.120		97.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.7	75-125			

Calibration Check (P0F0509-CCV1)

Prepared & Analyzed: 06/05/20

Benzene	0.0998	0.00100	mg/kg wet	0.100		99.8	80-120			
Toluene	0.0971	0.00500	"	0.100		97.1	80-120			
Ethylbenzene	0.0997	0.00500	"	0.100		99.7	80-120			
Xylene (p/m)	0.207	0.00500	"	0.200		103	80-120			
Xylene (o)	0.105	0.00500	"	0.100		105	80-120			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.1	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	75-125			

Calibration Check (P0F0509-CCV2)

Prepared & Analyzed: 06/05/20

Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.0976	0.00500	"	0.100		97.6	80-120			
Ethylbenzene	0.100	0.00500	"	0.100		100	80-120			
Xylene (p/m)	0.206	0.00500	"	0.200		103	80-120			
Xylene (o)	0.111	0.00500	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120		101	75-125			

Calibration Check (P0F0509-CCV3)

Prepared: 06/05/20 Analyzed: 06/06/20

Benzene	0.104	0.00100	mg/kg wet	0.100		104	80-120			
Toluene	0.0989	0.00500	"	0.100		98.9	80-120			
Ethylbenzene	0.0992	0.00500	"	0.100		99.2	80-120			
Xylene (p/m)	0.205	0.00500	"	0.200		102	80-120			
Xylene (o)	0.112	0.00500	"	0.100		112	80-120			
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.4	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0509 - General Preparation (GC)

Matrix Spike (P0F0509-MS1)		Source: 0F05006-01		Prepared: 06/05/20		Analyzed: 06/06/20				
Benzene	0.0702	0.00100	mg/kg dry	0.100	ND	70.2	80-120			QM-07
Toluene	0.0428	0.00500	"	0.100	ND	42.8	80-120			QM-07
Ethylbenzene	0.0633	0.00500	"	0.100	ND	63.3	80-120			QM-07
Xylene (p/m)	0.104	0.00500	"	0.200	ND	52.1	80-120			QM-07
Xylene (o)	0.0727	0.00500	"	0.100	ND	72.7	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.7	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	75-125			

Matrix Spike Dup (P0F0509-MSD1)		Source: 0F05006-01		Prepared: 06/05/20		Analyzed: 06/06/20				
Benzene	0.0662	0.00100	mg/kg dry	0.100	ND	66.2	80-120	5.90	20	QM-07
Toluene	0.0345	0.00500	"	0.100	ND	34.5	80-120	21.4	20	QM-07
Ethylbenzene	0.0575	0.00500	"	0.100	ND	57.5	80-120	9.57	20	QM-07
Xylene (p/m)	0.0907	0.00500	"	0.200	ND	45.4	80-120	13.8	20	QM-07
Xylene (o)	0.0677	0.00500	"	0.100	ND	67.7	80-120	7.21	20	QM-07
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			

Batch P0F1002 - General Preparation (GC)

Blank (P0F1002-BLK1)				Prepared & Analyzed: 06/10/20						
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	0.106		"	0.120		88.3	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		93.9	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F1002 - General Preparation (GC)

LCS (P0F1002-BS1)

Prepared & Analyzed: 06/10/20

Benzene	0.0866	0.00100	mg/kg wet	0.100		86.6	70-130			
Toluene	0.0913	0.00100	"	0.100		91.3	70-130			
Ethylbenzene	0.0957	0.00100	"	0.100		95.7	70-130			
Xylene (p/m)	0.184	0.00200	"	0.200		92.0	70-130			
Xylene (o)	0.0995	0.00100	"	0.100		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.104		"	0.120		86.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.5	75-125			

LCS Dup (P0F1002-BS1)

Prepared & Analyzed: 06/10/20

Benzene	0.0959	0.00100	mg/kg wet	0.100		95.9	70-130	10.2	20	
Toluene	0.0997	0.00100	"	0.100		99.7	70-130	8.79	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	70-130	11.2	20	
Xylene (p/m)	0.202	0.00200	"	0.200		101	70-130	9.49	20	
Xylene (o)	0.111	0.00100	"	0.100		111	70-130	11.3	20	
Surrogate: 4-Bromofluorobenzene	0.107		"	0.120		89.1	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.2	75-125			

Calibration Blank (P0F1002-CCB1)

Prepared & Analyzed: 06/10/20

Benzene	0.800		mg/kg wet							
Toluene	0.970		"							
Ethylbenzene	0.670		"							
Xylene (p/m)	1.47		"							
Xylene (o)	0.400		"							
Surrogate: 1,4-Difluorobenzene	0.111		"	0.120		92.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.106		"	0.120		88.0	75-125			

Calibration Blank (P0F1002-CCB2)

Prepared & Analyzed: 06/10/20

Benzene	0.00		mg/kg wet							
Toluene	0.710		"							
Ethylbenzene	0.570		"							
Xylene (p/m)	0.960		"							
Xylene (o)	0.410		"							
Surrogate: 4-Bromofluorobenzene	0.109		"	0.120		90.9	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.3	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F1002 - General Preparation (GC)

