

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 | NRM2013359652 |
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

| | |
|--------------------------------------------------------|--------------------------------|
| Responsible Party Mewbourne Oil Company | OGRID 14744 |
| Contact Name Robbie Runnels | Contact Telephone 575-393-5905 |
| Contact email rrunnels@mewbourne.com | Incident # (assigned by OCD) |
| Contact mailing address P.O. Box 5270, Hobbs, NM 88241 | |

Location of Release Source

Latitude 32.705396

Longitude -104.120902

(NAD 83 in decimal degrees to 5 decimal places)

| | |
|--------------------------------------------------|-----------------------------------|
| Site Name Pavo Macho 31 32 B2EH Federal COM 001H | Site Type Production |
| Date Release Discovered 10/29/2019 @ 07:00 | API# (if applicable) 30-015-43784 |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| E | 31 | 18S | 29E | Eddy |

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) Estimated | Volume Recovered (bbls) |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) Estimated 125 | Volume Recovered (bbls) 100 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | x 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) |


Valve was closed going to heater/treater causing overflow in overflow tank.

| | |
|----------------|---------------|
| Incident ID | NRM2013359652 |
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| Application ID | |

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 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 was larger than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given to Victoria Venegas on 10/29/2019 at 13:20 by email from Robbie Runnels. | |

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: N/A | |
| 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>Robbie Runnels</u> | Title: <u>Environmental Specialist</u> |
| Signature:  | Date: <u>10/29/2019</u> |
| email: <u>rrunnels@mewbourne.com</u> | Telephone: <u>575-393-5905</u> |
| <u>OCD Only</u> | |
| Received by: <u>Ramona Marcus</u> | Date: <u>5/12/2020</u> |

| | |
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| Facility ID | |
| Application ID | |

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>>100</u> (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes x <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 x <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 x <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 x <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 x <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 x <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 x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input checked="" type="checkbox"/> Yes x <input 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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| | |
|----------------|---------------|
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Robbie Runnels_____ Title: Environmental Specialist_____

Signature: __________ Date: 3/11/20_____

email: __rrunnels@mewbourne.com_____ Telephone: _575-393-5905_____

OCD Only

Received by: _Ramona Marcus_____ Date: _5/12/2020_____

| | |
|----------------|---------------|
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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: Robbie Runnels Title: Environmental Specialist

Signature:  Date: 3/11/20

email: rrunnels@mewbourne.com Telephone: 575-393-5905

OCD Only

Received by: Ramona Marcus Date: 5/12/2020

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

Signature: _____ Date: _____

| | |
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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: Robbie Runnels Title: Environmental Specialist

Signature:  Date: 3/11/20

email: rrunnels@mewbourne.com Telephone: 575-393-5905

OCD Only

Received by: Ramona Marcus Date: 5/12/2020

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: _____



*4801 Business Park Blvd | Hobbs NM
88240 | 575-393-5905*

REMEDIATION SUMMARY & DEFERRED SITE CLOSURE REQUEST

**MEWBOURNE OIL COMPANY
PAVO MACHO 31 32 B2EH FEDERAL COM 001H
Eddy County, New Mexico
Unit Letter "E" (SW/NW), Section 31, Township 18 South, Range 29 East
Latitude 32.705454 North, Longitude -104.120952 West
NMOCD Reference #**

Prepared For:

New Mexico Oil Conservation Division
District 2
811 S. First Street
Artesia, New Mexico 88210

Prepared By:

Mewbourne Oil Company
4801 Business Park Blvd
Hobbs, New Mexico 88240

February, 2020

A handwritten signature in black ink, appearing to read "Robbie Runnels", is written over a horizontal line.

Robbie Runnels
Environmental Specialist

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FIGURES

Figure 1 – Site Location Map

Figure 2 – Site & Sample Location Map

Figure 3 – Depth to Groundwater Wells

TABLES

Table 1 – Concentrations of Benzene, BTEX, TPH & Chloride in Soil

APPENDICES

Appendix A – Photographs

Appendix B – Laboratory Analytical Reports

Appendix C – Release Notification and Corrective Action (Form C-141)

1.0 INTRODUCTION & BACKGROUND INFORMATION

Mewbourne Oil Company (Mewbourne), has prepared this *Remediation Summary & Deferred Site Closure Request* for the release site known as Pavo Macho 31 32 B2EH Federal COM 001H (2RP-5455). The legal description of the release site is Unit Letter "E" (SW/NW) of Section 31, Township 18 South of Range 29 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.705454° North latitude and -104.120952° West longitude. The property affected by the release is owned by the state of New Mexico. A "Site Location Map" is provided as Figure 1.

On October 29th, 2019, Mewbourne discovered a release of an estimated one-hundred twenty-five (125) barrels (bbls) of produced water when a closed valve caused an overflow at the overflow tank. Approximately one hundred (100) bbls were recovered. The release impacted an estimated nine thousand, five hundred (9,500) square feet (ft²) of pad, pipeline right-of-way and road with an additional four-thousand, four hundred (4,400) square feet (ft²) of adjacent pasture area. New Mexico Oil Conservation Division (NMOCD) was notified of the release on October 29th, 2019, and an initial C-141 was submitted to NMOCD on October 29th, 2019, for approval.

Initial sampling began on August 1st, 2019. Twenty (20) soil sample points were established (SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, SP9, SP10, SP11, SP12, SP13, SP14, SP15, SP16) and soil samples were retrieved at various depths. The soil samples were field screened and clean samples were submitted to an NMOCD approved and certified laboratory for confirmation analyses. Concentration of chloride, gasoline range organics (GRO) and diesel range organics (DRO) were analyzed in addition to benzene, toluene, ethyl-benzene, and xylenes (BTEX). Vertical delineation was completed for all sample points for all constituents of interest excluding SP3 where auger refusal occurred at a depth just below four (4) feet below ground surface (bgs).

Locations of the soil sample collection areas are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical results are summarized in Table 1, "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Laboratory analytical reports are provided in Appendix B.

The Form C-141 is provided as Appendix C. General photographs of the release site and remediation activities are provided as Appendix A.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated that no wells were within a one-mile radius of the location. Utilizing the United States Geological Survey (USGS) website for groundwater, no wells were found to be in any adjacent section within a one-mile radius. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one-hundred seventy-five (175) feet bgs. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated no records of any water wells within the section of the release or immediate surrounding area. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

There are no surface water bodies within one thousand (1000) feet of the release. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Red Hills Water Management System (2RP-5455) release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) are as follows:

- Benzene – 10 mg/kg
- Benzene, ethylbenzene, toluene, and xylenes (BTEX) – 50 mg/kg
- Total petroleum hydrocarbons (TPH) – 2,500 mg/kg
- Chloride – 20,000 mg/kg

As remediation is taking place in the pasture area, the soil remediation level for chloride concentration is 600 mg/kg for the first four (4) feet.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On November 1st, 2019, remediation activities began.

Excavated soil was stockpiled on site on a six (6) mil polypropylene plastic liner before being transferred to an approved NMOCD permitted facility for final disposal.

The floor of the excavation varied in depth from one foot to seven (7) foot bgs dependent upon the concentration of chlorides still exhibited above 600 mg/kg, the NMOCD most stringent remediation level for chlorides.

Composite wall soil samples were retrieved at intervals of approximately fifty (50) feet along the perimeter of the excavation where the floor of the excavation was greater than one foot bgs. Each composite wall sample did not represent greater than two-hundred (200) square feet of wall. Analytical results indicate that the vertical delineation was completed in that only the wall soil sample adjacent to the pipeline right-of-way was above the remediation concentration level for chlorides.

The remaining portion of the excavation was backfilled with locally purchased, non-impacted material. The clean topsoil was compacted and contoured to fit the surrounding topography.

The disturbed area will be seeded with the landowner approved seed mix at such a time it is conducive for germination.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil Samples were delivered to Hall Laboratories, Inc., in Albuquerque, New Mexico, for analyses of BTEX, TPH, and/or chloride concentrations using the methods described below. Soil samples were analyzed for BTEX, TPH, and/or chloride concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method SW 846-8021b (TCLP - SW-8260B)
- TPH concentrations in accordance with modified EPA Method SW 846-8015M
- Chloride concentrations in accordance with EPA Method 300.1

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Soil samples collected from the Pavo Macho 31 32 B2 EH Federal COM 001H release site were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and chloride were below the Table 1 levels established for the site. Soil exhibiting chloride concentrations above the Table 1 action level were confined to the pad area and the pipeline right-of-way.

Mewbourne Oil Company is providing the NMOCD Artesia District Office a copy of this *Remediation Summary & Deferred Site Closure Request*. Mewbourne ask the NMOCD grant site closure to the Red Hills Water Management System release site and allow a deferral for the impacted area that is on the pad and pipeline right-of-way until such time the location and pipeline are abandoned.

6.0 LIMITATIONS

Mewbourne Oil Company has prepared this *Remediation Summary & Deferred Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Mewbourne has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Mewbourne has not conducted an independent examination of the facts contained in referenced materials and statements. Mewbourne has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Mewbourne has prepared this report in a professional manner, using the degree of skill and care exercised by similar oil company environmental departments and or consultants. Mewbourne notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of the New Mexico Oil Conservation Division as well as Mewbourne Oil Company. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Mewbourne Oil Company.

