The application/form must be submitted via OCD's Online Permitting System at https://wwwapps.emnrd.nm.gov/OCD/OCDPermitting/Default.aspx.

State of New Mexico
Energy Minerals and Natural Resources

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

For State Use Only:
Registration #

Form C-137 EZ
Revised October 11, 2022

REGISTRATION/ FINAL CLOSURE REPORT FOR SMALL LANDFARM

Section 7 of 19.15.36 NMAC defines a small landfarm as a centralized landfarm of two acres or less that has a total capacity of 2000 cubic yards or less in a single lift of eight inches or less, remains active for a maximum of three years from the date of its registration and that receives only petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-hazardous waste. The operator shall operate only one active small landfarm per governmental section at any time.

GENERAL INFORMATION

1. ☐ Small Landfarm Registration ☒ Small Landfarm Final Closure Report*
(*Must be submitted within three years from the registration date)

2. Operator: Hilcorp Energy Company

Address: 1111 Travis Street, Houston, TX 77002

Contact Person: Mitch Killough Phone: 713-757-5247

3. Location: NE /4 SW /4 Section 29 Township 30N Range 9W

REGISTRATION

1. As operator, are you the surface estate owner of the proposed site? ☐ Yes ☐ No If no, please attach a certification statement that demonstrates a written agreement is established with the surface estate owner authorizing the use of the site for the proposed small landfarm.

2. Will the proposed small landfarm comply with the siting requirements of Subsections A and B of 19.15.36.13 NMAC?
☐ Yes ☐ No

A. Depth to ground water.
- No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.

B. No surface waste management facility shall be located:
- within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
- within an existing wellhead protection area or 100-year floodplain;
- within, or within 500 feet of, a wetland;
- within the area overlying a subsurface mine;
- within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
- within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

3. Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

- The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.
- The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.
- The operator shall berm the landfarm to prevent rainwater run-on and run-off.
- The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.
- The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

- The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.
- The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Name: _____ Title: _____

Signature: _____ Date: _____

E-mail Address: _____

OCD REGISTRATION: ☐ Approved. Date : _____ ☐ Denied. Date: _____

Comments: _____

OCD Representative Signature: _____

Title: _____ **OCD Registration Number:** _____

FINAL CLOSURE REPORT

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? ☒ Yes ☐ No (Please provide laboratory analytical results)

- benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;
- TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and
- chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? ☒ Yes ☐ No (Please provide photos)

- The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC.
- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides.

If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? ☐ Yes ☐ No (Please provide photos)

CERTIFICATION

I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

Name: Mitch Killough Title: Environmental Specialist

Signature: ___ Date: 9/6/2023

E-mail Address: mkillough@hilcorp.com

OCD CLOSURE REVIEW: ☐ Closure Approved. Date : _____ ☐ Closure Denied. Date: _____

Comments: _____

OCD Representative Signature: _____

Title: _____ **OCD Registration Number:** _____

State of New Mexico
Energy, Minerals and Natural Resources Department

October 15, 2021

Mr. Mitch Killough
Hilcorp Energy Company
1111 Travis Street
Houston, Texas 77002

RE: Small Registered Landfarm Approval
Hilcorp Energy Company
NM3-003 - Mansfield #11N Landfarm
NESW of Section 29, Township 30 North, Range 9 West, NMPM
San Juan County, New Mexico

Mr. Killough:

The Oil Conservation Division (OCD) has completed its review of Hilcorp Energy Company's (Hilcorp) registration application dated September 13, 20121 to construct and operate a small registered landfarm, referred to as Mansfield #11N, for the remediation of petroleum hydrocarbon-contaminated soils (excluding drill cuttings). The OCD hereby approves Hilcorp to construct and operate the registered small landfarm. Mansfield #11N, in compliance with the applicable requirements of 19.15.36.16 NMAC and with the following understanding and conditions:

- Hilcorp has proposed an area of 1.2 acres for their landfarm facility. The 1.2 acres shall incorporate the required landfarm cell berming to prevent rainwater run-on and run-off and *a single lift of eight inches or less* (approximately 1000 cubic yards per acre per eight-inch lift), as required of 19.15.36.7.A(5) NMAC; and

- Hilcorp shall achieve the following closure performance standards within three years from the registration date or shall remove landfarmed soils that have not or cannot be remediated to a division-approved surface waste management facility:
  - benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg (per 19.15.36.16.E(1)(a) NMAC);
  - Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg (per 19.15.36.16.E(1)(b) NMAC);

- TPH, as determined by EPA SW-846 method 418.1 or the sum of GRO/DRO/MRO by EPA SW-846 method 8015M, shall not exceed 100 mg/kg (per Table I of 19.15.29.12 NMAC);
- the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg (per 19.15.36.16.E(1)(c) NMAC); and
- chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg (per 19.15.36.16.E(1)(d) NMAC).

If there are any questions, please do not hesitate to contact me at (505) 469-7486 or brad.a.jones@state.nm.us.

Respectfully,

Brad A. Jones
Environmental Specialist

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

For State Use Only:
Registration #

Form C-137 EZ
Revised August 1, 2011

Submit 1 Copy to Santa Fe Office

REGISTRATION/ FINAL CLOSURE REPORT FOR SMALL LANDFARM

Section 7 of 19.15.36 NMAC defines a small landfarm as a centralized landfarm of two acres or less that has a total capacity of 2000 cubic yards or less in a single lift of eight inches or less, remains active for a maximum of three years from the date of its registration and that receives only petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-hazardous waste. The operator shall operate only one active small landfarm per governmental section at any time.

GENERAL INFORMATION

1. ☒ Small Landfarm Registration ☐ Small Landfarm Final Closure Report*
(*Must be submitted within three years from the registration date)

2. Operator: Hilcorp Energy Company
Address: 1111 Travis Street, Houston, TX 77002
Contact Person: Mitch Killough Phone: 713-757-5247

3. Location: NE /4 SW /4 Section 29 Township 30N Range 9W

REGISTRATION

1. As operator, are you the surface estate owner of the proposed site? ☐ Yes ☒ No If no, please attach a certification statement that demonstrates a written agreement is established with the surface estate owner authorizing the use of the site for the proposed small landfarm.

2. Will the proposed small landfarm comply with the siting requirements of Subsections A and B of 19.15.36.13 NMAC?
☒ Yes ☐ No

A. Depth to ground water.
- No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.

B. No surface waste management facility shall be located:
- within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
- within an existing wellhead protection area or 100-year floodplain;
- within, or within 500 feet of, a wetland;
- within the area overlying a subsurface mine;
- within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
- within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

3. Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

- The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.
- The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.
- The operator shall berm the landfarm to prevent rainwater run-on and run-off.
- The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.
- The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

- The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.
- The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Name: Mitch Killough Title: Environmental Specialist

Signature: Date: 9/13/2021

E-mail Address: mkillough@hilcorp.com

OCD REGISTRATION: ☒ Approved. Date : October 15, 2021 ☐ Denied. Date:

Comments: Please see the attached approval letter with conditions.

OCD Representative Signature:

Title: Environmental Specialist **OCD Registration Number:** NM3-003

FINAL CLOSURE REPORT

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? ☐ Yes ☐ No (Please provide laboratory analytical results)

- benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;
- TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and
- chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? ☐ Yes ☐ No (Please provide photos)

- The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC.
- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides.

If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? ☐ Yes ☐ No (Please provide photos)

CERTIFICATION

I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

Name: Title:

Signature: Date:

E-mail Address:

OCD CLOSURE REVIEW: ☐ Closure Approved. Date : ☐ Closure Denied. Date:

Comments:

OCD Representative Signature:

Title: **OCD Registration Number:**

NMAC SURFACE WASTE MANAGEMENT FACILITIES SITING CRITERIA
SUMMARY INFORMATION SHEET
19.15.13 NMAC & 19.15.2 NMAC

WSP USA Inc.
848 East Second Avenue
Durango, Colorado 81301
T 970-385-1096

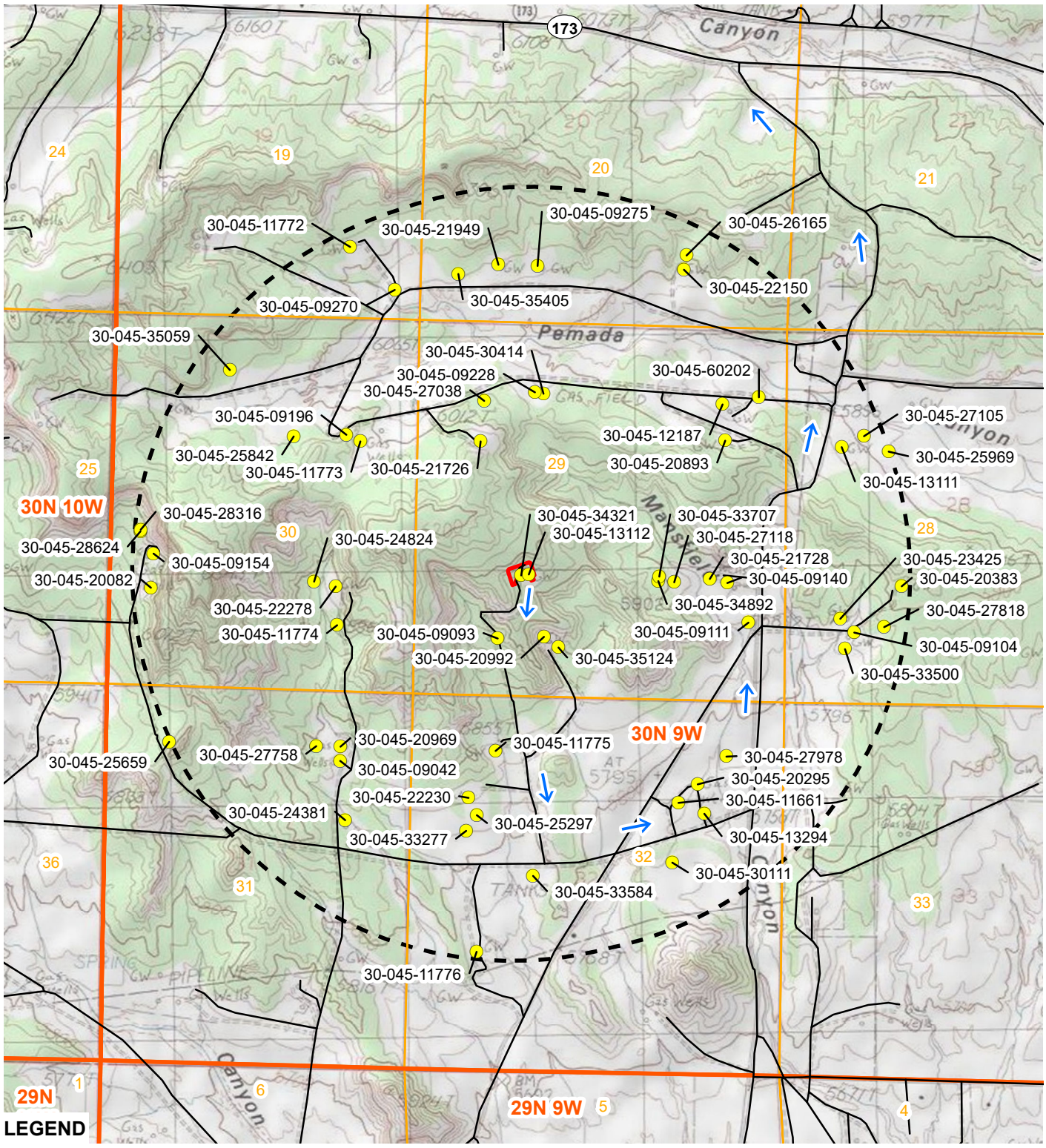
GENERAL INFORMATION

Operator:	Hilcorp Energy Company	Date:	3/29/2021
Site Name:	Mansfield #11N	Prepared By:	Stuart Hyde
Latitude:	36.78040	Longitude:	-107.80726
Section:	29	Section Unit:	K
Township:	30 N	Range:	9W
Site Elevation:	6040.12 feet		