Calibration Check (P0F1002-CCV1)

Prepared & Analyzed: 06/10/20

Benzene	0.0950	0.00100	mg/kg wet	0.100		95.0	80-120			
Toluene	0.0985	0.00100	"	0.100		98.5	80-120			
Ethylbenzene	0.0989	0.00100	"	0.100		98.9	80-120			
Xylene (p/m)	0.196	0.00200	"	0.200		97.8	80-120			
Xylene (o)	0.109	0.00100	"	0.100		109	80-120			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.104		"	0.120		87.0	75-125			

Calibration Check (P0F1002-CCV2)

Prepared & Analyzed: 06/10/20

Benzene	0.0934	0.00100	mg/kg wet	0.100		93.4	80-120			
Toluene	0.0959	0.00100	"	0.100		95.9	80-120			
Ethylbenzene	0.0969	0.00100	"	0.100		96.9	80-120			
Xylene (p/m)	0.189	0.00200	"	0.200		94.5	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.111		"	0.120		92.6	75-125			

Calibration Check (P0F1002-CCV3)

Prepared & Analyzed: 06/10/20

Benzene	0.0887	0.00100	mg/kg wet	0.100		88.7	80-120			
Toluene	0.0885	0.00100	"	0.100		88.5	80-120			
Ethylbenzene	0.0896	0.00100	"	0.100		89.6	80-120			
Xylene (p/m)	0.172	0.00200	"	0.200		86.1	80-120			
Xylene (o)	0.0988	0.00100	"	0.100		98.8	80-120			
Surrogate: 4-Bromofluorobenzene	0.108		"	0.120		90.2	75-125			
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.1	75-125			

Matrix Spike (P0F1002-MS1)

Source: 0F04011-07

Prepared & Analyzed: 06/10/20

Benzene	0.0770	0.00109	mg/kg dry	0.109	ND	70.8	80-120			QM-05
Toluene	0.0786	0.00109	"	0.109	0.000707	71.6	80-120			QM-05
Ethylbenzene	0.0879	0.00109	"	0.109	ND	80.9	80-120			
Xylene (p/m)	0.151	0.00217	"	0.217	ND	69.5	80-120			QM-05
Xylene (o)	0.0779	0.00109	"	0.109	ND	71.7	80-120			QM-05
Surrogate: 4-Bromofluorobenzene	0.119		"	0.130		91.2	75-125			
Surrogate: 1,4-Difluorobenzene	0.126		"	0.130		96.6	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F1002 - General Preparation (GC)

Matrix Spike Dup (P0F1002-MSD1)		Source: 0F04011-07			Prepared & Analyzed: 06/10/20					
Benzene	0.0812	0.00109	mg/kg dry	0.109	ND	74.7	80-120	5.36	20	QM-05
Toluene	0.0830	0.00109	"	0.109	0.000707	75.7	80-120	5.56	20	QM-05
Ethylbenzene	0.0953	0.00109	"	0.109	ND	87.7	80-120	8.05	20	
Xylene (p/m)	0.162	0.00217	"	0.217	ND	74.4	80-120	6.74	20	QM-05
Xylene (o)	0.0865	0.00109	"	0.109	ND	79.6	80-120	10.5	20	QM-05
Surrogate: 4-Bromofluorobenzene	0.123		"	0.130		94.7	75-125			
Surrogate: 1,4-Difluorobenzene	0.125		"	0.130		95.8	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

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 P0F0504 - *** DEFAULT PREP ***										
Blank (P0F0504-BLK1)	Prepared & Analyzed: 06/05/20									
% Moisture	ND	0.1	%							
Duplicate (P0F0504-DUP1)	Source: 0F04005-05 Prepared & Analyzed: 06/05/20									
% Moisture	10.0	0.1	%		10.0			0.00	20	
Duplicate (P0F0504-DUP2)	Source: 0F04005-32 Prepared & Analyzed: 06/05/20									
% Moisture	14.0	0.1	%		13.0			7.41	20	
Duplicate (P0F0504-DUP3)	Source: 0F04009-02 Prepared & Analyzed: 06/05/20									
% Moisture	10.0	0.1	%		9.0			10.5	20	
Duplicate (P0F0504-DUP4)	Source: 0F04010-23 Prepared & Analyzed: 06/05/20									
% Moisture	ND	0.1	%		ND				20	
Duplicate (P0F0504-DUP5)	Source: 0F04011-04 Prepared & Analyzed: 06/05/20									
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P0F0504-DUP6)	Source: 0F04011-12 Prepared & Analyzed: 06/05/20									
% Moisture	11.0	0.1	%		14.0			24.0	20	R3

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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

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P0F0502 - TX 1005

Blank (P0F0502-BLK1)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	91.5		"	100		91.5	70-130			
Surrogate: o-Terphenyl	47.8		"	50.0		95.5	70-130			

