



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

**APPROVED**

**By Olivia Yu at 3:00 pm, Oct 13, 2017**

October 13, 2017

Olivia Yu  
Environmental Specialist  
OCD – Hobbs District I  
1625 North French Dr.  
Hobbs, NM 88240

Shelly Tucker  
EPS – Spill/Release Coordinator  
Bureau of Land Management - Carlsbad  
620 East Greene Street  
Carlsbad, NM 88220-6292

Work Plan: Ling Federal Battery Spill

Ms. Yu and Ms. Tucker,

**Incident Description**

On the morning of October 5<sup>th</sup>, 2017 a spill was discovered at Fasken's Ling Federal Battery by Fasken personnel arriving for routine daily work. At the time of discovery, oil was actively leaking from both oil tanks and pooled oil was present inside of the firewall of the battery. Investigation determined that the both tanks had been shot with a firearm by persons unknown after approximately 5:00 pm. on October 4<sup>th</sup>. According to Fasken production records, 40 barrels of crude oil was spilled and 31 barrels were recovered. No produced water was released. All spilled oil was contained within the firewall of the battery. See attached pictures of spill upon discovery.

**Delineation Sampling**

On October 6<sup>th</sup>, Fasken Environmental Coordinator Aaron Pachlhofer advanced two shallow borings in the affected area of the spill. Three samples from each boring were collected: Surface, 1 foot BGS, and 2 feet BGS. The surface samples were analyzed for chlorides only. The other samples were analyzed for BTEX and TPH. Boring 1 was advanced near the point of release. Boring 2 was advanced at the lateral extent of spreading. Please refer to the attached aerial photo for boring locations.

**Potential Receptors**

According to the New Mexico State Engineer's Office, water well L-07213 is the closest well to the release approximately ½ mile to the south at 32.614054°, -103.596801°. The probable depth to groundwater is 110 feet below ground surface according to published data for well L-07213.

The closest surface water is Laguna Tonto, approximately 4 miles to the west.

There are no homes or occupied structures within 2 miles of the release.

There are no receptors near the Ling Federal Battery and groundwater is deeper than 100 feet. Clean up will be to 5,000 mg/kg TPH and 50 mg/kg BTEX.

## **Sample Results**

Sample results were:

	Chlorides	Benzene	Total BTEX	TPH
B-1 Surface	7.09	N/R	N/R	N/R
B-1 1'	N/R	0.827	77.027	3340
B-1 2'	N/R	0.0932	.24751	519
B-2 Surface	<1.10	N/R	N/R	N/R
B-2 1'	N/R	<0.00112	0.00751	47.4
B-2 2'	N/R	0.0110	0.1114	77.6

## **WORK PLAN**

Approximately 2,200 square feet of the firewall area were affected by the release. Fasken Oil and Ranch will remove affected soils inside of the firewall of the battery until visually and olfactorally clean. Based on sample results, approximately 1 foot of soil will be removed from inside of the firewall. Adjacent to the water and oil storage tanks onsite, as much soil as possible will be removed without destabilizing the tanks. Any affected soils that cannot be removed will be addressed at abandonment or significant upgrade of equipment.

Following the removal four grab samples will be collected from the excavation to demonstrate removal of affected soils. As previously noted, removal will be to 5,000 mg/kg TPH and 50 mg/kg BTEX as long as the stability of storage tanks is not compromised. Chlorides are not a constituent of concern and analysis will not be requested.

All excavated soil will be immediately loaded for disposal at Lea Lands Disposal Facility. Clean soil will be backhauled from Lea Lands to replace the soil that will be removed and disposed. Fasken anticipates that approximately 80 cubic yards of material will be disposed.

