R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266.0745

January 23, 2017

Mr. Jamie Keyes
NMOCD District 1
1625 N. French Drive
Hobbs, New Mexico 88240
Via Email to Jamie.Keyes@state.nm.us

RE: Murchison – Bettis 20 State Com 2H Release, initial C-141 form
Unit P, Section 20, T24S, R33E, Lea County, API# 30-025-41436

Dear Mr. Keyes:

On behalf of Murchison Oil and Gas, R.T Hicks Consultants submits the attached initial C-141 form for the above-referenced release. At 7:30 p.m. on January 16, a release occurred during the loading of a tanker truck at the above-referenced battery. The cause of the release was driver inattention. Approximately 9.7 barrels of oil were released onto the location pad, affecting approximately 400 ft^2 of the surface. A vacuum truck was immediately dispatched and recovered remaining standing fluid.

1/17/2017 Excavating impacted soil

The swift response assured minimal penetration. The next day the affected material (caliche pad and subsoils) was excavated and removed from the location. A final C-141 form will be submitted to the District with documentation of the final deposition of the excavated material from this release along with current photographs. Please contact me with any questions regarding this submission.

Best regards,

R.T. Hicks Consultants

Kristin Pope

Kristin Pope

Copy: Murchison Oil & Gas, State Land Office (Amber Groves)
Enclosure: initial C-141 form

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Murchison Oil & Gas, Inc.	Contact	Greg Boans
Address	7250 Dallas Parkway, Suite 1400, Plano, TX 75024	Telephone No.	(575) 361-4962
Facility Name	Bettis 20 State Com 2H	Facility Type	Production Facility

Surface Owner	State of New Mexico	Mineral Owner		API No.	30-025-41436

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	20	24S	33E	200	South	940	East	Lea

Latitude 32° 11' 47.195" N **Longitude** 103° 35'19.732" W

32.1964455,-103.5888443

NATURE OF RELEASE

10 bbls oil

29 bbls oil + rainwater

Type of Release: Oil	Volume of Release: 9.7 bbls	Volume Recovered: 0 bbls
Source of Release: Tanker truck	Date and Hour of Occurrence: 1/16/2017, 7:30 PM	Date and Hour of Discovery: 1/16/2017, 7:30 PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

n/a

RECEIVED
By Olivia Yu at 1:14 pm, Feb 06, 2017

Describe Cause of Problem and Remedial Action Taken.*

Oil was released onto the location pad during tanker truck loading due to driver inattention. Vacuum truck removed standing fluid and affected pad and subsoils were removed.

Describe Area Affected and Cleanup Action Taken.*

Oil was released onto approximately 400 ft^2 of the location pad. Penetration was minimal and the affected material from the surface of the location was removed and replaced.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:

Printed Name: Greg Boans

Title: Production Superintendent

E-mail Address: gboans@jdmii.com

Date: 1/23/2017 Phone: (575) 361-4962

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 02/06/2017 Expiration Date:

Conditions of Approval:

see attached directive

Attached ☑

* Attach Additional Sheets If Necessary

1RP-4578 nOY1703748127

pOY1703748868

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _1/23/2017__ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-_4578__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _3/6/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us