7.0 DISTRIBUTION:

- Copy 1: Victoria Venegas
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 2)
1301 E. Grand Avenue
Artesia, NM 88210
- Copy 2: Jim Amos
Department of Interior – Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 88220
- Copy 3: Robin Terrell
Mewbourne Oil Company
4801 Business Park Blvd
Hobbs, NM 88240

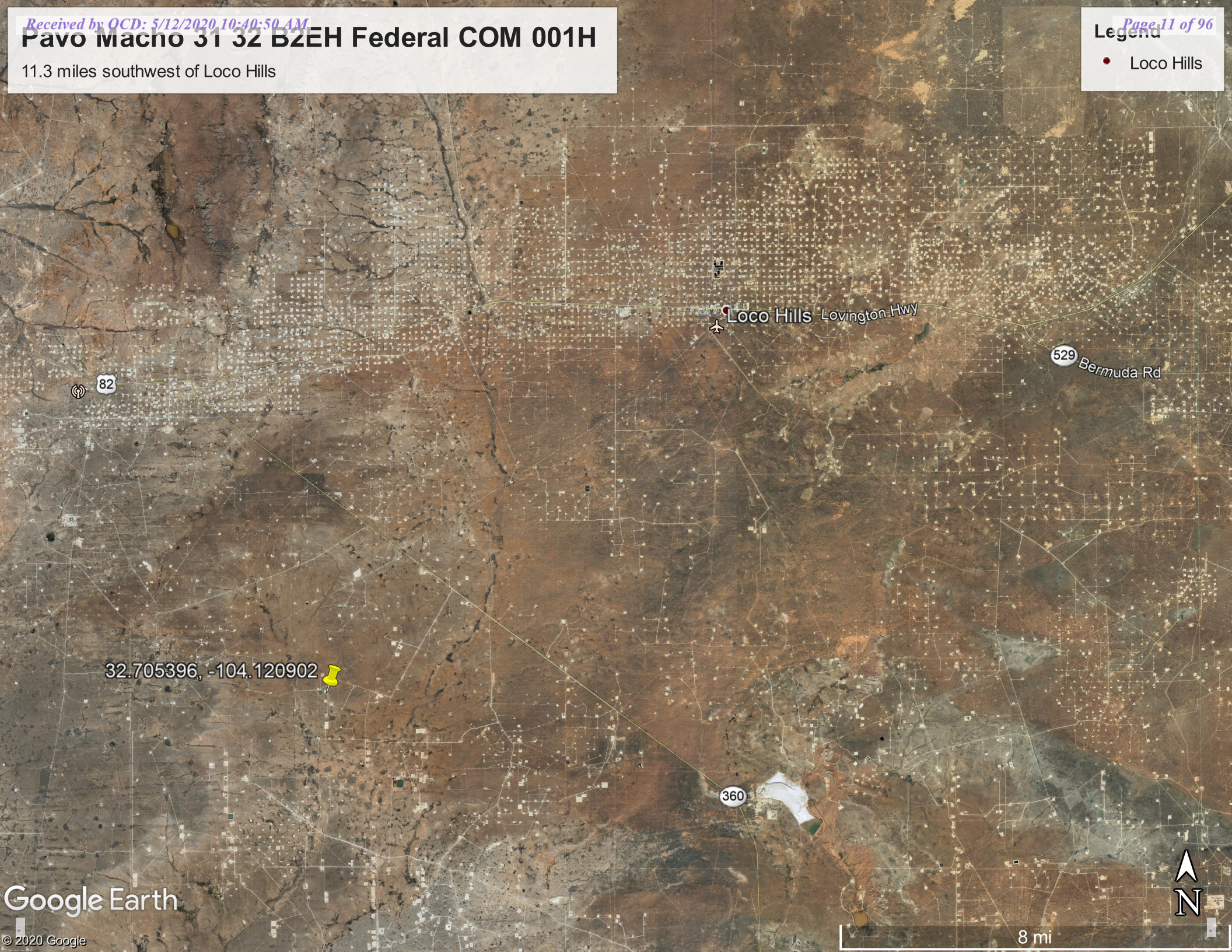
FIGURES

Pavo Macho 31 32 BZEH Federal COM 001H

11.3 miles southwest of Loco Hills

Legend

• Loco Hills







New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(NAD83 UTM in meters)

(in feet)

| POD Number | Code | Subbasin | County | Source | q | q | q | Sec | Tws | Rng | X | Y | Start Date | Finish Date | Log File Date | Depth Well | Depth Water | Driller | License Number | |
|-------------------------------|------|----------|--------|---------|----|----|---|-----|-----|-----|-----|--------|------------|-------------|---------------|------------|-------------|---------|----------------|------|
| CP 01618 POD1 | CP | | ED | Shallow | 64 | 16 | 4 | 4 | 29 | 18S | 29E | 585120 | 3620554 | 08/23/2016 | 08/26/2016 | 09/12/2016 | 240 | 180 | DON KUEHN III | 1058 |

Record Count: 1

PLSS Search:

Section(s): 29

Township: 18S

Range: 29E

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.

2/12/20 11:05 AM

WELLS WITH WELL LOG INFORMATION



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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:


Groundwater ▼

Geographic Area:

New Mexico ▼

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Groundwater levels for New Mexico

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Site Selection Results -- 1711 sites found

County = Eddy

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

| Agency | Site Number | Site Name | Period of Record | | |
|--------|---------------------------------|------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 18s.29e | | | |
| USGS | 324158104040301 | 18S.29E.34.33233 | 1976-05-28 | 1976-05-28 | 1 |
| USGS | 324208104034101 | 18S.29E.34.32420 | 1976-05-28 | 1983-04-12 | 2 |
| USGS | 324402104014701 | 18S.29E.24.14413 | 1994-03-30 | 2015-12-16 | 2 |

| Agency | Site Number | Site Name | Period of Record | | |
|--------|------------------------|------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 18s.29e | | | |
| USGS | <u>324403104013301</u> | 18S.29E.24.23314 | 1950-04-28 | 1950-04-28 | 1 |
| USGS | <u>324403104013601</u> | 18S.29E.24.23313 | 1965-12-20 | 1994-03-30 | 9 |
| USGS | <u>324520104035201</u> | 18S.29E.10.34310 | 1983-04-12 | 1994-03-29 | 4 |

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Title: Groundwater levels -- 1711 sites found

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2020-03-11 13:30:17 EDT

2.77 0.42 nadww01



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Data Category:


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Geographic Area:

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Groundwater levels for New Mexico

Click to hide state-specific text

Site Selection Results -- 1711 sites found

County = Eddy

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

| Agency | Site Number | Site Name | Period of Record | | |
|--------|---------------------------------|-------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 18s.28e | | | |
| USGS | 324339104131901 | 18S.28E.30.111123 | 1948-12-02 | 1989-02-22 | 3 |
| USGS | 324424104103901 | 18S.28E.21.21212 | 1986-05-21 | 1999-02-19 | 4 |
| USGS | 324523104121601 | 18S.28E.17.111212 | 1948-12-02 | 1948-12-02 | 1 |

| Agency | Site Number | Site Name | Period of Record | | |
|--------|------------------------|-------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 18s.28e | | | |
| USGS | <u>324523104121701</u> | 18S.28E.17.111211 | 1983-04-13 | 2015-12-16 | 5 |
| USGS | <u>324532104125101</u> | 18S.28E.07.43131 | 1983-04-13 | 1994-03-09 | 3 |
| USGS | <u>324633104105401</u> | 18S.28E.04.32412 | 1985-06-04 | 1999-01-13 | 4 |
| USGS | <u>324642104111001</u> | 18S.28E.04.131444 | 1985-06-04 | 1994-03-09 | 3 |

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Title: Groundwater levels -- 1711 sites found

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2020-03-11 13:30:17 EDT

2.77 0.42 nadww01



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Groundwater levels for New Mexico

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Site Selection Results -- 1711 sites found

County = Eddy

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

| Agency | Site Number | Site Name | Period of Record | | |
|--------|------------------------|------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 19s.28e | | | |
| USGS | 323645104074001 | 19S.28E.36.43233 | 1965-12-07 | 1999-01-19 | 8 |
| USGS | <u>323724104103901</u> | 19S.28E.33.21422 | 1948-12-21 | 1971-01-28 | 4 |
| USGS | 323845104075601 | 19S.28E.24.32233 | 1965-11-03 | 1999-01-19 | 8 |

| Agency | Site Number | Site Name | Period of Record | | |
|--------|---------------------------------|-------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 19s.28e | | | |
| USGS | 323958104073401 | 19S.28E.13.21400 | 1948-12-03 | 1971-02-01 | 4 |
| USGS | 324000104073601 | 19S.28E.13.214411 | 1983-01-10 | 2015-12-16 | 5 |
| USGS | 324008104131201 | 19S.28E.18.12113 | 1948-09-03 | 2004-03-02 | 10 |
| USGS | 324022104105701 | 19S.28E.09.32322 | 1986-06-04 | 1999-02-19 | 3 |
| USGS | 324136104084701 | 19S.28E.02.23312 | 1948-12-13 | 1983-01-11 | 4 |
| USGS | 324154104115201 | 19S.28E.05.21114 | 1965-11-03 | 2015-12-16 | 10 |

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2.77 0.42 nadww01



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Groundwater levels for New Mexico

Click to hide state-specific text

Site Selection Results -- 1711 sites found

County = Eddy

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

| Agency | Site Number | Site Name | Period of Record | | |
|--------|---------------------------------|-------------------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 19S.29e | | | |
| USGS | 323731104011801 | 19S.29E.25.44332 | 1983-01-12 | 1994-03-04 | 2 |
| USGS | 323853104023101 | 19S.29E.23.23322 | 1965-12-09 | 1994-03-04 | 7 |
| USGS | 323900104052901 | 19S.29E.20.24111 RATLSNAKE | 1948-12-13 | 1983-01-12 | 6 |

| Agency | Site Number | Site Name | Period of Record | | |
|--------|---------------------------------|-------------------|------------------|------------|--------|
| | | | Begin Date | End Date | Levels |
| | | 19s.29e | | | |
| USGS | 323936104012601 | 19S.29E.13.41224A | 1990-09-20 | 1999-01-20 | 3 |
| USGS | 323937104012201 | 19S.29E.13.41224 | 1948-12-21 | 1976-12-07 | 3 |
| USGS | 323937104012301 | 19S.29E.13.412243 | 1948-12-21 | 1983-01-12 | 5 |
| USGS | 324019104033201 | 19S.29E.10.43211 | 1965-12-09 | 1971-02-01 | 3 |
| USGS | 324026104064301 | 19S.29E.07.41134 | 1984-04-26 | 2004-03-02 | 4 |
| USGS | 324135104035901 | 19S.29E.03.13223 | 1984-04-26 | 1994-03-11 | 3 |
| USGS | 324139104034901 | 19S.29E.03.12344 | 1984-07-20 | 2015-12-16 | 4 |

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Title: Groundwater levels -- 1711 sites found