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

Spill Area and Boring Locations



**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: Ling Federal  
Project Number: [none]  
Location: Lea County, NM  
Lab Order Number: 7J09005



NELAP/TCEQ # T104704516-16-7

Report Date: 10/13/17

Fasken Oil & Ranch, Ltd.  
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Project: Ling Federal  
Project Number: [none]  
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1 Surface	7J09005-01	Soil	10/06/17 09:05	10-06-2017 16:30
B-1 1'	7J09005-02	Soil	10/06/17 09:15	10-06-2017 16:30
B-1 2'	7J09005-03	Soil	10/06/17 09:18	10-06-2017 16:30
B-2 Surface	7J09005-04	Soil	10/06/17 09:22	10-06-2017 16:30
B-2 1'	7J09005-05	Soil	10/06/17 09:35	10-06-2017 16:30
B-2 2'	7J09005-06	Soil	10/06/17 09:40	10-06-2017 16:30

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**B-1 Surface**  
**7J09005-01 (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**

<b>Chloride</b>	<b>7.09</b>	1.12	mg/kg dry	1	P7J1105	10/11/17	10/12/17	EPA 300.0	
<b>% Moisture</b>	<b>11.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	

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**B-1 1'**  
**7J09005-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Permian Basin Environmental Lab, L.P.</b>									
<b>Organics by GC</b>									
<b>Benzene</b>	<b>0.827</b>	0.116	mg/kg dry	100	P7J1003	10/10/17	10/13/17	EPA 8021B	
<b>Toluene</b>	<b>20.3</b>	0.233	mg/kg dry	100	P7J1003	10/10/17	10/13/17	EPA 8021B	
<b>Ethylbenzene</b>	<b>19.8</b>	0.116	mg/kg dry	100	P7J1003	10/10/17	10/13/17	EPA 8021B	
<b>Xylene (p/m)</b>	<b>25.2</b>	0.233	mg/kg dry	100	P7J1003	10/10/17	10/13/17	EPA 8021B	
<b>Xylene (o)</b>	<b>10.9</b>	0.116	mg/kg dry	100	P7J1003	10/10/17	10/13/17	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		92.0 %		75-125	P7J1003	10/10/17	10/13/17	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %		75-125	P7J1003	10/10/17	10/13/17	EPA 8021B	
<b>C6-C12</b>	<b>718</b>	145	mg/kg dry	5	P7J1101	10/11/17	10/11/17	TX 1005	
<b>&gt;C12-C28</b>	<b>2120</b>	145	mg/kg dry	5	P7J1101	10/11/17	10/11/17	TX 1005	
<b>&gt;C28-C35</b>	<b>505</b>	145	mg/kg dry	5	P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: 1-Chlorooctane</i>		98.5 %		70-130	P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: o-Terphenyl</i>		100 %		70-130	P7J1101	10/11/17	10/11/17	TX 1005	
<b>Total Hydrocarbon nC6-nC35</b>	<b>3340</b>	145	mg/kg dry	5	[CALC]	10/11/17	10/11/17	[CALC]	
<b>General Chemistry Parameters by EPA / Standard Methods</b>									
<b>% Moisture</b>	<b>14.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	

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**B-1 2'**  
**7J09005-03 (Soil)**

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

**Organics by GC**

<b>Benzene</b>	<b>0.0932</b>	0.00118	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Toluene</b>	<b>0.0994</b>	0.00235	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Ethylbenzene</b>	<b>0.0121</b>	0.00118	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Xylene (p/m)</b>	<b>0.00381</b>	0.00235	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Xylene (o)</b>	<b>0.00471</b>	0.00118	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.5 %			P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		95.2 %			P7J1003	10/10/17	10/10/17	EPA 8021B	
C6-C12	ND	29.4	mg/kg dry	1	P7J1101	10/11/17	10/12/17	TX 1005	
<b>&gt;C12-C28</b>	<b>387</b>	29.4	mg/kg dry	1	P7J1101	10/11/17	10/12/17	TX 1005	
<b>&gt;C28-C35</b>	<b>132</b>	29.4	mg/kg dry	1	P7J1101	10/11/17	10/12/17	TX 1005	
<i>Surrogate: 1-Chlorooctane</i>		97.0 %			P7J1101	10/11/17	10/12/17	TX 1005	
<i>Surrogate: o-Terphenyl</i>		113 %			P7J1101	10/11/17	10/12/17	TX 1005	
<b>Total Hydrocarbon nC6-nC35</b>	<b>519</b>	29.4	mg/kg dry	1	[CALC]	10/11/17	10/12/17	[CALC]	

