Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-045-38351

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

Application approval 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.
Conditions of approval, if any, are attached.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/19/2024

Additional Operator Remarks

Location of Well

0. SHL: SWSW / 997 FSL / 299 FWL / TWSP: 32N / RANGE: 07W / SECTION: 26 / LAT: 36.947192 / LONG: -107.544512 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 318 FNL / 0 FEL / TWSP: 32N / RANGE: 07W / SECTION: 33 / LAT: 36.944591 / LONG: -107.581788 (TVD: 7301 feet, MD: 18808 feet)

PPP: NENE / 228 FNL / 629 FEL / TWSP: 32N / RANGE: 07W / SECTION: 34 / LAT: 36.943856 / LONG: -107.547655 (TVD: 7301 feet, MD: 18808 feet)

PPP: NENE / 146 FNL / 0 FEL / TWSP: 32N / RANGE: 07W / SECTION: 33 / LAT: 36.944202 / LONG: -107.563648 (TVD: 7301 feet, MD: 18808 feet)

PPP: SESE / 0 FNL / 102 FWL / TWSP: 32N / RANGE: 07W / SECTION: 27 / LAT: 36.944433 / LONG: -107.545148 (TVD: 7333 feet, MD: 7860 feet)

BHL: NENE / 268 FNL / 970 FEL / TWSP: 32N / RANGE: 07W / SECTION: 32 / LAT: 36.944662 / LONG: -107.585109 (TVD: 7301 feet, MD: 18808 feet)

BLM Point of Contact

Name: JEFFREY J TAFOYA
Title: Assistant Field Manager
Phone: (505) 564-7672
Email: JTAFOYA@BLM.GOV

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-38351	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
335849	SAN JUAN 32 7 603 FEDERAL COM	605H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372171	HILCORP ENERGY COMPANY	6748'

[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
M	26	32N	7W		997	SOUTH	299	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
A	32	32N	7W		268	NORTH	970	EAST	SAN JUAN

[12] Dedicated Acres		[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1593.48	S/2 - Section 27, T32N, R7W S/2 - Section 28, T32N, R7W SE/4 - Section 29, T32N, R7W NE/4 - Section 32, T32N, R7W N/2 - Section 33, T32N, R7W N/2 - Section 34, T32N, R7W			

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.

Signature 04/13/2023
Date

Amanda Walker
Printed Name

mwalker@hilcorp.com
E-mail Address

[18] SURVEYOR CERTIFICATION

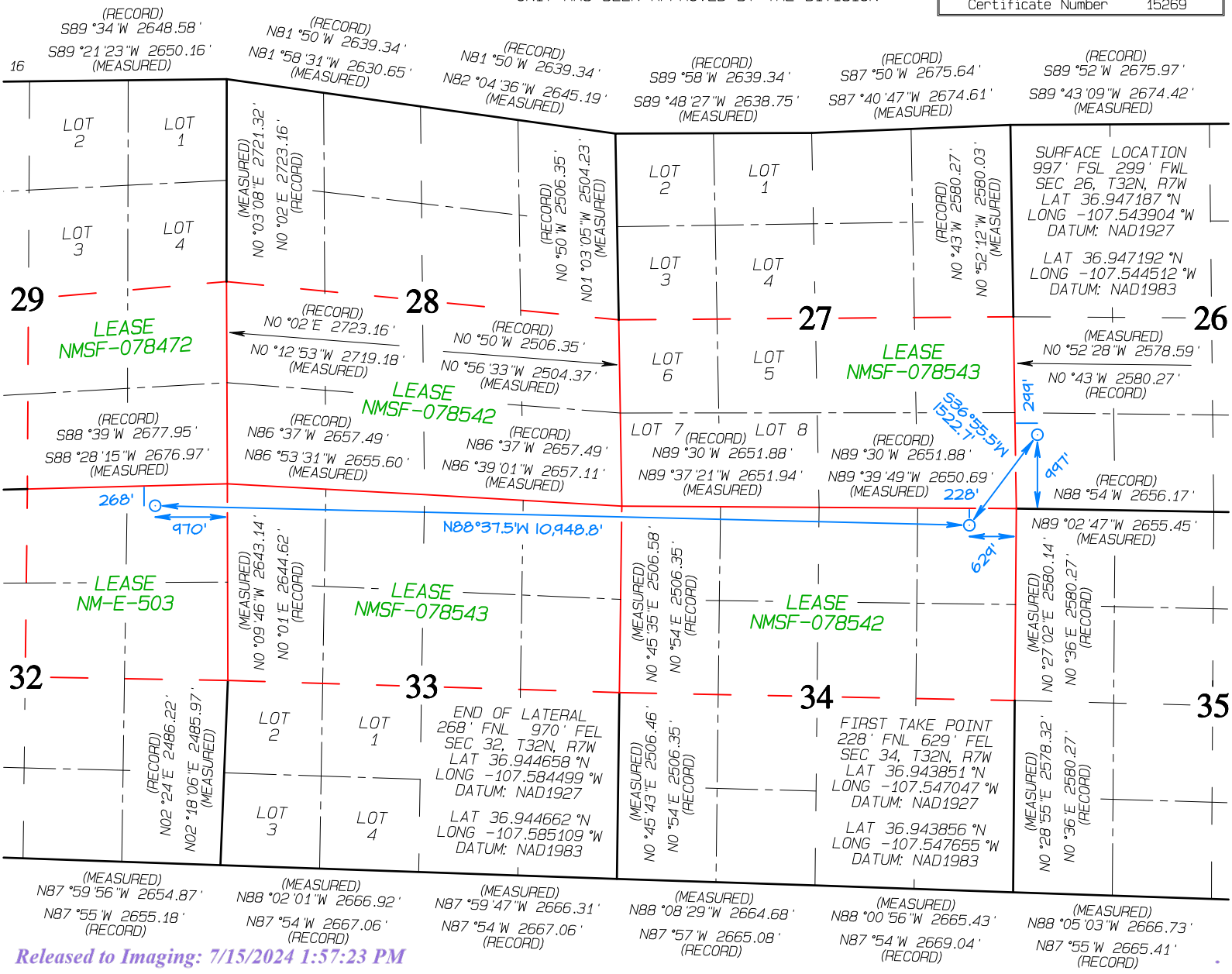
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: APRIL 5, 2023
Date of Survey: JULY 27, 2022

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269



State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Hilcorp Energy Company **OGRID:** 372171 **Date:** 3/29/2023

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MMCF/D	Anticipated Produced Water BBL/D
Burnt Mesa Federal Com 601H		M-26-32N-7W	1059' FSL & 259' FWL	0	15	100
Burnt Mesa Federal Com 602H		M-26-32N-7W	1134' FSL & 259' FWL	0	15	100
Burnt Mesa Federal Com 603H		M-26-32N-7W	1009' FSL & 259' FWL	0	15	100
Burnt Mesa Federal Com 604H		M-26-32N-7W	1084' FSL & 259' FWL	0	15	100
Burnt Mesa Federal Com 605H		M-26-32N-7W	1034' FSL & 259' FWL	0	15	100
San Juan 32 7 602 Federal Com 601H		M-26-32N-7W	934' FSL & 259' FWL	0	15	100
San Juan 32 7 602 Federal Com 602H		M-26-32N-7W	1022' FSL & 299' FWL	0	15	100
San Juan 32 7 602 Federal Com 603H		M-26-32N-7W	959' FSL & 259' FWL	0	15	100
San Juan 32 7 602 Federal Com 604H		M-26-32N-7W	909' FSL & 259' FWL	0	15	100
San Juan 32 7 603 Federal Com 605H		M-26-32N-7W	997' FLS & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 606H		M-26-32N-7W	1122' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 607H		M-26-32N-7W	1109' FSL & 259' FWL	0	15	100
San Juan 32 7 603 Federal Com 608H		M-26-32N-7W	984' FSL & 259' FWL	0	15	100
San Juan 32 7 603 Federal Com 609H		M-26-32N-7W	947' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 610H		M-26-32N-7W	897' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 611H		M-26-32N-7W	1097' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 612H		M-26-32N-7W	1072' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 613H		M-26-32N-7W	1047' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 614H		M-26-32N-7W	972' FSL & 299' FWL	0	15	100
San Juan 32 7 603 Federal Com 615H		M-26-32N-7W	922' FSL & 299' FWL	0	15	100

IV. Central Delivery Point Name: Milagro/Ignacio Gas Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Burnt Mesa Federal Com 601H						**2024**
Burnt Mesa Federal Com 602H						**2024**
Burnt Mesa Federal Com 603H						**2024**
Burnt Mesa Federal Com 604H						**2024**
Burnt Mesa Federal Com 605H						**2024**
San Juan 32 7 602 Federal Com 601H						**2024**
San Juan 32 7 602 Federal Com 602H						**2024**
San Juan 32 7 602 Federal Com 603H						**2024**
San Juan 32 7 602 Federal Com 604H						**2024**
San Juan 32 7 603 Federal Com 605H						**2024**
San Juan 32 7 603 Federal Com 606H						**2024**
San Juan 32 7 603 Federal Com 607H						**2024**
San Juan 32 7 603 Federal Com 608H						**2024**
San Juan 32 7 603 Federal Com 609H						**2024**
San Juan 32 7 603 Federal Com 610H						**2024**
San Juan 32 7 603 Federal Com 611H						**2024**
San Juan 32 7 603 Federal Com 612H						**2024**
San Juan 32 7 603 Federal Com 613H						**2024**
San Juan 32 7 603 Federal Com 614H						**2024**
San Juan 32 7 603 Federal Com 615H						**2024**

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Amanda Walker
Title: Operations Regulatory Tech Sr.
E-mail Address: mwalker@hilcorp.com
Date: 3/29/2023
Phone: 346-237-2177

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

Hilcorp Energy Natural Gas Management Plan Attachments

VI. Separation Equipment

The operator will select separation equipment for the maximum anticipated throughput and pressure to optimize gas capture. Separation equipment is sized according to manufacturer's design specifications. Separation vessels are built following the A.S.M.E. section VII division 1 codes for pressure vessel design, fabrication, inspection, testing and certification. Anticipated well pressures and production rates are evaluated to select separation equipment according to the equipment's designed operating pressure and throughput.

After completion, the operator utilizes flowback equipment, including separators, to manage wellbore fluids and solids during the initial separation period. After the initial flowback period is complete the operator utilizes iterative facility separation equipment to ensure that optimal separation is achieved.

VII. Operational Practices 19.15.27.8 NMAC A through F

A. The operator will maximize the recovery of natural gas and minimize the amount of gas vented or flared when technically and safely feasible as further described and detailed within the following subsections (B-F of 19.15.27.8). In all cases where natural gas venting and flaring requires regulatory reporting, reporting will be submitted accurately and within the required time frames.
B. Venting and flaring during drilling operations:
    a. New Drill HZ Gas Wells: The operator drills wells in the area by utilizing a balanced mud to safely drill the wellbore. This technique prevents gas from coming to surface during the drilling process. If there is an emergency or malfunction and natural gas does come to surface the natural gas will be captured and routed to sales if technically and safely feasible.
C. Venting and flaring during completion or recompletion operations:
    a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from the newly drilled and completed wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible. During initial flowback and initial separation flowback the operator will utilize contracted flowback equipment, including separators, to manage wellbore fluids and solids. The initial flowback period will be minimized and flow will be sent to separation equipment as soon as possible to reduce the amount of gas that is vented to atmosphere. The natural gas will be utilized on site as needed for fuel gas and natural gas will be sold.

D. Venting and flaring during production operations:
    a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from producing wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible.

    Operations will effectively manage the following scenarios to minimize the quantity of natural gas that is vented or flared:

(a) If there is an emergency or malfunction vented or flared natural gas will be reported, if required, and the emergency or malfunction will be resolved as soon as technically and safely feasible.
(b) If the wellbore needs to be unloaded to atmosphere the operator will not vent the well after the well has achieved a stabilized rate and pressure. The operator will remain on site during unloading. Plunger lift systems will be optimized to reduce the amount of natural gas venting. Downhole maintenance, such as workovers, swabbing, etc. will only be conducted as needed and best management practices will be utilized to reduce venting of natural gas.
(c) The operator will minimize the amount of time that natural gas is vented to atmosphere from gauging and sampling a storage tank or low pressure vessel. The formation is only anticipated to produce water and therefore tank emissions are anticipated to be negligible.
(d) The operator will reduce the amount of time needed for loading out liquids from a storage tanks or other low-pressure vessels whenever feasible. Operations will always utilize the water transfer systems when available. Water loading emissions are anticipated to be negligible.
(e) Equipment will be repaired and maintained routinely to minimize the venting or flaring of natural gas. Repairs and maintenance will be conducted in a manner that minimizes the amount of natural gas vented to atmosphere through the isolation of the equipment that is being repaired or maintained.
(f) Electric controllers and pumps will be installed to replace pneumatic controllers whenever feasible. Pneumatic controllers and pumps will be inspected frequently to ensure that no excess gas is vented to atmosphere.
(g) No dehydration or amine units are anticipated to be set on location.
(h) Compressors, compressor engines, turbines, flanges, connectors, valves, storage tanks, and other low-pressure vessels and flanges will be routinely inspected to ensure that no excess venting occurs outside of normal operations.
(i) Regulatory required testing, such as bradenhead and packer testing will be performed in a manner that minimizes the amount of natural gas vented to atmosphere.
(j) If natural gas does not meet gathering pipeline specifications gas samples will be collected twice per week to determine when pipeline specification gas content has been achieved. During this time frame gas will be flared and not vented to atmosphere. Natural gas that meets pipeline specifications will be sold via pipeline and natural gas that can be utilized for fuel gas will be used during this time.
(k) If pipeline, equipment, or facilities need purged of impurities gas losses will be minimized as much as technically and safely feasible.

E. Performance standards:

a. The production facilities are designed to handle the maximum throughput and pressures from producing wellbores and will be designed to minimize waste. The amount of gas vented and flared will be minimized when technically and safely feasible.
b. All tanks that are routed to a control device that is installed after 5/25/2021 will have an automatic gauging system to minimize the amount of vented natural gas.
c. If a flare stack is installed or replaced after 5/25/2021 it will be equipped with an automatic ignitor or continuous pilot. The flare stack will be properly sized and designed to ensure proper combustion efficiency. The flare stack will be located 100 feet away from the nearest wellhead or storage tank.
d. AVO inspections will be conducted weekly for the year after completion and for all wells producing greater than 60,000 cubic feet of natural gas daily. The AVO inspection will include all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated pipeline to identify any leaks and releases by comprehensive auditory, visual, and olfactory inspection. The AVO inspection records will be maintained for 5 years which will be available at the department's request. Identified leaks will be repaired as soon as feasible to minimize the amount of vented natural gas. F. Measurement or estimation of vented and flared natural gas.

a. The volume of natural gas that is vented, flared or consumed for beneficial use will be measured when possible, or estimated, during drilling, completions, or production operations.
b. Equipment will be installed to measure the volume of natural gas flared for all APD's issued after 5/25/2021 on facilities that will have an average daily gas rate greater than 60,000 cubic feet of natural gas. Measurement equipment will conform to API MPMS Chapter 14.10 regulations. The measurement equipment will not have a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment. If metering is not practical then the volume of gas will be estimated.

San Juan County, NM San Juan 32 7 603 Federal Com 605H

Hilcorp Energy Company

Technical Drilling Plan (Rev. 3)

Hilcorp Energy Company proposes to drill and complete the referenced horizontal well targeting the Mancos formation.