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2.77 0.42 nadww01

TABLES

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL
MEWBOURNE OIL COMPANY
PAVO MACHO 31 32 B2EH FEDERAL COM 001H
EDDY COUNTY, NEW MEXICO
UL E, SEC 31, T-18-S, R-29-E
NMOCD REFERENCE #: 2RP-5455

| SAMPLE LOCATION | SAMPLE DEPTH (BGS) | SAMPLE DATE | SOIL STATUS | METHOD: EPA SW 846-8021B, 5030 | | | | | METHOD: 8015M | | | TOTAL TPH C ₆ -C ₃₆ (mg/Kg) | 300 | | FIELD CHLORIDE (mg/Kg) |
|---------------------------|--------------------|-------------|-------------|--------------------------------|-----------------|-----------------------|-----------------------|--------------------|---------------------------------------------|----------------------------------------------|--------------------------------------------------|---------------------------------------------------|------------------|--|------------------------|
| | | | | BENZENE (mg/Kg) | TOLUENE (mg/Kg) | ETHYL-BENZENE (mg/Kg) | TOTAL XYLENES (mg/Kg) | TOTAL BTEX (mg/Kg) | GRO C ₆ -C ₁₀ (mg/Kg) | DRO C ₁₀ -C ₂₈ (mg/Kg) | EXT DRO C ₂₈ -C ₃₆ (mg/Kg) | | CHLORIDE (mg/Kg) | | |
| SP1 @ 1' | 1' | 11/4/2019 | In-Situ | 0.21 | 3.7 | 5.2 | 13 | 22.11 | 250 | 900 | <490 | 1,150 | 360 | | NA |
| SP2 @ 4' | 4' | 11/4/2019 | In-Situ | 2.4 | 32 | 29 | 65 | 128.4 | 850 | 2,700 | 820 | 4,370 | 7,700 | | NA |
| SP2 @ 9' | 9' | 11/4/2019 | In-Situ | NA | NA | NA | NA | NA | NA | NA | NA | NA | 130 | | NA |
| SP3 @ 4' | 4' | 11/4/2019 | In-Situ | 27 | 260 | 130 | 250 | 667 | 3,900 | 6,500 | 1,800 | 12,200 | 11,000 | | AR |
| SP4 @ 1' | 1' | 11/4/2019 | In-Situ | <0.023 | 0.064 | 0.070 | 0.20 | 0.334 | <4.6 | 48 | <47 | 48 | <60 | | NA |
| SP5 @ 2' | 2' | 11/4/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.098 | <0.221 | <4.9 | <9.9 | <49 | <63.8 | <60 | | NA |
| SP6 @ 2' | 2' | 11/4/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.098 | <0.221 | <4.9 | <9.6 | <48 | <62.5 | <60 | | NA |
| SP7 @ 1' | 1' | 11/4/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | 0.217 | <4.8 | <9.8 | <49 | <63.6 | 69 | | NA |
| SP8 @ 2' | 2' | 11/4/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | 0.217 | <4.8 | <9.0 | <45 | <58.8 | <59 | | NA |
| SP9 @ 2' | 2' | 11/4/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.095 | <0.213 | <4.7 | 63 | <48 | 63 | 200 | | NA |
| SP10 @ 1' | 1' | 11/4/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.099 | <0.222 | <4.9 | <9.7 | <49 | <63.6 | <60 | | NA |
| SP11 @ 1' | 1' | 11/4/2019 | In-Situ | <0.025 | <0.050 | <0.050 | <0.10 | <0.225 | <5.0 | 200 | 70 | 270 | 170 | | NA |
| SP12 @ 4' | 4' | 11/4/2019 | In-Situ | <0.024 | <0.049 | <0.049 | <0.097 | <0.219 | <4.9 | 18 | <45 | <45 | <60 | | NA |
| SP12 @ 6' | 6' | 11/4/2019 | In-Situ | NA | NA | NA | NA | NA | NA | NA | NA | NA | 99 | | NA |
| SP13 @ 1' | 1' | 11/4/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 10 | <47 | <47 | <60 | | NA |
| SP14 @ 2' | 2' | 11/4/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.098 | <0.221 | <4.9 | <9.0 | <45 | <58.9 | <60 | | NA |
| SP15 @ 3' | 3' | 11/4/2019 | In-Situ | 0.031 | <0.048 | <0.048 | <0.096 | <0.216 | <4.8 | <9.6 | <48 | <62.4 | <60 | | NA |
| SP16 @ 4' | 4' | 11/4/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.096 | <0.216 | <4.8 | 16 | <49 | <53.8 | 1,500 | | NA |
| SP16 @ 7' | 7' | 11/4/2019 | In-Situ | NA | NA | NA | NA | NA | NA | NA | NA | NA | <60 | | NA |
| Wall 5 East | Various | 11/22/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.094 | <0.212 | <4.7 | <9.7 | <48 | <62.4 | <60 | | NA |
| Wall 5 West | Various | 11/22/2019 | In-Situ | <0.11 | <0.23 | <0.23 | <0.46 | <1.03 | 50 | 1800 | 660 | 2,510 | 790 | | NA |
| Wall 6 East | Various | 11/22/2019 | In-Situ | <0.025 | <0.050 | <0.050 | <0.099 | <0.224 | <5.0 | <9.7 | <48 | <62.7 | 120 | | NA |
| Wall 6 West | Various | 11/22/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 100 | 57 | 157 | 740 | | NA |
| Wall 8 East | Various | 11/22/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.099 | <0.222 | <4.9 | <9.5 | <48 | <62.4 | <60 | | NA |
| Wall 8 West | Various | 11/22/2019 | In-Situ | <0.025 | <0.050 | <0.050 | <0.10 | <0.225 | <5.0 | 39 | <48 | <48 | 650 | | NA |
| Wall 9 East | Various | 11/22/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.094 | <0.212 | <4.7 | <9.6 | <48 | <62.5 | 120 | | NA |
| Wall 9 West | Various | 11/22/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 210 | 78 | 288 | 5,400 | | NA |
| Wall 12 East | Various | 11/22/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.098 | <0.221 | <4.9 | <9.0 | <45 | <58.9 | <60 | | NA |
| Wall 12 North | Various | 11/22/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.094 | <0.212 | <4.7 | <9.2 | <46 | <59.9 | <60 | | NA |
| Wall 12 South | Various | 11/22/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.095 | <0.213 | <4.7 | <9.7 | <48 | <62.4 | 99 | | NA |
| Wall 13 South | Various | 11/22/2019 | In-Situ | <0.023 | <0.046 | <0.046 | <0.093 | <0.208 | <4.6 | <9.4 | <47 | <61.0 | <60 | | NA |
| Wall 13 East | Various | 11/22/2019 | In-Situ | <0.024 | <0.049 | <0.049 | <0.098 | <0.220 | <4.9 | <9.4 | <47 | <61.3 | <60 | | NA |
| Wall 13 West | Various | 11/22/2019 | In-Situ | <0.023 | <0.047 | <0.047 | <0.093 | <0.210 | <4.7 | 57 | <49 | 57 | <60 | | NA |
| Wall 14 North | Various | 11/22/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | <9.3 | <47 | <61.1 | <60 | | NA |
| Wall 14 South | Various | 11/22/2019 | In-Situ | <0.025 | <0.050 | <0.050 | <0.10 | <0.225 | <5.0 | <9.0 | <45 | <59.0 | <60 | | NA |
| Wall 14 West | Various | 11/22/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.098 | <0.221 | <4.9 | <8.6 | <43 | <56.5 | <60 | | NA |
| Wall 15 East | Various | 11/22/2019 | In-Situ | <0.024 | <0.047 | <0.047 | <0.095 | <0.213 | <4.7 | 28 | <43 | <56.2 | 140 | | NA |
| Wall 15 West | Various | 11/22/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.096 | <0.216 | <4.8 | <9.3 | <47 | <61.1 | <59 | | NA |
| Wall 15 North | Various | 11/22/2019 | In-Situ | <0.024 | <0.048 | <0.048 | <0.096 | <0.216 | <4.8 | <9.9 | <50 | <64.7 | <60 | | NA |
| Wall 16 North | Various | 11/22/2019 | In-Situ | <0.024 | <0.049 | <0.049 | <0.098 | <0.220 | <4.9 | <9.7 | <49 | <63.6 | <60 | | NA |
| Wall 16 South | Various | 11/22/2019 | In-Situ | <0.024 | <0.049 | <0.049 | <0.098 | <0.220 | <4.9 | <10 | <50 | <64.9 | 270 | | NA |
| Wall 16 West | Various | 11/22/2019 | In-Situ | <0.025 | <0.049 | <0.049 | <0.099 | <0.222 | <4.9 | <9.9 | <49 | <63.8 | 510 | | NA |
| NMOCD Regulatory Standard | | | | 10 | | | | 50 | | | | 2,500 | 600 | | |

APPENDICES

APPENDIX – A

Photo Documentation

Pavo Macho 31-32 B2EH Fed COM #1H

32.705454, -104.120952



Release area, facing north

10/29/19



Release area, facing south

10/29/19



Remediation, facing north

11/5/19



Remediation, facing west

11/5/19

Pavo Macho 31-32 B2EH Fed COM #1H

32.705454, -104.120952



Remediation complete, facing south

2/14/20



Remediation complete, facing north

2/14/20



Remediation complete, facing west

2/14/20



Remediation complete, facing southwest

2/14/20

APPENDIX – B

Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 15, 2019

Robbie Runnels
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
TEL: (575) 393-5905
FAX

RE: Pavo Macho 3132 Fedcom 1 H

OrderNo.: 1911346

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 19 sample(s) on 11/8/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP1 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 9:40:00 AM

Lab ID: 1911346-001

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 360 | 60 | | mg/Kg | 20 | 11/13/2019 2:20:33 PM | 48762 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 900 | 98 | | mg/Kg | 10 | 11/12/2019 4:39:49 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 490 | | mg/Kg | 10 | 11/12/2019 4:39:49 PM | 48697 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 11/12/2019 4:39:49 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 250 | 48 | | mg/Kg | 10 | 11/11/2019 9:36:00 AM | 48681 |
| Surr: BFB | 328 | 77.4-118 | S | %Rec | 10 | 11/11/2019 9:36:00 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | 0.21 | 0.12 | | mg/Kg | 5 | 11/11/2019 5:57:07 PM | 48681 |
| Toluene | 3.7 | 0.24 | | mg/Kg | 5 | 11/11/2019 5:57:07 PM | 48681 |
| Ethylbenzene | 5.2 | 0.24 | | mg/Kg | 5 | 11/11/2019 5:57:07 PM | 48681 |
| Xylenes, Total | 13 | 0.48 | | mg/Kg | 5 | 11/11/2019 5:57:07 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 146 | 80-120 | S | %Rec | 5 | 11/11/2019 5:57:07 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP2 @ 4