LCS (P0F0502-BS1)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	1020	25.0	mg/kg wet	1000		102	75-125			
>C12-C28	1130	25.0	"	1000		113	75-125			
Surrogate: 1-Chlorooctane	84.0		"	100		84.0	70-130			
Surrogate: o-Terphenyl	44.1		"	50.0		88.2	70-130			

LCS Dup (P0F0502-BSD1)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	1040	25.0	mg/kg wet	1000		104	75-125	2.40	20	
>C12-C28	1150	25.0	"	1000		115	75-125	2.33	20	
Surrogate: 1-Chlorooctane	86.1		"	100		86.1	70-130			
Surrogate: o-Terphenyl	49.0		"	50.0		97.9	70-130			

Calibration Blank (P0F0502-CCB1)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	7.39		mg/kg wet							
>C12-C28	6.99		"							
Surrogate: 1-Chlorooctane	89.5		"	100		89.5	70-130			
Surrogate: o-Terphenyl	47.5		"	50.0		94.9	70-130			

Calibration Blank (P0F0502-CCB2)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	7.79		mg/kg wet							
>C12-C28	5.80		"							
Surrogate: 1-Chlorooctane	84.1		"	100		84.1	70-130			
Surrogate: o-Terphenyl	44.0		"	50.0		88.0	70-130			

Permian Basin Environmental Lab, L.P.

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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

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P0F0502 - TX 1005

Calibration Check (P0F0502-CCV1)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	552	25.0	mg/kg wet	500		110	85-115			
>C12-C28	572	25.0	"	500		114	85-115			
Surrogate: 1-Chlorooctane	89.8		"	100		89.8	70-130			
Surrogate: o-Terphenyl	45.6		"	50.0		91.3	70-130			

Calibration Check (P0F0502-CCV2)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	476	25.0	mg/kg wet	500		95.1	85-115			
>C12-C28	547	25.0	"	500		109	85-115			
Surrogate: 1-Chlorooctane	81.7		"	100		81.7	70-130			
Surrogate: o-Terphenyl	42.1		"	50.0		84.3	70-130			

Calibration Check (P0F0502-CCV3)

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	497	25.0	mg/kg wet	500		99.5	85-115			
>C12-C28	561	25.0	"	500		112	85-115			
Surrogate: 1-Chlorooctane	85.0		"	100		85.0	70-130			
Surrogate: o-Terphenyl	44.2		"	50.0		88.4	70-130			

Duplicate (P0F0502-DUP1)

Source: 0F04012-08

Prepared: 06/05/20 Analyzed: 06/07/20

C6-C12	50.8	27.2	mg/kg dry		54.7			7.52	20	
>C12-C28	ND	27.2	"		ND				20	
Surrogate: 1-Chlorooctane	99.7		"	109		91.7	70-130			
Surrogate: o-Terphenyl	56.1		"	54.3		103	70-130			

Permian Basin Environmental Lab, L.P.

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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

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

R3 The RPD exceeded the acceptance limit due to sample matrix effects.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

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:

6/11/2020

Brent Barron, Laboratory Director/Technical Director

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

PERMIA LAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP

1400 Rankin HWY

Midland, Texas 79701

Phone: 432-686-7235

Project Manager:

Avon Pack/Holter

Project Name:

Denton 5 SWD

Company Name

Lockman Oil & Ranch

Project #:

Company Address:

Project Loc:

City/State/Zip:

PO #:

Telephone No:

Report Format

☒ Standard☐ TRAP☐ NPDES

Sampler Signature:

[Signature]

e-mail:

avonp@permianlab.com

(lab use only)

ORDER #:

0509011

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 80218/5030 or BTEX 5260

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

Standard TAT

Preservation & # of Containers

Matrix

Analyze For:

TCAP:

TOTAL:

Special Instructions:

Relinquished by:

Relinquished by:

Relinquished by:

Date

Time

Received by:

Date

Time

Date

Time

Received by:

Date

Time

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 bottles?

Sample Hand Delivered by Courier?

Temperature Upon Receipt

GPS

DHL

FedEx

Lone Star

Signature

Signature

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2 of 2

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**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: 0F02001



Current Certification

Report Date: 06/10/20

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
Del - 1	0F02001-01	Soil	05/28/20 09:00	06-01-2020 16:50
Del - 2	0F02001-02	Soil	05/28/20 09:05	06-01-2020 16:50
Del - 3	0F02001-03	Soil	05/28/20 09:13	06-01-2020 16:50
Del - 4	0F02001-04	Soil	05/28/20 09:18	06-01-2020 16:50
Del - 5	0F02001-05	Soil	05/28/20 09:25	06-01-2020 16:50
Del - 6	0F02001-06	Soil	05/28/20 09:31	06-01-2020 16:50
Del - 7	0F02001-07	Soil	05/28/20 09:38	06-01-2020 16:50
Del - 8	0F02001-08	Soil	05/28/20 09:41	06-01-2020 16:50

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

Del - 1
0F02001-01 (Soil)