Note: This technical drilling plan will be adjusted based upon actual conditions.

1. Location

Date:	May 16, 2023	**Pool:**	Mancos
Well Name:	San Juan 32 7 603 Federal Com 605H	**Ground Elevation (ft. MSL):**	6,748’
Surface Hole Location:	36.947192° N, -107.544512° W NAD83	**Total Measured Depth (ft.)**	18,808’
Bottom Hole Location:	36.944622° N, -107.547655° W NAD83	**County, State:**	San Juan County, NM

Note: All depths in the directional drilling plan are referenced from an estimated RKB datum of 17’ above ground level.

2. Geological Markers

Anticipated formation tops with comments of any possible water, gas or oil shows are indicated below:

Formation	Depth (ft. TVD)	Remarks
Ojo Alamo	2,525	Possible Water
Kirtland	2,651	Gas & Water
Fruitland	3,282	Gas & Water
Pictured Cliffs	3,661	Possible Gas
Lewis Shale	3,978	None
Cliffhouse	5,568	Possible Gas & Water
Menefee	5,783	None
Point Lookout	5,989	Gas
Mancos	6,467	Gas
Mancos A	6,996	Gas
Mancos B	7,184	Gas
Mancos C	7,375	Gas
Mancos D	7,465	Gas
Gallup	7,627	Water & Gas

3. Pressure Control Equipment

See Appendix A for BOP equipment and choke manifold schematics.

- BOP equipment will be nippled up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 5M standards.
- All equipment will have 5M pressure rating at a minimum.
- A rotating head will be installed on top of the annular as seen in the attached diagram.

- BOP Testing: The BOPE will be tested to **250 psi (Low) for 5 minutes and 5,000 psi (High) for 10 minutes.** Pressure test **surface casing to 600 psi for 30 minutes** and **intermediate casing to 1,500 psi for 30 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. BOP equipment will be tested upon installation, every 30 days, and after any repairs are made to the BOP equipment. Annular preventors will be functionally tested at least once per week. Pipe and blind rams will be function tested each trip. **The New Mexico Oil & Gas Conservation Division and the BLM will be notified 24 hours in advance of testing BOPE**. All tests and inspections will be recorded and logged with time and results. A full BOP test will be conducted when initially installed for the first well on the pad or if a seal subject to test pressure is broken, following related repairs, and at a minimum of 30-day intervals. A BOPE shell test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken, repaired, and fall within the 30-day interval of the first full test.

4. Casing & Cement Program

A. Proposed Casing Program:

Proposed Casing Design								
Casing String	**Hole Size**	**Casing Size**	**Weight/Grade**	**Top Depth (MD/TVD)**	**Shoe Depth (MD/TVD)**	**Collapse**	**Yield**	**Joint Strength**
Surface	17-1/2”	13-3/8”	54.5#, J55 or equiv, LTC/BTC	0’	350’ / 350’	1,130 psi	2,730 psi	514,000 lbs
Intermediate	12-1/4”	9-5/8”	43.5# L80 or equiv, LTC/BTC	0’	6,581’ / 6,480’	3,810 psi	6,330 psi	737,000 lbs
Production	8-1/2”	5-1/2”	20.0#, P110 or equiv, LTC/BTC	0’	18,808’ / 7,301’	11,080 psi	12,360 psi	548,000 lbs

Proposed Casing Design Safety Factors				
Casing String	**Burst Design SF**	**Collapse Design SF**	**Joint Tensile Design SF**	**Connection Tensile Design SF**
Surface	16.7	8.8	44.7	47.7
Intermediate	1.634	1.181	3.5	2.8
Production	2.8	2.9	1.7	1.8

Notes:

- Production casing will be run from surface to TD.
- If the 8-1/2" hole is not drilled to the total planned measured depth, the production casing setting depth and length will be adjusted accordingly.
- Casing Design Parameters – Designed for full evacuation. Mud Weights used for calculations: Surface = 9.0 ppg, Intermediate = 11.5 ppg, Production = 12.0 ppg. Burst: 1.15; Collapse: 1.125; Tensile: 1.6.
    - Burst: (Casing Burst Rating) / (Maximum Burst Load (Max MW x TVD x .052))
    - Collapse: (Full hydrostatic of MW in annulus) – (Hydrostatic of vacated casing, 0.1 psi/ft)
    - Tensile: (Tensile rating) / (measured depth x casing weight)
- A toe initiation sliding sleeve will be installed at the toe of the production casing.

B. Proposed Centralizer Program:

Proposed Centralizer Program	
Interval	**Centralizers & Placement**
Surface	1 centralizer per joint on bottom 3 joints.
Intermediate	1 centralizer per joint in shoe track. 1 centralizer every 3rd joint to surface.
Production	Centralizers determined by hole conditions from TD to top of cement.

C. Proposed Cement Program:

Proposed Cement Design							
Interval	**Depth (ft. MD)**	**Lead/Tail**	**Volume (ft^3)**	**Sacks**	**Slurry**	**Density**	**Planned TOC**
Surface	350'	Tail	486 ft^3	414	Premium Cement – 100% OH Excess 2% CaCl, 0.125 lb/sk Poly E Flake 1.175 ft^3/sk – 5.14 gal/sk	15.8 ppg	Surface
Intermediate	6,581'	Lead	1,947 ft^3	987	HalCem Cement – 25% OH Excess 0.3% HR-5, 0.125 lb/sk Poly E Flake 1.974 ft^3/sk – 10.28 gal/sk	12.3 ppg	Surface
		Tail	619 ft^3	478	VariCem Cement – 25 % OH Excess 0.1% HR-5, 0.125 lb/sk Poly E Flake 1.295 ft^3/sk – 5.69 gal/sk	13.5 ppg	5,000'
Production	18,808'	Tail	3,493 ft^3	2,576	BondCem Cement – 10% OH Excess 0.3% Super CBL, 0.1% HR-601 1.356 ft^3/sk – 6.08 gal/sk	13.3 ppg	5,000'

Notes:

- The cement slurry additives may be adjusted to accommodate required pump and compressive test times.

- Actual cement volumes will be determined and may be adjusted onsite based on well conditions.
- For the intermediate hole section, a 2-stage cement job may be performed if hole conditions dictate. If needed, the stage tool will be placed appropriately as conditions indicate.
- Cement will be circulated to surface on surface and intermediate casing sections to protect water bearing zones.
- A minimum of 8 hours of wait on cement time will be observed on each hole section to allow adequate time for cement to achieve a minimum of 500 psi of compressive strength. The BOP will not be nippled down, the wellhead will not be installed, the casing will not be tested and the prior casing shoe will not be drilled out until adequate wait on cement time has been observed (8 hours or time to reach 500 psi compressive strength).

5. Drilling Fluids Program

A. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	**Fluid Type**	**Density**	**Fluid Loss**	**Invert Ratio**	**Depth**
		(ppg)	(mL/30 min)	(%Diesel / %Brine)	(ft. MD)
Surface	Water/Gel	8.3 – 9.2	NC	N/A	0’ – 350’
Intermediate	LSND / Gel	8.4 – 10.0	<6	N/A	350’ – 6,581’
Production	Oil Base Mud	10.0 – 12.0	6 – 8	70/30 – 75/25	6,581’ – 18,808’

Notes:

- In the 8-1/2” production section, oil base mud will be utilized which will be an invert mud. The base fluid will be diesel. Brine fluid will be $CaCl_2$ or KCl.
- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- The well will be drilled utilizing a closed-loop circulating system. Drill cuttings for all hole sections will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 1,871 bbls (10,494 ft^3).

6. Estimated Pressures & Drilling Hazards

A. Estimated Pressures

- Estimated Reservoir Pressure of Mancos Shale target: 4,000 – 4,200 psi
- Maximum Anticipated Surface Pressure: 1,900 psi
- No over-pressured intervals expected (aside from Mancos Shale target).
- There is production from the Fruitland Coal, Mesa Verde and Pictured Cliffs formations in offset wells in the area, which could result in these formations being depleted.

B. Water Flows

- Water flows are possible in the intermediate section. Water flows will be mitigated with increased mud weight.

C. Lost Circulation

- Lost circulation is possible in the intermediate section. Losses will be mitigated by utilizing LCM in the mud system.

D. Hydrogen Sulfide

- No hydrogen sulfide is expected to be encountered based on nearby well production.

7. Testing, Logging, Coring

A. Mud Logging

- Mud loggers will collect formation samples every 30' from surface casing shoe to TD of the well.

B. MWD

- Measurement while drilling tools will be utilized on all sections of the well to measure and record inclination and azimuth.

C. LWD

- Logging while drilling tools (gamma ray) will be utilized while drilling the production section from the intermediate casing kick-off to the production hole section TD to assist in staying in the desired interval while drilling the lateral section.

D. Open Hole Logging

- None.

E. Coring

- None.

F. Cased Hole Logging

- The 9-5/8" intermediate casing will be cemented to surface to protect water bearing zones. If cement is not circulated to surface on the intermediate cement job, a temperature survey or a cement bod log will be run to verify top of cement.

8. Directional Drilling Plan

- The directional drilling plan and plot are attached.

- The directional plan is built from geologic targets from offset wells and lease boundaries. The production hole section will be landed and drilled horizontally within the target formation utilizing LWD tools to steer the wellbore. On-site adjustments to the directional plan will be made as formation and wellbore dictate.

9. Completion

A. Pressure Testing

- A pressure test of the 5-1/2" production casing will be conducted to the maximum allowable frac pressure for 30 minutes.
- Pressure will be cycled to shift the toe sleeve open.

B. Stimulation

- The well will be stimulated with sand and water. The number of stages and amount of proppant used will be adjusted based on actual lateral length and real-time pumping conditions during the stimulation.
- Individual stages will be perforated on wireline and isolated using frac plugs or dissolvable frac plugs.
- Upon completion of the stimulation operation, frac plugs will be drilled out and the stimulation fluid will be flowed back.

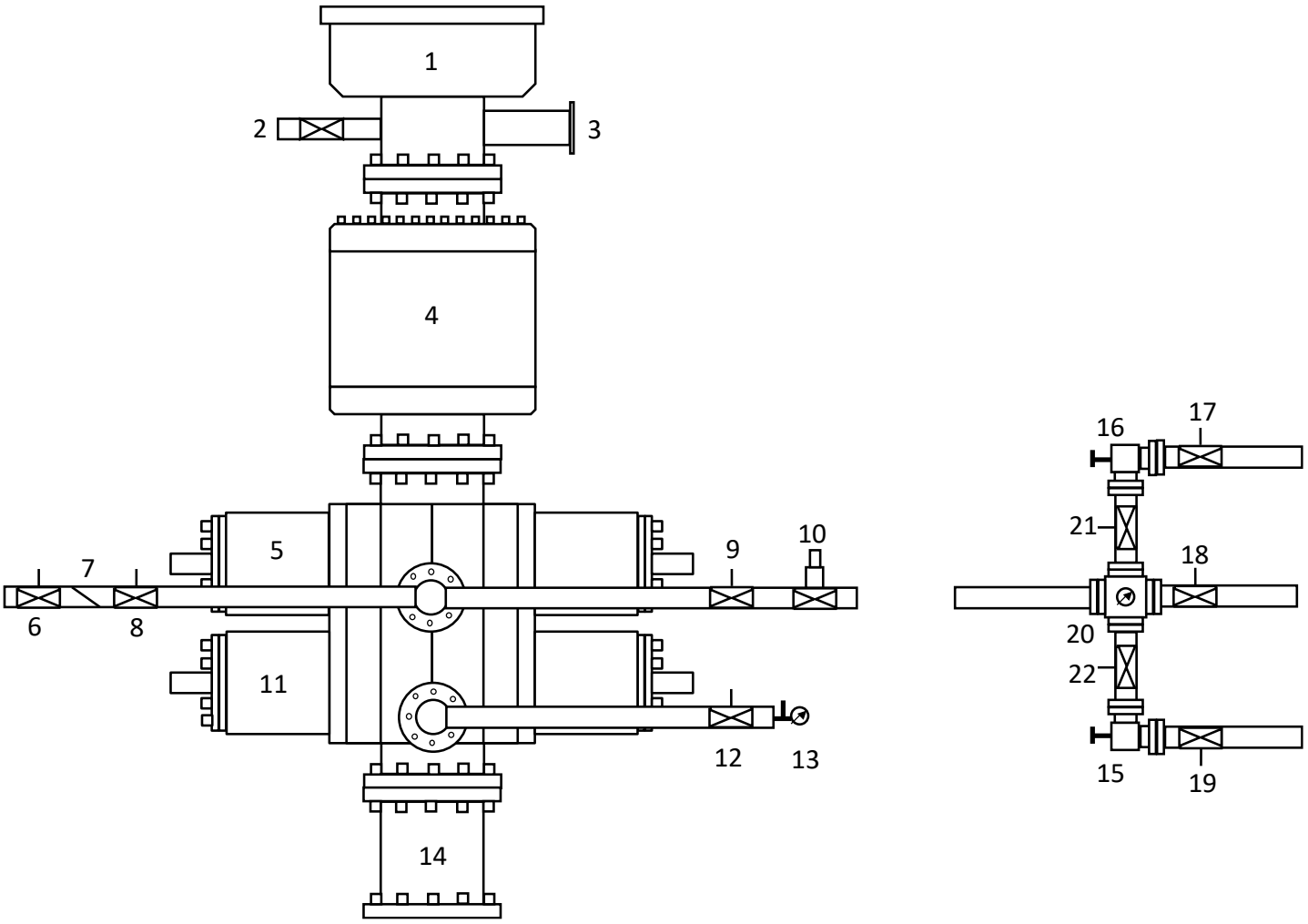
*NOTE: Although this horizontal well may be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 8(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 8(2) NMAC, 19.15.16.15 8(2)NMAC, and 19.15.16.15 8(4) NMAC.

San Juan County, NM San Juan 32 7 603 Federal Com 605H

Hilcorp Energy Company

Appendix A

13-5/8" 5M BOP & 5M Choke Manifold Configuration



1	Rotating Head	12	Manual Isolation Valve
2	Fill-Up Line	13	Needle Valve & Pressure Gauge
3	Flow Line	14	Spacer Spool (if needed)
4	5M Annular Preventer	15	Manual Choke
5	5M Pipe Rams	16	Hydraulicly Operated Choke
6	Manual Isolation Valve	17	Manual Isolation Valve
7	Check Valve	18	Manual Isolation Valve
8	Manual Isolation Valve	19	Manual Isolation Valve
9	Manual Isolation Valve	20	Valve Block & Pressure Gauge
10	High Closing Ratio Valve	21	Manual Isolation Valve
11	5M Blind Rams	22	Manual Isolation Valve

Hilcorp Energy Corp.