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:18:00 AM

Lab ID: 1911346-002

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|-----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 7700 | 300 | | mg/Kg | 100 | 11/14/2019 8:28:00 PM | 48762 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 2700 | 100 | | mg/Kg | 10 | 11/12/2019 5:07:24 PM | 48697 |
| Motor Oil Range Organics (MRO) | 820 | 500 | | mg/Kg | 10 | 11/12/2019 5:07:24 PM | 48697 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 11/12/2019 5:07:24 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 850 | 24 | | mg/Kg | 5 | 11/11/2019 9:59:46 AM | 48681 |
| Surr: BFB | 899 | 77.4-118 | S | %Rec | 5 | 11/11/2019 9:59:46 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | 2.4 | 0.12 | | mg/Kg | 5 | 11/11/2019 9:59:46 AM | 48681 |
| Toluene | 32 | 2.4 | | mg/Kg | 50 | 11/11/2019 6:19:45 PM | 48681 |
| Ethylbenzene | 29 | 2.4 | | mg/Kg | 50 | 11/11/2019 6:19:45 PM | 48681 |
| Xylenes, Total | 65 | 0.48 | | mg/Kg | 5 | 11/11/2019 9:59:46 AM | 48681 |
| Surr: 4-Bromofluorobenzene | 249 | 80-120 | S | %Rec | 5 | 11/11/2019 9:59:46 AM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP3 @ 4

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:20:00 AM

Lab ID: 1911346-003

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|-----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 11000 | 600 | | mg/Kg | 200 | 11/14/2019 8:40:21 PM | 48762 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 6500 | 93 | | mg/Kg | 10 | 11/12/2019 5:25:34 PM | 48697 |
| Motor Oil Range Organics (MRO) | 1800 | 470 | | mg/Kg | 10 | 11/12/2019 5:25:34 PM | 48697 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 11/12/2019 5:25:34 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 3900 | 480 | | mg/Kg | 100 | 11/12/2019 9:38:05 AM | 48681 |
| Surr: BFB | 217 | 77.4-118 | S | %Rec | 100 | 11/12/2019 9:38:05 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | 27 | 2.4 | | mg/Kg | 100 | 11/11/2019 6:42:38 PM | 48681 |
| Toluene | 260 | 4.8 | | mg/Kg | 100 | 11/11/2019 6:42:38 PM | 48681 |
| Ethylbenzene | 130 | 4.8 | | mg/Kg | 100 | 11/11/2019 6:42:38 PM | 48681 |
| Xylenes, Total | 250 | 9.5 | | mg/Kg | 100 | 11/11/2019 6:42:38 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 119 | 80-120 | | %Rec | 100 | 11/11/2019 6:42:38 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP4 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:34:00 AM

Lab ID: 1911346-004

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/13/2019 2:57:34 PM | 48762 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 48 | 9.3 | | mg/Kg | 1 | 11/12/2019 5:34:39 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/12/2019 5:34:39 PM | 48697 |
| Surr: DNOP | 86.9 | 70-130 | | %Rec | 1 | 11/12/2019 5:34:39 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 11/11/2019 7:05:35 PM | 48681 |
| Surr: BFB | 128 | 77.4-118 | S | %Rec | 1 | 11/11/2019 7:05:35 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 11/11/2019 7:05:35 PM | 48681 |
| Toluene | 0.064 | 0.046 | | mg/Kg | 1 | 11/11/2019 7:05:35 PM | 48681 |
| Ethylbenzene | 0.070 | 0.046 | | mg/Kg | 1 | 11/11/2019 7:05:35 PM | 48681 |
| Xylenes, Total | 0.20 | 0.092 | | mg/Kg | 1 | 11/11/2019 7:05:35 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | | %Rec | 1 | 11/11/2019 7:05:35 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP5 @ 2

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:50:00 AM

Lab ID: 1911346-005

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 1:39:14 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 11/12/2019 5:43:44 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/12/2019 5:43:44 PM | 48697 |
| Surr: DNOP | 80.6 | 70-130 | | %Rec | 1 | 11/12/2019 5:43:44 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/11/2019 7:28:22 PM | 48681 |
| Surr: BFB | 97.0 | 77.4-118 | | %Rec | 1 | 11/11/2019 7:28:22 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/11/2019 7:28:22 PM | 48681 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 7:28:22 PM | 48681 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 7:28:22 PM | 48681 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/11/2019 7:28:22 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 94.8 | 80-120 | | %Rec | 1 | 11/11/2019 7:28:22 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP6 @ 2

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:51:00 AM

Lab ID: 1911346-006

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 1:51:39 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 11/12/2019 5:52:47 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/12/2019 5:52:47 PM | 48697 |
| Surr: DNOP | 86.4 | 70-130 | | %Rec | 1 | 11/12/2019 5:52:47 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/11/2019 7:51:13 PM | 48681 |
| Surr: BFB | 97.7 | 77.4-118 | | %Rec | 1 | 11/11/2019 7:51:13 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/11/2019 7:51:13 PM | 48681 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 7:51:13 PM | 48681 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 7:51:13 PM | 48681 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/11/2019 7:51:13 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 96.9 | 80-120 | | %Rec | 1 | 11/11/2019 7:51:13 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP7 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 10:40:00 AM

Lab ID: 1911346-007

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 69 | 60 | | mg/Kg | 20 | 11/14/2019 2:04:04 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 11/12/2019 6:01:49 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/12/2019 6:01:49 PM | 48697 |
| Surr: DNOP | 80.6 | 70-130 | | %Rec | 1 | 11/12/2019 6:01:49 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/11/2019 8:14:04 PM | 48681 |
| Surr: BFB | 99.0 | 77.4-118 | | %Rec | 1 | 11/11/2019 8:14:04 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/11/2019 8:14:04 PM | 48681 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 8:14:04 PM | 48681 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 8:14:04 PM | 48681 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/11/2019 8:14:04 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 97.3 | 80-120 | | %Rec | 1 | 11/11/2019 8:14:04 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP8 @ 2

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 11:30:00 AM

Lab ID: 1911346-008

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 59 | | mg/Kg | 20 | 11/14/2019 2:16:28 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 11/12/2019 6:10:51 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 11/12/2019 6:10:51 PM | 48697 |
| Surr: DNOP | 79.2 | 70-130 | | %Rec | 1 | 11/12/2019 6:10:51 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/11/2019 8:36:52 PM | 48681 |
| Surr: BFB | 99.4 | 77.4-118 | | %Rec | 1 | 11/11/2019 8:36:52 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/11/2019 8:36:52 PM | 48681 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 8:36:52 PM | 48681 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 8:36:52 PM | 48681 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/11/2019 8:36:52 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 96.4 | 80-120 | | %Rec | 1 | 11/11/2019 8:36:52 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP9 @ 2

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 1:36:00 PM

Lab ID: 1911346-009

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 200 | 59 | | mg/Kg | 20 | 11/14/2019 2:53:41 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 63 | 9.6 | | mg/Kg | 1 | 11/12/2019 6:28:50 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/12/2019 6:28:50 PM | 48697 |
| Surr: DNOP | 90.2 | 70-130 | | %Rec | 1 | 11/12/2019 6:28:50 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/11/2019 8:59:43 PM | 48681 |
| Surr: BFB | 97.3 | 77.4-118 | | %Rec | 1 | 11/11/2019 8:59:43 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/11/2019 8:59:43 PM | 48681 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/11/2019 8:59:43 PM | 48681 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/11/2019 8:59:43 PM | 48681 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 11/11/2019 8:59:43 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 94.4 | 80-120 | | %Rec | 1 | 11/11/2019 8:59:43 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP10 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 11:52:00 AM

Lab ID: 1911346-010

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 3:06:06 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 11/12/2019 6:37:51 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/12/2019 6:37:51 PM | 48697 |
| Surr: DNOP | 84.6 | 70-130 | | %Rec | 1 | 11/12/2019 6:37:51 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/11/2019 9:22:31 PM | 48681 |
| Surr: BFB | 94.2 | 77.4-118 | | %Rec | 1 | 11/11/2019 9:22:31 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/11/2019 9:22:31 PM | 48681 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 9:22:31 PM | 48681 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 9:22:31 PM | 48681 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 11/11/2019 9:22:31 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 91.9 | 80-120 | | %Rec | 1 | 11/11/2019 9:22:31 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP11 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 12:10:00 PM

Lab ID: 1911346-011

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 170 | 60 | | mg/Kg | 20 | 11/14/2019 3:43:20 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 200 | 9.5 | | mg/Kg | 1 | 11/12/2019 6:46:49 PM | 48697 |
| Motor Oil Range Organics (MRO) | 70 | 47 | | mg/Kg | 1 | 11/12/2019 6:46:49 PM | 48697 |
| Surr: DNOP | 105 | 70-130 | | %Rec | 1 | 11/12/2019 6:46:49 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 11/11/2019 10:53:38 PM | 48681 |
| Surr: BFB | 106 | 77.4-118 | | %Rec | 1 | 11/11/2019 10:53:38 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/11/2019 10:53:38 PM | 48681 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 11/11/2019 10:53:38 PM | 48681 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 11/11/2019 10:53:38 PM | 48681 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 11/11/2019 10:53:38 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 93.7 | 80-120 | | %Rec | 1 | 11/11/2019 10:53:38 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP12 @ 4

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 12:18:00 PM

Lab ID: 1911346-012

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 3:55:45 AM | 48786 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 18 | 9.0 | | mg/Kg | 1 | 11/12/2019 6:55:47 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 11/12/2019 6:55:47 PM | 48697 |
| Surr: DNOP | 82.1 | 70-130 | | %Rec | 1 | 11/12/2019 6:55:47 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/11/2019 11:16:20 PM | 48681 |
| Surr: BFB | 95.4 | 77.4-118 | | %Rec | 1 | 11/11/2019 11:16:20 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/11/2019 11:16:20 PM | 48681 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 11:16:20 PM | 48681 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/11/2019 11:16:20 PM | 48681 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/11/2019 11:16:20 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 94.0 | 80-120 | | %Rec | 1 | 11/11/2019 11:16:20 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP13 @ 1

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 12:20:00 PM

Lab ID: 1911346-013

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 5:22:52 PM | 48795 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 10 | 9.3 | | mg/Kg | 1 | 11/12/2019 7:04:44 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/12/2019 7:04:44 PM | 48697 |
| Surr: DNOP | 102 | 70-130 | | %Rec | 1 | 11/12/2019 7:04:44 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/11/2019 11:39:01 PM | 48681 |
| Surr: BFB | 95.6 | 77.4-118 | | %Rec | 1 | 11/11/2019 11:39:01 PM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/11/2019 11:39:01 PM | 48681 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 11:39:01 PM | 48681 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/11/2019 11:39:01 PM | 48681 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/11/2019 11:39:01 PM | 48681 |
| Surr: 4-Bromofluorobenzene | 94.0 | 80-120 | | %Rec | 1 | 11/11/2019 11:39:01 PM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP14 @ 2