GENERAL SITING CRITERIA	**Yes/No**	**Figure Reference**
Within 200 feet of a watercourse, lakebed, sinkhole or playa lake? Nearest watercourse is an unnamed dry wash, second-order tributary of the San Juan River approximately 738 feet southwest of the proposed facility location. No watercourses, lakebeds, sinkholes, or playa lakes are located within 200 feet of the proposed landfarm boundaries according to United States Geological Survey (USGS).	No	Figures 1 & 2
Is the location within a 100-year flood plain? The proposed location is not within the 100-year or 500-year flood plain as indicated by the "Zone X" designation on Figure 3 and the attached FEMA Panel. As shown on the Panel, the site is specfically located in the unshaded, or no screen, "Zone X - Area of minimal flood hazard", further defined as an area "determined to be outside the 500-year flood and protected by levee from 100-year flood".	No	Figure 3
Within, or within 500 feet of a wetland? The nearest map feature is a Riverine approximatly 738 feet southwest of the site. Features identified as "riverine" by the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) are not within 500 feet of the proposed facility.	No	Figure 4
Within the area overlying a subsurface mine? Closest subsurface mine is 17.4 miles to the West. Mike Tompson with the EMNRD Mining & Minerals Division was contacted on August 13, 2020 to confirm that The New Mexico Abandoned Mine Land Program has no record of underground mines in this area. Email contact is included in this packet.	No	Figure 5
Within 500 feet from the nearest permanent residence, school, hospital, institution or church? Closest residence is 1.3 miles to the SE. Updated fied verification by Eric Carroll of LTE on September 10, 2020. Eric Carroll	No	Figure 6
Located within an unstable area susceptible to natural or human-induced events or forces capable of impairing the division-approved facility's structural components? Closest karst geologic environment is ~46 miles to the North. In addition, data provided by the USGS indicates that there are no known faults or seismic activity in the area of the Site (within the boundaries of the map provided in Figure 7).	No	Figure 7
Within an existing wellhead protection area? The proposed waste management facility is not located within 200 horizontal feet of a private, domestic fresh water well or spring used by <5 households for domestic or stock watering purpose, or within 1,000 horizontal feet any other fresh water well or spring. Wells SJ04353 PODs 1 through 5 depicted on Figure 9 are classified as "monitoring wells" that have been installed to monitor groundwater conditions at the Mansfield #11N remediation site. These wells do not have associated water rights and are not intended for irrigation, domestic, livestock, or any other use.	No	Figure 8

Estimated Depth to Groundwater:	>100
Justification:	Figure 9
Distance to Closest water well with groundwater data:	866 feet, southeast
Well Name:	SJ 4353 POD 1
Wellhead Elevation:	5923 feet
Depth to groundwater:	15.12 feet
Groundwater Elevation:	5907.88 feet
Elevation difference between groundwater elevation of nearest well and proposed small landfarm location:	132.24 feet

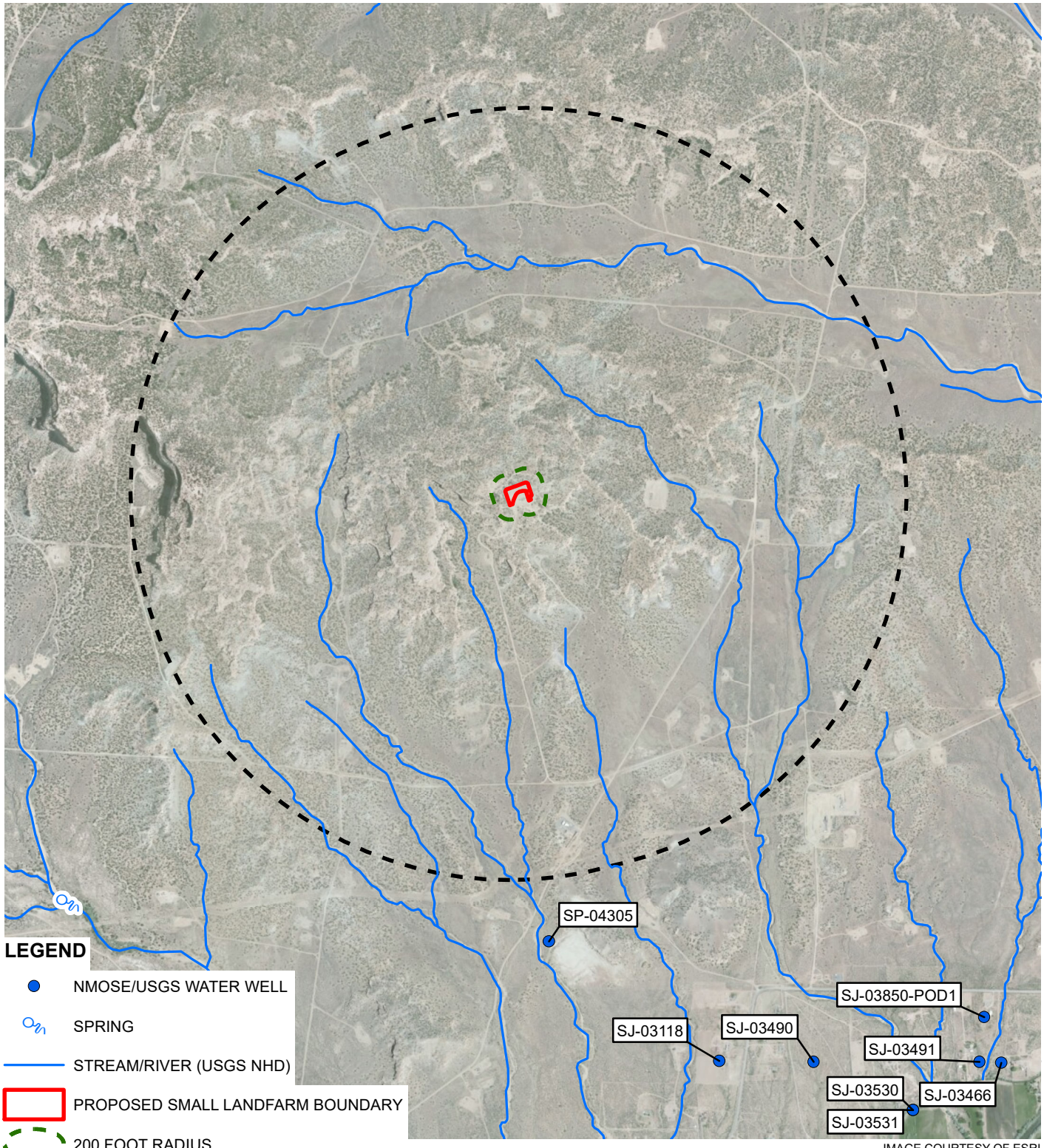
Additional Comments: Water well SJ 4353 POD 1 has a depth to water of approximatly 15 feet, but is located approximatly 117 feet lower in elevation than the proposed site. Therefore the anticipated depth to groundwater at the site is greater than 100 feet. Refer to Figure 9.



HIGHWAY 173 IS THE NEAREST MAJOR ROAD IN PROXIMITY TO THE SITE AND IS LOCATED APPROXIMATELY 3.54 MILES TO THE NORTHEAST.

FIGURE 1
SITE MAP
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG01_SITE_2020.mxd



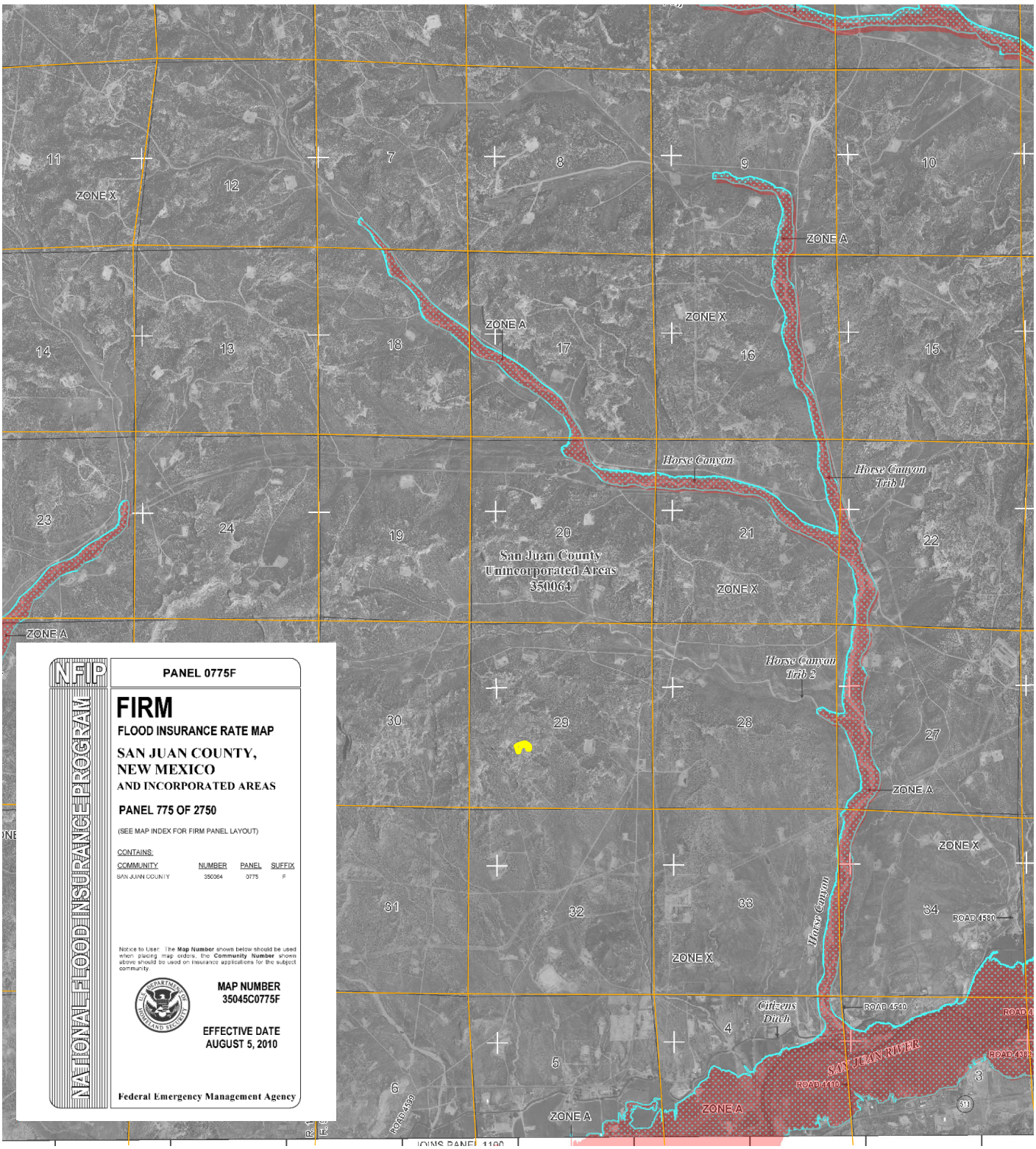
LEGEND

- NMOSE/USGS WATER WELL
- SPRING
- STREAM/RIVER (USGS NHD)
- PROPOSED SMALL LANDFARM BOUNDARY
- 200 FOOT RADIUS
- 1 MILE RADIUS