San Juan, NM NAD27
Burnt Mesa Pad
San Juan 32 7 603 Federal Com 605H

Lateral
Plan #1

Anticollision Summary Report

29 March, 2023

Lonestar Consulting, LLC

Anticollision Summary Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Reference Site:	Burnt Mesa Pad	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site Error:	0.00 ft	**North Reference:**	True
Reference Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	Grand Junction
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 15,000.00ft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 3/21/2023

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	18,808.22	Plan #1 (Lateral)	MWD+HDGM	OWSG MWD + HDGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Burnt Mesa Pad						
Burnt Mesa Federal Com 601H - OH - Plan #2	450.00	450.00	74.50	71.39	23.997	CC, ES
Burnt Mesa Federal Com 601H - OH - Plan #2	800.00	794.96	98.99	93.48	17.948	SF
Burnt Mesa Federal Com 602H - OH - Plan #2	450.00	450.00	143.47	140.37	46.217	CC, ES
Burnt Mesa Federal Com 602H - OH - Plan #2	800.00	781.33	180.51	175.02	32.890	SF
Burnt Mesa Federal Com 603H - OH - Plan #2	450.00	450.00	41.80	38.69	13.464	CC
Burnt Mesa Federal Com 603H - OH - Plan #2	500.00	499.76	41.99	38.55	12.188	ES
Burnt Mesa Federal Com 603H - OH - Plan #2	7,300.00	7,353.28	239.20	183.56	4.299	SF
Burnt Mesa Federal Com 604H - OH - Plan #2	450.00	450.00	96.27	93.17	31.012	CC, ES
Burnt Mesa Federal Com 604H - OH - Plan #2	800.00	788.13	129.70	124.19	23.557	SF
Burnt Mesa Federal Com 605H - OH - Plan #2	450.00	450.00	54.82	51.71	17.659	CC
Burnt Mesa Federal Com 605H - OH - Plan #2	500.00	499.84	55.13	51.68	15.995	ES
Burnt Mesa Federal Com 605H - OH - Plan #2	7,402.25	7,371.15	702.44	646.50	12.558	SF
San Juan 32 7 602 Federal Com 601H - OH - Plan #2	450.00	450.00	74.16	71.06	23.890	CC
San Juan 32 7 602 Federal Com 601H - OH - Plan #2	900.00	888.79	75.46	69.35	12.341	ES
San Juan 32 7 602 Federal Com 601H - OH - Plan #2	1,200.00	1,180.87	85.73	77.50	10.413	SF
San Juan 32 7 602 Federal Com 602H - OH - Plan #2	1,331.20	1,336.75	16.17	6.32	1.641	CC, ES, SF
San Juan 32 7 602 Federal Com 603H - OH - Plan #2	450.00	450.00	54.68	51.58	17.614	CC
San Juan 32 7 602 Federal Com 603H - OH - Plan #2	600.00	597.34	55.15	51.05	13.458	ES
San Juan 32 7 602 Federal Com 603H - OH - Plan #2	7,500.00	7,390.93	198.33	139.95	3.397	SF
San Juan 32 7 602 Federal Com 604H - OH - Plan #2	986.08	968.85	95.65	88.96	14.306	CC
San Juan 32 7 602 Federal Com 604H - OH - Plan #2	1,000.00	982.32	95.67	88.89	14.109	ES
San Juan 32 7 602 Federal Com 604H - OH - Plan #2	1,300.00	1,271.73	111.92	103.05	12.629	SF
San Juan 32 7 603 Federal Com 605H - Pilot - Plan #1	453.73	453.73	0.00	-3.13	0.001	Level 1, CC, ES, SF
San Juan 32 7 603 Federal Com 606H - OH - Plan #1	450.00	450.00	125.25	122.14	40.345	CC, ES
San Juan 32 7 603 Federal Com 606H - OH - Plan #1	18,808.22	18,696.38	2,446.99	1,743.69	3.479	SF
San Juan 32 7 603 Federal Com 607H - OH - Plan #1	450.00	450.00	119.56	116.46	38.514	CC, ES
San Juan 32 7 603 Federal Com 607H - OH - Plan #1	18,808.22	18,441.82	1,629.91	931.18	2.333	SF
San Juan 32 7 603 Federal Com 608H - OH - Plan #1	450.00	450.00	41.73	38.63	13.444	CC
San Juan 32 7 603 Federal Com 608H - OH - Plan #1	500.00	499.48	41.84	38.40	12.150	ES
San Juan 32 7 603 Federal Com 608H - OH - Plan #1	18,808.22	18,653.01	819.23	115.68	1.164	Level 2, SF
San Juan 32 7 603 Federal Com 609H - OH - Plan #1	986.08	977.00	49.69	42.98	7.404	CC
San Juan 32 7 603 Federal Com 609H - OH - Plan #1	1,000.00	990.68	49.72	42.91	7.304	ES
San Juan 32 7 603 Federal Com 609H - OH - Plan #1	18,808.22	18,986.51	809.02	103.83	1.147	Level 2, SF
San Juan 32 7 603 Federal Com 610H - OH - Plan #1	993.46	975.28	98.94	92.21	14.701	CC
San Juan 32 7 603 Federal Com 610H - OH - Plan #1	1,000.00	981.60	98.94	92.17	14.606	ES
San Juan 32 7 603 Federal Com 610H - OH - Plan #1	18,808.22	19,249.87	1,629.22	924.12	2.311	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Lonestar Consulting, LLC

Anticollision Summary Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Reference Site:	Burnt Mesa Pad	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site Error:	0.00 ft	**North Reference:**	True
Reference Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	Grand Junction
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Burnt Mesa Pad						
San Juan 32 7 603 Federal Com 611H - OH - Plan #1	450.00	450.00	100.12	97.02	32.253	CC, ES
San Juan 32 7 603 Federal Com 611H - OH - Plan #1	18,808.22	18,819.29	2,052.27	1,351.38	2.928	SF
San Juan 32 7 603 Federal Com 612H - OH - Plan #1	450.00	450.00	75.00	71.90	24.160	CC
San Juan 32 7 603 Federal Com 612H - OH - Plan #1	500.00	500.33	75.32	71.87	21.832	ES
San Juan 32 7 603 Federal Com 612H - OH - Plan #1	18,808.22	18,800.01	1,245.73	548.41	1.786	SF
San Juan 32 7 603 Federal Com 613H - OH - Plan #1	450.00	450.00	50.24	47.14	16.185	CC
San Juan 32 7 603 Federal Com 613H - OH - Plan #1	18,808.22	18,904.60	435.68	-217.91	0.667	Level 1, ES, SF
San Juan 32 7 603 Federal Com 614H - OH - Plan #1	842.25	838.93	24.73	19.00	4.310	CC
San Juan 32 7 603 Federal Com 614H - OH - Plan #1	18,808.22	19,049.18	429.24	-221.20	0.660	Level 1, ES, SF
San Juan 32 7 603 Federal Com 615H - OH - Plan #1	989.66	975.99	74.53	67.81	11.092	CC
San Juan 32 7 603 Federal Com 615H - OH - Plan #1	1,000.00	986.07	74.55	67.76	10.979	ES
San Juan 32 7 603 Federal Com 615H - OH - Plan #1	18,808.22	19,265.01	1,226.28	528.16	1.757	SF

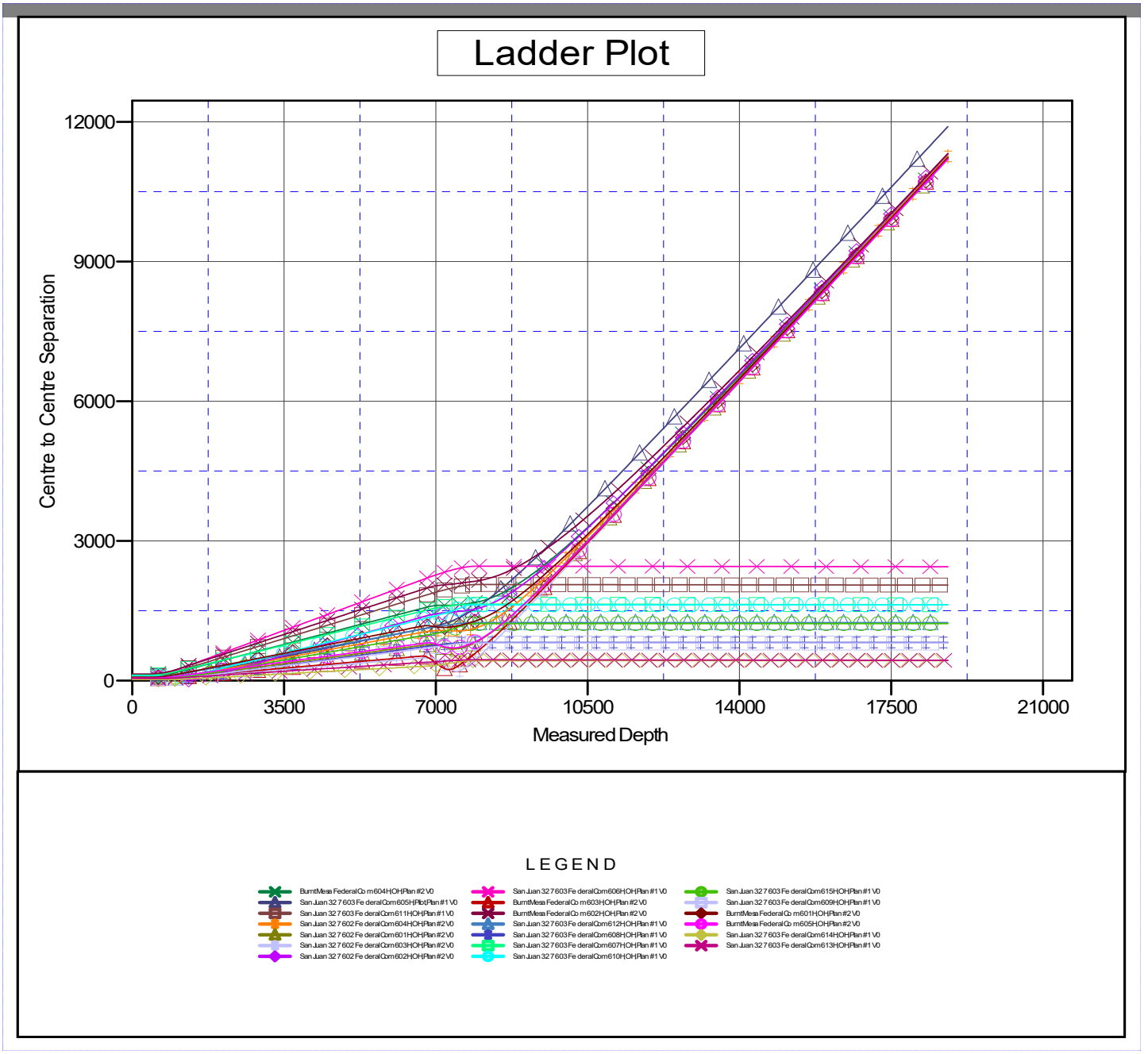
Lonestar Consulting, LLC

Anticollision Summary Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Reference Site:	Burnt Mesa Pad	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site Error:	0.00 ft	**North Reference:**	True
Reference Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	Grand Junction
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6748' & RKB 17' @ 6765.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: San Juan 32 7 603 Federal Com 605H - Slot B06
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.17°



CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

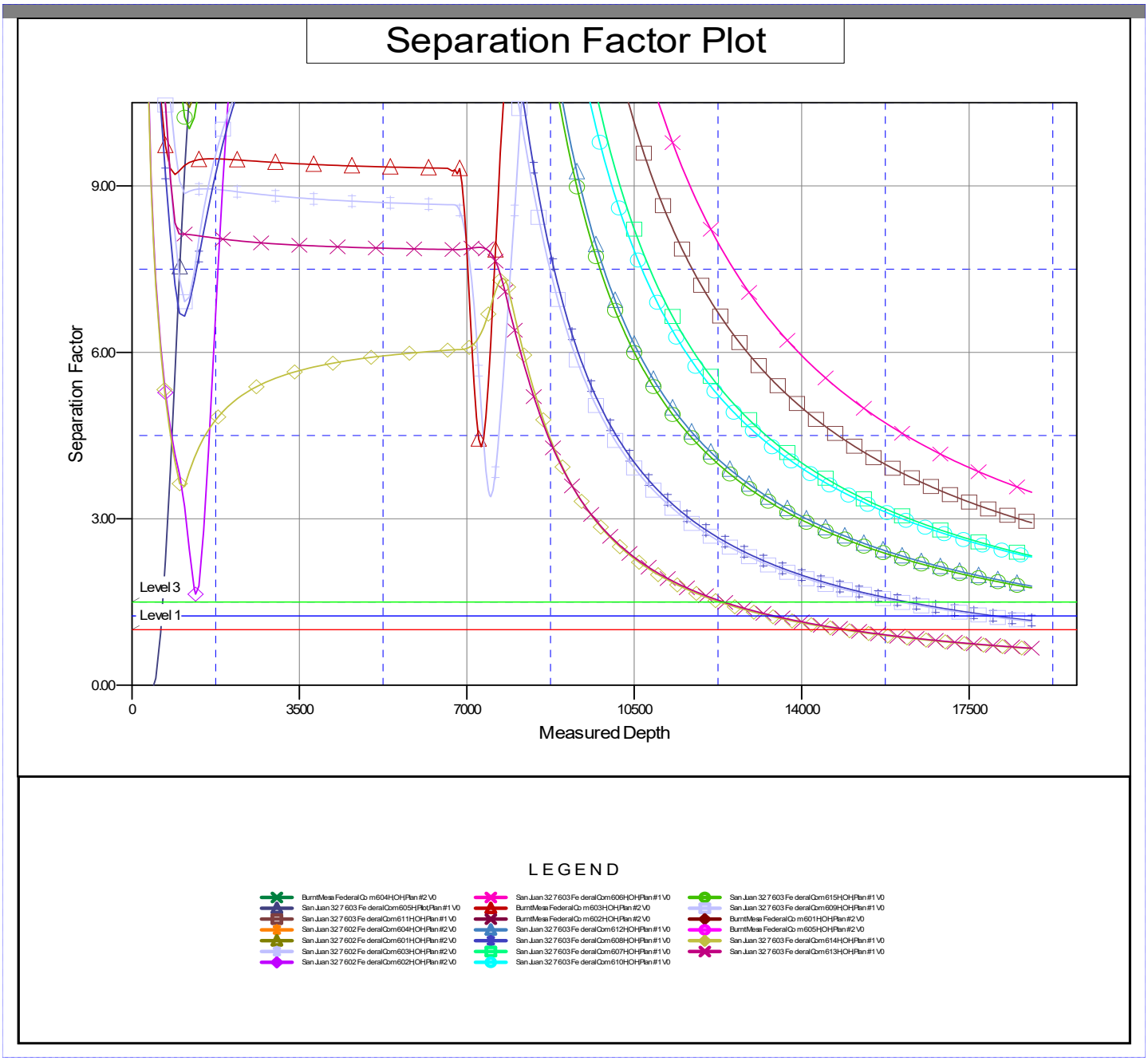
Lonestar Consulting, LLC

Anticollision Summary Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Reference Site:	Burnt Mesa Pad	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site Error:	0.00 ft	**North Reference:**	True
Reference Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	Grand Junction
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6748' & RKB 17' @ 6765.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: San Juan 32 7 603 Federal Com 605H - Slot B06
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.17°



Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Burnt Mesa Pad
Well: San Juan 32 7 603 Federal Com 605H
Wellbore: Lateral
Design: Plan #1

PROJECT DETAILS: San Juan, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level
Local North: True

LONESTAR CONSULTING

WELL DETAILS: San Juan 32 7 603 Federal Com 605H

GL 6748' & RKB 17' @ 6765.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2164171.04	584576.29	36.9471870	-107.5439040	B06

Plan: Plan #1 (San Juan 32 7 603 Federal Com 605H/Lateral)