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

BTEX by 8021B

Benzene	0.00289	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Toluene	0.0102	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		96.2 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.2 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:12	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	261	1.01	mg/kg dry	1	P0F0601	06/06/20 16:42	06/09/20 09:08	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:12	TPH 8015M	
>C12-C28	82.6	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:12	TPH 8015M	
>C28-C35	35.2	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:12	TPH 8015M	
Surrogate: 1-Chlorooctane		88.6 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:12	TPH 8015M	
Surrogate: o-Terphenyl		94.9 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:12	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	118	25.3	mg/kg dry	1	[CALC]	06/02/20 13:24	06/05/20 09:12	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 2
0F02001-02 (Soil)

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

BTEX by 8021B

Benzene	0.00146	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Toluene	0.00636	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.0 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		96.2 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:33	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	182	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 10:43	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:35	TPH 8015M	
>C12-C28	30.8	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:35	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:35	TPH 8015M	
Surrogate: 1-Chlorooctane		88.7 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:35	TPH 8015M	
Surrogate: o-Terphenyl		95.6 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:35	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	30.8	25.3	mg/kg dry	1	[CALC]	06/02/20 13:24	06/05/20 09:35	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 3
0F02001-03 (Soil)

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

BTEX by 8021B

Benzene	0.00155	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Toluene	0.00726	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.7 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.1 %	75-125		P0F0308	06/03/20 15:19	06/04/20 13:54	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	115	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 10:58	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:58	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:58	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 09:58	TPH 8015M	
Surrogate: 1-Chlorooctane		89.0 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:58	TPH 8015M	
Surrogate: o-Terphenyl		98.0 %	70-130		P0F0208	06/02/20 13:24	06/05/20 09:58	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/02/20 13:24	06/05/20 09:58	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 4
0F02001-04 (Soil)

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

BTEX by 8021B

Benzene	0.00135	0.00102	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Toluene	0.00662	0.00510	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Ethylbenzene	ND	0.00510	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Xylene (p/m)	ND	0.00510	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.6 %		75-125	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		95.2 %		75-125	P0F0308	06/03/20 15:19	06/04/20 14:15	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	95.1	1.10	mg/kg dry	5	P0F0602	06/06/20 17:32	06/09/20 11:14	EPA 300.0	
% Moisture	2.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.5	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 10:21	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 10:21	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P0F0208	06/02/20 13:24	06/05/20 10:21	TPH 8015M	
Surrogate: 1-Chlorooctane		89.4 %		70-130	P0F0208	06/02/20 13:24	06/05/20 10:21	TPH 8015M	
Surrogate: o-Terphenyl		102 %		70-130	P0F0208	06/02/20 13:24	06/05/20 10:21	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	06/02/20 13:24	06/05/20 10:21	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 5
0F02001-05 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Toluene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		100 %	75-125		P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125		P0F0309	06/03/20 15:26	06/04/20 04:20	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	128	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 12:01	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 22:51	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 22:51	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 22:51	TPH 8015M	
Surrogate: 1-Chlorooctane		126 %	70-130		P0F0209	06/02/20 14:38	06/02/20 22:51	TPH 8015M	
Surrogate: o-Terphenyl		132 %	70-130		P0F0209	06/02/20 14:38	06/02/20 22:51	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/02/20 14:38	06/02/20 22:51	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 6
0F02001-06 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Toluene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125		P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		P0F0309	06/03/20 15:26	06/04/20 04:41	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	210	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 12:17	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:13	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:13	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:13	TPH 8015M	
Surrogate: 1-Chlorooctane		125 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:13	TPH 8015M	
Surrogate: o-Terphenyl		127 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/02/20 14:38	06/02/20 23:13	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 7
0F02001-07 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Toluene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		100 %	75-125		P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		98.8 %	75-125		P0F0309	06/03/20 15:26	06/04/20 05:01	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	143	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 12:33	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:35	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:35	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:35	TPH 8015M	
Surrogate: 1-Chlorooctane		126 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:35	TPH 8015M	
Surrogate: o-Terphenyl		126 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:35	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/02/20 14:38	06/02/20 23:35	calc	

Permian Basin Environmental Lab, L.P.

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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

Del - 8
0F02001-08 (Soil)

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

BTEX by 8021B

Benzene	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Toluene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Xylene (p/m)	ND	0.00505	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		99.6 %	75-125		P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		100 %	75-125		P0F0309	06/03/20 15:26	06/04/20 05:22	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	166	1.01	mg/kg dry	1	P0F0602	06/06/20 17:32	06/09/20 12:49	EPA 300.0	
% Moisture	1.0	0.1	%	1	P0F0301	06/03/20 09:17	06/03/20 09:19	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:58	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:58	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P0F0209	06/02/20 14:38	06/02/20 23:58	TPH 8015M	
Surrogate: 1-Chlorooctane		117 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:58	TPH 8015M	
Surrogate: o-Terphenyl		120 %	70-130		P0F0209	06/02/20 14:38	06/02/20 23:58	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/02/20 14:38	06/02/20 23:58	calc	

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0308 - General Preparation (GC)**Blank (P0F0308-BLK1)**