NOTE:
ACCORDING TO 19.15.2 NMAC A WATERCOURSE MEANS A RIVER, CREEK, ARROYO, CANYON, DRAW, OR WASH OR OTHER CHANNEL HAVING DEFINITE BANKS AND BED WITH VISIBLE EVIDENCE OF OCCASIONAL FLOW OF WATER. THERE ARE NO SINKHOLES, LAKEBEDS, OR PLAYA LAKES WITHIN THE BOUNDARIES OF THIS MAP USING MAPPED DATA FROM THE USGS NHD.
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NHD: NATIONAL HYDROGRAPHY DATASET
USGS: UNITED STATES GEOLOGICAL SURVEY

FIGURE 2
PROXIMITY TO WATERCOURSE, LAKEBED, SINKHOLE, OR PLAYA LAKE
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG02_MANSFIELD_HYDRO 2_2020.mxd



NFIP

PANEL 0775F

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY, NEW MEXICO
AND INCORPORATED AREAS

PANEL 775 OF 2750

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SAN JUAN COUNTY	350064	0775	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
35045C0775F

EFFECTIVE DATE
AUGUST 5, 2010

Federal Emergency Management Agency

IMAGE COURTESY OF FEMA FIRM PANEL

LEGEND

PROPOSED SMALL LANDFARM BOUNDARY

FEMA FLOOD ZONE CLASSIFICATION

FLOODWAY

0 4,000 8,000
Feet

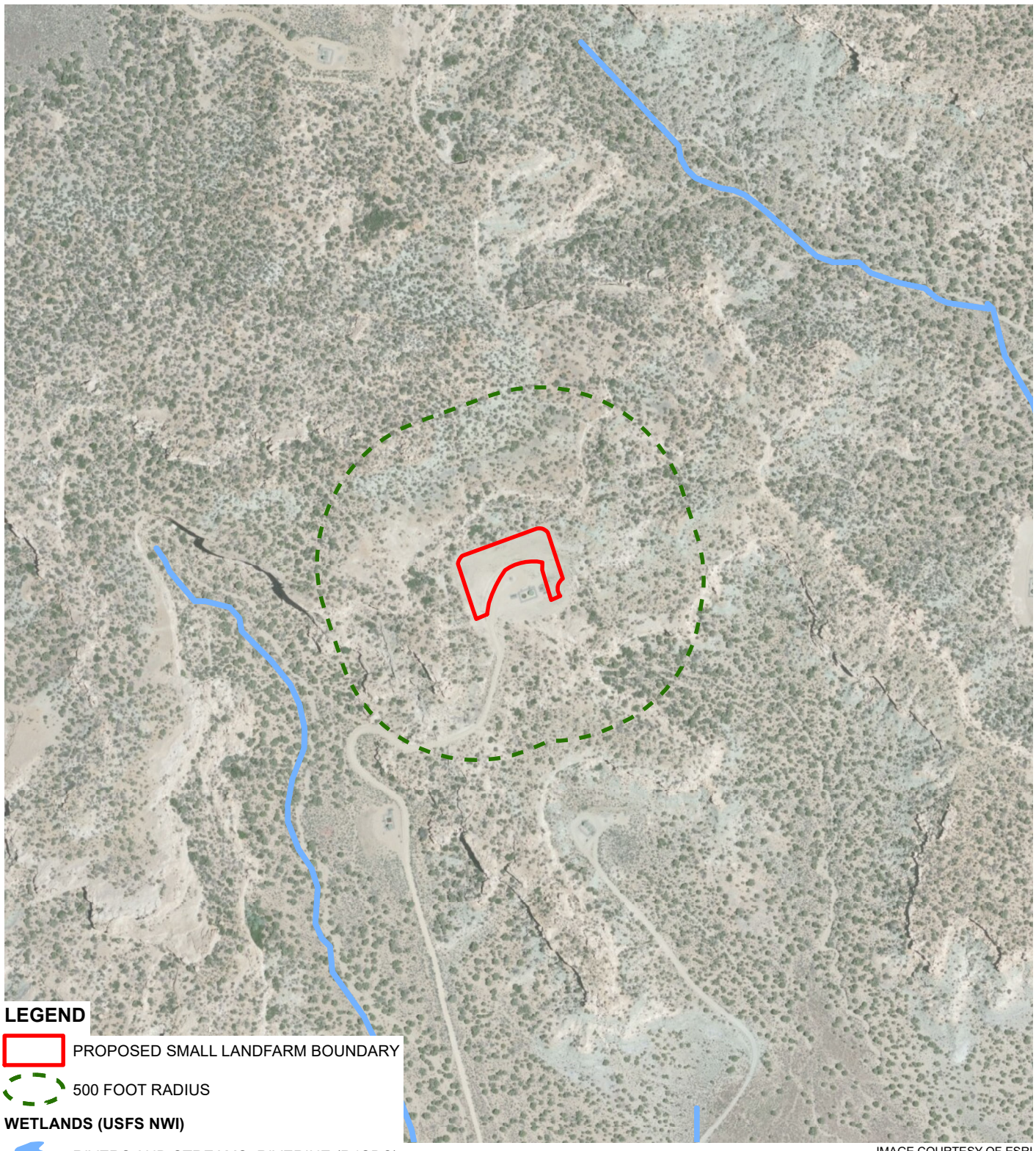
N

NOTE:
SITE IS WITHIN AN AREA OF MINIMAL FLOOD HAZARD DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).
SOURCE: FEMA FLOOD MAP NUMBER 35045C0775F/ZONE X

FIGURE 3
PROXIMITY TO 100 YEAR FLOODPLAIN
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

wsp

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG03_MANSFIELD_FLOOD_2020_FIRM.mxd



LEGEND

PROPOSED SMALL LANDFARM BOUNDARY

500 FOOT RADIUS

WETLANDS (USFS NWI)

RIVERS AND STREAMS; RIVERINE (R4SBC)

IMAGE COURTESY OF ESRI

NOTE:
ACCORDING TO 19.15.2 NMAC A WETLAND MEANS ANY AREAS THAT ARE INUNDATED OR SATURATED BY SURFACE OR GROUND WATER AT A FREQUENCY AND DURATION TO SUPPORT, AND UNDER NORMAL CIRCUMSTANCES DO SUPPORT A PREVALENCE OF VEGETATION TYPICALLY ADAPTED FOR LIFE IN SATURATED SOILS IN NEW MEXICO.

NMAC: NEW MEXICO ADMINISTRATIVE CODE
NWI: NATIONAL WETLAND INVENTORY
USFS: UNITED STATES FISH AND WILDLIFE SERVICE

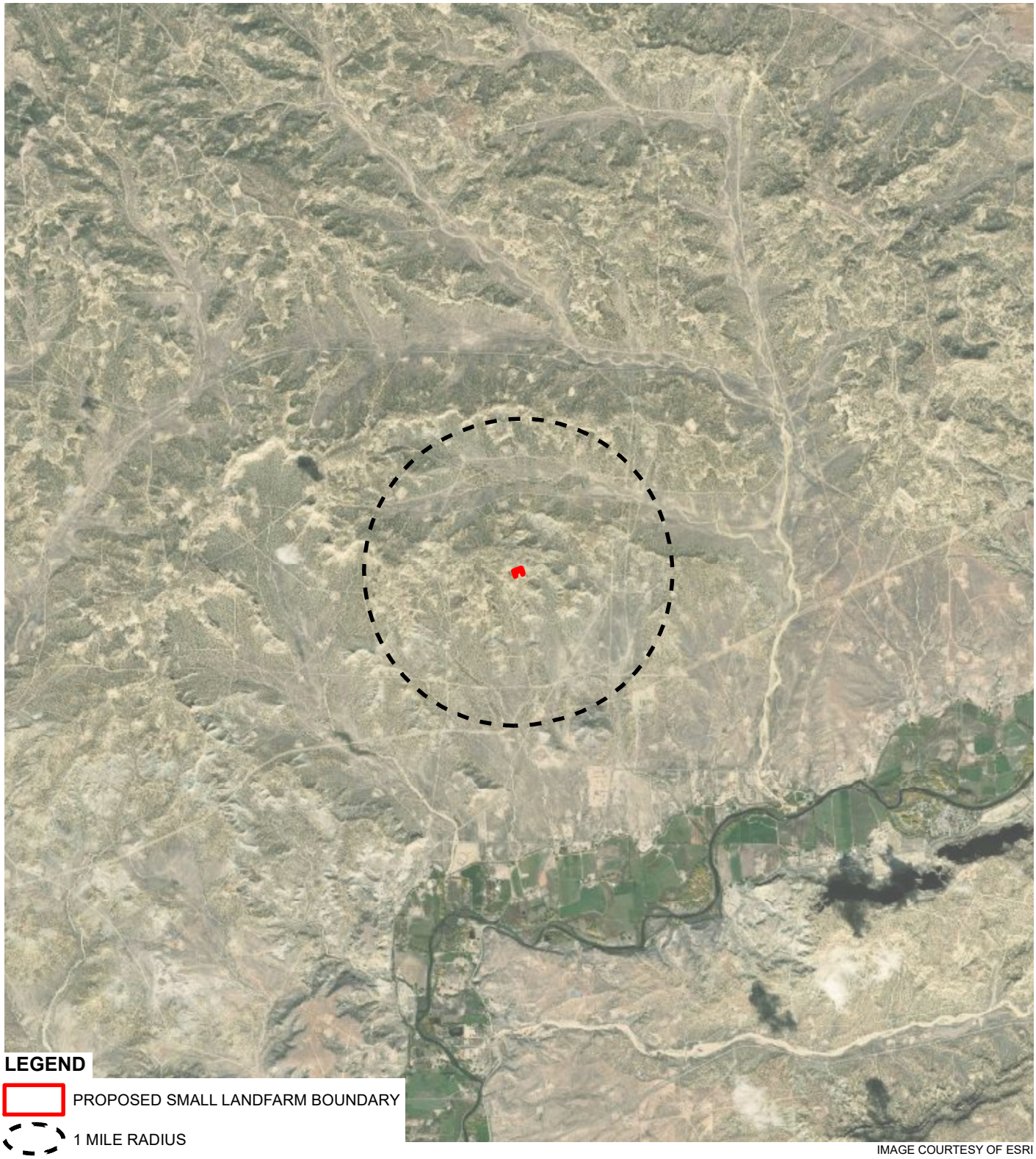
0 500 1,000
Feet

N

FIGURE 4
PROXIMITY TO WETLANDS
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

wsp

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG04_MANSFIELD_WETLANDS_2.mxd



LEGEND

PROPOSED SMALL LANDFARM BOUNDARY

1 MILE RADIUS

IMAGE COURTESY OF ESRI

NOTE:
THERE ARE NO SURFACE MINES OR SUBSURFACE COAL MINES WITHIN THE BOUNDARIES OF THIS MAP ACCORDING TO DATA PROVIDED BY NMEMNRD AND EIA.