Created By: Janie Collins Date: 22:19, March 29 2023

Azimuths to True North
Magnetic North: 8.[illegible]°
Magnetic Field
Strength: 49615.4[illegible]nT
Dip Angle: 63.[illegible]°
Date: 12/31/2021
Model: HDGM2021_FILE

DESIGN TARGET DETAILS

e	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
C 605H LP	7333.00	-1214.34	-918.46	2162953.92	583661.53	36.9438514	-107.5470469
C 605H BHL	7301.00	-918.32	-11863.02	2163216.70	572716.14	36.9446576	-107.5844989

SECTION DETAILS

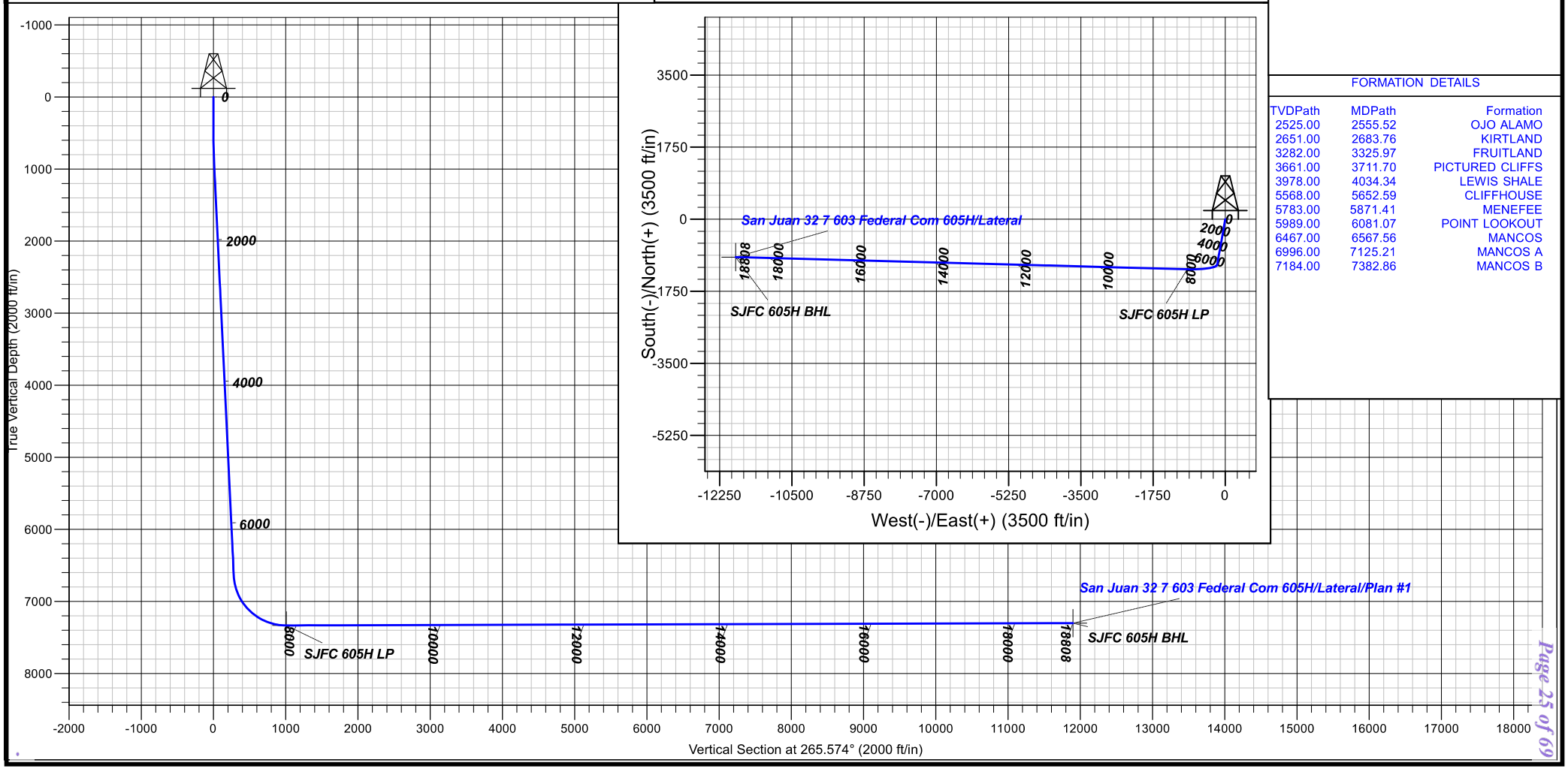
MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.000	450.00	0.00	0.00	0.00	0.00	0.00
986.08	10.72	190.119	982.95	-49.23	-8.79	2.00	190.12	12.56
6752.41	10.72	190.119	6648.62	-1105.29	-197.27	0.00	0.00	281.98
7859.61	90.17	271.549	7333.00	-1214.34	-918.46	8.00	81.55	1009.44
18808.22	90.17	271.549	7301.00	-918.32	-11863.02	0.00	0.00	11898.51

CASING DETAILS

No casing data is available

FORMATION DETAILS

TVDPath	MDPath	Formation
2525.00	2555.52	OJO ALAMO
2651.00	2683.76	KIRTLAND
3282.00	3325.97	FRUITLAND
3661.00	3711.70	PICTURED CLIFFS
3978.00	4034.34	LEWIS SHALE
5568.00	5652.59	CLIFFHOUSE
5783.00	5871.41	MENEFEE
5989.00	6081.07	POINT LOOKOUT
6467.00	6567.56	MANCOS
6996.00	7125.21	MANCOS A
7184.00	7382.86	MANCOS B



Hilcorp Energy Corp.

San Juan, NM NAD27
Burnt Mesa Pad
San Juan 32 7 603 Federal Com 605H - Slot B06

Lateral

Plan: Plan #1

Standard Planning Report

29 March, 2023

Lonestar Consulting, LLC

Planning Report

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project San Juan, NM NAD27

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site Burnt Mesa Pad

Site Position:		**Northing:**	2,164,058.07 usft	**Latitude:**	36.9468770
From:	Lat/Long	**Easting:**	584,538.07 usft	**Longitude:**	-107.5440360
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.20 in		

Well San Juan 32 7 603 Federal Com 605H - Slot B06

Well Position	**+N/-S**	0.00 ft	**Northing:**	2,164,171.04 usft	**Latitude:**	36.9471870
	+E/-W	0.00 ft	**Easting:**	584,576.30 usft	**Longitude:**	-107.5439040
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,748.00 ft
Grid Convergence:		0.17 °				

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021_FILE	12/31/2021	8.77	63.38	49,615.40000000

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	265.574

Plan Survey Tool Program **Date** 3/21/2023

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,808.22	Plan #1 (Lateral)	MWD+HDGM	
				OWSG MWD + HDGM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	0.00	0.000	450.00	0.00	0.00	0.00	0.00	0.00	0.00	
986.08	10.72	190.119	982.95	-49.23	-8.79	2.00	2.00	0.00	190.12	
6,752.41	10.72	190.119	6,648.62	-1,105.29	-197.27	0.00	0.00	0.00	0.00	
7,859.61	90.17	271.549	7,333.00	-1,214.34	-918.46	8.00	7.18	7.35	81.55	SJFC 605H LP
18,808.22	90.17	271.549	7,301.00	-918.32	-11,863.02	0.00	0.00	0.00	0.00	SJFC 605H BHL

Hilcorp Energy Company

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.000	450.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.00	190.119	500.00	-0.43	-0.08	0.11	2.00	2.00	0.00
600.00	3.00	190.119	599.93	-3.87	-0.69	0.99	2.00	2.00	0.00
700.00	5.00	190.119	699.68	-10.73	-1.92	2.74	2.00	2.00	0.00
800.00	7.00	190.119	799.13	-21.02	-3.75	5.36	2.00	2.00	0.00
900.00	9.00	190.119	898.15	-34.72	-6.20	8.86	2.00	2.00	0.00
986.08	10.72	190.119	982.95	-49.23	-8.79	12.56	2.00	2.00	0.00
1,000.00	10.72	190.119	996.63	-51.78	-9.24	13.21	0.00	0.00	0.00
1,100.00	10.72	190.119	1,094.89	-70.10	-12.51	17.88	0.00	0.00	0.00
1,200.00	10.72	190.119	1,193.14	-88.41	-15.78	22.56	0.00	0.00	0.00
1,300.00	10.72	190.119	1,291.40	-106.73	-19.05	27.23	0.00	0.00	0.00
1,400.00	10.72	190.119	1,389.65	-125.04	-22.32	31.90	0.00	0.00	0.00
1,500.00	10.72	190.119	1,487.91	-143.35	-25.58	36.57	0.00	0.00	0.00
1,600.00	10.72	190.119	1,586.16	-161.67	-28.85	41.24	0.00	0.00	0.00
1,700.00	10.72	190.119	1,684.41	-179.98	-32.12	45.92	0.00	0.00	0.00
1,800.00	10.72	190.119	1,782.67	-198.30	-35.39	50.59	0.00	0.00	0.00
1,900.00	10.72	190.119	1,880.92	-216.61	-38.66	55.26	0.00	0.00	0.00
2,000.00	10.72	190.119	1,979.18	-234.92	-41.93	59.93	0.00	0.00	0.00
2,100.00	10.72	190.119	2,077.43	-253.24	-45.20	64.61	0.00	0.00	0.00
2,200.00	10.72	190.119	2,175.69	-271.55	-48.47	69.28	0.00	0.00	0.00
2,300.00	10.72	190.119	2,273.94	-289.87	-51.73	73.95	0.00	0.00	0.00
2,400.00	10.72	190.119	2,372.19	-308.18	-55.00	78.62	0.00	0.00	0.00
2,500.00	10.72	190.119	2,470.45	-326.50	-58.27	83.30	0.00	0.00	0.00
2,600.00	10.72	190.119	2,568.70	-344.81	-61.54	87.97	0.00	0.00	0.00
2,700.00	10.72	190.119	2,666.96	-363.12	-64.81	92.64	0.00	0.00	0.00
2,800.00	10.72	190.119	2,765.21	-381.44	-68.08	97.31	0.00	0.00	0.00
2,900.00	10.72	190.119	2,863.47	-399.75	-71.35	101.99	0.00	0.00	0.00
3,000.00	10.72	190.119	2,961.72	-418.07	-74.61	106.66	0.00	0.00	0.00
3,100.00	10.72	190.119	3,059.97	-436.38	-77.88	111.33	0.00	0.00	0.00
3,200.00	10.72	190.119	3,158.23	-454.69	-81.15	116.00	0.00	0.00	0.00
3,300.00	10.72	190.119	3,256.48	-473.01	-84.42	120.67	0.00	0.00	0.00
3,400.00	10.72	190.119	3,354.74	-491.32	-87.69	125.35	0.00	0.00	0.00
3,500.00	10.72	190.119	3,452.99	-509.64	-90.96	130.02	0.00	0.00	0.00
3,600.00	10.72	190.119	3,551.25	-527.95	-94.23	134.69	0.00	0.00	0.00
3,700.00	10.72	190.119	3,649.50	-546.27	-97.49	139.36	0.00	0.00	0.00
3,800.00	10.72	190.119	3,747.75	-564.58	-100.76	144.04	0.00	0.00	0.00
3,900.00	10.72	190.119	3,846.01	-582.89	-104.03	148.71	0.00	0.00	0.00
4,000.00	10.72	190.119	3,944.26	-601.21	-107.30	153.38	0.00	0.00	0.00
4,100.00	10.72	190.119	4,042.52	-619.52	-110.57	158.05	0.00	0.00	0.00
4,200.00	10.72	190.119	4,140.77	-637.84	-113.84	162.73	0.00	0.00	0.00
4,300.00	10.72	190.119	4,239.03	-656.15	-117.11	167.40	0.00	0.00	0.00
4,400.00	10.72	190.119	4,337.28	-674.46	-120.37	172.07	0.00	0.00	0.00
4,500.00	10.72	190.119	4,435.53	-692.78	-123.64	176.74	0.00	0.00	0.00
4,600.00	10.72	190.119	4,533.79	-711.09	-126.91	181.42	0.00	0.00	0.00
4,700.00	10.72	190.119	4,632.04	-729.41	-130.18	186.09	0.00	0.00	0.00
4,800.00	10.72	190.119	4,730.30	-747.72	-133.45	190.76	0.00	0.00	0.00
4,900.00	10.72	190.119	4,828.55	-766.04	-136.72	195.43	0.00	0.00	0.00
5,000.00	10.72	190.119	4,926.81	-784.35	-139.99	200.10	0.00	0.00	0.00