Prepared & Analyzed: 06/03/20

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.00500	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.121		"	0.120		101	75-125			
Surrogate: 1,4-Difluorobenzene	0.119		"	0.120		99.5	75-125			

LCS (P0F0308-BS1)

Prepared & Analyzed: 06/03/20

Benzene	0.0934	0.00100	mg/kg wet	0.100		93.4	70-130			
Toluene	0.0920	0.00500	"	0.100		92.0	70-130			
Ethylbenzene	0.104	0.00500	"	0.100		104	70-130			
Xylene (p/m)	0.202	0.00500	"	0.200		101	70-130			
Xylene (o)	0.103	0.00100	"	0.100		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			

LCS Dup (P0F0308-BSD1)

Prepared & Analyzed: 06/03/20

Benzene	0.0972	0.00100	mg/kg wet	0.100		97.2	70-130	3.93	20	
Toluene	0.0971	0.00500	"	0.100		97.1	70-130	5.39	20	
Ethylbenzene	0.104	0.00500	"	0.100		104	70-130	0.355	20	
Xylene (p/m)	0.208	0.00500	"	0.200		104	70-130	3.27	20	
Xylene (o)	0.106	0.00100	"	0.100		106	70-130	3.63	20	
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		97.9	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			

Calibration Blank (P0F0308-CCB1)

Prepared & Analyzed: 06/03/20

Benzene	0.00		mg/kg wet							
Toluene	0.720		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.370		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120		96.8	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0308 - General Preparation (GC)

Calibration Blank (P0F0308-CCB2)

Prepared & Analyzed: 06/03/20

Benzene	0.00		mg/kg wet							
Toluene	0.500		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.540		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		95.7	75-125			

Calibration Blank (P0F0308-CCB3)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.420		mg/kg wet							
Toluene	4.92		"							
Ethylbenzene	1.36		"							
Xylene (p/m)	3.58		"							
Xylene (o)	0.920		"							
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.4	75-125			

Calibration Check (P0F0308-CCV1)

Prepared & Analyzed: 06/03/20

Benzene	0.0958	0.00100	mg/kg wet	0.100		95.8	80-120			
Toluene	0.0935	0.00500	"	0.100		93.5	80-120			
Ethylbenzene	0.0972	0.00500	"	0.100		97.2	80-120			
Xylene (p/m)	0.199	0.00500	"	0.200		99.6	80-120			
Xylene (o)	0.103	0.00100	"	0.100		103	80-120			
Surrogate: 1,4-Difluorobenzene	0.123		"	0.120		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.1	75-125			

Calibration Check (P0F0308-CCV2)

Prepared & Analyzed: 06/03/20

Benzene	0.0994	0.00100	mg/kg wet	0.100		99.4	80-120			
Toluene	0.0918	0.00500	"	0.100		91.8	80-120			
Ethylbenzene	0.0937	0.00500	"	0.100		93.7	80-120			
Xylene (p/m)	0.191	0.00500	"	0.200		95.7	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	75-125			
Surrogate: 4-Bromofluorobenzene	0.115		"	0.120		95.9	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0308 - General Preparation (GC)**Calibration Check (P0F0308-CCV3)**

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0958	0.00100	mg/kg wet	0.100		95.8	80-120			
Toluene	0.0998	0.00500	"	0.100		99.8	80-120			
Ethylbenzene	0.0968	0.00500	"	0.100		96.8	80-120			
Xylene (p/m)	0.192	0.00500	"	0.200		96.0	80-120			
Xylene (o)	0.103	0.00100	"	0.100		103	80-120			
Surrogate: 4-Bromofluorobenzene	0.113		"	0.120		94.2	75-125			
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.5	75-125			

Matrix Spike (P0F0308-MS1)

Source: 0F01002-18

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0736	0.00100	mg/kg dry	0.100	ND	73.6	80-120			QM-07
Toluene	0.0836	0.00500	"	0.100	0.000640	82.9	80-120			
Ethylbenzene	0.0847	0.00500	"	0.100	0.000910	83.8	80-120			
Xylene (p/m)	0.151	0.00500	"	0.200	0.00602	72.4	80-120			QM-07
Xylene (o)	0.0773	0.00100	"	0.100	0.00221	75.1	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	0.107		"	0.120		89.4	75-125			
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.8	75-125			

Matrix Spike Dup (P0F0308-MSD1)

Source: 0F01002-18

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0782	0.00100	mg/kg dry	0.100	ND	78.2	80-120	6.02	20	QM-07
Toluene	0.0867	0.00500	"	0.100	0.000640	86.0	80-120	3.66	20	
Ethylbenzene	0.0918	0.00500	"	0.100	0.000910	90.9	80-120	8.17	20	
Xylene (p/m)	0.166	0.00500	"	0.200	0.00602	79.8	80-120	9.66	20	QM-07
Xylene (o)	0.0849	0.00100	"	0.100	0.00221	82.7	80-120	9.62	20	
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.7	75-125			
Surrogate: 4-Bromofluorobenzene	0.114		"	0.120		95.4	75-125			