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 12:22:00 PM

Lab ID: 1911346-014

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 5:35:13 PM | 48795 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 11/12/2019 7:13:43 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 11/12/2019 7:13:43 PM | 48697 |
| Surr: DNOP | 86.0 | 70-130 | | %Rec | 1 | 11/12/2019 7:13:43 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/12/2019 12:01:43 AM | 48681 |
| Surr: BFB | 98.6 | 77.4-118 | | %Rec | 1 | 11/12/2019 12:01:43 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/12/2019 12:01:43 AM | 48681 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/12/2019 12:01:43 AM | 48681 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/12/2019 12:01:43 AM | 48681 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/12/2019 12:01:43 AM | 48681 |
| Surr: 4-Bromofluorobenzene | 96.7 | 80-120 | | %Rec | 1 | 11/12/2019 12:01:43 AM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP15 @ 3

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 12:24:00 PM

Lab ID: 1911346-015

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 5:47:34 PM | 48795 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 11/12/2019 7:22:39 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/12/2019 7:22:39 PM | 48697 |
| Surr: DNOP | 85.7 | 70-130 | | %Rec | 1 | 11/12/2019 7:22:39 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/12/2019 12:24:25 AM | 48681 |
| Surr: BFB | 97.2 | 77.4-118 | | %Rec | 1 | 11/12/2019 12:24:25 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | 0.031 | 0.024 | | mg/Kg | 1 | 11/12/2019 12:24:25 AM | 48681 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/12/2019 12:24:25 AM | 48681 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/12/2019 12:24:25 AM | 48681 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 11/12/2019 12:24:25 AM | 48681 |
| Surr: 4-Bromofluorobenzene | 96.5 | 80-120 | | %Rec | 1 | 11/12/2019 12:24:25 AM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP2 @ 9

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 9:50:00 AM

Lab ID: 1911346-016

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|----|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 130 | 60 | | mg/Kg | 20 | 11/14/2019 5:59:54 PM | 48795 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical ReportLab Order **1911346**Date Reported: **11/15/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP16 @ 7**Project:** Pavo Macho 3132 Fedcom 1 H**Collection Date:** 11/4/2019 11:30:00 AM**Lab ID:** 1911346-017**Matrix:** SOIL**Received Date:** 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|----|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/14/2019 6:12:15 PM | 48795 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical ReportLab Order **1911346**Date Reported: **11/15/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Mewbourne Oil Company**Client Sample ID:** SP12 @ 6**Project:** Pavo Macho 3132 Fedcom 1 H**Collection Date:** 11/4/2019 11:55:00 AM**Lab ID:** 1911346-018**Matrix:** SOIL**Received Date:** 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------|--------|----|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 99 | 60 | | mg/Kg | 20 | 11/14/2019 6:24:35 PM | 48795 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911346

Date Reported: 11/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: SP16 @ 4

Project: Pavo Macho 3132 Fedcom 1 H

Collection Date: 11/4/2019 11:00:00 AM

Lab ID: 1911346-019

Matrix: SOIL

Received Date: 11/8/2019 9:18:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 1500 | 60 | | mg/Kg | 20 | 11/14/2019 6:36:55 PM | 48795 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 16 | 9.9 | | mg/Kg | 1 | 11/12/2019 7:31:34 PM | 48697 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/12/2019 7:31:34 PM | 48697 |
| Surr: DNOP | 78.9 | 70-130 | | %Rec | 1 | 11/12/2019 7:31:34 PM | 48697 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/12/2019 12:47:06 AM | 48681 |
| Surr: BFB | 97.8 | 77.4-118 | | %Rec | 1 | 11/12/2019 12:47:06 AM | 48681 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/12/2019 12:47:06 AM | 48681 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/12/2019 12:47:06 AM | 48681 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/12/2019 12:47:06 AM | 48681 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 11/12/2019 12:47:06 AM | 48681 |
| Surr: 4-Bromofluorobenzene | 95.8 | 80-120 | | %Rec | 1 | 11/12/2019 12:47:06 AM | 48681 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911346

15-Nov-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132 Fedcom 1 H

| Sample ID: MB-48786 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48786 | RunNo: 64488 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207706 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-48786 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48786 | RunNo: 64488 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207707 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.0 | 90 | 110 | | | |

| Sample ID: MB-48762 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48762 | RunNo: 64469 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207935 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-48762 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48762 | RunNo: 64469 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207936 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.1 | 90 | 110 | | | |

| Sample ID: MB-48795 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48795 | RunNo: 64512 | | | | | | | | |
| Prep Date: 11/14/2019 | Analysis Date: 11/14/2019 | SeqNo: 2209492 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-48795 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48795 | RunNo: 64512 | | | | | | | | |
| Prep Date: 11/14/2019 | Analysis Date: 11/14/2019 | SeqNo: 2209493 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.1 | 90 | 110 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911346

15-Nov-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132 Fedcom 1 H

| Sample ID: LCS-48697 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48697 | RunNo: 64436 | | | | | | | | |
| Prep Date: 11/11/2019 | Analysis Date: 11/12/2019 | SeqNo: 2205864 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 43 | 10 | 50.00 | 0 | 85.8 | 63.9 | 124 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 73.1 | 70 | 130 | | | |

| Sample ID: LCS-48715 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48715 | RunNo: 64436 | | | | | | | | |
| Prep Date: 11/11/2019 | Analysis Date: 11/12/2019 | SeqNo: 2205865 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 3.4 | | 5.000 | | 68.9 | 70 | 130 | | | S |

| Sample ID: MB-48697 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|------------------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48697 | RunNo: 64436 | | | | | | | | |
| Prep Date: 11/11/2019 | Analysis Date: 11/12/2019 | SeqNo: 2205866 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 7.6 | | 10.00 | | 76.0 | 70 | 130 | | | |

| Sample ID: MB-48715 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48715 | RunNo: 64436 | | | | | | | | |
| Prep Date: 11/11/2019 | Analysis Date: 11/12/2019 | SeqNo: 2205874 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 7.8 | | 10.00 | | 77.9 | 70 | 130 | | | |

| Sample ID: LCS-48767 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48767 | RunNo: 64440 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207141 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.0 | | 5.000 | | 80.9 | 70 | 130 | | | |

| Sample ID: MB-48767 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48767 | RunNo: 64440 | | | | | | | | |
| Prep Date: 11/13/2019 | Analysis Date: 11/13/2019 | SeqNo: 2207142 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 7.5 | | 10.00 | | 74.8 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911346

15-Nov-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132 Fedcom 1 H

| Sample ID: MB-48681 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48681 | RunNo: 64387 | | | | | | | | |
| Prep Date: 11/8/2019 | Analysis Date: 11/11/2019 | SeqNo: 2204110 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 960 | | 1000 | | 95.9 | 77.4 | 118 | | | |

| Sample ID: LCS-48681 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48681 | RunNo: 64387 | | | | | | | | |
| Prep Date: 11/8/2019 | Analysis Date: 11/11/2019 | SeqNo: 2204111 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 22 | 5.0 | 25.00 | 0 | 87.2 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 107 | 77.4 | 118 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911346

15-Nov-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132 Fedcom 1 H

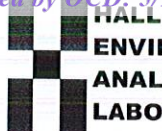
| Sample ID: MB-48681 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48681 | RunNo: 64387 | | | | | | | | |
| Prep Date: 11/8/2019 | Analysis Date: 11/11/2019 | SeqNo: 2204138 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 1.000 | | 94.9 | 80 | 120 | | | |

| Sample ID: LCS-48681 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48681 | RunNo: 64387 | | | | | | | | |
| Prep Date: 11/8/2019 | Analysis Date: 11/11/2019 | SeqNo: 2204139 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.90 | 0.025 | 1.000 | 0 | 89.6 | 80 | 120 | | | |
| Toluene | 0.90 | 0.050 | 1.000 | 0 | 89.7 | 80 | 120 | | | |
| Ethylbenzene | 0.89 | 0.050 | 1.000 | 0 | 88.8 | 80 | 120 | | | |
| Xylenes, Total | 2.7 | 0.10 | 3.000 | 0 | 88.7 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 97.7 | 80 | 120 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MEWBOURNE OIL COM**Work Order Number: **1911346**

RcptNo: 1

Received By: **Yazmine Garduno**

11/8/2019 9:18:00 AM

Completed By: **Erin Melendrez**

11/8/2019 10:49:45 AM

Reviewed By: **YG 11/8/19**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: **JR 11/8/19**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Chain-of-Custody Record

Client: Newborn

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☐ Standard ☐ Rush

Project Name:

PRV3m-Lyho 3132
Red Dot

Project #:

Project Manager:

Robbie Runnels

Sampler:

KanngOn Ice: ☒ Yes ☐ No# of Coolers: 1Cooler Temp (including CF): 54-0.3-54 (°C)

Date Time Matrix Sample Name

11-4-19 12:20 S SR13 Q1

11-4-19 12:22 S SR14 Q2

11-4-19 12:24 S SR15 Q3

11-5-19 9:50 S SR2 Q9

11-5-19 11:30 S SR16 Q7

11-5-19 11:55 S SR12 Q6

11-5-19 11:00 S SR12 Q4

Container Type and #

1 Ice

1 Ice

1 Ice

1 Ice

1 Ice

1 Ice

1 Ice

Preservative Type

Ice

Ice

Ice

Ice

Ice

Ice

Ice

HEAL No.