Hilcorp Energy Company

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	10.72	190.119	5,025.06	-802.66	-143.25	204.78	0.00	0.00	0.00
5,200.00	10.72	190.119	5,123.31	-820.98	-146.52	209.45	0.00	0.00	0.00
5,300.00	10.72	190.119	5,221.57	-839.29	-149.79	214.12	0.00	0.00	0.00
5,400.00	10.72	190.119	5,319.82	-857.61	-153.06	218.79	0.00	0.00	0.00
5,500.00	10.72	190.119	5,418.08	-875.92	-156.33	223.47	0.00	0.00	0.00
5,600.00	10.72	190.119	5,516.33	-894.23	-159.60	228.14	0.00	0.00	0.00
5,700.00	10.72	190.119	5,614.59	-912.55	-162.87	232.81	0.00	0.00	0.00
5,800.00	10.72	190.119	5,712.84	-930.86	-166.14	237.48	0.00	0.00	0.00
5,900.00	10.72	190.119	5,811.09	-949.18	-169.40	242.16	0.00	0.00	0.00
6,000.00	10.72	190.119	5,909.35	-967.49	-172.67	246.83	0.00	0.00	0.00
6,100.00	10.72	190.119	6,007.60	-985.81	-175.94	251.50	0.00	0.00	0.00
6,200.00	10.72	190.119	6,105.86	-1,004.12	-179.21	256.17	0.00	0.00	0.00
6,300.00	10.72	190.119	6,204.11	-1,022.43	-182.48	260.84	0.00	0.00	0.00
6,400.00	10.72	190.119	6,302.37	-1,040.75	-185.75	265.52	0.00	0.00	0.00
6,500.00	10.72	190.119	6,400.62	-1,059.06	-189.02	270.19	0.00	0.00	0.00
6,600.00	10.72	190.119	6,498.87	-1,077.38	-192.28	274.86	0.00	0.00	0.00
6,700.00	10.72	190.119	6,597.13	-1,095.69	-195.55	279.53	0.00	0.00	0.00
6,752.41	10.72	190.119	6,648.62	-1,105.29	-197.27	281.98	0.00	0.00	0.00
6,800.00	11.89	208.715	6,695.31	-1,113.95	-200.40	285.78	8.00	2.45	39.07
6,900.00	17.03	233.839	6,792.20	-1,131.65	-217.20	303.89	8.00	5.14	25.12
7,000.00	23.77	246.368	6,885.92	-1,148.40	-247.53	335.43	8.00	6.74	12.53
7,100.00	31.09	253.434	6,974.63	-1,163.86	-290.82	379.78	8.00	7.32	7.07
7,200.00	38.66	257.986	7,056.63	-1,177.75	-346.21	436.08	8.00	7.57	4.55
7,300.00	46.36	261.233	7,130.29	-1,189.79	-412.64	503.23	8.00	7.70	3.25
7,400.00	54.12	263.737	7,194.21	-1,199.74	-488.79	579.93	8.00	7.77	2.50
7,500.00	61.93	265.789	7,247.12	-1,207.41	-573.20	664.68	8.00	7.81	2.05
7,600.00	69.77	267.562	7,288.00	-1,212.65	-664.23	755.84	8.00	7.84	1.77
7,700.00	77.62	269.163	7,316.05	-1,215.37	-760.09	851.62	8.00	7.85	1.60
7,800.00	85.48	270.670	7,330.74	-1,215.50	-858.92	950.17	8.00	7.86	1.51
7,859.61	90.17	271.549	7,333.00	-1,214.34	-918.46	1,009.44	8.00	7.86	1.48
7,900.00	90.17	271.549	7,332.88	-1,213.25	-958.83	1,049.61	0.00	0.00	0.00
8,000.00	90.17	271.549	7,332.59	-1,210.55	-1,058.80	1,149.07	0.00	0.00	0.00
8,100.00	90.17	271.549	7,332.30	-1,207.85	-1,158.76	1,248.53	0.00	0.00	0.00
8,200.00	90.17	271.549	7,332.01	-1,205.14	-1,258.72	1,347.98	0.00	0.00	0.00
8,300.00	90.17	271.549	7,331.71	-1,202.44	-1,358.69	1,447.44	0.00	0.00	0.00
8,400.00	90.17	271.549	7,331.42	-1,199.73	-1,458.65	1,546.89	0.00	0.00	0.00
8,500.00	90.17	271.549	7,331.13	-1,197.03	-1,558.61	1,646.35	0.00	0.00	0.00
8,600.00	90.17	271.549	7,330.84	-1,194.33	-1,658.58	1,745.81	0.00	0.00	0.00
8,700.00	90.17	271.549	7,330.54	-1,191.62	-1,758.54	1,845.26	0.00	0.00	0.00
8,800.00	90.17	271.549	7,330.25	-1,188.92	-1,858.50	1,944.72	0.00	0.00	0.00
8,900.00	90.17	271.549	7,329.96	-1,186.22	-1,958.46	2,044.17	0.00	0.00	0.00
9,000.00	90.17	271.549	7,329.67	-1,183.51	-2,058.43	2,143.63	0.00	0.00	0.00
9,100.00	90.17	271.549	7,329.37	-1,180.81	-2,158.39	2,243.09	0.00	0.00	0.00
9,200.00	90.17	271.549	7,329.08	-1,178.10	-2,258.35	2,342.54	0.00	0.00	0.00
9,300.00	90.17	271.549	7,328.79	-1,175.40	-2,358.32	2,442.00	0.00	0.00	0.00
9,400.00	90.17	271.549	7,328.50	-1,172.70	-2,458.28	2,541.46	0.00	0.00	0.00
9,500.00	90.17	271.549	7,328.21	-1,169.99	-2,558.24	2,640.91	0.00	0.00	0.00
9,600.00	90.17	271.549	7,327.91	-1,167.29	-2,658.21	2,740.37	0.00	0.00	0.00
9,700.00	90.17	271.549	7,327.62	-1,164.59	-2,758.17	2,839.82	0.00	0.00	0.00
9,800.00	90.17	271.549	7,327.33	-1,161.88	-2,858.13	2,939.28	0.00	0.00	0.00
9,900.00	90.17	271.549	7,327.04	-1,159.18	-2,958.09	3,038.74	0.00	0.00	0.00
10,000.00	90.17	271.549	7,326.74	-1,156.47	-3,058.06	3,138.19	0.00	0.00	0.00
10,100.00	90.17	271.549	7,326.45	-1,153.77	-3,158.02	3,237.65	0.00	0.00	0.00

Hilcorp Energy Company

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.00	90.17	271.549	7,326.16	-1,151.07	-3,257.98	3,337.10	0.00	0.00	0.00
10,300.00	90.17	271.549	7,325.87	-1,148.36	-3,357.95	3,436.56	0.00	0.00	0.00
10,400.00	90.17	271.549	7,325.58	-1,145.66	-3,457.91	3,536.02	0.00	0.00	0.00
10,500.00	90.17	271.549	7,325.28	-1,142.96	-3,557.87	3,635.47	0.00	0.00	0.00
10,600.00	90.17	271.549	7,324.99	-1,140.25	-3,657.84	3,734.93	0.00	0.00	0.00
10,700.00	90.17	271.549	7,324.70	-1,137.55	-3,757.80	3,834.39	0.00	0.00	0.00
10,800.00	90.17	271.549	7,324.41	-1,134.84	-3,857.76	3,933.84	0.00	0.00	0.00
10,900.00	90.17	271.549	7,324.11	-1,132.14	-3,957.72	4,033.30	0.00	0.00	0.00
11,000.00	90.17	271.549	7,323.82	-1,129.44	-4,057.69	4,132.75	0.00	0.00	0.00
11,100.00	90.17	271.549	7,323.53	-1,126.73	-4,157.65	4,232.21	0.00	0.00	0.00
11,200.00	90.17	271.549	7,323.24	-1,124.03	-4,257.61	4,331.67	0.00	0.00	0.00
11,300.00	90.17	271.549	7,322.94	-1,121.33	-4,357.58	4,431.12	0.00	0.00	0.00
11,400.00	90.17	271.549	7,322.65	-1,118.62	-4,457.54	4,530.58	0.00	0.00	0.00
11,500.00	90.17	271.549	7,322.36	-1,115.92	-4,557.50	4,630.04	0.00	0.00	0.00
11,600.00	90.17	271.549	7,322.07	-1,113.21	-4,657.47	4,729.49	0.00	0.00	0.00
11,700.00	90.17	271.549	7,321.78	-1,110.51	-4,757.43	4,828.95	0.00	0.00	0.00
11,800.00	90.17	271.549	7,321.48	-1,107.81	-4,857.39	4,928.40	0.00	0.00	0.00
11,900.00	90.17	271.549	7,321.19	-1,105.10	-4,957.36	5,027.86	0.00	0.00	0.00
12,000.00	90.17	271.549	7,320.90	-1,102.40	-5,057.32	5,127.32	0.00	0.00	0.00
12,100.00	90.17	271.549	7,320.61	-1,099.70	-5,157.28	5,226.77	0.00	0.00	0.00
12,200.00	90.17	271.549	7,320.31	-1,096.99	-5,257.24	5,326.23	0.00	0.00	0.00
12,300.00	90.17	271.549	7,320.02	-1,094.29	-5,357.21	5,425.68	0.00	0.00	0.00
12,400.00	90.17	271.549	7,319.73	-1,091.58	-5,457.17	5,525.14	0.00	0.00	0.00
12,500.00	90.17	271.549	7,319.44	-1,088.88	-5,557.13	5,624.60	0.00	0.00	0.00
12,600.00	90.17	271.549	7,319.15	-1,086.18	-5,657.10	5,724.05	0.00	0.00	0.00
12,700.00	90.17	271.549	7,318.85	-1,083.47	-5,757.06	5,823.51	0.00	0.00	0.00
12,800.00	90.17	271.549	7,318.56	-1,080.77	-5,857.02	5,922.97	0.00	0.00	0.00
12,900.00	90.17	271.549	7,318.27	-1,078.07	-5,956.99	6,022.42	0.00	0.00	0.00
13,000.00	90.17	271.549	7,317.98	-1,075.36	-6,056.95	6,121.88	0.00	0.00	0.00
13,100.00	90.17	271.549	7,317.68	-1,072.66	-6,156.91	6,221.33	0.00	0.00	0.00
13,200.00	90.17	271.549	7,317.39	-1,069.96	-6,256.87	6,320.79	0.00	0.00	0.00
13,300.00	90.17	271.549	7,317.10	-1,067.25	-6,356.84	6,420.25	0.00	0.00	0.00
13,400.00	90.17	271.549	7,316.81	-1,064.55	-6,456.80	6,519.70	0.00	0.00	0.00
13,500.00	90.17	271.549	7,316.51	-1,061.84	-6,556.76	6,619.16	0.00	0.00	0.00
13,600.00	90.17	271.549	7,316.22	-1,059.14	-6,656.73	6,718.61	0.00	0.00	0.00
13,700.00	90.17	271.549	7,315.93	-1,056.44	-6,756.69	6,818.07	0.00	0.00	0.00
13,800.00	90.17	271.549	7,315.64	-1,053.73	-6,856.65	6,917.53	0.00	0.00	0.00
13,900.00	90.17	271.549	7,315.35	-1,051.03	-6,956.62	7,016.98	0.00	0.00	0.00
14,000.00	90.17	271.549	7,315.05	-1,048.33	-7,056.58	7,116.44	0.00	0.00	0.00
14,100.00	90.17	271.549	7,314.76	-1,045.62	-7,156.54	7,215.90	0.00	0.00	0.00
14,200.00	90.17	271.549	7,314.47	-1,042.92	-7,256.50	7,315.35	0.00	0.00	0.00
14,300.00	90.17	271.549	7,314.18	-1,040.21	-7,356.47	7,414.81	0.00	0.00	0.00
14,400.00	90.17	271.549	7,313.88	-1,037.51	-7,456.43	7,514.26	0.00	0.00	0.00
14,500.00	90.17	271.549	7,313.59	-1,034.81	-7,556.39	7,613.72	0.00	0.00	0.00
14,600.00	90.17	271.549	7,313.30	-1,032.10	-7,656.36	7,713.18	0.00	0.00	0.00
14,700.00	90.17	271.549	7,313.01	-1,029.40	-7,756.32	7,812.63	0.00	0.00	0.00
14,800.00	90.17	271.549	7,312.72	-1,026.70	-7,856.28	7,912.09	0.00	0.00	0.00
14,900.00	90.17	271.549	7,312.42	-1,023.99	-7,956.25	8,011.54	0.00	0.00	0.00
15,000.00	90.17	271.549	7,312.13	-1,021.29	-8,056.21	8,111.00	0.00	0.00	0.00
15,100.00	90.17	271.549	7,311.84	-1,018.58	-8,156.17	8,210.46	0.00	0.00	0.00
15,200.00	90.17	271.549	7,311.55	-1,015.88	-8,256.13	8,309.91	0.00	0.00	0.00
15,300.00	90.17	271.549	7,311.25	-1,013.18	-8,356.10	8,409.37	0.00	0.00	0.00
15,400.00	90.17	271.549	7,310.96	-1,010.47	-8,456.06	8,508.83	0.00	0.00	0.00

Hilcorp Energy Company

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,500.00	90.17	271.549	7,310.67	-1,007.77	-8,556.02	8,608.28	0.00	0.00	0.00
15,600.00	90.17	271.549	7,310.38	-1,005.07	-8,655.99	8,707.74	0.00	0.00	0.00
15,700.00	90.17	271.549	7,310.08	-1,002.36	-8,755.95	8,807.19	0.00	0.00	0.00
15,800.00	90.17	271.549	7,309.79	-999.66	-8,855.91	8,906.65	0.00	0.00	0.00
15,900.00	90.17	271.549	7,309.50	-996.95	-8,955.88	9,006.11	0.00	0.00	0.00
16,000.00	90.17	271.549	7,309.21	-994.25	-9,055.84	9,105.56	0.00	0.00	0.00
16,100.00	90.17	271.549	7,308.92	-991.55	-9,155.80	9,205.02	0.00	0.00	0.00
16,200.00	90.17	271.549	7,308.62	-988.84	-9,255.76	9,304.48	0.00	0.00	0.00
16,300.00	90.17	271.549	7,308.33	-986.14	-9,355.73	9,403.93	0.00	0.00	0.00
16,400.00	90.17	271.549	7,308.04	-983.44	-9,455.69	9,503.39	0.00	0.00	0.00
16,500.00	90.17	271.549	7,307.75	-980.73	-9,555.65	9,602.84	0.00	0.00	0.00
16,600.00	90.17	271.549	7,307.45	-978.03	-9,655.62	9,702.30	0.00	0.00	0.00
16,700.00	90.17	271.549	7,307.16	-975.32	-9,755.58	9,801.76	0.00	0.00	0.00
16,800.00	90.17	271.549	7,306.87	-972.62	-9,855.54	9,901.21	0.00	0.00	0.00
16,900.00	90.17	271.549	7,306.58	-969.92	-9,955.51	10,000.67	0.00	0.00	0.00
17,000.00	90.17	271.549	7,306.29	-967.21	-10,055.47	10,100.12	0.00	0.00	0.00
17,100.00	90.17	271.549	7,305.99	-964.51	-10,155.43	10,199.58	0.00	0.00	0.00
17,200.00	90.17	271.549	7,305.70	-961.81	-10,255.39	10,299.04	0.00	0.00	0.00
17,300.00	90.17	271.549	7,305.41	-959.10	-10,355.36	10,398.49	0.00	0.00	0.00
17,400.00	90.17	271.549	7,305.12	-956.40	-10,455.32	10,497.95	0.00	0.00	0.00
17,500.00	90.17	271.549	7,304.82	-953.69	-10,555.28	10,597.41	0.00	0.00	0.00
17,600.00	90.17	271.549	7,304.53	-950.99	-10,655.25	10,696.86	0.00	0.00	0.00
17,700.00	90.17	271.549	7,304.24	-948.29	-10,755.21	10,796.32	0.00	0.00	0.00
17,800.00	90.17	271.549	7,303.95	-945.58	-10,855.17	10,895.77	0.00	0.00	0.00
17,900.00	90.17	271.549	7,303.65	-942.88	-10,955.14	10,995.23	0.00	0.00	0.00
18,000.00	90.17	271.549	7,303.36	-940.18	-11,055.10	11,094.69	0.00	0.00	0.00
18,100.00	90.17	271.549	7,303.07	-937.47	-11,155.06	11,194.14	0.00	0.00	0.00
18,200.00	90.17	271.549	7,302.78	-934.77	-11,255.03	11,293.60	0.00	0.00	0.00
18,300.00	90.17	271.549	7,302.49	-932.06	-11,354.99	11,393.05	0.00	0.00	0.00
18,400.00	90.17	271.549	7,302.19	-929.36	-11,454.95	11,492.51	0.00	0.00	0.00
18,500.00	90.17	271.549	7,301.90	-926.66	-11,554.91	11,591.97	0.00	0.00	0.00
18,600.00	90.17	271.549	7,301.61	-923.95	-11,654.88	11,691.42	0.00	0.00	0.00
18,700.00	90.17	271.549	7,301.32	-921.25	-11,754.84	11,790.88	0.00	0.00	0.00
18,800.00	90.17	271.549	7,301.02	-918.55	-11,854.80	11,890.34	0.00	0.00	0.00
18,808.22	90.17	271.549	7,301.00	-918.32	-11,863.02	11,898.51	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SJFC 605H BHL - plan hits target center - Point	0.00	0.000	7,301.00	-918.32	-11,863.02	2,163,216.70	572,716.14	36.9446576	-107.5844989
SJFC 605H LP - plan hits target center - Point	0.00	0.000	7,333.00	-1,214.34	-918.46	2,162,953.92	583,661.53	36.9438514	-107.5470469

Hilcorp Energy Company

Lonestar Consulting, LLC
Planning Report

LONESTAR CONSULTING

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well San Juan 32 7 603 Federal Com 605H - Slot B06
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6748' & RKB 17' @ 6765.00ft
Site:	Burnt Mesa Pad	**North Reference:**	True
Well:	San Juan 32 7 603 Federal Com 605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,555.52	2,525.00	OJO ALAMO		0.00	0.000
2,683.76	2,651.00	KIRTLAND		0.00	0.000
3,325.97	3,282.00	FRUITLAND		0.00	0.000
3,711.70	3,661.00	PICTURED CLIFFS		0.00	0.000
4,034.34	3,978.00	LEWIS SHALE		0.00	0.000
5,652.59	5,568.00	CLIFFHOUSE		0.00	0.000
5,871.41	5,783.00	MENEFEE		0.00	0.000
6,081.07	5,989.00	POINT LOOKOUT		0.00	0.000
6,567.56	6,467.00	MANCOS		0.00	0.000
7,125.21	6,996.00	MANCOS A		0.00	0.000
7,382.86	7,184.00	MANCOS B		0.00	0.000

Conditions of Approval

Operator:	Hilcorp Energy Company
Well Names:	Burnt Mesa Fed Com (601H, 602H, 603H, 604H, 605H); SJ 32-7 602 Fed Com (601H, 602H, 603H, 604H); SJ 32-7 603 Fed Com (605H, 606H, 607H, 608H, 609H, 610H, 611H, 612H, 613H 614H, 615H) (+2 future) and Burnt Mesa Pipeline Project
Legal Location:	Sec 26, T32N, R7W, San Juan County, NM
NEPA Log Number:	DOI-BLM-NM-F010-2023-0045-EA
Inspection Date:	December 19, 2022
Lease Number:	NMNM02995

The following conditions of approval will apply to Burnt Mesa Federal Com & San Juan 32-7 602 Federal Com Project, and other associated facilities, unless a particular Surface Managing Agency or private surface owner has supplied to Bureau of Land Management and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in an assessment or civil penalties pursuant to 43 CFR 3163.1 or 3163.2.