Batch P0F0309 - General Preparation (GC)**Blank (P0F0309-BLK1)**

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.00500	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.116		"	0.120		96.8	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0309 - General Preparation (GC)

LCS (P0F0309-BS1)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0974	0.00100	mg/kg wet	0.100		97.4	70-130			
Toluene	0.0937	0.00500	"	0.100		93.7	70-130			
Ethylbenzene	0.111	0.00500	"	0.100		111	70-130			
Xylene (p/m)	0.194	0.00500	"	0.200		97.2	70-130			
Xylene (o)	0.103	0.00100	"	0.100		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		97.9	75-125			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			

LCS Dup (P0F0309-BSD1)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0990	0.00100	mg/kg wet	0.100		99.0	70-130	1.68	20	
Toluene	0.0972	0.00500	"	0.100		97.2	70-130	3.72	20	
Ethylbenzene	0.110	0.00500	"	0.100		110	70-130	1.21	20	
Xylene (p/m)	0.202	0.00500	"	0.200		101	70-130	3.76	20	
Xylene (o)	0.107	0.00100	"	0.100		107	70-130	3.53	20	
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		101	75-125			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.0	75-125			

Calibration Blank (P0F0309-CCB1)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.420		mg/kg wet							
Toluene	4.92		"							
Ethylbenzene	1.36		"							
Xylene (p/m)	3.58		"							
Xylene (o)	0.920		"							
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.119		"	0.120		99.4	75-125			

Calibration Blank (P0F0309-CCB2)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.00		mg/kg wet							
Toluene	1.77		"							
Ethylbenzene	0.470		"							
Xylene (p/m)	1.12		"							
Xylene (o)	0.340		"							
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.117		"	0.120		97.9	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0309 - General Preparation (GC)

Calibration Check (P0F0309-CCV1)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0958	0.00100	mg/kg wet	0.100		95.8	80-120			
Toluene	0.0998	0.00500	"	0.100		99.8	80-120			
Ethylbenzene	0.0968	0.00500	"	0.100		96.8	80-120			
Xylene (p/m)	0.192	0.00500	"	0.200		96.0	80-120			
Xylene (o)	0.103	0.00100	"	0.100		103	80-120			
Surrogate: 1,4-Difluorobenzene	0.118		"	0.120		98.5	75-125			
Surrogate: 4-Bromofluorobenzene	0.113		"	0.120		94.2	75-125			

Calibration Check (P0F0309-CCV2)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0979	0.00100	mg/kg wet	0.100		97.9	80-120			
Toluene	0.0963	0.00500	"	0.100		96.3	80-120			
Ethylbenzene	0.0956	0.00500	"	0.100		95.6	80-120			
Xylene (p/m)	0.191	0.00500	"	0.200		95.5	80-120			
Xylene (o)	0.0986	0.00100	"	0.100		98.6	80-120			
Surrogate: 1,4-Difluorobenzene	0.122		"	0.120		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.112		"	0.120		93.0	75-125			

Calibration Check (P0F0309-CCV3)

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.101	0.00100	mg/kg wet	0.100		101	80-120			
Toluene	0.0952	0.00500	"	0.100		95.2	80-120			
Ethylbenzene	0.0949	0.00500	"	0.100		94.9	80-120			
Xylene (p/m)	0.193	0.00500	"	0.200		96.6	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	0.121		"	0.120		101	75-125			
Surrogate: 4-Bromofluorobenzene	0.118		"	0.120		98.2	75-125			

Matrix Spike (P0F0309-MS1)

Source: 0F02001-05

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0687	0.00101	mg/kg dry	0.101	ND	68.0	80-120			QM-07
Toluene	0.0551	0.00505	"	0.101	0.00277	51.8	80-120			QM-07
Ethylbenzene	0.0662	0.00505	"	0.101	ND	65.6	80-120			QM-07
Xylene (p/m)	0.111	0.00505	"	0.202	0.00213	53.7	80-120			QM-07
Xylene (o)	0.0575	0.00101	"	0.101	0.000838	56.1	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	0.123		"	0.121		101	75-125			
Surrogate: 1,4-Difluorobenzene	0.124		"	0.121		102	75-125			

Permian Basin Environmental Lab, L.P.

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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

BTEX by 8021B - 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 P0F0309 - General Preparation (GC)

Matrix Spike Dup (P0F0309-MSD1)

Source: 0F02001-05

Prepared: 06/03/20 Analyzed: 06/04/20

Benzene	0.0691	0.00101	mg/kg dry	0.101	ND	68.4	80-120	0.528	20	QM-07
Toluene	0.0572	0.00505	"	0.101	0.00277	53.9	80-120	3.86	20	QM-07
Ethylbenzene	0.0720	0.00505	"	0.101	ND	71.3	80-120	8.35	20	QM-07
Xylene (p/m)	0.122	0.00505	"	0.202	0.00213	59.1	80-120	9.55	20	QM-07
Xylene (o)	0.0633	0.00101	"	0.101	0.000838	61.8	80-120	9.72	20	QM-07
Surrogate: 4-Bromofluorobenzene	0.121		"	0.121		100	75-125			
Surrogate: 1,4-Difluorobenzene	0.121		"	0.121		99.8	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