MIKE THOMPSON WITH THE NMEMNRD MINING & MINERALS DIVISION WAS CONTACTED TO CONFIRM THAT THE NEW MEXICO ABANDONED MINE LAND PROGRAM HAS NO RECORD OF UNDERGROUND MINES IN THIS AREA

EIA: ENERGY INFORMATION ADMINISTRATION
NMEMNRD: NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

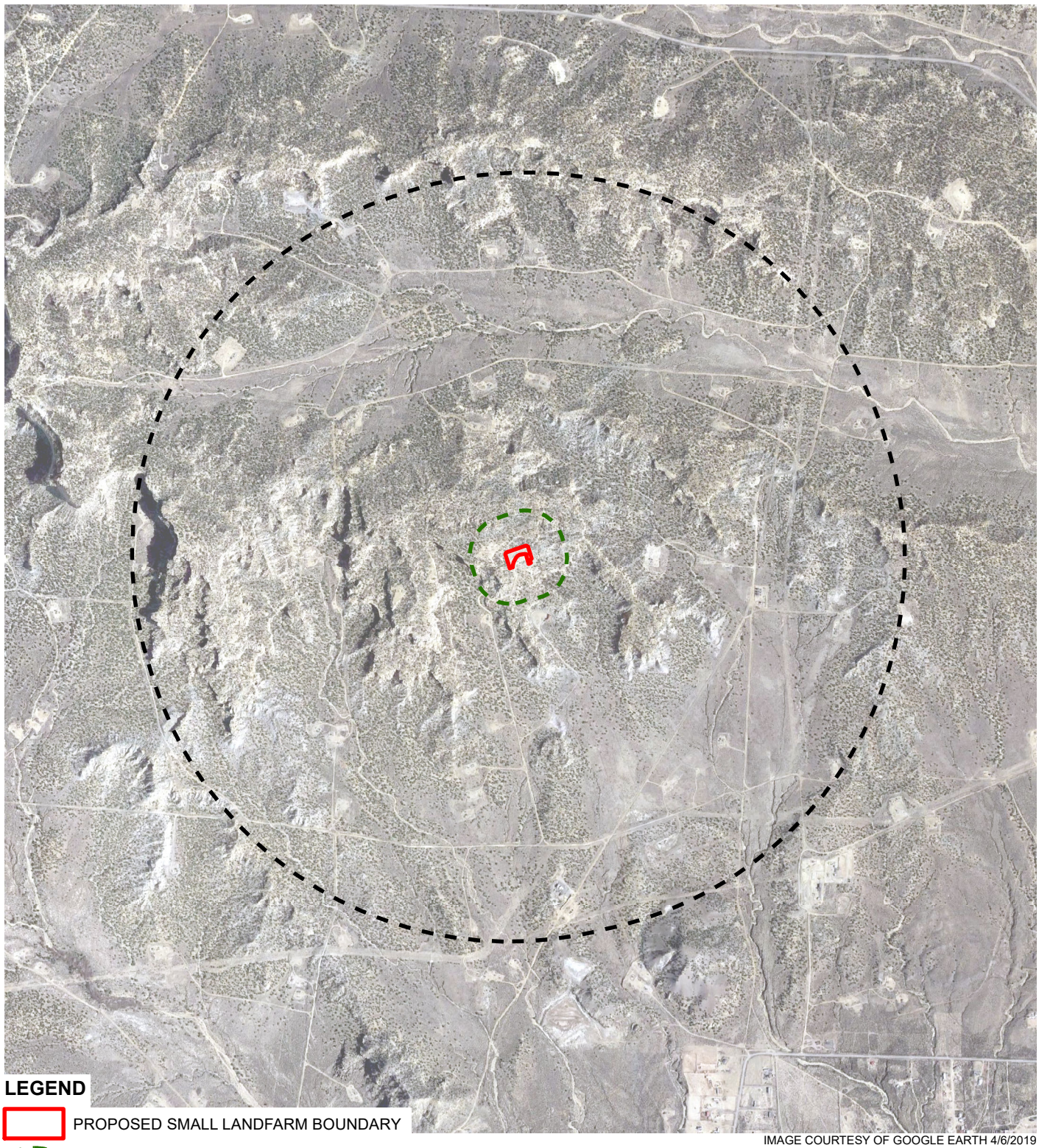
0 5,000 10,000
Feet

N

FIGURE 5
PROXIMITY TO SUBSURFACE MINE
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

wsp

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG05_MANSFIELD_MINES.mxd



LEGEND

PROPOSED SMALL LANDFARM BOUNDARY

500 FOOT RADIUS

1 MILE RADIUS

IMAGE COURTESY OF GOOGLE EARTH 4/6/2019

0 2,000 4,000

Feet

N

Eric Carroll

NOTE:
FIELD VERIFICATION PERFORMED BY ERIC CARROLL (WSP) ON SEPTEMBER 10, 2020.

SITE IS NOT WITHIN 500 FEET OF ANY SITES INTENDED FOR HUMAN OCCUPANCY (SIHO). AERIAL AND SATELLITE IMAGERY INTERPRETATION FOR SIHO LOCATIONS WERE CONDUCTED USING GOOGLE EARTH IMAGERY ACQUIRED IN 2020.

FIGURE 6
PROXIMITY TO PERMANENT RESIDENCE, SCHOOL, HOSPITAL, INSTITUTION, OR CHURCH
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

wsp

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG06_MANSFIELD_PUBLIC.mxd

Josh Adams

From: Tompson, Mike, EMNRD <Mike.Tompson@state.nm.us>
Sent: Wednesday, August 12, 2020 10:12 AM
To: Josh Adams
Cc: Devin Hencmann
Subject: RE: Question about abandoned mines

Hi Josh,

That appears to be Section 29, Township 30 North, Range 9 West. The New Mexico Abandoned Mine Land Program has no record of abandoned mines in that Section.

Please let me know if you have any further questions.

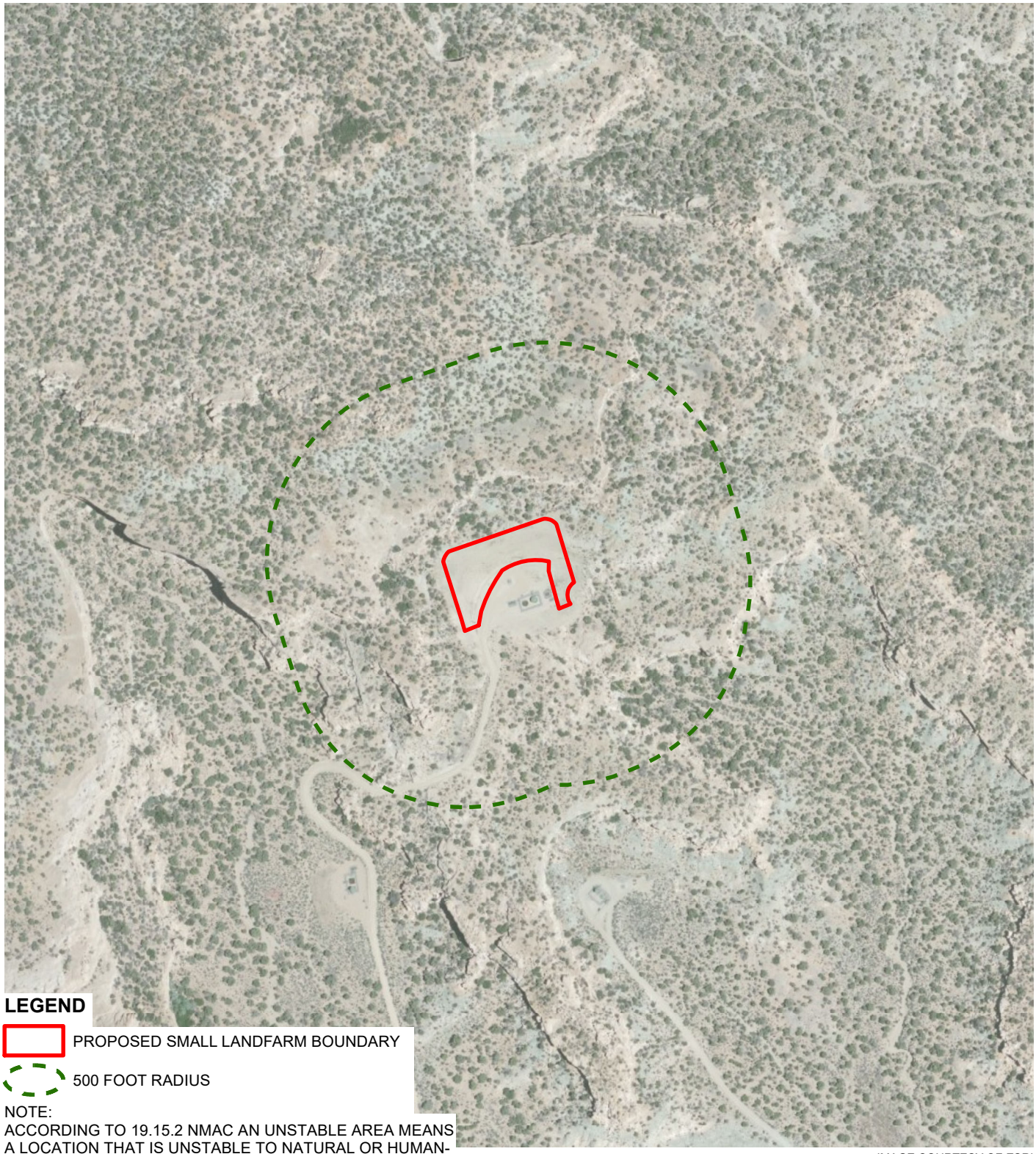
Mike Tompson
New Mexico Energy, Minerals and Natural Resources Department
Mining and Minerals Division
Manager, Abandoned Mine Land Program
1220 South St. Francis Drive
Santa Fe NM 87505
(505) 690-8063 [cell]
www.NMMines.com
MMD Online – Searchable Mine Database

From: Josh Adams <jadams@ltenv.com>
Sent: Tuesday, August 11, 2020 3:58 PM
To: Tompson, Mike, EMNRD <Mike.Tompson@state.nm.us>
Cc: Devin Hencmann <dhencmann@ltenv.com>
Subject: [EXT] Question about abandoned mines

Mike,
I am currently working on citing criteria for a new proposed facility for one of my clients and we have been asked to get in contact with you to confirm that there are no abandoned mines at the proposed location. I believe you have spoken to some of my colleagues about a similar task in the past. The coordinates for the facility are latitude 36.780400, longitude -107.807260 in San Juan County, NM between Aztec and Turley. Can you please respond and confirm that there are no abandoned mines at this location? Thank you, your help is much appreciated.