**General Chemistry Parameters by EPA / Standard Methods**

<b>% Moisture</b>	<b>15.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	
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**B-2 Surface**  
**7J09005-04 (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	ND	1.10	mg/kg dry	1	P7J1105	10/11/17	10/12/17	EPA 300.0	
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	

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**B-2 1'**  
**7J09005-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Permian Basin Environmental Lab, L.P.</b>									
<b>Organics by GC</b>									
Benzene	ND	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Toluene</b>	<b>0.00237</b>	0.00225	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Ethylbenzene</b>	<b>0.00376</b>	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Xylene (o)</b>	<b>0.00138</b>	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		91.9 %	75-125		P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	75-125		P7J1003	10/10/17	10/10/17	EPA 8021B	
C6-C12	ND	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
<b>&gt;C12-C28</b>	<b>47.4</b>	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
>C28-C35	ND	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: 1-Chlorooctane</i>		79.0 %	70-130		P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: o-Terphenyl</i>		91.9 %	70-130		P7J1101	10/11/17	10/11/17	TX 1005	
<b>Total Hydrocarbon nC6-nC35</b>	<b>47.4</b>	28.1	mg/kg dry	1	[CALC]	10/11/17	10/11/17	[CALC]	
<b>General Chemistry Parameters by EPA / Standard Methods</b>									
<b>% Moisture</b>	<b>11.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	

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**B-2 2'**  
**7J09005-06 (Soil)**

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

**Organics by GC**

<b>Benzene</b>	<b>0.0110</b>	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Toluene</b>	<b>0.0437</b>	0.00225	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Ethylbenzene</b>	<b>0.0331</b>	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<b>Xylene (o)</b>	<b>0.0236</b>	0.00112	mg/kg dry	1	P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		90.7 %	75-125		P7J1003	10/10/17	10/10/17	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		84.8 %	75-125		P7J1003	10/10/17	10/10/17	EPA 8021B	
C6-C12	ND	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
<b>&gt;C12-C28</b>	<b>77.6</b>	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
>C28-C35	ND	28.1	mg/kg dry	1	P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: 1-Chlorooctane</i>		83.5 %	70-130		P7J1101	10/11/17	10/11/17	TX 1005	
<i>Surrogate: o-Terphenyl</i>		98.4 %	70-130		P7J1101	10/11/17	10/11/17	TX 1005	
<b>Total Hydrocarbon nC6-nC35</b>	<b>77.6</b>	28.1	mg/kg dry	1	[CALC]	10/11/17	10/11/17	[CALC]	

**General Chemistry Parameters by EPA / Standard Methods**

<b>% Moisture</b>	<b>11.0</b>	0.1	%	1	P7J1302	10/13/17	10/13/17	ASTM D2216	
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**Organics by GC - 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 P7J1003 - General Preparation (GC)**

**Blank (P7J1003-BLK1)**

Prepared & Analyzed: 10/10/17

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>0.0574</i>		<i>"</i>	<i>0.0600</i>		<i>95.7</i>	<i>75-125</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0583</i>		<i>"</i>	<i>0.0600</i>		<i>97.2</i>	<i>75-125</i>			

**LCS (P7J1003-BS1)**

Prepared & Analyzed: 10/10/17

Benzene	0.117	0.00100	mg/kg wet	0.100		117	70-130			
Toluene	0.114	0.00200	"	0.100		114	70-130			
Ethylbenzene	0.111	0.00100	"	0.100		111	70-130			
Xylene (p/m)	0.210	0.00200	"				70-130			
Xylene (o)	0.120	0.00100	"				70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0621</i>		<i>"</i>	<i>0.0600</i>		<i>103</i>	<i>75-125</i>			
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>0.0646</i>		<i>"</i>	<i>0.0600</i>		<i>108</i>	<i>75-125</i>			