1911346

-013

-014

-015

-016

-017

-018

-019

Analysis Request

BTX / MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

C, F, Br, NO₂, NO₃, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Received by: [Signature] Date Time 11/6/19 06:50Relinquished by: [Signature] Date Time 11/6/19 14:00Relinquished by: [Signature] Date Time 11/6/19 14:00

Remarks:

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 06, 2019

Robbie Runnels
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
TEL: (575) 393-5905
FAX

RE: Pavo Macho 3132

OrderNo.: 1911B25

Dear Robbie Runnels:

Hall Environmental Analysis Laboratory received 23 sample(s) on 11/23/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 05, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 5 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:50:00 AM

Lab ID: 1911B25-001

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | ND | 60 | | mg/Kg | 20 | 11/27/2019 12:22:32 AM | 49047 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 11/26/2019 1:30:44 PM | 49028 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/26/2019 1:30:44 PM | 49028 |
| Surr: DNOP | 94.1 | 70-130 | | %Rec | 1 | 11/26/2019 1:30:44 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/26/2019 8:25:24 PM | 49020 |
| Surr: BFB | 106 | 77.4-118 | | %Rec | 1 | 11/26/2019 8:25:24 PM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/26/2019 8:25:24 PM | 49020 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/26/2019 8:25:24 PM | 49020 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/26/2019 8:25:24 PM | 49020 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 11/26/2019 8:25:24 PM | 49020 |
| Surr: 4-Bromofluorobenzene | 90.8 | 80-120 | | %Rec | 1 | 11/26/2019 8:25:24 PM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 5 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 8:55:00 AM

Lab ID: 1911B25-002

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 790 | 60 | | mg/Kg | 20 | 11/27/2019 12:34:53 AM | 49047 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 1800 | 96 | | mg/Kg | 10 | 11/26/2019 1:39:54 PM | 49028 |
| Motor Oil Range Organics (MRO) | 660 | 480 | | mg/Kg | 10 | 11/26/2019 1:39:54 PM | 49028 |
| Surr: DNOP | 203 | 70-130 | S | %Rec | 10 | 11/26/2019 1:39:54 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 50 | 23 | | mg/Kg | 5 | 11/26/2019 9:10:57 PM | 49020 |
| Surr: BFB | 199 | 77.4-118 | S | %Rec | 5 | 11/26/2019 9:10:57 PM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.11 | | mg/Kg | 5 | 11/26/2019 9:10:57 PM | 49020 |
| Toluene | ND | 0.23 | | mg/Kg | 5 | 11/26/2019 9:10:57 PM | 49020 |
| Ethylbenzene | 0.92 | 0.23 | | mg/Kg | 5 | 11/26/2019 9:10:57 PM | 49020 |
| Xylenes, Total | 2.7 | 0.46 | | mg/Kg | 5 | 11/26/2019 9:10:57 PM | 49020 |
| Surr: 4-Bromofluorobenzene | 100 | 80-120 | | %Rec | 5 | 11/26/2019 9:10:57 PM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 6 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:55:00 AM

Lab ID: 1911B25-003

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 120 | 60 | | mg/Kg | 20 | 11/27/2019 12:47:14 AM | 49047 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 21 | 9.7 | | mg/Kg | 1 | 11/26/2019 1:49:01 PM | 49028 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/26/2019 1:49:01 PM | 49028 |
| Surr: DNOP | 86.9 | 70-130 | | %Rec | 1 | 11/26/2019 1:49:01 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 11/26/2019 10:41:40 PM | 49020 |
| Surr: BFB | 96.3 | 77.4-118 | | %Rec | 1 | 11/26/2019 10:41:40 PM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/26/2019 10:41:40 PM | 49020 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 11/26/2019 10:41:40 PM | 49020 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 11/26/2019 10:41:40 PM | 49020 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 11/26/2019 10:41:40 PM | 49020 |
| Surr: 4-Bromofluorobenzene | 84.4 | 80-120 | | %Rec | 1 | 11/26/2019 10:41:40 PM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 6 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 8:58:00 AM

Lab ID: 1911B25-004

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 740 | 61 | | mg/Kg | 20 | 12/2/2019 6:04:40 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 100 | 9.2 | | mg/Kg | 1 | 11/26/2019 1:58:12 PM | 49028 |
| Motor Oil Range Organics (MRO) | 57 | 46 | | mg/Kg | 1 | 11/26/2019 1:58:12 PM | 49028 |
| Surr: DNOP | 132 | 70-130 | S | %Rec | 1 | 11/26/2019 1:58:12 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/26/2019 11:27:00 PM | 49020 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/26/2019 11:27:00 PM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/26/2019 11:27:00 PM | 49020 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/26/2019 11:27:00 PM | 49020 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/26/2019 11:27:00 PM | 49020 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/26/2019 11:27:00 PM | 49020 |
| Surr: 4-Bromofluorobenzene | 90.3 | 80-120 | | %Rec | 1 | 11/26/2019 11:27:00 PM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 8 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 12:00:00 PM

Lab ID: 1911B25-005

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 7:06:26 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 11/26/2019 2:07:20 PM | 49028 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/26/2019 2:07:20 PM | 49028 |
| Surr: DNOP | 86.3 | 70-130 | | %Rec | 1 | 11/26/2019 2:07:20 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 12:12:09 AM | 49020 |
| Surr: BFB | 101 | 77.4-118 | | %Rec | 1 | 11/27/2019 12:12:09 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 12:12:09 AM | 49020 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 12:12:09 AM | 49020 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 12:12:09 AM | 49020 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 11/27/2019 12:12:09 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 88.1 | 80-120 | | %Rec | 1 | 11/27/2019 12:12:09 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 8 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 8:58:00 AM

Lab ID: 1911B25-006

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 650 | 60 | | mg/Kg | 20 | 12/2/2019 7:18:46 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 39 | 9.6 | | mg/Kg | 1 | 11/26/2019 2:16:29 PM | 49028 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/26/2019 2:16:29 PM | 49028 |
| Surr: DNOP | 108 | 70-130 | | %Rec | 1 | 11/26/2019 2:16:29 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 11/27/2019 12:34:45 AM | 49020 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/27/2019 12:34:45 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 12:34:45 AM | 49020 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 11/27/2019 12:34:45 AM | 49020 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 11/27/2019 12:34:45 AM | 49020 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 11/27/2019 12:34:45 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 89.8 | 80-120 | | %Rec | 1 | 11/27/2019 12:34:45 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 9 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 12:05:00 PM

Lab ID: 1911B25-007

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 120 | 60 | | mg/Kg | 20 | 12/2/2019 7:31:07 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 11/26/2019 2:25:36 PM | 49028 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/26/2019 2:25:36 PM | 49028 |
| Surr: DNOP | 93.1 | 70-130 | | %Rec | 1 | 11/26/2019 2:25:36 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/27/2019 12:57:18 AM | 49020 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/27/2019 12:57:18 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 12:57:18 AM | 49020 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 12:57:18 AM | 49020 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 12:57:18 AM | 49020 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 11/27/2019 12:57:18 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 89.4 | 80-120 | | %Rec | 1 | 11/27/2019 12:57:18 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 9 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 8:59:00 AM

Lab ID: 1911B25-008

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|-----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CJS |
| Chloride | 5400 | 300 | | mg/Kg | 100 | 12/4/2019 3:50:55 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 210 | 9.8 | | mg/Kg | 1 | 11/26/2019 2:34:45 PM | 49028 |
| Motor Oil Range Organics (MRO) | 78 | 49 | | mg/Kg | 1 | 11/26/2019 2:34:45 PM | 49028 |
| Surr: DNOP | 124 | 70-130 | | %Rec | 1 | 11/26/2019 2:34:45 PM | 49028 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/27/2019 1:19:54 AM | 49020 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/27/2019 1:19:54 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 1:19:54 AM | 49020 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 1:19:54 AM | 49020 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 1:19:54 AM | 49020 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/27/2019 1:19:54 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 88.4 | 80-120 | | %Rec | 1 | 11/27/2019 1:19:54 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 12 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:00:00 AM

Lab ID: 1911B25-009

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 7:55:48 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 11/27/2019 1:22:37 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 11/27/2019 1:22:37 PM | 49025 |
| Surr: DNOP | 92.5 | 70-130 | | %Rec | 1 | 11/27/2019 1:22:37 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 1:42:29 AM | 49020 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/27/2019 1:42:29 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 1:42:29 AM | 49020 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 1:42:29 AM | 49020 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 1:42:29 AM | 49020 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/27/2019 1:42:29 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 90.5 | 80-120 | | %Rec | 1 | 11/27/2019 1:42:29 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 12 North

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:02:00 AM

Lab ID: 1911B25-010

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 8:08:08 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 11/27/2019 1:31:45 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 11/27/2019 1:31:45 PM | 49025 |
| Surr: DNOP | 90.7 | 70-130 | | %Rec | 1 | 11/27/2019 1:31:45 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/27/2019 2:05:01 AM | 49020 |
| Surr: BFB | 99.7 | 77.4-118 | | %Rec | 1 | 11/27/2019 2:05:01 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 2:05:01 AM | 49020 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:05:01 AM | 49020 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:05:01 AM | 49020 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 11/27/2019 2:05:01 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 86.6 | 80-120 | | %Rec | 1 | 11/27/2019 2:05:01 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 12 South

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:04:00 AM

Lab ID: 1911B25-011

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 99 | 60 | | mg/Kg | 20 | 12/2/2019 8:20:29 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 51 | 9.7 | | mg/Kg | 1 | 11/27/2019 1:40:54 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 11/27/2019 1:40:54 PM | 49025 |
| Surr: DNOP | 95.9 | 70-130 | | %Rec | 1 | 11/27/2019 1:40:54 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/27/2019 2:27:33 AM | 49020 |
| Surr: BFB | 101 | 77.4-118 | | %Rec | 1 | 11/27/2019 2:27:33 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 2:27:33 AM | 49020 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:27:33 AM | 49020 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:27:33 AM | 49020 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 11/27/2019 2:27:33 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 87.8 | 80-120 | | %Rec | 1 | 11/27/2019 2:27:33 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 13 South

Project: Pavo Macho 3132

Collection Date: 11/22/2019 12:10:00 PM

Lab ID: 1911B25-012

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 8:32:51 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 11/27/2019 1:50:02 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/27/2019 1:50:02 PM | 49025 |
| Surr: DNOP | 91.3 | 70-130 | | %Rec | 1 | 11/27/2019 1:50:02 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 11/27/2019 2:50:04 AM | 49020 |
| Surr: BFB | 100 | 77.4-118 | | %Rec | 1 | 11/27/2019 2:50:04 AM | 49020 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 11/27/2019 2:50:04 AM | 49020 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 11/27/2019 2:50:04 AM | 49020 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 11/27/2019 2:50:04 AM | 49020 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 11/27/2019 2:50:04 AM | 49020 |
| Surr: 4-Bromofluorobenzene | 86.2 | 80-120 | | %Rec | 1 | 11/27/2019 2:50:04 AM | 49020 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 13 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:06:00 AM

Lab ID: 1911B25-013

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 9:09:53 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 11/27/2019 1:59:11 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/27/2019 1:59:11 PM | 49025 |
| Surr: DNOP | 86.6 | 70-130 | | %Rec | 1 | 11/27/2019 1:59:11 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 10:44:52 AM | 49032 |
| Surr: BFB | 104 | 77.4-118 | | %Rec | 1 | 11/27/2019 10:44:52 AM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 10:44:52 AM | 49032 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 10:44:52 AM | 49032 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 10:44:52 AM | 49032 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/27/2019 10:44:52 AM | 49032 |
| Surr: 4-Bromofluorobenzene | 100 | 80-120 | | %Rec | 1 | 11/27/2019 10:44:52 AM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 13 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:08:00 AM