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 P0F0301 - * DEFAULT PREP *****

Blank (P0F0301-BLK1)		Prepared & Analyzed: 06/03/20								
% Moisture	ND	0.1	%							
Duplicate (P0F0301-DUP1)		Source: 0F01006-14		Prepared & Analyzed: 06/03/20						
% Moisture	10.0	0.1	%		10.0			0.00	20	
Duplicate (P0F0301-DUP2)		Source: 0F02002-13		Prepared & Analyzed: 06/03/20						
% Moisture	8.0	0.1	%		9.0			11.8	20	
Duplicate (P0F0301-DUP3)		Source: 0F02002-21		Prepared & Analyzed: 06/03/20						
% Moisture	10.0	0.1	%		10.0			0.00	20	

Batch P0F0601 - * DEFAULT PREP *****

Blank (P0F0601-BLK1)		Prepared: 06/06/20 Analyzed: 06/09/20								
Chloride	ND	1.00	mg/kg wet							
LCS (P0F0601-BS1)		Prepared: 06/06/20 Analyzed: 06/09/20								
Chloride	431	1.00	mg/kg wet	400		108	80-120			
LCS Dup (P0F0601-BSD1)		Prepared: 06/06/20 Analyzed: 06/09/20								
Chloride	432	1.00	mg/kg wet	400		108	80-120	0.306	20	
Calibration Blank (P0F0601-CCB1)		Prepared: 06/06/20 Analyzed: 06/09/20								
Chloride	0.00		mg/kg wet							
Calibration Blank (P0F0601-CCB2)		Prepared: 06/06/20 Analyzed: 06/09/20								
Chloride	0.00		mg/kg wet							

Permian Basin Environmental Lab, L.P.

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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 P0F0601 - * DEFAULT PREP *******Calibration Check (P0F0601-CCV1)**

Prepared: 06/06/20 Analyzed: 06/08/20

Chloride	21.4		mg/kg	20.0		107	0-200			
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Calibration Check (P0F0601-CCV2)

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	21.6		mg/kg	20.0		108	0-200			
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Calibration Check (P0F0601-CCV3)

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	22.0		mg/kg	20.0		110	0-200			
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Matrix Spike (P0F0601-MS1)**Source: 0F01006-01**

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	7340	27.2	mg/kg dry	2720	4320	111	80-120			
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Matrix Spike (P0F0601-MS2)**Source: 0F01004-04**

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	16900	55.6	mg/kg dry	5560	13.8	303	80-120			
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Matrix Spike Dup (P0F0601-MSD1)**Source: 0F01006-01**

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	7360	27.2	mg/kg dry	2720	4320	112	80-120	0.303	20	
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Matrix Spike Dup (P0F0601-MSD2)**Source: 0F01004-04**

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	16900	55.6	mg/kg dry	5560	13.8	304	80-120	0.414	20	
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Batch P0F0602 - * DEFAULT PREP *******Blank (P0F0602-BLK1)**

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	ND	1.00	mg/kg wet							
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LCS (P0F0602-BS1)

Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	433	1.00	mg/kg wet	400		108	80-120			
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Permian Basin Environmental Lab, L.P.

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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 P0F0602 - * DEFAULT PREP *****

LCS Dup (P0F0602-BSD1) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	428	1.00	mg/kg wet	400		107	80-120	1.10	20	
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Calibration Blank (P0F0602-CCB1) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	0.00		mg/kg wet							
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Calibration Blank (P0F0602-CCB2) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	0.00		mg/kg wet							
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Calibration Check (P0F0602-CCV1) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	22.0		mg/kg	20.0		110	0-200			
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Calibration Check (P0F0602-CCV2) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	21.7		mg/kg	20.0		109	0-200			
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Calibration Check (P0F0602-CCV3) Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	21.9		mg/kg	20.0		110	0-200			
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Matrix Spike (P0F0602-MS1) Source: 0F02001-04 Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	1500	5.10	mg/kg dry	510	943	108	80-120			
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Matrix Spike (P0F0602-MS2) Source: 0F02002-05 Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	8570	26.6	mg/kg dry	2660	5980	97.5	80-120			
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Matrix Spike Dup (P0F0602-MSD1) Source: 0F02001-04 Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	1500	5.10	mg/kg dry	510	943	110	80-120	0.466	20	
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Matrix Spike Dup (P0F0602-MSD2) Source: 0F02002-05 Prepared: 06/06/20 Analyzed: 06/09/20

Chloride	8640	26.6	mg/kg dry	2660	5980	100	80-120	0.856	20	
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Permian Basin Environmental Lab, L.P.

