

**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: El Paso Federal #12

Project Number: [none]

Location: Eddy CO NM

Lab Order Number: 7H24009



NELAP/TCEQ # T104704516-16-7

Report Date: 08/28/17

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

Project: El Paso Federal #12
Project Number: [none]
Project Manager: Aaron Pachlhofer

Fax: 43-687-1570

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-------------|---------------|--------|----------------|------------------|
| Stockpile A | 7H24009-01 | Soil | 08/23/17 08:38 | 08-24-2017 09:15 |
| Stockpile B | 7H24009-02 | Soil | 08/23/17 08:41 | 08-24-2017 09:15 |

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Stockpile A
7H24009-01 (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

| | | | | | | | | |
|------------|-----|-----|---|---|---------|----------|----------|------------|
| % Moisture | 4.0 | 0.1 | % | 1 | P7H2805 | 08/28/17 | 08/28/17 | ASTM D2216 |
|------------|-----|-----|---|---|---------|----------|----------|------------|

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

| | | | | | | | | |
|---------------------------------------|------|-------|-----------|---|---------|----------|----------|-----------|
| C6-C12 | ND | 26.0 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/25/17 | TPH 8015M |
| >C12-C28 | 142 | 26.0 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/25/17 | TPH 8015M |
| >C28-C35 | 73.1 | 26.0 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/25/17 | TPH 8015M |
| Surrogate: 1-Chlorooctane | | 115 % | 70-130 | | P7H2515 | 08/25/17 | 08/25/17 | TPH 8015M |
| Surrogate: o-Terphenyl | | 108 % | 70-130 | | P7H2515 | 08/25/17 | 08/25/17 | TPH 8015M |
| Total Petroleum Hydrocarbon C6-C35 | 215 | 26.0 | mg/kg dry | 1 | [CALC] | 08/25/17 | 08/25/17 | calc |

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Stockpile B
7H24009-02 (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

| | | | | | | | | |
|------------|-----|-----|---|---|---------|----------|----------|------------|
| % Moisture | 1.0 | 0.1 | % | 1 | P7H2805 | 08/28/17 | 08/28/17 | ASTM D2216 |
|------------|-----|-----|---|---|---------|----------|----------|------------|

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

| | | | | | | | | |
|---------------------------------------|-----|--------|-----------|---|---------|----------|----------|-----------|
| C6-C12 | ND | 25.3 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/26/17 | TPH 8015M |
| >C12-C28 | 610 | 25.3 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/26/17 | TPH 8015M |
| >C28-C35 | 380 | 25.3 | mg/kg dry | 1 | P7H2515 | 08/25/17 | 08/26/17 | TPH 8015M |
| Surrogate: 1-Chlorooctane | | 111 % | 70-130 | | P7H2515 | 08/25/17 | 08/26/17 | TPH 8015M |
| Surrogate: o-Terphenyl | | 97.7 % | 70-130 | | P7H2515 | 08/25/17 | 08/26/17 | TPH 8015M |
| Total Petroleum Hydrocarbon C6-C35 | 990 | 25.3 | mg/kg dry | 1 | [CALC] | 08/25/17 | 08/26/17 | calc |

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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 P7H2805 - * DEFAULT PREP *****

Blank (P7H2805-BLK1)

Prepared & Analyzed: 08/28/17

% Moisture ND 0.1 %

Duplicate (P7H2805-DUP1)

Source: 7H23006-02

Prepared & Analyzed: 08/28/17

% Moisture 4.0 0.1 % 4.0 0.00 20

Duplicate (P7H2805-DUP2)

Source: 7H24003-06

Prepared & Analyzed: 08/28/17

% Moisture 11.0 0.1 % 10.0 9.52 20

Duplicate (P7H2805-DUP3)

Source: 7H24005-03

Prepared & Analyzed: 08/28/17

% Moisture 15.0 0.1 % 14.0 6.90 20

Duplicate (P7H2805-DUP4)