A proud member of WSP

Joshua G. Adams, G.I.T.
Staff Geologist
970.456.5750 *cell*
970.385.1096 *direct*
848 East Second Avenue Durango, CO 81301
www.ltenv.com



LEGEND

PROPOSED SMALL LANDFARM BOUNDARY

500 FOOT RADIUS

NOTE:
ACCORDING TO 19.15.2 NMAC AN UNSTABLE AREA MEANS A LOCATION THAT IS UNSTABLE TO NATURAL OR HUMAN-INDUCED EVENTS OR FORCES CAPABLE OF IMPAIRING THE DIVISION-APPROVED FACILITY'S STRUCTURAL COMPONENTS.

SITE RESIDES WITHIN THE USGS NACIMIENTO GEOLOGIC FORMATION WHICH EXHIBITS MEDIUM-GRAINED, MIXED CLASTIC MATERIAL AND IS NOT ASSOCIATED WITH KARST GEOLOGIC ENVIRONMENT. THERE ARE NO FAULTS WITHIN THE BOUNDARIES OF THIS MAP AND NO KNOWN SEISMIC ACTIVITY ACCORDING TO DATA PROVIDED BY THE USGS.

NMAC: NEW MEXICO ADMINISTRATIVE CODE
USGS: USGS: UNITED STATES GEOLOGICAL SURVEY

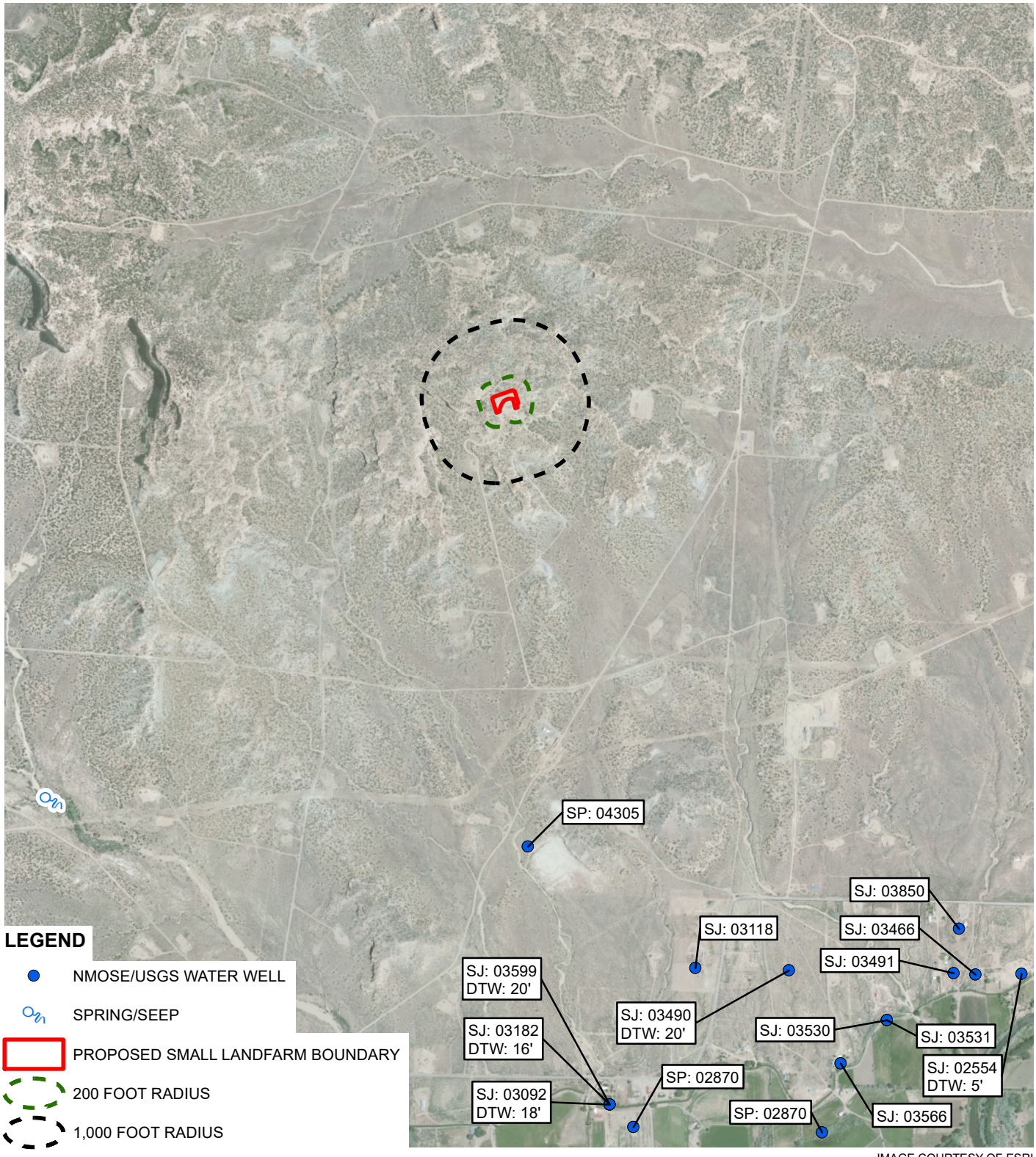
IMAGE COURTESY OF ESRI

0 400 800
Feet

N

FIGURE 7
PROXIMITY TO UNSTABLE AREA
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

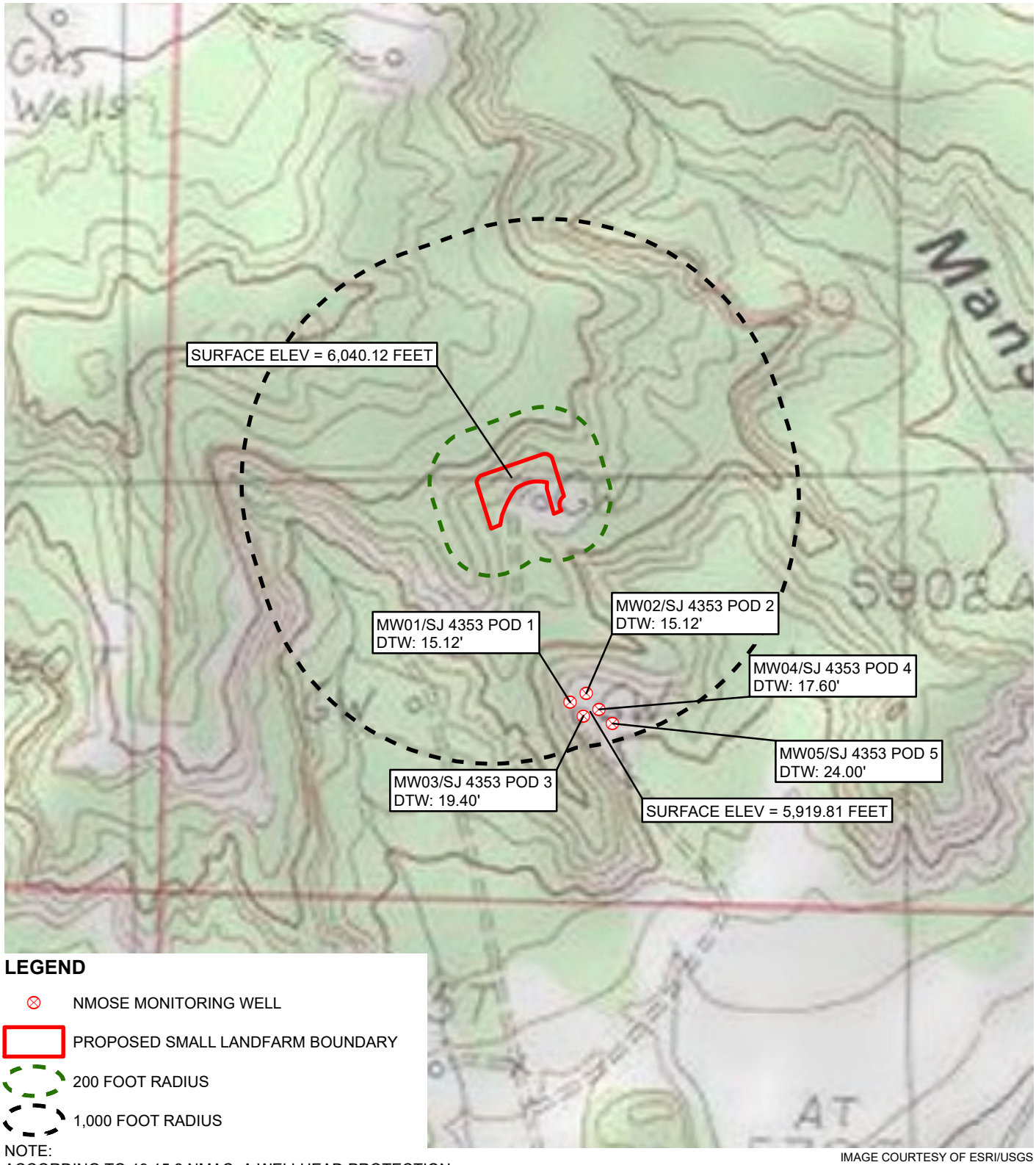
P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG07_MANSFIELD_GEOLOGY.mxd



NOTE:
ACCORDING TO 19.15.2 NMAC, A WELLHEAD PROTECTION AREA CONSISTS OF THE AREA WITHIN 200 HORIZONTAL FEET OF A PRIVATE, DOMESTIC FRESH WATER WELL OR SPRING USED BY <5 HOUSEHOLDS FOR DOMESTIC OR STOCK WATERING PURPOSE, OR WITHIN 1,000 HORIZONTAL FEET OF ANY OTHER FRESH WATER WELL OR SPRING. NO FRESH WATER WELLS OR SPRINGS IN THE AREA PER NWIS, USGS, AND NMOSE.
DTW: DEPTH TO WATER
NMOSE: NEW MEXICO OFFICE OF THE STATE ENGINEER
NWIS: NATIONAL WATER INFORMATION SYSTEM
': FEET

FIGURE 8
PROXIMITY TO WELLHEAD PROTECTION AREA
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG08_MANSFIELD_WW_LOC.mxd



LEGEND

- NMOSE MONITORING WELL
- PROPOSED SMALL LANDFARM BOUNDARY
- 200 FOOT RADIUS
- 1,000 FOOT RADIUS

NOTE:
ACCORDING TO 19.15.2 NMAC, A WELLHEAD PROTECTION AREA CONSISTS OF THE AREA WITHIN 200 HORIZONTAL FEET OF A PRIVATE, DOMESTIC FRESH WATER WELL OR SPRING USED BY <5 HOUSEHOLDS FOR DOMESTIC OR STOCK WATERING PURPOSE, OR WITHIN 1,000 HORIZONTAL FEET OF ANY OTHER FRESH WATER WELL OR SPRING. NO FRESHWATER WELLS OR SPRINGS IN THE AREA PER NWIS, USGS, AND NMOSE.