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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

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P0F0208 - TX 1005

Blank (P0F0208-BLK1)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	157		"	160		98.1	70-130			
Surrogate: o-Terphenyl	86.2		"	80.0		108	70-130			

LCS (P0F0208-BS1)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	1830	25.0	mg/kg wet	1800		102	75-125			
>C12-C28	2140	25.0	"	1800		119	75-125			
Surrogate: 1-Chlorooctane	202		"	160		126	70-130			
Surrogate: o-Terphenyl	82.5		"	80.0		103	70-130			

LCS Dup (P0F0208-BSD1)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	1810	25.0	mg/kg wet	1800		100	75-125	1.07	20	
>C12-C28	2130	25.0	"	1800		119	75-125	0.455	20	
Surrogate: 1-Chlorooctane	195		"	160		122	70-130			
Surrogate: o-Terphenyl	79.9		"	80.0		99.9	70-130			

Calibration Blank (P0F0208-CCB1)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	19.1		mg/kg wet							
>C12-C28	10.6		"							
Surrogate: 1-Chlorooctane	153		"	160		95.6	70-130			
Surrogate: o-Terphenyl	84.2		"	80.0		105	70-130			

Calibration Blank (P0F0208-CCB2)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	20.7		mg/kg wet							
>C12-C28	16.8		"							
Surrogate: 1-Chlorooctane	136		"	160		85.3	70-130			
Surrogate: o-Terphenyl	75.3		"	80.0		94.2	70-130			

Permian Basin Environmental Lab, L.P.

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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

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P0F0208 - TX 1005**Calibration Check (P0F0208-CCV1)**

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	861	25.0	mg/kg wet	800		108	85-115			
>C12-C28	918	25.0	"	800		115	85-115			
Surrogate: 1-Chlorooctane	165		"	160		103	70-130			
Surrogate: o-Terphenyl	79.0		"	80.0		98.7	70-130			

Calibration Check (P0F0208-CCV2)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	823	25.0	mg/kg wet	800		103	85-115			
>C12-C28	871	25.0	"	800		109	85-115			
Surrogate: 1-Chlorooctane	157		"	160		98.4	70-130			
Surrogate: o-Terphenyl	75.0		"	80.0		93.7	70-130			

Calibration Check (P0F0208-CCV3)

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	541	25.0	mg/kg wet	500		108	85-115			
>C12-C28	561	25.0	"	500		112	85-115			
Surrogate: 1-Chlorooctane	130		"	160		81.5	70-130			
Surrogate: o-Terphenyl	70.8		"	80.0		88.5	70-130			

Duplicate (P0F0208-DUP1)

Source: 0F02001-04

Prepared: 06/02/20 Analyzed: 06/05/20

C6-C12	14.0	25.5	mg/kg dry		14.2			1.45	20	
>C12-C28	12.5	25.5	"		11.8			5.69	20	
Surrogate: 1-Chlorooctane	148		"	163		90.8	70-130			
Surrogate: o-Terphenyl	84.8		"	81.6		104	70-130			

Batch P0F0209 - TX 1005**Blank (P0F0209-BLK1)**

Prepared & Analyzed: 06/02/20

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	144		"	140		103	70-130			
Surrogate: o-Terphenyl	74.6		"	70.0		107	70-130			

Permian Basin Environmental Lab, L.P.

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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

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P0F0209 - TX 1005

LCS (P0F0209-BS1)

Prepared & Analyzed: 06/02/20

C6-C12	1190	25.0	mg/kg wet	1100		109	75-125			
>C12-C28	1050	25.0	"	1100		95.8	75-125			
Surrogate: 1-Chlorooctane	127		"	140		90.8	70-130			
Surrogate: o-Terphenyl	64.7		"	70.0		92.4	70-130			

LCS Dup (P0F0209-BSD1)

Prepared & Analyzed: 06/02/20

C6-C12	1100	25.0	mg/kg wet	1100		100	75-125	8.18	20	
>C12-C28	1280	25.0	"	1100		116	75-125	19.2	20	
Surrogate: 1-Chlorooctane	140		"	140		99.7	70-130			
Surrogate: o-Terphenyl	70.3		"	70.0		100	70-130			

Calibration Blank (P0F0209-CCB1)

Prepared & Analyzed: 06/02/20

C6-C12	16.0		mg/kg wet							
>C12-C28	1.20		"							
Surrogate: 1-Chlorooctane	150		"	140		107	70-130			
Surrogate: o-Terphenyl	77.1		"	70.0		110	70-130			

Calibration Check (P0F0209-CCV1)

Prepared & Analyzed: 06/02/20

C6-C12	574	25.0	mg/kg wet	500		115	85-115			
>C12-C28	543	25.0	"	500		109	85-115			
Surrogate: 1-Chlorooctane	129		"	140		92.2	70-130			
Surrogate: o-Terphenyl	64.4		"	70.0		92.0	70-130			

Duplicate (P0F0209-DUP1)

Source: 0F02001-08

Prepared: 06/02/20 Analyzed: 06/03/20

C6-C12	21.3	25.3	mg/kg dry		16.8			23.8	20	
>C12-C28	ND	25.3	"		ND				20	
Surrogate: 1-Chlorooctane	119		"	141		84.4	70-130			
Surrogate: o-Terphenyl	60.9		"	70.7		86.1	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.

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

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

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:

6/10/2020

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.

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