Disclaimers: BLM's approval of the APD does not relieve the lessee and operator from obtaining any other authorizations that may be required by the BIA, Navajo Tribe, State, or other jurisdictional entities.

Copy of Plans: A complete copy of the APD package, including Surface Use Plan of Operations, Bare Soil Reclamation Plan, Plan of Development (if required), Conditions of Approval, Cultural Resource Record of Review, Cultural Resources Compliance Form (if required), and Project Stipulations (if required) shall be at the project area at all times and available to all persons.

Review of NEPA documents: It is the responsibility of the operator to follow all the design features, best management practices, and mitigation measures as contained in the Environmental Assessment DOI-BLM-NM-F010-2023-0045-EA, which contains additional design features and best management practices that must be followed. Copies of the EA, Decision Record, and Finding of No Significant Impact may be obtained from the BLM FFO public room, or online at: EplanningUi (blm.gov).

Best Management Practices (BMPs): Farmington Field Office established environmental Best Management Practices (BMP's) will be followed during construction and reclamation of well site pads, access roads, pipeline ties, facility placement or any other surface disturbing activity associated with this project. Bureau wide standard BMP's are found in the Gold Book, Fourth Edition-Revised 2007 and at The Gold Book | Bureau of Land Management (blm.gov). Farmington Field Office BMPs are integrated into the Environmental Assessment, Surface Use Plan of Operations, Bare Soil Reclamation Plan, and COAs.

Construction, Production, Facilities, Reclamation & Maintenance

Construction & Reclamation Notification: The operator or their contractor will contact the Bureau of Land Management, Farmington Field Office Environmental Protection Staff (505) 564-7600 or by email, at least 48 hours prior to any construction or reclamation on this project.

Production Facilities: design and layout of facilities will be deferred until an onsite with BLM-FFO surface protection staff is conducted to determine the best location. Hilcorp or their contractor will contact the Bureau of Land Management, Farmington Field Office, Surface, and Environmental Protection Staff (505) 564-7600 to schedule a facility layout onsite.

Berms: Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of 110% of the largest tank, or 110% of the combined capacity of tanks if a rupture could drain more than one tank. Berm walls will be compacted with appropriate equipment to assure proper construction. Metal containment barriers, used for secondary containment, will be properly installed, per the manufacturer directions.

Painting of Equipment: Within 90 days of installation, all above ground structures not subject to safety requirements shall be painted by the Holder to blend with the natural color of the landscape. A reflective material may be used to reduce hazards that may occur when such structures are near roads. Otherwise, the paint use shall be a non-glare, non-reflective, non-chalking color of: **Juniper Green**

Staking: The holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the authorized officer to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

Weather: No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts more than 6 inches deep, the soil shall be deemed too wet.

Stockpile of Soil: The top 6 inches of soil material will be stripped and stockpiled in the construction zones around the pad [construction zones may be restricted or deleted to provide resource avoidance]. The stockpiled soil will be free of brush and tree limbs, trunks, and roots. The stockpiled soil material will be spread on the reclaimed portions of the pad [including the reserve pit, cut and fill slopes] prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet.

New & Existing Access: All sections of the proposed access road associated with this permit shall be sited, designed, constructed, upgraded and maintained utilizing standards, requirements, guidelines and instructions specified in BLM Manual 9113 “Roads”, BLM Manual 9113-1” Roads Design Handbook”, BLM Manual 9113-2 “Roads National Inventory and Condition Assessment Guidance & Instructions Handbook” and Surface Operations and Guidelines for Oil and Gas Exploration and Development (Gold Book).

Storage Tanks: All open top permanent production or storage tanks regardless of diameter made of fiberglass, steel, or other material used for the containment of oil, condensate, produced water and or other production waste shall be screened, netted, or otherwise covered to protect migratory birds and other wildlife from access.

Compressors: Compressor units on this well location not equipped with a drip pan for containment of fluids shall be lined with an impervious material at least 8 mils thick and a 12-inch berm. The compressor will be painted to match the well facilities. Any variance to this will be approved by the Authorized Officer (AO). Noise mitigation may be required at the time of compressor installation.

Culverts: Silt Traps/Bell Holes will be built upstream of all culvert locations.

Driving Surface Area: All activities associated within the construction, operation, maintenance, and abandonment of the well location is limited to areas approved in the APD or ROW permit. During the production of the well, vehicular traffic is limited to the daily driving surface area established during interim reclamation construction operations. This area typically forms a keyhole or teardrop driving surface from which all production facilities may be serviced or inspected. A v-type ditch will be constructed on the outside of the driving surface to further define the driving surface and to deter vehicular traffic from entering onto the interim reclamation areas.

Contouring of Cut and Fill Slopes: The interim cut and fill slope grade shall be as close to the original contour as possible. To obtain this ratio, pits and slopes shall be back sloped into the pad during interim reclamation. Only subsurface soil and material shall be utilized in the contouring of the cut and fill slopes. Under no circumstances shall topsoil be utilized as substrate material for contouring of cut and fill slopes.

Maintenance: In order to perform subsequent well operations, right-of-way (ROW) operations, or install new/additional equipment, it may be necessary to drive, park, and operate on restored, interim vegetation within the previously disturbed area. This is generally acceptable provided damage is promptly repaired and reclaimed following use. Where vehicular travel has occurred as a "convenience" and interim reclamation/vegetation has been compromised, immediate remediation of the affected areas is required. Additionally, where erosion has occurred and compromised the reclamation of the well location, the affected area must be promptly remediated so that future erosion is prevented, and the landform is stabilized.

Layflat Lines: Layflat lines used for development of the wells may be on the ground for a maximum of 6 months and shall be retrieved within 30 days of ending completion operations. If the layflat lines are needed for longer than 6 months or cannot be retrieved within 30 days of ending completion operations, a Sundry NOI shall be submitted to the BLM FFO for review and decision that includes a rationale for the time extension.

"Hotwork" and Construction Affecting Fire Safety: The holder or its contractors will notify the BLM of any fires and comply with all rules and regulations administered by the BLM concerning the use, prevention and suppression of fires on federal lands, including any fire prevention orders that may be in effect at the time of the permitted activity. The holder or its contractors may be held liable for the cost of fire suppression, stabilization and rehabilitation. In the event of a fire, personal safety will be the first priority of the holder or its contractors.

The holder or its contractors shall:

1. Operate all internal and external combustion engines (including off-highway vehicles, chainsaws, generators, heavy equipment, etc.) with a qualified spark arrester. Qualified spark arresters are maintained and not modified and meet the Society of Automotive Engineers (SAE) Recommended Practices J335 or J350. Refer to 43 CFR §8343.1.
    a. *Refueling of any combustible engine equipment must be minimum of 3 meters away from any ignition source (open flame, smoking, etc.).*
2. Maintain and clean all equipment regularly to remove flammable debris buildup and prevent fluid leaks that can lead to ignitions.
3. Carry at least one shovel or wildland fire hand tool (combi, Pulaski, McLeod) per person working, minimum 5 gallons of water, and a fire extinguisher rated at a minimum as ABC - 10 pound on each piece of equipment and each vehicle.

4. When conducting "hotwork" such as, but not limited to welding, grinding, cutting, spark-producing work with metal, work that creates hot material or slag; choose an area large enough to contain all hot material that is naturally free of all flammable vegetation or remove the flammable vegetation in a manner compliant with the permitted activity. If adequate clearance cannot be made, wet an area large enough to contain all hot material prior to the activity and periodically throughout the activity to reduce the risk of wildfire ignition. Regardless of clearance, maintain readiness to respond to an ignition at all times. In addition, keep one hand tool per person and at least one fire extinguisher ready, minimum, as specified earlier (#3) during this activity.
5. Keep apprised of current and forecasted weather at https://www.weather.gov/abq/forecasts-fireweather-links and fire conditions at www.wfas.net and take additional fire precautions when fire danger is rated High or greater. Red Flag Warnings are issued by the National Weather Service when fire conditions are most dangerous, and ignitions escape control quickly. Extra precautions are required during these warnings such as additional water, designate a fire watch/patrol and tools. If work is being conducted in an area that is not clear of vegetation within 50 feet of work area; then, when fire danger is rated High or greater and 1. There is a predicted Red Flag warning for your area or 2. If winds are predicted to be greater than 10 mph, stop all hotwork activities for the day at 10 am.
6. In the event of an ignition, initiate fire suppression actions in the work area to prevent fire spread to or on federally administered lands. If a fire spreads beyond the capability of workers with the stipulated tools, all will cease fire suppression action and leave the area immediately via pre-identified escape routes.
7. Call **911** or the **Taos Interagency Fire Dispatch Center (575-758-6208)** immediately of the location and status of any fire.

   AND

   Notify the respective BLM field office for which the permit or contract was issued immediately of the incident.
   Farmington Field Office at 505-564-7600

Noxious Weeds

Inventory the proposed site for the presence of noxious and invasive weeds. Noxious weeds are those listed on the New Mexico Noxious Weed List and USDA's Federal Noxious Weed List. The New Mexico Noxious Weed List or USDA's Noxious Weed List can be updated at any time and should be regularly check for any changes. Invasive species may or may not be listed as a noxious weed but have been identified to likely cause economic or environmental harm or harm to human health. The following noxious weeds have been identified as occurring on lands within the boundaries of the Farmington Field Office (FFO). There are numerous invasive species on the FFO such as Russian thistle (*Salsola spp.)* and field bindweed (*Convolvulus arvensis*).

Russian Knapweed (*Centaurea repens*)	Musk Thistle (*Carduss nutans*)
Bull Thistle (*Cirsium vulgare*)	Canada Thistle (*Cirsium arvense*)
Scotch Thistle (*Onopordum acanthium)*	Hoary Cress (*Cardaria draba*)
Perennial Pepperweed (*Lepdium latiofolfium*)	Halogeton (*Halogeton glomeratus*)
Spotted Knapweed (*Centaurea maculosa*)	Dalmation Toadflax (*Linaria genistifolia*)
Yellow Toadflax (*Linaria vulgaris*)	Camelthorn (*Alhagi pseudalhagi*)

African Rue (*Penganum harmala*)	Salt Cedar (*Tamarix spp.*)
Diffuse Knapweed (*Centaurea diffusa*)	Leafy Spurge (*Euphorbia esula*)

a. Identified weeds will be treated prior to new surface disturbance if determined by the FFO Noxious Weed Coordinator. A Pesticide Use Proposal (PUP) must be submitted to and approved by the FFO Noxious Weed Coordinator prior to application of pesticide. The FFO Noxious Weeds Coordinator (505-564-7600) can provide assistance in the development of the PUP.

b. Vehicles and equipment should be inspected and cleaned prior to coming onto the work site. This is especially important on vehicles from out of state or if coming from a weed-infested site.

c. Fill dirt or gravel may be needed for excavation, road construction/repair, or for spill remediation. If fill dirt or gravel will be required, the source shall be noxious weed free and approved by the FFO Noxious Weed Coordinator.

d. The site shall be monitored for the life of the project for the presence of noxious weeds (includes maintenance and construction activities). If weeds are found the FFO Coordinator shall be notified at (505) 564-7600 and provided with a Weed Management Plan and if necessary, a Pesticide Use Proposal (PUP). The FFO Coordinator can provide assistance developing the Weed Management Plan and/or the Pesticide Use Proposal.

e. Only pesticides authorized for use on BLM lands would be used and applied by a licensed pesticide applicator. The use of pesticides would comply with federal and state laws and used only in accordance with their registered use and limitations. Hilcorp's weed-control contractor would contact the BLM-FFO prior to using these chemicals.

f. Noxious/invasive weed treatments must be reported to the FFO Noxious Weed Coordinator. A Pesticide Use Report (PUR) is required to report any mechanical, chemical, biological, or cultural treatments used to eradicate, and/or control noxious or invasive species. Reporting will be required quarterly and annually or per request from the FFO Noxious Weed Coordinator.

Bare ground vegetation trim-out: If bare ground vegetation treatment (trim-out) is desired around facility structures, the operator will submit a bare ground/trim-out design included in their Surface Use Plan of Operations (SUPO). The design will address vegetation safety concerns of the operator and BLM while minimizing impacts to interim reclamation efforts. The design must include what structures to be treated and buffer distances of trim-out. Pesticide use for vegetation control around anchor structures is not approved. If pesticides are used for bare ground trim-out, the trim-out will not exceed three feet from the edge of any eligible permanent structure (i.e., well heads, fences, tanks). Additional distance/areas may be requested and must be approved by the FFO authorized officer. The additional information below must also be provided to the FFO:

a. Pesticide use for trim out will require a Pesticide Use Proposal (PUP). A PUP is required ***prior*** to any treatment and must be approved by the FFO Noxious Weed Coordinator. Only pesticides authorized for use on BLM lands would be used and applied by a licensed pesticide applicator. The use of pesticides would comply with federal and state laws and used only in accordance with

their registered use and limitations. Hilcorp's weed-control contractor would contact the BLM-FFO prior to using these chemicals and provide Pesticide Use Reports (PURs) post treatment.

b. A Pesticide Use Report (PUR) or a Biological Use Report (BUR) is required to report any chemical, or biological treatments used to eradicate, or control vegetation on site. Reporting will be required quarterly and annually or per request from the FFO Noxious Weed Coordinator.

Paleontology

Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

Visual Resources

Dark Sky COAs need to be applied to existing lighting, which is not dark sky friendly and to any additional lights added as part of pad expansion. All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source). All permanent lighting will be pointed straight down at the ground in order to prevent light spill to the sides. All permanent lighting will be 4000° Kelvin or less with 3000° Kelvin preferred. Warmer light colors are less noticeable by humans and cause less impact to wildlife. All permanent lighting will be controlled by a switch and/or timer which allows the lights to be turned on when workers are on location during dark periods but will keep the lights off the majority of the time.