Lab ID: 1911B25-014

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 9:22:13 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 57 | 9.7 | | mg/Kg | 1 | 11/27/2019 2:08:21 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/27/2019 2:08:21 PM | 49025 |
| Surr: DNOP | 93.0 | 70-130 | | %Rec | 1 | 11/27/2019 2:08:21 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/27/2019 11:55:02 AM | 49032 |
| Surr: BFB | 105 | 77.4-118 | | %Rec | 1 | 11/27/2019 11:55:02 AM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 11/27/2019 11:55:02 AM | 49032 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 11:55:02 AM | 49032 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 11:55:02 AM | 49032 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 11/27/2019 11:55:02 AM | 49032 |
| Surr: 4-Bromofluorobenzene | 100 | 80-120 | | %Rec | 1 | 11/27/2019 11:55:02 AM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 14 North

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:12:00 AM

Lab ID: 1911B25-015

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 9:34:35 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.3 | | mg/Kg | 1 | 11/27/2019 2:17:27 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/27/2019 2:17:27 PM | 49025 |
| Surr: DNOP | 83.6 | 70-130 | | %Rec | 1 | 11/27/2019 2:17:27 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/27/2019 1:06:25 PM | 49032 |
| Surr: BFB | 110 | 77.4-118 | | %Rec | 1 | 11/27/2019 1:06:25 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 1:06:25 PM | 49032 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 1:06:25 PM | 49032 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 1:06:25 PM | 49032 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 11/27/2019 1:06:25 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 104 | 80-120 | | %Rec | 1 | 11/27/2019 1:06:25 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 14 South

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:14:00 AM

Lab ID: 1911B25-016

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 9:46:55 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 11/27/2019 2:26:34 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 11/27/2019 2:26:34 PM | 49025 |
| Surr: DNOP | 89.5 | 70-130 | | %Rec | 1 | 11/27/2019 2:26:34 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 11/27/2019 1:29:50 PM | 49032 |
| Surr: BFB | 108 | 77.4-118 | | %Rec | 1 | 11/27/2019 1:29:50 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 1:29:50 PM | 49032 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 11/27/2019 1:29:50 PM | 49032 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 11/27/2019 1:29:50 PM | 49032 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 11/27/2019 1:29:50 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | | %Rec | 1 | 11/27/2019 1:29:50 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 14 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 12:15:00 PM

Lab ID: 1911B25-017

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 9:59:17 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.6 | | mg/Kg | 1 | 11/27/2019 2:35:41 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 11/27/2019 2:35:41 PM | 49025 |
| Surr: DNOP | 86.4 | 70-130 | | %Rec | 1 | 11/27/2019 2:35:41 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 1:53:16 PM | 49032 |
| Surr: BFB | 114 | 77.4-118 | | %Rec | 1 | 11/27/2019 1:53:16 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 1:53:16 PM | 49032 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 1:53:16 PM | 49032 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 1:53:16 PM | 49032 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/27/2019 1:53:16 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 108 | 80-120 | | %Rec | 1 | 11/27/2019 1:53:16 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 15 East

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:18:00 AM

Lab ID: 1911B25-018

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 140 | 60 | | mg/Kg | 20 | 12/2/2019 10:11:38 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 28 | 8.5 | | mg/Kg | 1 | 11/27/2019 2:44:50 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 11/27/2019 2:44:50 PM | 49025 |
| Surr: DNOP | 94.5 | 70-130 | | %Rec | 1 | 11/27/2019 2:44:50 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 11/27/2019 2:16:43 PM | 49032 |
| Surr: BFB | 107 | 77.4-118 | | %Rec | 1 | 11/27/2019 2:16:43 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 2:16:43 PM | 49032 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:16:43 PM | 49032 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 11/27/2019 2:16:43 PM | 49032 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 11/27/2019 2:16:43 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | | %Rec | 1 | 11/27/2019 2:16:43 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 15 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:20:00 AM

Lab ID: 1911B25-019

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 59 | | mg/Kg | 20 | 12/2/2019 10:23:58 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.3 | | mg/Kg | 1 | 11/27/2019 2:53:58 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 11/27/2019 2:53:58 PM | 49025 |
| Surr: DNOP | 93.7 | 70-130 | | %Rec | 1 | 11/27/2019 2:53:58 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/27/2019 2:40:10 PM | 49032 |
| Surr: BFB | 102 | 77.4-118 | | %Rec | 1 | 11/27/2019 2:40:10 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 2:40:10 PM | 49032 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 2:40:10 PM | 49032 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 2:40:10 PM | 49032 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 11/27/2019 2:40:10 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 96.5 | 80-120 | | %Rec | 1 | 11/27/2019 2:40:10 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 15 North

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:22:00 AM

Lab ID: 1911B25-020

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 10:36:20 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 11/27/2019 3:03:07 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 11/27/2019 3:03:07 PM | 49025 |
| Surr: DNOP | 80.2 | 70-130 | | %Rec | 1 | 11/27/2019 3:03:07 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 11/27/2019 3:03:37 PM | 49032 |
| Surr: BFB | 103 | 77.4-118 | | %Rec | 1 | 11/27/2019 3:03:37 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 3:03:37 PM | 49032 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 3:03:37 PM | 49032 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 11/27/2019 3:03:37 PM | 49032 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 11/27/2019 3:03:37 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 99.1 | 80-120 | | %Rec | 1 | 11/27/2019 3:03:37 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 16 North

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:26:00 AM

Lab ID: 1911B25-021

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 12/2/2019 10:48:40 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 11/27/2019 3:12:14 PM | 49025 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/27/2019 3:12:14 PM | 49025 |
| Surr: DNOP | 93.7 | 70-130 | | %Rec | 1 | 11/27/2019 3:12:14 PM | 49025 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 3:27:05 PM | 49032 |
| Surr: BFB | 111 | 77.4-118 | | %Rec | 1 | 11/27/2019 3:27:05 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 3:27:05 PM | 49032 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 3:27:05 PM | 49032 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 3:27:05 PM | 49032 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/27/2019 3:27:05 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 105 | 80-120 | | %Rec | 1 | 11/27/2019 3:27:05 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |
| | | | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 16 South

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:24:00 AM

Lab ID: 1911B25-022

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 270 | 60 | | mg/Kg | 20 | 12/2/2019 11:01:00 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 11/27/2019 3:57:54 PM | 49026 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 11/27/2019 3:57:54 PM | 49026 |
| Surr: DNOP | 82.5 | 70-130 | | %Rec | 1 | 11/27/2019 3:57:54 PM | 49026 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 3:50:30 PM | 49032 |
| Surr: BFB | 112 | 77.4-118 | | %Rec | 1 | 11/27/2019 3:50:30 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 11/27/2019 3:50:30 PM | 49032 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 3:50:30 PM | 49032 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 3:50:30 PM | 49032 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/27/2019 3:50:30 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 108 | 80-120 | | %Rec | 1 | 11/27/2019 3:50:30 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

Analytical Report

Lab Order 1911B25

Date Reported: 12/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Mewbourne Oil Company

Client Sample ID: Wall 16 West

Project: Pavo Macho 3132

Collection Date: 11/22/2019 11:28:00 AM

Lab ID: 1911B25-023

Matrix: SOIL

Received Date: 11/23/2019 9:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------------------------------|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: CAS |
| Chloride | 510 | 60 | | mg/Kg | 20 | 12/2/2019 11:38:03 PM | 49098 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 11/27/2019 4:25:20 PM | 49026 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 11/27/2019 4:25:20 PM | 49026 |
| Surr: DNOP | 84.1 | 70-130 | | %Rec | 1 | 11/27/2019 4:25:20 PM | 49026 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/27/2019 5:24:23 PM | 49032 |
| Surr: BFB | 107 | 77.4-118 | | %Rec | 1 | 11/27/2019 5:24:23 PM | 49032 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 11/27/2019 5:24:23 PM | 49032 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 5:24:23 PM | 49032 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/27/2019 5:24:23 PM | 49032 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 11/27/2019 5:24:23 PM | 49032 |
| Surr: 4-Bromofluorobenzene | 102 | 80-120 | | %Rec | 1 | 11/27/2019 5:24:23 PM | 49032 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|-------------------------------------------------------|----|-------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: MB-49047 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49047 | RunNo: 64785 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/26/2019 | SeqNo: 2221557 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-49047 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49047 | RunNo: 64785 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/26/2019 | SeqNo: 2221558 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.0 | 90 | 110 | | | |

| Sample ID: MB-49098 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49098 | RunNo: 64879 | | | | | | | | |
| Prep Date: 12/2/2019 | Analysis Date: 12/2/2019 | SeqNo: 2224662 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-49098 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49098 | RunNo: 64879 | | | | | | | | |
| Prep Date: 12/2/2019 | Analysis Date: 12/2/2019 | SeqNo: 2224663 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.1 | 90 | 110 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: LCS-49028 | SampType: LCS | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
|------------------------------|----------------------------------|-----|-----------|------------------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49028 | | | RunNo: 64772 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/26/2019 | | | SeqNo: 2220198 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 53 | 10 | 50.00 | 0 | 106 | 63.9 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 95.6 | 70 | 130 | | | |

| Sample ID: MB-49028 | SampType: MBLK | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
|--------------------------------|----------------------------------|-----|-----------|------------------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49028 | | | RunNo: 64772 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/26/2019 | | | SeqNo: 2220199 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 8.3 | | 10.00 | | 82.9 | 70 | 130 | | | |

| Sample ID: LCS-49025 | SampType: LCS | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
|------------------------------|----------------------------------|-----|-----------|------------------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49025 | | | RunNo: 64812 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2221965 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 50 | 10 | 50.00 | 0 | 99.3 | 63.9 | 124 | | | |
| Surr: DNOP | 4.3 | | 5.000 | | 85.8 | 70 | 130 | | | |

| Sample ID: MB-49025 | SampType: MBLK | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
|--------------------------------|----------------------------------|-----|-----------|------------------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49025 | | | RunNo: 64812 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2221966 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.3 | | 10.00 | | 93.5 | 70 | 130 | | | |

| Sample ID: 1911B25-022AMS | SampType: MS | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
|----------------------------------|----------------------------------|-----|-----------|------------------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: Wall 16 South | Batch ID: 49026 | | | RunNo: 64812 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2222639 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 45 | 9.8 | 48.83 | 2.167 | 87.1 | 57 | 142 | | | |
| Surr: DNOP | 3.8 | | 4.883 | | 77.2 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: 1911B25-022AMSD | SampType: MSD | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|-----------------------------------|----------------------------------|------------------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: Wall 16 South | Batch ID: 49026 | RunNo: 64812 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222640 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 9.8 | 48.83 | 2.167 | 101 | 57 | 142 | 14.0 | 20 | |
| Surr: DNOP | 4.4 | | 4.883 | | 89.7 | 70 | 130 | 0 | 0 | |