**LCS Dup (P7J1003-BSD1)**

Prepared & Analyzed: 10/10/17

Benzene	0.120	0.00100	mg/kg wet	0.100		120	70-130	2.52	20	
Toluene	0.115	0.00200	"	0.100		115	70-130	0.690	20	
Ethylbenzene	0.108	0.00100	"	0.100		108	70-130	2.54	20	
Xylene (p/m)	0.216	0.00200	"				70-130		20	
Xylene (o)	0.117	0.00100	"				70-130		20	
<i>Surrogate: 1,4-Difluorobenzene</i>	<i>0.0655</i>		<i>"</i>	<i>0.0600</i>		<i>109</i>	<i>75-125</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0635</i>		<i>"</i>	<i>0.0600</i>		<i>106</i>	<i>75-125</i>			

**Batch P7J1101 - General Preparation (GC)**

**Blank (P7J1101-BLK1)**

Prepared & Analyzed: 10/11/17

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
<i>Surrogate: 1-Chlorooctane</i>	<i>98.1</i>		<i>"</i>	<i>100</i>		<i>98.1</i>	<i>70-130</i>			
<i>Surrogate: o-Terphenyl</i>	<i>57.8</i>		<i>"</i>	<i>50.0</i>		<i>116</i>	<i>70-130</i>			

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**Organics by GC - 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 P7J1101 - General Preparation (GC)**

**LCS (P7J1101-BS1)**

Prepared & Analyzed: 10/11/17

C6-C12	955	25.0	mg/kg wet	1000		95.5	75-125			
>C12-C28	987	25.0	"	1000		98.7	75-125			
Surrogate: 1-Chlorooctane	124		"	100		124	70-130			
Surrogate: o-Terphenyl	53.0		"	50.0		106	70-130			

**LCS Dup (P7J1101-BSD1)**

Prepared & Analyzed: 10/11/17

C6-C12	949	25.0	mg/kg wet	1000		94.9	75-125	0.709	20	
>C12-C28	972	25.0	"	1000		97.2	75-125	1.52	20	
Surrogate: 1-Chlorooctane	118		"	100		118	70-130			
Surrogate: o-Terphenyl	50.1		"	50.0		100	70-130			

**Calibration Check (P7J1101-CCV1)**

Prepared & Analyzed: 10/11/17

C6-C12	473	25.0	mg/kg wet	500		94.6	85-115			
>C12-C28	453	25.0	"	500		90.5	85-115			
Surrogate: 1-Chlorooctane	104		"	100		104	70-130			
Surrogate: o-Terphenyl	53.8		"	50.0		108	70-130			

**Calibration Check (P7J1101-CCV2)**

Prepared & Analyzed: 10/11/17

C6-C12	497	25.0	mg/kg wet	500		99.4	85-115			
>C12-C28	484	25.0	"	500		96.9	85-115			
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	59.5		"	50.0		119	70-130			

**Calibration Check (P7J1101-CCV3)**

Prepared: 10/11/17 Analyzed: 10/12/17

C6-C12	497	25.0	mg/kg wet	500		99.4	85-115			
>C12-C28	478	25.0	"	500		95.6	85-115			
Surrogate: 1-Chlorooctane	109		"	100		109	70-130			
Surrogate: o-Terphenyl	56.0		"	50.0		112	70-130			

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**Organics by GC - 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 P7J1101 - General Preparation (GC)**

**Matrix Spike (P7J1101-MS1)**

Source: 7J10010-03

Prepared: 10/11/17 Analyzed: 10/12/17

C6-C12	1040	28.1	mg/kg dry	1120	ND	92.5	75-125			
>C12-C28	1070	28.1	"	1120	58.8	90.1	75-125			
Surrogate: 1-Chlorooctane	129		"	112		115	70-130			
Surrogate: o-Terphenyl	59.4		"	56.2		106	70-130			

**Matrix Spike Dup (P7J1101-MSD1)**

Source: 7J10010-03

Prepared: 10/11/17 Analyzed: 10/12/17

C6-C12	1050	28.1	mg/kg dry	1120	ND	93.7	75-125	1.30	20	
>C12-C28	1090	28.1	"	1120	58.8	91.8	75-125	1.87	20	
Surrogate: 1-Chlorooctane	133		"	112		118	70-130			
Surrogate: o-Terphenyl	60.2		"	56.2		107	70-130			