Wildlife Resources

Wildlife: Timing Limitation - Important Seasonal Wildlife Habitat Middle Mesa Wildlife SDA. No construction, drilling, or completion activity is allowed during the following time period: December 1 - March 31.

Hazards: Wildlife hazards associated with the proposed project would be fenced, covered, and/or contained in storage tanks, as necessary.

Migratory Bird: Any new disturbance over 4.0 acres within nesting season (5/15-7/31) will require a migratory bird nest survey to be conducted by BLM/FFO biologist. Once drilling and completion activities are complete, any open water that could be harmful to birds and wildlife. must be covered, screened, or netted to prevent entry.

Threatened, Endangered or Sensitive Species: If, in operations the operator/holder discovers any Threatened, Endangered, or Sensitive species, work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM-FFO T&E specialist at (505) 564-7600. The BLM-FFO will then specify what action is to be taken. Failure to notify the BLM-FFO about a discovery may result in civil or criminal penalties in accordance with The Endangered Species Act (as amended).

Nesting: If a bird nest containing eggs or young is encountered in the path of construction the operator

will cease construction and consult with BLM to determine appropriate actions.

Grazing Permittee Notification and Concerns: The operator will notify the grazing lease operator(s) at least ten business days prior to beginning any construction activity to ensure there will be no conflicts between construction activities and livestock grazing operations. The operator is not obligated to cease or delay construction unless directed by the Authorized Officer (AO). Any range improvement (fences, pipelines, ponds, etc.) disturbed by construction activities will be repaired immediately following construction and will be repaired to the condition the improvement was in prior to disturbance. Cattle guards will be installed to replace any livestock fencing or gates removed for road construction.

Soil, Air, Water

Land Farming: No excavation, remediation or closure activities will be authorized without prior approval, on any federal or Indian mineral estate, federal surface, or federal ROW. A Sundry Notice (DOI, BLM Form 3160-5) must be submitted with an explanation of the remediation or closure plan for on-lease actions.

Emission Control Standard: Compressor engines 300 horsepower or less used during well production must be rated by the manufacturer as emitting NOx at 2 grams per horsepower hour or less to comply with the New Mexico Environmental Department, Air Quality Bureau's guidance.

Waste Disposal: All fluids (i.e., scrubber cleaners) used during washing of production equipment, including compressors, will be properly disposed of to avoid ground contamination, or hazard to livestock or wildlife.

Cultural Resources

Non-Permitted Disturbance: Construction, construction maintenance or any other activity outside the areas permitted by the APD will require additional approval and may require a new cultural survey and clearance.

Employee Education: All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

Discovery of Cultural Resources in the Absence of Monitoring: Discovery of Cultural Resources in the Absence of Monitoring: If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, **or in accordance with an approved program alternative.** Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural

resources consultant. If warranted, more extensive **archaeological or alternative mitigation,** likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any **mitigations determined appropriate through the agency's Section 106 consultation are completed**. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, **the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws**.

Discovery of Cultural Resources during Monitoring: If monitoring confirms the presence of previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. BLM will then specify what action is to be taken. **If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, or in accordance with an approved program alternative. Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural resources consultant. If warranted, more extensive archaeological or alternative mitigation, likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any mitigations determined appropriate through the agency's Section 106 consultation are completed.**

Damage to Sites: If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare a BLM approved damage assessment and/or data recovery plan. The operator/holder agrees at his/her expense to implement a **mitigation** that the agency finds appropriate given the significance of the site, which the agency determines in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property. **This mitigation may entail execution of the data recovery plan by a permitted cultural resources consultant and/or alternative mitigations.** Damage to cultural resources may result in **civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws.**

See below additional cultural stipulations.

BLM Report Number: 2023(I)009F
USGS Map: Burnt Mesa, NM
Activity Code: 1310
NMCRIS No: 150270

CULTURAL RESOURCE RECORD OF REVIEW

BUREAU OF LAND MANAGEMENT
FARMINGTON FIELD OFFICE

1. Description of Report/Project:
Project Name: Burnt Mesa Well Pad and Access Road.
Project Sponsor: Hilcorp.
Arch. Firm & Report No.: ERO Resources Corp; ERO Report No. 22-116.
Location: T32N R7W Sections 26, 27, 34, & 35.
Well Footages: see plats.
Split Estate: no.

Project Dimensions: 700 ft x 500 ft –well pad.
450 ft x 400 ft – well pad.
700 ft x 20 ft – access road.

Sites Located: LA149522/NM-210-44415 (NRHP: Not Eligible; No Further Work).
Determination: No Effect to Historic Properties.
2. Field Check: No.
3. Cultural ACEC: No.
4. Sensitive Cultural Area: No.
5. Recommendation: *PROCEED WITH ACTION:* _X_ *STIPULATIONS ATTACHED*: __
6. Reviewer /Archaeologist: Kim Adams **Date**: 12/14/2022

Report Summary	BLM	Other	Total
Acres Inventoried	**24.7**	**0.00**	**24.7**
Sites Recorded	**0**	**0**	**0**
Prev. Recorded Sites	**1**	**0**	**1**
Sites Avoided	**0**	**0**	**0**
Sites Treated	**0**	**0**	**0**

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If any previously unidentified historic or prehistoric cultural resources are discovered during construction or project operations, work in the vicinity of the discovery will be suspended and the discovery will promptly be reported to the BLM Field Manager.

Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

BLM Report Number: 2024(III)001F
USGS Map: Anastacio Spring, Navajo Dam, and Burnt Mesa, NM
Activity Code: 1310
NMCRIS No: 154068

CULTURAL RESOURCE RECORD OF REVIEW
BUREAU OF LAND MANAGEMENT
FARMINGTON FIELD OFFICE

1. Description of Report/Project:
Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.
Arch. Firm & Report No.: Chronicle Heritage; Chronicle Report No. 23-702.
Location: T31N R7W Sections 2, 3, 11, 14, 23, 25, & 26.
T32N R7W Sections 17, 18, 19, 20, 21, 22, 26, 27, 29, & 34.
T32N R8W Sections 24, 25, 26, and 27.
Well Footages: N/A
Split Estate: Yes
Project Dimensions: 31,919 ft x 30 ft – waterline.
58,065 ft x 30 ft – waterline

Sites Located: LA4258/NM-01-991 (NRHP: Eligible; Update; Avoided).
LA4270/NM-01-881 (NRHP: Eligible; Update; Partially Avoided).
LA4422/NM-01-890 (NRHP: Eligible; Update; Partially Avoided).
LA4820/NM-01-38236 (NRHP: Eligible; Update; Partially Avoided).
LA78807/NM-01-36578 (NRHP: Not Determined; Update; Avoided).
LA79410/NM-01-37261 (NRHP: Eligible; Update; Partially Avoided).
LA82025/NM-01-37901 (NRHP: Eligible; Update; Partially Avoided).
LA82111/NM-01-37894 (NRHP: Not Eligible; Update; Avoided; No Further Work).
LA84611/NM-01-38171 (NRHP: Not Eligible; Update; Avoided; No Further Work).
LA98419/NM-01-38924 (NRHP: Eligible; Update; Avoided).
LA99158/NM-01-39005 (NRHP: Eligible; Update; Avoided).
LA104581/NM-01-39612 (NRHP: Not Eligible; Update; Avoided; No Further Work).
LA118130/NM-01-40584 (NRHP: Eligible; Update; Avoided).
LA140230/NM-01-43412 (NRHP: Not Determined; Update; Avoided).
LA186032/NM-01-48881 (NRHP: Not Eligible; Update; No Further Work).
LA187625/NM-01-48946 (NRHP: Eligible; Update; Avoided).
LA187834/NM-01-48967 (NRHP: Not Determined; Update; Avoided).
LA189397/NM-01-49009 (NRHP: Not Determined; Update; Avoided).
LA203631/NM-210-49564 (NRHP: Not Eligible; Avoided; No Further Work).
LA203632/NM-210-49565 (NRHP: Not Determined; Avoided; No Further Work).
HCPI 53627/NM-210-49555 (NRHP: Not Eligible; Update; No Further Work).
HCPI 54359/NM-210-49566 (NRHP: Not Eligible; No Further Work).
(LA89711 was subsumed into LA4420. LA4821, LA4823, & LA4824 were subsumed into LA4270. LA4263, LA71619, LA71620, LA78806, LA80922, LA82023, LA82024, LA82028, LA82108, LA82109, LA82110, LA82112, LA88656, LA126995, LA134499, LA144214, & LA187835 were Not Relocated.
Determination: No Adverse Effect to Historic Properties.

2. **Field Check:** none.
3. **Cultural ACEC:** No.
4. **Sensitive Cultural Area:** No
5. **Recommendation:** *PROCEED WITH ACTION:* X *STIPULATIONS ATTACHED*: _X_
6. **Reviewer /Archaeologist:** Kim Adams **Date**: 4/8/2024

Report Summary	BLM	Other	Total
Acres Inventoried	228.46	103.56	332.02
Sites Recorded	3	0	3
Prev. Recorded Sites	12	7	19
Sites Avoided	7	7	14
Sites Treated	0	0	0

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If any previously unidentified historic or prehistoric cultural resources are discovered during construction or project operations, work in the vicinity of the discovery will be suspended and the discovery will promptly be reported to the BLM Field Manager.

Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

1. SITE PROTECTION AND EMPLOYEE EDUCATION:
All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

2. ARCHAEOLOGICAL MONITORING IS REQUIRED:
A copy of these stipulations will be supplied to the archeological monitor at least two working days prior to the start of construction activities. No construction activities, including vegetation removal, may begin before the arrival of the archaeological monitor.
The monitor will:

- Ensure that site protection barriers are located as indicated on the attached maps in the vicinity of LA4258, LA4270, LA4422, LA4820, LA78807, LA79410, LA82025, LA98419, LA99158, LA118130, LA187625, & LA189397.
- Inform BLM-FFO archaeologists that monitoring will be occurring within 24 hours of the scheduled monitoring.

- Observe all construction and the placement of this layflat line within 100'of LA4258, LA4270, LA4422, LA4820, LA78807, LA79410, LA82025, LA98419, LA99158, LA118130, LA140230, LA187625, LA187834, & LA189397.
- Submit a report of the monitoring activities within 30 days of completion of monitoring unless other arrangements are made with the BLM. These stipulations must be attached to the report.

3. SITE PROTECTION BARRIER:

- The temporary site protection barriers will be erected prior to the placement of the layflat line or any construction. The barriers will consist of upright wooden survey lath spaced no more than 10 feet apart and marked with blue flagging or blue paint. The barrier will remain in place through reclamation and reseeding and shall be promptly removed after reclamation.
- The barriers will be placed as indicated on the attached maps.
- There will be no surface-disturbing activities or vehicle traffic past the barriers.

Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project. **ROW will be restricted in Site Boundary**
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

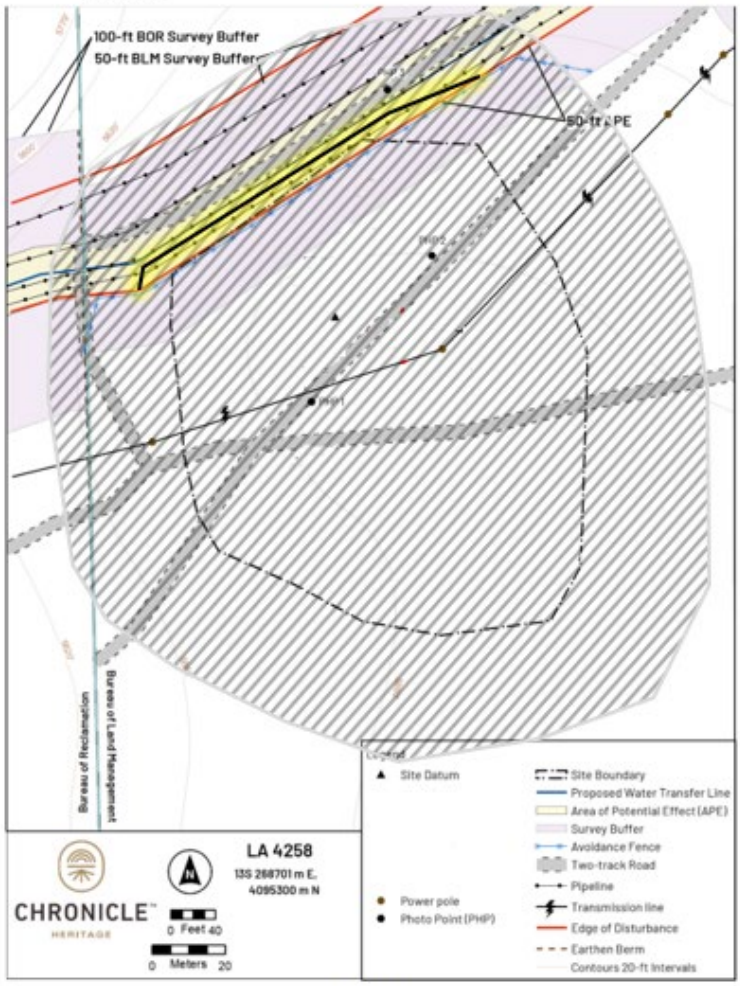


Figure 6-2. Site LA 4258 map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project. **ROW will be restricted in Site Boundary**
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

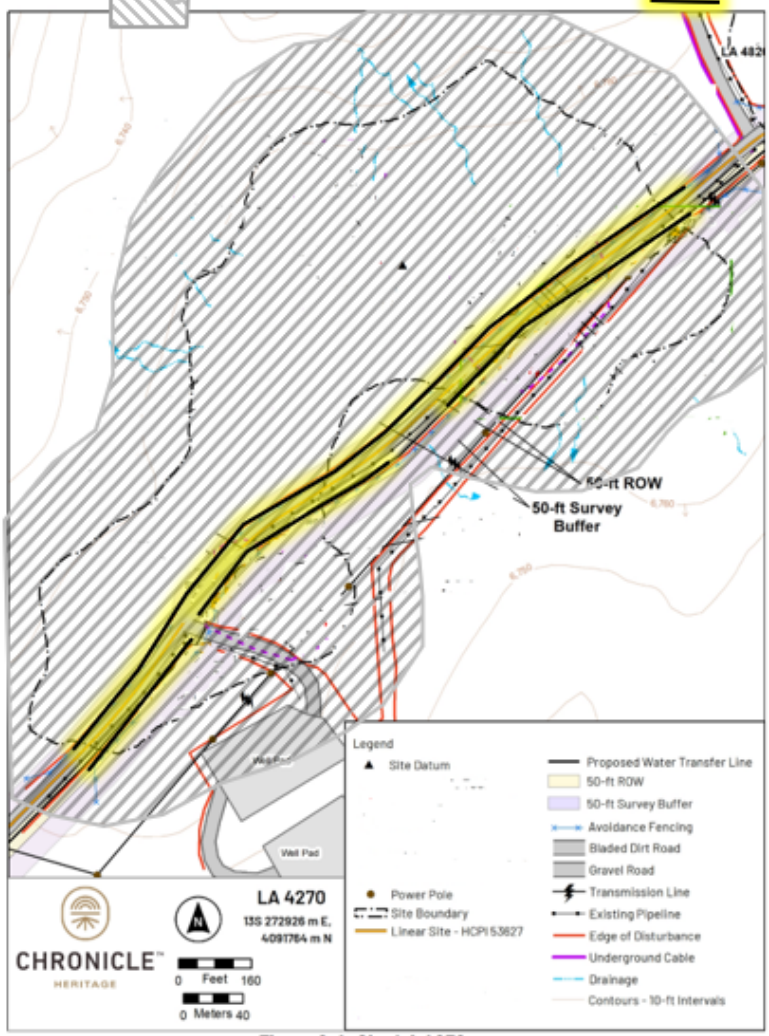


Figure 6-4. Site LA 4270 map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project. **ROW will be restricted in site boundary**
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