| Sample ID: LCS-49026 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49026 | RunNo: 64812 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222660 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 104 | 63.9 | 124 | | | |
| Surr: DNOP | 4.3 | | 5.000 | | 85.4 | 70 | 130 | | | |

| Sample ID: MB-49026 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|------------------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49026 | RunNo: 64812 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222661 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.1 | | 10.00 | | 91.1 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: MB-49020 | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49020 | | | RunNo: 64783 | | | | | | |
| Prep Date: 11/25/2019 | Analysis Date: 11/26/2019 | | | SeqNo: 2220681 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1100 | | 1000 | | 108 | 77.4 | 118 | | | |

| Sample ID: LCS-49020 | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49020 | | | RunNo: 64783 | | | | | | |
| Prep Date: 11/25/2019 | Analysis Date: 11/26/2019 | | | SeqNo: 2220682 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 5.0 | 25.00 | 0 | 106 | 80 | 120 | | | |
| Surr: BFB | 1200 | | 1000 | | 120 | 77.4 | 118 | | | S |

| Sample ID: MB-49032 | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49032 | | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2222414 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1100 | | 1000 | | 113 | 77.4 | 118 | | | |

| Sample ID: LCS-49032 | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49032 | | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2222415 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 105 | 80 | 120 | | | |
| Surr: BFB | 1300 | | 1000 | | 129 | 77.4 | 118 | | | S |

| Sample ID: 1911B25-013AMS | SampType: MS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|----------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: Wall 13 East | Batch ID: 49032 | | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2222417 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 29 | 4.9 | 24.61 | 0 | 118 | 69.1 | 142 | | | |
| Surr: BFB | 1200 | | 984.3 | | 126 | 77.4 | 118 | | | S |

| Sample ID: 1911B25-013AMSD | SampType: MSD | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-----------------------------------|----------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: Wall 13 East | Batch ID: 49032 | | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | | | SeqNo: 2222418 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: 1911B25-013AMSD | SampType: MSD | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-----------------------------------|----------------------------------|---------------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: Wall 13 East | Batch ID: 49032 | RunNo: 64830 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222418 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28 | 4.9 | 24.63 | 0 | 115 | 69.1 | 142 | 3.10 | 20 | |
| Surr: BFB | 1200 | | 985.2 | | 126 | 77.4 | 118 | 0 | 0 | S |

| Sample ID: MB-49037 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|------------------------------|----------------------------------|---------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49037 | RunNo: 64830 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222438 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 1000 | | 108 | 77.4 | 118 | | | |

| Sample ID: LCS-49037 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|------------------------------|----------------------------------|---------------------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49037 | RunNo: 64830 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222439 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1200 | | 1000 | | 122 | 77.4 | 118 | | | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: MB-49020 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49020 | RunNo: 64783 | | | | | | | | |
| Prep Date: 11/25/2019 | Analysis Date: 11/26/2019 | SeqNo: 2220713 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 94.0 | 80 | 120 | | | |

| Sample ID: LCS-49020 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49020 | RunNo: 64783 | | | | | | | | |
| Prep Date: 11/25/2019 | Analysis Date: 11/26/2019 | SeqNo: 2220714 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.90 | 0.025 | 1.000 | 0 | 90.1 | 80 | 120 | | | |
| Toluene | 0.87 | 0.050 | 1.000 | 0 | 87.5 | 80 | 120 | | | |
| Ethylbenzene | 0.87 | 0.050 | 1.000 | 0 | 87.0 | 80 | 120 | | | |
| Xylenes, Total | 2.6 | 0.10 | 3.000 | 0 | 86.7 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.93 | | 1.000 | | 92.7 | 80 | 120 | | | |

| Sample ID: MB-49032 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 49032 | RunNo: 64830 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222464 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

| Sample ID: LCS-49032 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|----------------------------------------------|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 49032 | RunNo: 64830 | | | | | | | | |
| Prep Date: 11/26/2019 | Analysis Date: 11/27/2019 | SeqNo: 2222465 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.94 | 0.025 | 1.000 | 0 | 94.3 | 80 | 120 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 98.4 | 80 | 120 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.0 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.2 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 118 | 80 | 120 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911B25

06-Dec-19

Client: Mewbourne Oil Company**Project:** Pavo Macho 3132

| Sample ID: 1911B25-014AMS | | SampType: MS | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
|----------------------------------|--------|----------------------------------|-----------|----------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: Wall 13 West | | Batch ID: 49032 | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | | Analysis Date: 11/27/2019 | | SeqNo: 2222468 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.1 | 0.025 | 0.9921 | 0 | 106 | 76 | 123 | | | |
| Toluene | 1.1 | 0.050 | 0.9921 | 0.009328 | 108 | 80.3 | 127 | | | |
| Ethylbenzene | 1.1 | 0.050 | 0.9921 | 0 | 110 | 80.2 | 131 | | | |
| Xylenes, Total | 3.3 | 0.099 | 2.976 | 0.01371 | 110 | 78 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 0.9921 | | 113 | 80 | 120 | | | |

| Sample ID: 1911B25-014AMSD | | SampType: MSD | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
|-----------------------------------|--------|----------------------------------|-----------|----------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: Wall 13 West | | Batch ID: 49032 | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | | Analysis Date: 11/27/2019 | | SeqNo: 2222469 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.1 | 0.025 | 0.9960 | 0 | 111 | 76 | 123 | 5.38 | 20 | |
| Toluene | 1.1 | 0.050 | 0.9960 | 0.009328 | 113 | 80.3 | 127 | 5.57 | 20 | |
| Ethylbenzene | 1.1 | 0.050 | 0.9960 | 0 | 114 | 80.2 | 131 | 4.03 | 20 | |
| Xylenes, Total | 3.4 | 0.10 | 2.988 | 0.01371 | 114 | 78 | 133 | 3.63 | 20 | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 0.9960 | | 117 | 80 | 120 | 0 | 0 | |

| Sample ID: MB-49037 | | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
|------------------------------|--------|----------------------------------|-----------|----------------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBS | | Batch ID: 49037 | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | | Analysis Date: 11/27/2019 | | SeqNo: 2222488 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

| Sample ID: LCS-49037 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
|------------------------------|--------|----------------------------------|-----------|----------------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS | | Batch ID: 49037 | | RunNo: 64830 | | | | | | |
| Prep Date: 11/26/2019 | | Analysis Date: 11/27/2019 | | SeqNo: 2222489 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MEWBORNE OIL COM**Work Order Number: **1911B25**

RcptNo: 1

Received By: **Yazmine Garduno** 11/23/2019 9:30:00 AM*Yazmine Garduno*Completed By: **Yazmine Garduno** 11/23/2019 11:26:37 AM*Yazmine Garduno*Reviewed By: *DM 11/25/19*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:
(<2 or >12 unless noted)

Adjusted? _____

Checked by: *ENM 11/25/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.9 | Good | | | | |
| 2 | 1.6 | Good | | | | |
| 3 | 0.8 | Good | | | | |
| 4 | NA | Good | | | | |

Chain-of-Custody Record

Client: Newbourne

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Raymond
3132

Project #:

Project Manager:

Robbie Runner

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers:

Cooler Temp (including CF):

4 REMARK

Container Type and #

Preservative Type

HEAL No.

Date Time Matrix Sample Name

11/22 11:06 S Well 13 East

11/22 11:08 S Well 13 West

11/22 11:12 S Well 14 North

11/22 11:14 S Well 14 South

11/22 11:15 S Well 14 West

11/22 11:18 S Well 15 East

11/22 11:20 S Well 15 West

11/22 11:22 S Well 15 North

11/22 11:24 S Well 16 North

11/22 11:24 S Well 16 South

11/22 11:28 S Well 16 West

Date:

11/22

Time:

11:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/22/19

Time:

19:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

Time:

16:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

Time:

16:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

Time:

16:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

Time:

16:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

Time:

16:00

Relinquished by:

Raymond

Relinquished by:

Raymond

Date:

11/23/19

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APPENDIX – C

C-141

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 Mewbourne Oil Company | OGRID 14744 |
| Contact Name Robbie Runnels | Contact Telephone 575-393-5905 |
| Contact email rrunnels@mewbourne.com | Incident # (assigned by OCD) |
| Contact mailing address P.O. Box 5270, Hobbs, NM 88241 | |

Location of Release Source

Latitude 32.705396

Longitude -104.120902

(NAD 83 in decimal degrees to 5 decimal places)

| | |
|--------------------------------------------------|-----------------------------------|
| Site Name Pavo Macho 31 32 B2EH Federal COM 001H | Site Type Production |
| Date Release Discovered 10/29/2019 @ 07:00 | API# (if applicable) 30-015-43784 |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| E | 31 | 18S | 29E | Eddy |

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) Estimated | Volume Recovered (bbls) |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) Estimated 125 | Volume Recovered (bbls) 100 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | x 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) |


Valve was closed going to heater/treater causing overflow in overflow tank.

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| Incident ID | |
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| Application ID | |

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 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 was larger than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given to Victoria Venegas on 10/29/2019 at 13:20 by email from Robbie Runnels. | |

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: N/A | |
| 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>Robbie Runnels</u> | Title: <u>Environmental Specialist</u> |
| Signature:  | Date: <u>10/29/2019</u> |
| email: <u>rrunnels@mewbourne.com</u> | Telephone: <u>575-393-5905</u> |
| <u>OCD Only</u> | |
| Received by: _____ | Date: _____ |

| | |
|----------------|--|
| Incident ID | |
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| Facility ID | |
| Application ID | |

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>>100</u> (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes x <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 x <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 x <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 x <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 x <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 x <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 x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes x <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input checked="" type="checkbox"/> Yes x <input 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

Page 4

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Printed Name: _Robbie Runnels_____ Title: Environmental Specialist_____

Signature: __________ Date: 3/11/20_____

email: __rrunnels@mewbourne.com_____ Telephone: _575-393-5905_____

OCD Only

Received by: _____ Date: _____

| | |
|----------------|--|
| Incident ID | |
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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: Robbie Runnels Title: Environmental Specialist

Signature:  Date: 3/11/20

email: rrunnels@mewbourne.com Telephone: 575-393-5905

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

| | |
|----------------|--|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

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: Robbie Runnels Title: Environmental Specialist

Signature:  Date: 3/11/20

email: rrunnels@mewbourne.com Telephone: 575-393-5905

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: _____