DTW: DEPTH TO WATER
NMOSE: NEW MEXICO OFFICE OF THE STATE ENGINEER
NWIS: NATIONAL WATER INFORMATION SYSTEM
': FEET

IMAGE COURTESY OF ESRI/USGS

0 600 1,200
Feet

N

FIGURE 9
LOCAL DEPTH TO WATER
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG09_MANSFIELD_LOCAL_DTW.mxd

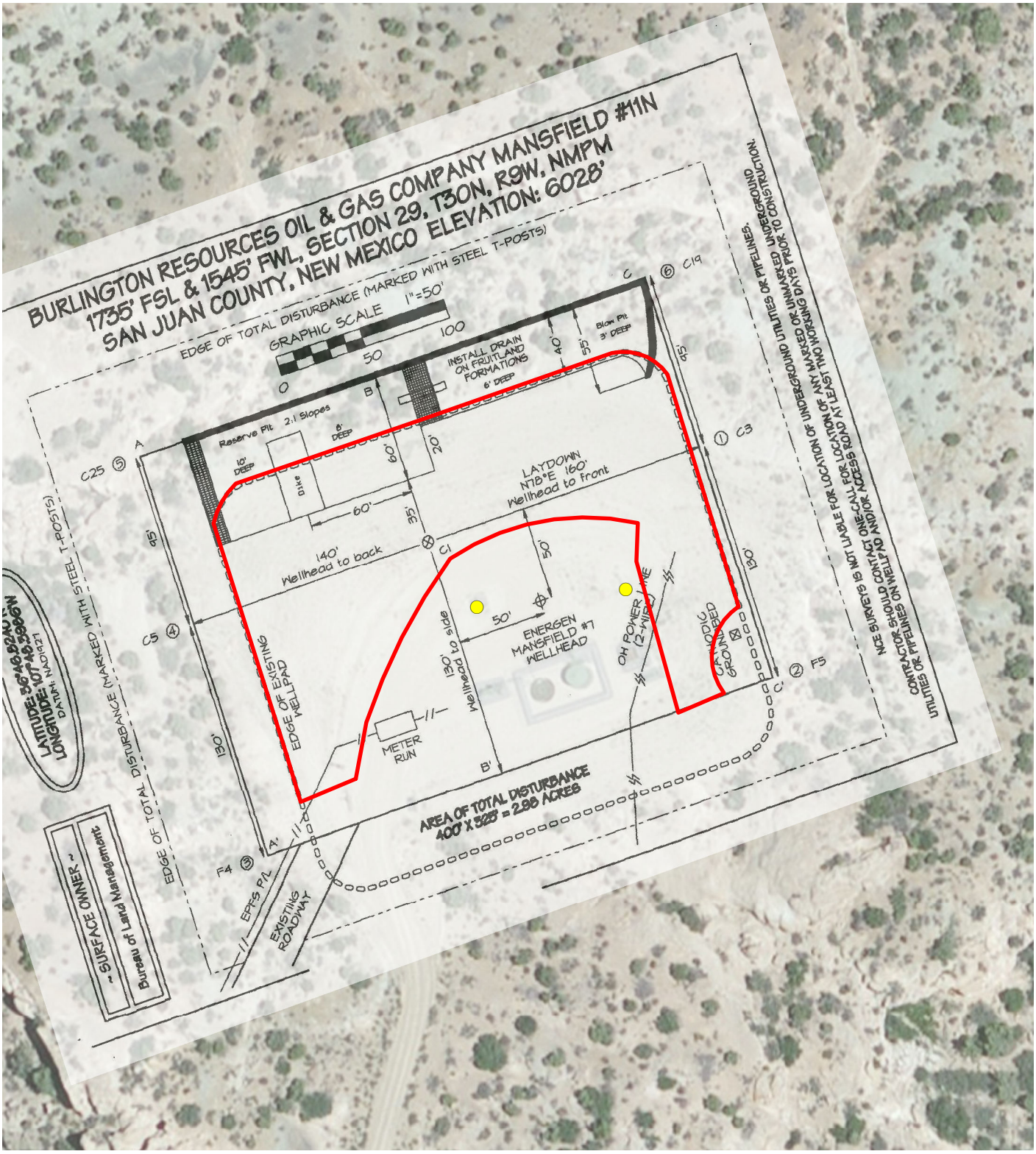


IMAGE COURTESY OF ESRI

LEGEND

WELLHEAD

PROPOSED SMALL LANDFARM BOUNDARY (1.2 ACRES)

0 100 200

Feet

N

FIGURE 10
PLAT MAP
MANSFIELD #11N
NESW SEC 29 T30N R9W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819011_MANSFIELD 11\017819011_FIG01_PLAT_2021.mxd

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
2007 NOV 17 PM 2 04
070 FARMINGTON NM

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-34321	72319/71599	BLANCO MESAVERDE / BASIN DAKOTA

4 Property Code	5 Property Name	6 Well Number
7284	MANSFIELD	11N

7 OGRID No.	8 Operator Name	9 Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	6028'

10 Surface Location

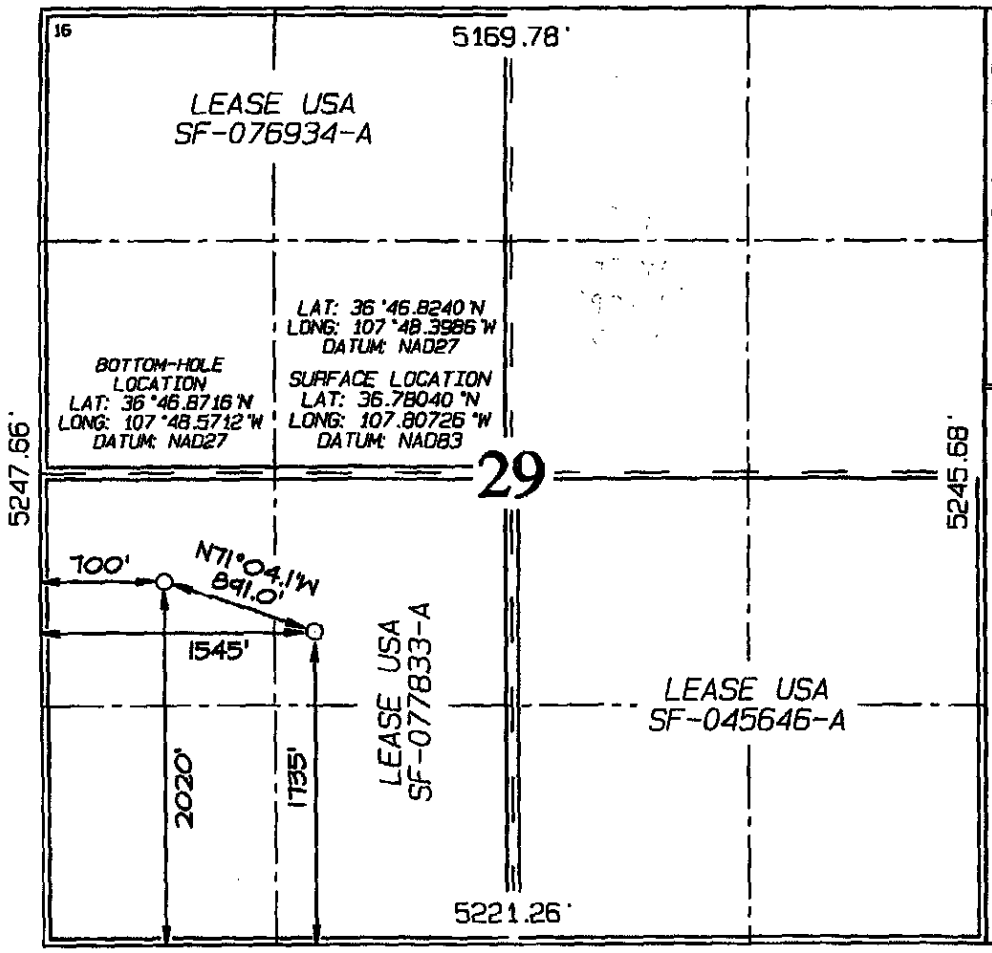
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	29	30N	9W		1735	SOUTH	1545	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	29	30N	9W		2020	SOUTH	700	WEST	SAN JUAN

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320 MV (W/2)/320 DK (S/2)			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Patsy Clugston 12/13/06
Signature Date

Patsy Clugston
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

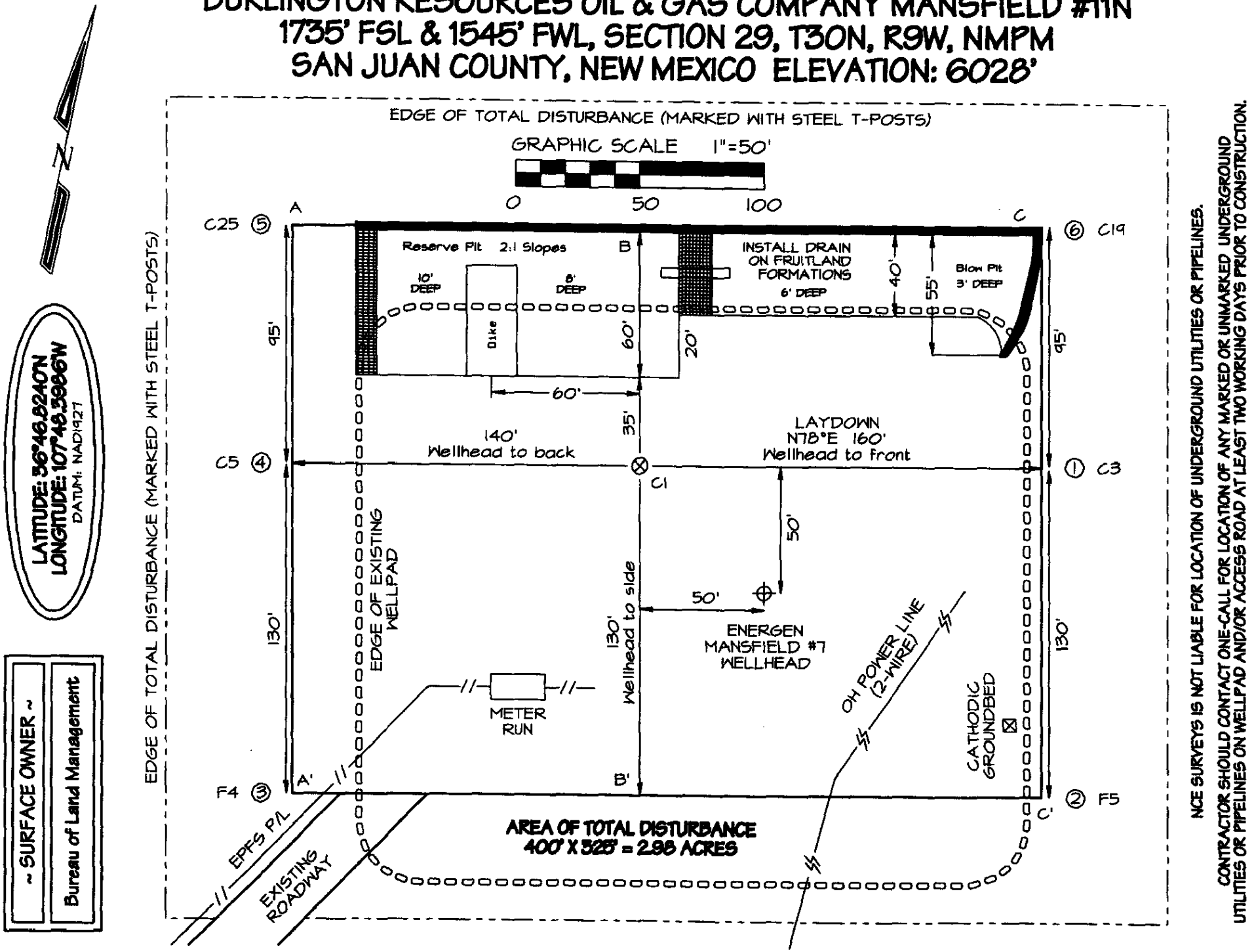
Survey Date: NOVEMBER 29, 2006

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

BURLINGTON RESOURCES OIL & GAS COMPANY MANSFIELD #11N
1735' FSL & 1545' FWL, SECTION 29, T30N, R9W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6028'



Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

January 19, 2021

Bureau of Land Management
Farmington Field Office
6251 College Boulevard
Farmington, New Mexico 87402

RE: Request to Amend Conditions of Approval
Hilcorp Energy Company
Mansfield #11 – NCS1913741281
San Juan County, New Mexico

To Whom It May Concern,

Following identification of a historical release by Hilcorp Energy Company (Hilcorp) at the Mansfield #11 natural gas production well, Hilcorp excavated approximately 2,000 cubic yards of soil and requested land use permission from the Bureau of Land Management (BLM) to remediate impacted soil via biopiling at the nearby Mansfield #11N, another well pad located on BLM surface with available space for remediation. Upon approval with conditions from the BLM, Hilcorp submitted a Revised Remediation Work Plan on February 19, 2020 to the New Mexico Oil Conservation Division (NMOCD). In response, the NMOCD is requiring Hilcorp to adhere to the requirements of the NMOCD small landfarm regulations (19.15.36.16 of the New Mexico Administrative Code [NMAC]), which differ slightly from the BLM conditions of approval (COAs) for the Site's biopiling work plan. The NMOCD has additionally requested that Hilcorp obtain acknowledgement from BLM of the differences between the NMOCD requirements and BLM's COAs. To comply with NMOCD's request, WSP USA Inc. (WSP) has attached for your review a table that summarizes the differences in the regulatory requirements and any proposed changes in landfarm construction, management, and closure based on compliance with 19.15.36.16 NMAC. In all but one case, Hilcorp will default to the more stringent of the BLM COAs and the NMOCD small landfarm regulations so that both regulatory directives can be met.

WSP has attempted to summarize the most significant differences below:

- Hilcorp will meet a closure standard for benzene of 0.2 milligrams per kilogram (mg/kg) as prescribed in the 19.15.36.16 NMAC instead of 10 mg/kg approved by the BLM. Hilcorp will comply with BLM's closure criteria of 100 mg/kg for TPH. Hilcorp will add NMOCD standards for BTEX, GRO+DRO, and chloride, which were not required by the BLM.
- Landfarm construction will comply with BLM requirements, but have stricter NMOCD constraints including:
    - The entire area will not exceed 2 acres,
    - Lift heights will be restricted to 8 inches instead of 24 inches,
    - No more than 2,000 cubic yards of soil will be treated.
- Due to the time it has taken to identify and comply with the NMOCD requirements, along with projected time to receive final approval to proceed from NMOCD, Hilcorp is requesting BLM change the timeline for remediation to three years from the landfarm application acceptance date instead of two years from the release date. Hilcorp will submit sundry notices to the BLM each year following the application acceptance from the NMOCD. The reports will include

laboratory analytical results soil sampling, evaluation of remediation progress, and anticipated timeline to closure.

As stated above, for NMOCD to proceed with approval of small landfarm registration, it requires BLM acknowledge differences between the BLM COAs and NMOCD small landfarm requirements and for BLM to approve of any modifications. All differences are summarized in the attached table and show the most stringent requirement will be met. Due to the extended timeline required to receive approval of a work plan from NMOCD and subsequent small landfarm registration, Hilcorp requests approval to modify the timeline in the original BLM COAs. Hilcorp respectfully requests extension of the timeline for remediation from two years from the date of the release to three years from the application acceptance date.

Upon approval of this Sundry, Hilcorp can proceed with the final steps required for NMOCD small landfarm registration and begin remediation at the site.

Sincerely,

Jennifer Deal

Jennifer Deal

Well Name: MANSFIELD

Well Location: T30N / R9W / SEC 29 / NESW / 36.780261 / 107.807377

County or Parish/State: SAN JUAN / NM

Well Number: 11N

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF077833A

Unit or CA Name: MANSFIELD, MANSFIELD - W/2 MV

Unit or CA Number: NMNM73156, NMNM74066

US Well Number: 3004534321

Well Status: Producing Gas Well

Operator: HILCORP ENERGY COMPANY

Subsequent Report

Type of Submission: Subsequent Report

Type of Action: Surface Disturbance

Date Sundry Submitted: 02/10/2021

Time Sundry Submitted: 01:46

Date Operation Actually Began: 02/01/2021

Actual Procedure: Please see the attached Change of Plans. Attn: Ryan Joyner

SR Attachments

Actual Procedure

Sundry_Notice__Mansfield_11N_3160_005_1__20210210134541.pdf

Copy_of_Rule_36_BLM_COA_Comparison_JA_V2_20210210134541.pdf

Mansfield_11N_COA_20210210134541.pdf

BLM_letter_for_Sundry_20210210134541.pdf

EC504488_20210210134541.pdf

Well Name: MANSFIELD

Well Location: T30N / R9W / SEC 29 / NESW / 36.780261 / 107.807377

County or Parish/State: SAN JUAN / NM

Well Number: 11N

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF077833A

Unit or CA Name: MANSFIELD, MANSFIELD - W/2 MV

Unit or CA Number: NMNM73156, NMNM74066

US Well Number: 3004534321

Well Status: Producing Gas Well

Operator: HILCORP ENERGY COMPANY

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: WALKER

Signed on: FEB 10, 2021 01:45 PM

Name: HILCORP ENERGY COMPANY

Title: Operations/Regulatory Technician

Street Address: 1111 TRAVIS STREET

City: HOUSTON **State:** TX

Phone: (713) 209-2400

Email address: NOT ENTERED

Field Representative

Representative Name: Jennifer Deal

Street Address: 382 ROAD 3100

City: FARMINGTON **State:** NM **Zip:** 87401

Phone: (505)324-5128

Email address: jdeal@hilcorp.com

BLM Point of Contact

BLM POC Name: RYAN JOYNER

BLM POC Title: Physical Scientist

BLM POC Phone: 9703851242

BLM POC Email Address: rjoyner@blm.gov

Disposition: Approved

Disposition Date: 02/11/2021

Signature: Ryan Joyner

ENSOLUM

TABLE 1
SOIL ANALYTICAL RESULTS
Mansfield #11N Small Landfarm
Hilcorp Energy Company
San Juan County, New Mexico

Sample Identification	Sample Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	TPH, GRO+DRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
Landfarm Closure Performance Standards		**0.2**	**50**	NE	NE	NE	**500**	**100**	**500**
Treatment Zone Soil Sampling									
LFC	11/17/2022	<0.020	<0.079	<4.0	<15	<49	<15	<49	<60
Vadose Zone Soil Sampling									
Vadose Zone	5/11/2023	<0.024	<0.097	<4.8	<9.7	<49	<9.7	<49	110

Notes:

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
DRO: Diesel Range Organics
GRO: Gasoline Range Organics
mg/kg: milligrams per kilogram
MRO: Motor Oil/Lube Oil Range Organics
NE: Not Established
TPH: Total Petroleum Hydrocarbon
<0.037 : indicates result less than the stated laboratory reporting limit (RL)

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

November 28, 2022

Stuart Hyde
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Mansfield 11 OrderNo.: 2211B13

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/18/2022 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2211B13**
Date Reported: **11/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** LFC
Project: Mansfield 11 **Collection Date:** 11/17/2022 11:55:00 AM
Lab ID: 2211B13-001 **Matrix:** MEOH (SOIL) **Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/18/2022 10:01:32 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/18/2022 10:01:32 AM
Surr: DNOP	105	21-129		%Rec	1	11/18/2022 10:01:32 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	11/18/2022 2:26:55 PM
Surr: BFB	91.7	37.7-212		%Rec	1	11/18/2022 2:26:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.020		mg/Kg	1	11/18/2022 2:26:55 PM
Toluene	ND	0.040		mg/Kg	1	11/18/2022 2:26:55 PM
Ethylbenzene	ND	0.040		mg/Kg	1	11/18/2022 2:26:55 PM
Xylenes, Total	ND	0.079		mg/Kg	1	11/18/2022 2:26:55 PM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	11/18/2022 2:26:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	11/18/2022 12:17:57 PM

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	Above Quantitation Range/Estimated Value
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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B13**

28-Nov-22

Client: HILCORP ENERGY

Project: Mansfield 11

Sample ID: **MB-71590**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **71590**	RunNo: **92690**
Prep Date: **11/18/2022**	Analysis Date: **11/18/2022**	SeqNo: **3336788** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-71590**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **71590**	RunNo: **92690**
Prep Date: **11/18/2022**	Analysis Date: **11/18/2022**	SeqNo: **3336789** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B13**

28-Nov-22

Client: HILCORP ENERGY

Project: Mansfield 11

Sample ID: **LCS-71589**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **71589**	RunNo: **92689**
Prep Date: **11/18/2022**	Analysis Date: **11/18/2022**	SeqNo: **3335128** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	15	50.00	0	93.8	64.4	127			
Surr: DNOP	5.3		5.000		106	21	129			

Sample ID: **MB-71589**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **71589**	RunNo: **92689**
Prep Date: **11/18/2022**	Analysis Date: **11/18/2022**	SeqNo: **3335129** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		94.7	21	129			

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B13**

28-Nov-22

Client: HILCORP ENERGY

Project: Mansfield 11

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **B92694**	RunNo: **92694**
Prep Date:	Analysis Date: **11/18/2022**	SeqNo: **3335416** 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	970		1000		97.1	37.7	212			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **B92694**	RunNo: **92694**
Prep Date:	Analysis Date: **11/18/2022**	SeqNo: **3335417** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B13**

28-Nov-22

Client: HILCORP ENERGY

Project: Mansfield 11

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **D92694**	RunNo: **92694**
Prep Date:	Analysis Date: **11/18/2022**	SeqNo: **3335494** 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	1.0		1.000		101	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **D92694**	RunNo: **92694**
Prep Date:	Analysis Date: **11/18/2022**	SeqNo: **3335495** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.8	80	120			
Toluene	0.97	0.050	1.000	0	97.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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: Hilcorp Energy | Work Order Number: 2211B13 | RcptNo: 1

Received By: Tracy Casarrubias 11/18/2022 6:20:00 AM
Completed By: Tracy Casarrubias 11/18/2022 7:02:54 AM
Reviewed By: TMC 11/18/22

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° 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: JM 11/18/22

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mKillough@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

~~5-days~~

~~☒ Standard~~ or ☒ Rush Next Day

Project Name: Mansfield #11

Project #:

Project Manager: Stuart Hyde

shyde@ensolum.com

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.4-0.2=1.2 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~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	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride (300.0)
11/14/22	1155	Soil	LFC	1, 4 oz	Cool	2211B13 001	X	X									X
↓	1205	↓	LWC-04B	↓	↓	002	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via	Date	Time
11/14/22	1358					
11/17/22	1804			Courier	11/16/22	6:20