**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 P7J1105 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P7J1105-BLK1)</b>										
					Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P7J1105-BS1)</b>										
					Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	422	1.00	mg/kg wet	400		105	80-120			
<b>LCS Dup (P7J1105-BSD1)</b>										
					Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	414	1.00	mg/kg wet	400		103	80-120	1.89	20	
<b>Duplicate (P7J1105-DUP1)</b>										
		<b>Source: 7J09005-01</b>			Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	7.96	1.12	mg/kg dry		7.09			11.5	20	
<b>Duplicate (P7J1105-DUP2)</b>										
		<b>Source: 7J10007-10</b>			Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	16300	59.5	mg/kg dry		16300			0.577	20	
<b>Matrix Spike (P7J1105-MS1)</b>										
		<b>Source: 7J09005-01</b>			Prepared: 10/11/17 Analyzed: 10/12/17					
Chloride	1150	1.12	mg/kg dry	1120	7.09	102	80-120			

**Batch P7J1302 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P7J1302-BLK1)</b>										
					Prepared & Analyzed: 10/13/17					
% Moisture	ND	0.1	%							
<b>Blank (P7J1302-BLK2)</b>										
					Prepared & Analyzed: 10/13/17					
% Moisture	ND	0.1	%							
<b>Duplicate (P7J1302-DUP1)</b>										
		<b>Source: 7J10007-15</b>			Prepared & Analyzed: 10/13/17					
% Moisture	11.0	0.1	%		17.0			42.9	20	

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

Project: Ling Federal  
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 P7J1302 - \*\*\* DEFAULT PREP \*\*\***

**Duplicate (P7J1302-DUP2)**

**Source: 7J10009-21**

**Prepared & Analyzed: 10/13/17**

% 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: Ling Federal  
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: 10/13/2017

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.



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 Pachtkofer

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: aaronpp@lori.com

Report Format:  Standard  TRRP  NPDES

Project Name: Ling Federal  
 Project #: \_\_\_\_\_  
 Project Loc: Lea County, NM

<b>(lab use only)</b>				ORDER #: <u>7099005</u>	
LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled
	B-1 Surface	10/6/2017	9:05		
	B-1 1'	10/6/2017	9:15		
	B-1 2'	10/6/2017	9:18		
	B-2 Surface	10/6/2017	9:22		
	B-2 1'	10/6/2017	9:35		
	B-2 2'	10/6/2017	9:40		

Preservation & # of Containers		Matrix
Ice		DW=Drinking Water SL=Sludge
HNO <sub>3</sub>		GW = Groundwater S=Soil/Solid
HCl		NP=Non-Potable Specify Other
H <sub>2</sub> SO <sub>4</sub>		
NaOH		TPH: 418.1 <u>8015M</u> 8015B
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		TPH: TX 1005 TX 1006
None		Cations (Ca, Mg, Na, K)
Other (Specify)		Anions (Cl, SO <sub>4</sub> , Alkalinity)

Analyze For:	
TCLP:	
TOTAL:	
SAR / ESP / CEC	
Metals: As Ag Ba Cd Cr Pb Hg Se	
Volatiles	
Semivolatiles	
BTEX 8021B/5030 or BTEX 8260	
RCl	
N.O.R.M.	
Glycol	
RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	
Standard TAT	

**Special Instructions:**

Relinquished by: Aaron Pachtkofer Date: 10/6/17 Time: 4:30 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: 10/6/17 Time: 16:30

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Laboratory Comments:**  
 Sample Containers Intact?  N  
 VOCs Free of Headspace?  N  
 Labels on containers?  N  
 Custody seals on containers(s)?  N  
 (Custody seals on coolers)  N  
 Sample Hand Delivered by Sampler/Client Rep?  N  
 by Courier? UPS DHL FedEx  
 Temperature Upon Receipt: 40 °C Factor NCFE L