Source: 7H25004-05

Prepared & Analyzed: 08/28/17

% Moisture 5.0 0.1 % 6.0 18.2 20

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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 |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch P7H2515 - General Preparation (GC)

Blank (P7H2515-BLK1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|----------------------------------|-------------|------|-----------|-------------|--|-------------|---------------|--|--|--|
| C6-C12 | ND | 25.0 | mg/kg wet | | | | | | | |
| >C12-C28 | ND | 25.0 | " | | | | | | | |
| >C28-C35 | ND | 25.0 | " | | | | | | | |
| <i>Surrogate: 1-Chlorooctane</i> | <i>109</i> | | <i>"</i> | <i>100</i> | | <i>109</i> | <i>70-130</i> | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>49.8</i> | | <i>"</i> | <i>50.0</i> | | <i>99.7</i> | <i>70-130</i> | | | |

LCS (P7H2515-BS1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|----------------------------------|-------------|------|-----------|-------------|--|-------------|---------------|--|--|--|
| C6-C12 | 755 | 25.0 | mg/kg wet | 1000 | | 75.5 | 75-125 | | | |
| >C12-C28 | 958 | 25.0 | " | 1000 | | 95.8 | 75-125 | | | |
| <i>Surrogate: 1-Chlorooctane</i> | <i>129</i> | | <i>"</i> | <i>100</i> | | <i>129</i> | <i>70-130</i> | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>48.5</i> | | <i>"</i> | <i>50.0</i> | | <i>97.0</i> | <i>70-130</i> | | | |

LCS Dup (P7H2515-BSD1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|----------------------------------|-------------|------|-----------|-------------|--|-------------|---------------|------|----|--|
| C6-C12 | 803 | 25.0 | mg/kg wet | 1000 | | 80.3 | 75-125 | 6.22 | 20 | |
| >C12-C28 | 972 | 25.0 | " | 1000 | | 97.2 | 75-125 | 1.45 | 20 | |
| <i>Surrogate: 1-Chlorooctane</i> | <i>130</i> | | <i>"</i> | <i>100</i> | | <i>130</i> | <i>70-130</i> | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>49.3</i> | | <i>"</i> | <i>50.0</i> | | <i>98.5</i> | <i>70-130</i> | | | |

Matrix Spike (P7H2515-MS1)

Source: 7H24006-04

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|----------------------------------|-------------|------|-----------|-------------|------|------------|---------------|--|--|--|
| C6-C12 | 1100 | 27.8 | mg/kg dry | 1110 | 21.7 | 97.4 | 75-125 | | | |
| >C12-C28 | 1270 | 27.8 | " | 1110 | 276 | 89.5 | 75-125 | | | |
| <i>Surrogate: 1-Chlorooctane</i> | <i>137</i> | | <i>"</i> | <i>111</i> | | <i>123</i> | <i>70-130</i> | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>68.0</i> | | <i>"</i> | <i>55.6</i> | | <i>122</i> | <i>70-130</i> | | | |

Matrix Spike Dup (P7H2515-MSD1)

Source: 7H24006-04

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|----------------------------------|-------------|------|-----------|-------------|------|------------|---------------|-------|----|--|
| C6-C12 | 1100 | 27.8 | mg/kg dry | 1110 | 21.7 | 96.8 | 75-125 | 0.683 | 20 | |
| >C12-C28 | 1290 | 27.8 | " | 1110 | 276 | 91.1 | 75-125 | 1.76 | 20 | |
| <i>Surrogate: 1-Chlorooctane</i> | <i>144</i> | | <i>"</i> | <i>111</i> | | <i>129</i> | <i>70-130</i> | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>68.6</i> | | <i>"</i> | <i>55.6</i> | | <i>123</i> | <i>70-130</i> | | | |

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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:

8/28/2017

Brent Barron, Laboratory Director/Technical Director

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