Remarks: cc: rhanson@ensolum.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

May 19, 2023

Stuart Hyde
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Mansfield 11N Small Landfarm OrderNo.: 2305684

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/12/2023 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2305684**
Date Reported: **5/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Vadose Zone
Project: Mansfield 11N Small Landfarm
Collection Date: 5/11/2023 10:30:00 AM
Lab ID: 2305684-001 **Matrix:** SOIL
Received Date: 5/12/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/16/2023 1:03:31 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/16/2023 1:03:31 PM
Surr: DNOP	103	69-147		%Rec	1	5/16/2023 1:03:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/15/2023 11:52:33 PM
Surr: BFB	75.9	15-244		%Rec	1	5/15/2023 11:52:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	5/15/2023 11:52:33 PM
Toluene	ND	0.048		mg/Kg	1	5/15/2023 11:52:33 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/15/2023 11:52:33 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/15/2023 11:52:33 PM
Surr: 4-Bromofluorobenzene	82.9	39.1-146		%Rec	1	5/15/2023 11:52:33 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	110	60		mg/Kg	20	5/15/2023 10:39:48 PM

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	Above Quantitation Range/Estimated Value
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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305684**

19-May-23

Client: HILCORP ENERGY

Project: Mansfield 11N Small Landfarm

Sample ID: **MB-74968**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **74968**	RunNo: **96777**
Prep Date: **5/15/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509658** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74968**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **74968**	RunNo: **96777**
Prep Date: **5/15/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305684**

19-May-23

Client: HILCORP ENERGY

Project: Mansfield 11N Small Landfarm

Sample ID: **LCS-74977**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74977**	RunNo: **96783**
Prep Date: **5/16/2023**	Analysis Date: **5/16/2023**	SeqNo: **3510137** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.2	61.9	130			
Surr: DNOP	4.6		5.000		91.8	69	147			

Sample ID: **MB-74977**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74977**	RunNo: **96783**
Prep Date: **5/16/2023**	Analysis Date: **5/16/2023**	SeqNo: **3510138** 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	9.4		10.00		93.9	69	147			

Sample ID: **LCS-74966**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74966**	RunNo: **96783**
Prep Date: **5/15/2023**	Analysis Date: **5/16/2023**	SeqNo: **3510946** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.4	69	147			

Sample ID: **MB-74966**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74966**	RunNo: **96783**
Prep Date: **5/15/2023**	Analysis Date: **5/16/2023**	SeqNo: **3510974** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.2	69	147			

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305684**

19-May-23

Client: HILCORP ENERGY

Project: Mansfield 11N Small Landfarm

Sample ID: **lcs-74925**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74925**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3508640** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	4900		1000		492	15	244			S

Sample ID: **mb-74925**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74925**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3508641** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	740		1000		74.4	15	244			

Sample ID: **lcs-74930**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74930**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509509** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.4	70	130			
Surr: BFB	4800		1000		483	15	244			S

Sample ID: **mb-74930**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74930**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509510** 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	810		1000		81.0	15	244			

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305684**

19-May-23

Client: HILCORP ENERGY

Project: Mansfield 11N Small Landfarm

Sample ID: **LCS-74925**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74925**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3508649** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.85		1.000		84.6	39.1	146			

Sample ID: **mb-74925**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74925**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3508650** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		1.000		82.6	39.1	146			

Sample ID: **LCS-74930**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74930**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509516** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	80.2	70	130			
Toluene	0.82	0.050	1.000	0	82.4	70	130			
Ethylbenzene	0.82	0.050	1.000	0	82.2	70	130			
Xylenes, Total	2.5	0.10	3.000	0	82.7	70	130			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.1	39.1	146			

Sample ID: **mb-74930**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74930**	RunNo: **96762**
Prep Date: **5/12/2023**	Analysis Date: **5/15/2023**	SeqNo: **3509517** 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	0.84		1.000		83.9	39.1	146			

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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: HILCORP ENERGY Work Order Number: 2305684 RcptNo: 1

Received By: Juan Rojas 5/12/2023 7:30:00 AM

Completed By: Cheyenne Cason 5/12/2023 8:36:15 AM

Reviewed By: 5/12/23

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° 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: JH 5/12/23

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes	Morty		

Chain-of-Custody Record

Client: Hilcorp
Mitch Killough
Mailing Address: 1111 Travis St
Houston TX
Phone #:
email or Fax#: mkillough@hilcorp.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush By 5/16/2023
Project Name: Mansfield 11N Small Landfarm
Project #:
Project Manager: Stuart Hyde
Sampler: SH
On Ice: ☐ Yes ☐ No
# of Coolers: 1 Monty
Cooler Temp(Including CF): 0.8+0.1=0.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2305684	BTEX / 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	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
5/11	1030	S	Vadose Zone	4oz	cool	001	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/11/23	1202				5/11/23	1202
5/11/23	1804			Courier	5/12/23	7:30

Remarks:

ENSOLUM

Photographic Log
Hilcorp Energy Company
Mansfield #11N Small Landfarm
San Juan County, New Mexico

Photograph: 1 Date: 6/21/2023
Description: Removing treatment zone soil and berms
View: Northwest

Photograph: 2 Date: 8/15/2023
Description: View of treatment zone cell after soil and berm removal
View: Southeast

The application/form must be submitted via OCD's Online Permitting System at https://wwwapps.emnrd.nm.gov/OCD/OCDPermitting/Default.aspx.

State of New Mexico
Energy Minerals and Natural Resources

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

For State Use Only:
Registration # NM3-003

Form C-137 EZ
Revised October 11, 2022

REGISTRATION/ FINAL CLOSURE REPORT FOR SMALL LANDFARM

Section 7 of 19.15.36 NMAC defines a small landfarm as a centralized landfarm of two acres or less that has a total capacity of 2000 cubic yards or less in a single lift of eight inches or less, remains active for a maximum of three years from the date of its registration and that receives only petroleum hydrocarbon-contaminated soils (excluding drill cuttings) that are exempt or non-hazardous waste. The operator shall operate only one active small landfarm per governmental section at any time.

GENERAL INFORMATION

1. ☐ Small Landfarm Registration ☒ Small Landfarm Final Closure Report*
(*Must be submitted within three years from the registration date)

2. Operator: Hilcorp Energy Company
Address: 1111 Travis Street, Houston, TX 77002
Contact Person: Mitch Killough Phone: 713-757-5247

3. Location: NE /4 SW /4 Section 29 Township 30N Range 9W

REGISTRATION

1. As operator, are you the surface estate owner of the proposed site? ☐ Yes ☐ No If no, please attach a certification statement that demonstrates a written agreement is established with the surface estate owner authorizing the use of the site for the proposed small landfarm.

2. Will the proposed small landfarm comply with the siting requirements of Subsections A and B of 19.15.36.13 NMAC?
☐ Yes ☐ No

A. Depth to ground water.
- No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.

B. No surface waste management facility shall be located:
- within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
- within an existing wellhead protection area or 100-year floodplain;
- within, or within 500 feet of, a wetland;
- within the area overlying a subsurface mine;
- within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or
- within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.

3. Attach a plat and topographic map showing the small landfarm's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the small landfarm site; watercourses; fresh water sources, including wells and springs; oil and gas wells or other production facilities; and inhabited buildings within one mile of the site's perimeter.

Based on the information provided with this submittal, registration of a small landfarm can only be granted if the operator complies with the following understandings and conditions:

- The operator shall operate only one active small landfarm per governmental section at any time. No small landfarm shall be located more than one mile from the operator's nearest oil or gas well or other production facility.
- The operator shall accept only exempt or non-hazardous wastes consisting of soils (excluding drill cuttings) generated as a result of accidental releases from production operations, that are predominantly contaminated by petroleum hydrocarbons, do not contain free liquids, would pass the paint filter test and where testing shows chloride concentrations are 500 mg/kg or below.
- The operator shall berm the landfarm to prevent rainwater run-on and run-off.
- The operator shall post a sign at the site readable from a distance of 50 feet and listing the operator's name; small landfarm registration number; location by unit letter, section, township and range; expiration date; and an emergency contact telephone number.
- The operator shall spread and disk contaminated soils in a single eight inch or less lift within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg; and that the chloride

concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg. The operator shall treat soils by disking at least once a month and by watering and adding bioremediation enhancing materials when needed.

- The operator shall maintain records reflecting the generator, the location of origin, the volume and type of oil field waste, the date of acceptance and the hauling company for each load of oil field waste received. The division shall post on its website each small landfarm's location, operator and registration date. In addition, the operator shall maintain records of the small landfarm's remediation activities in a form readily accessible for division inspection. The operator shall maintain all records for five years following the small landfarm's closure.
- The operator shall submit a final closure report on a form C-137 EZ, together with photographs of the closed site, to the environmental bureau in the division's Santa Fe office.

CERTIFICATION

I hereby certify that the information submitted with this registration is true, accurate and complete to the best of my knowledge and belief and agree to the understandings and conditions of this registration.

Name: _____ Title: _____

Signature: _____ Date: _____

E-mail Address: _____

OCD REGISTRATION: ☐ Approved. Date : _____ ☐ Denied. Date: _____

Comments: _____

OCD Representative Signature: _____

Title: _____ **OCD Registration Number:** _____

FINAL CLOSURE REPORT

Were the landfarmed soils able to achieve the closure performance standards, listed below, within three years from the registration date? ☒ Yes ☐ No (Please provide laboratory analytical results)

- benzene, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, shall not exceed 50 mg/kg;
- TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg; and
- chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg.

If yes, were the additional closure requirements listed below satisfied? ☒ Yes ☐ No (Please provide photos)

- The operator shall re-vegetate soils remediated to the closure performance standards if left in place in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC.
- If the operator returns remediated soils to the original site, or with division permission, recycles them, re-vegetate the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC;
- The operator shall remove berms on the small landfarm and buildings, fences, roads and equipment; and
- The operator shall clean up the site and collect one vadose zone soil sample from three to five feet below the middle of the treatment zone, or in an area where liquids may have collected due to rainfall events; the vadose zone soil sample shall be collected and analyzed using the methods specified above for TPH, BTEX and chlorides.

If no, were the landfarmed soils that have not or cannot be remediated to the closure performance standards within three years removed to a division-approved surface waste management facility, and the cell filled in with native soil to the standards in Paragraph (6) of Subsection A of 19.15.36.18 NMAC and re-vegetated? ☐ Yes ☐ No (Please provide photos)

CERTIFICATION

I hereby certify that the information submitted with this final closure report is true, accurate and complete to the best of my knowledge and belief.

Name: Mitch Killough Title: Environmental Specialist

Signature: _____ Date: 9/6/2023

E-mail Address: mkillough@hilcorp.com

OCD CLOSURE REVIEW: ☒ Closure Approved. Date : November 1, 2023 ☐ Closure Denied. Date: _____

Comments: _____

OCD Representative Signature: _____

Title: Brad A. Jones - Environmental Specialist **OCD Registration Number:** NM3-003

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 263364

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 263364
	Action Type: [C-137] Small Landfarm Final Closure (C-137EZB)

CONDITIONS

Created By	Condition	Condition Date
bjones	None	11/1/2023