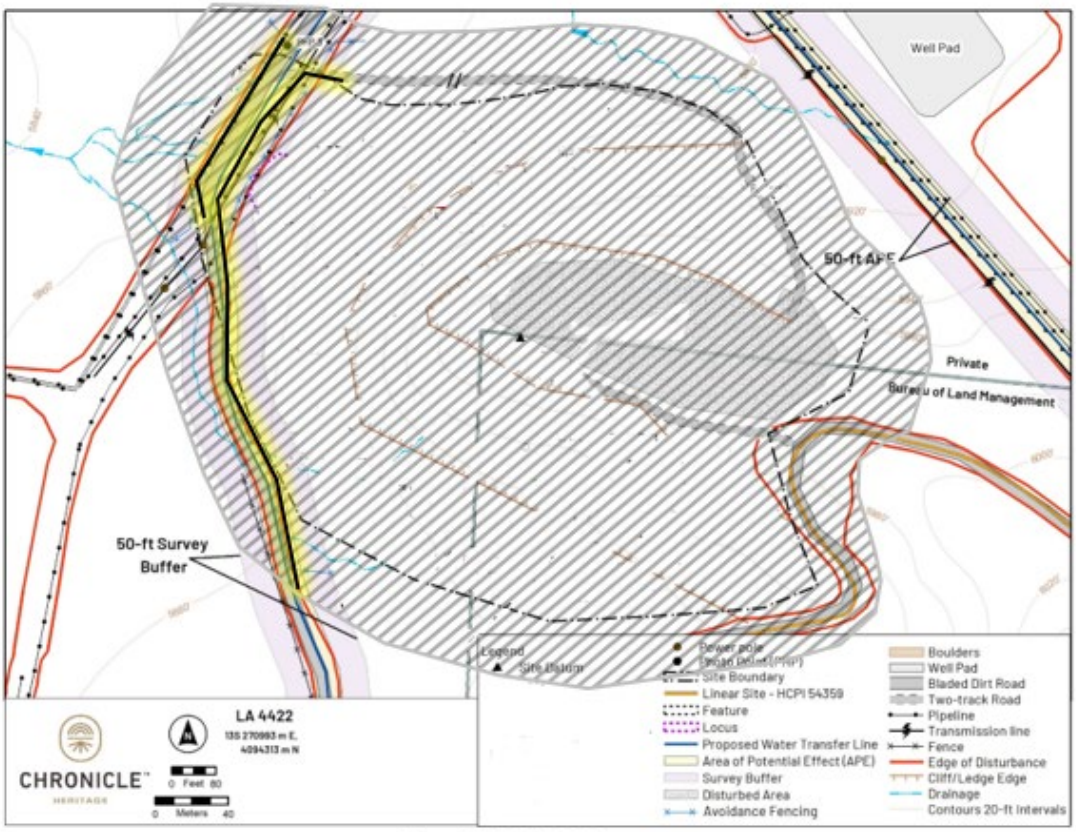


Figure 6-14. LA 4422 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project. **ROW will be restricted in site boundary**
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

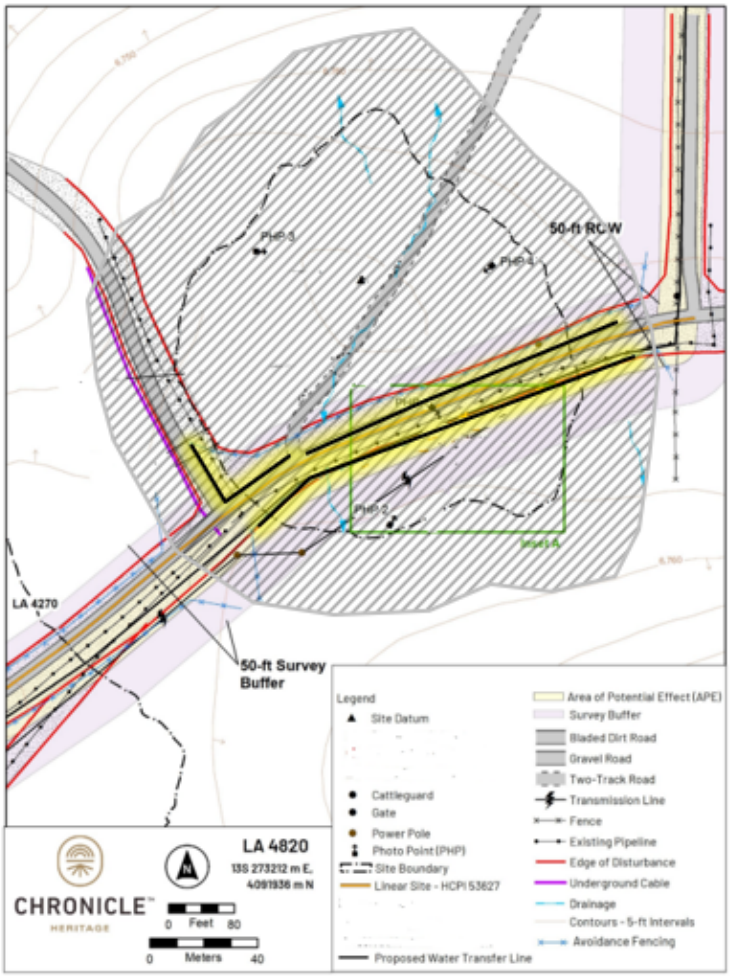


Figure 6-18. LA 4820 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

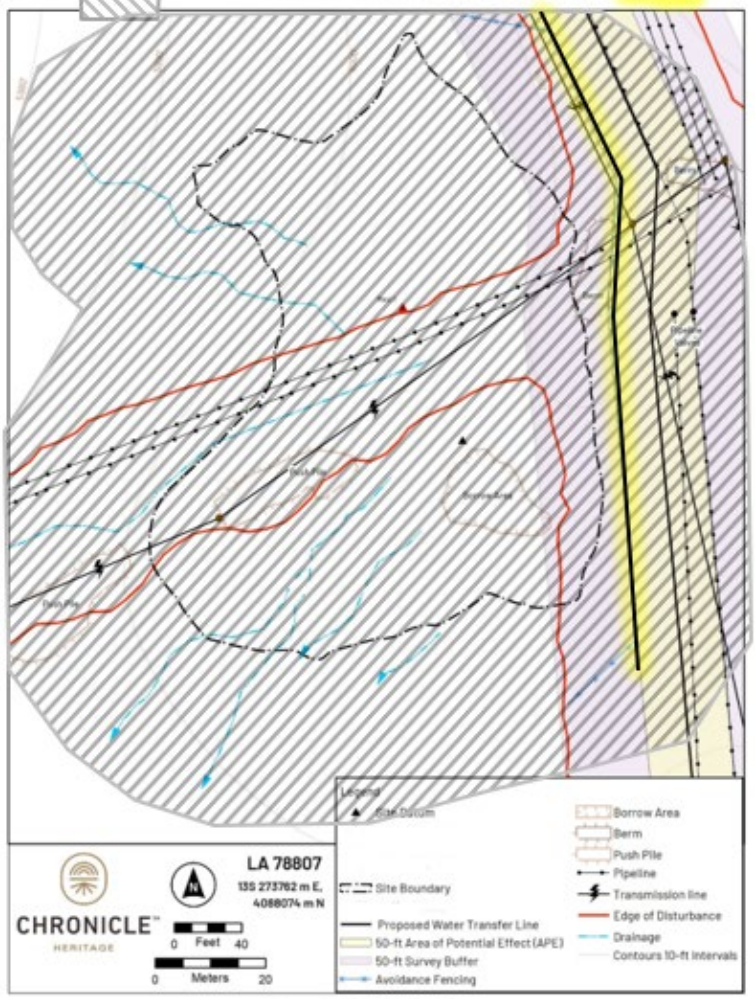


Figure 6-23 LA78807 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

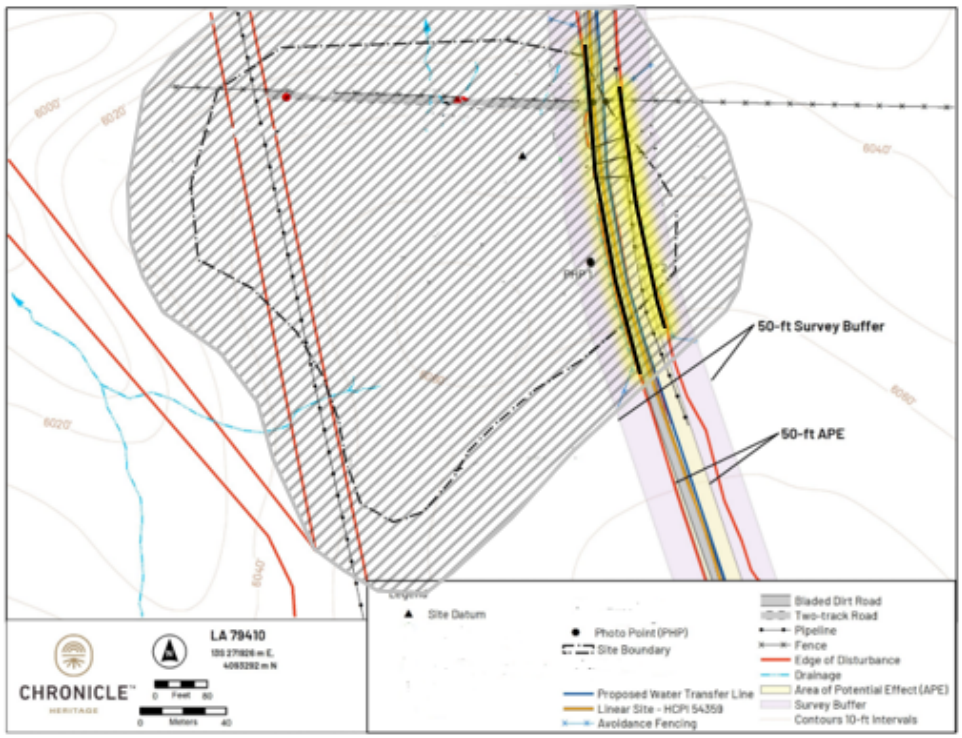


Figure 6-29. LA 79410 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

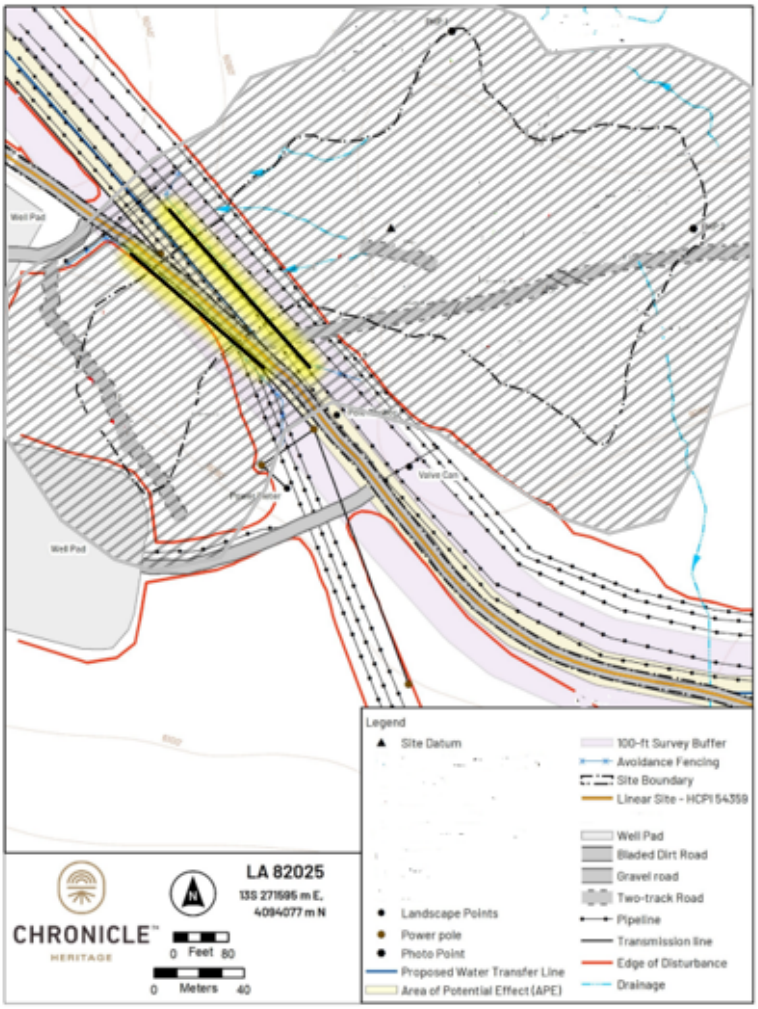


Figure 6-36. LA 82025 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project. **ROW will be restricted in site boundary**
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

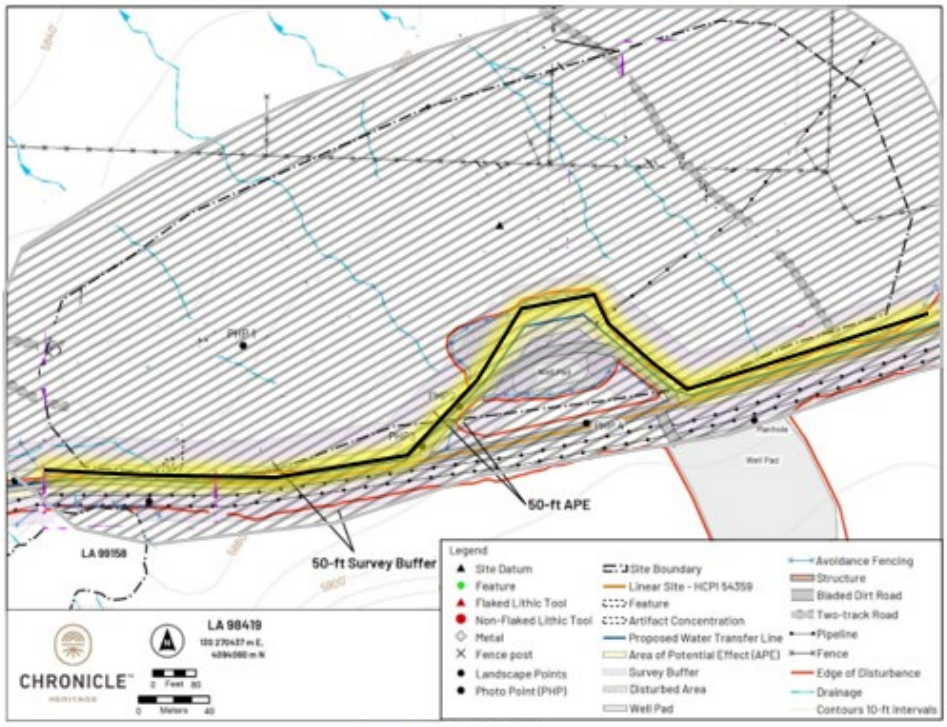


Figure 6-45. LA 98419 site map

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

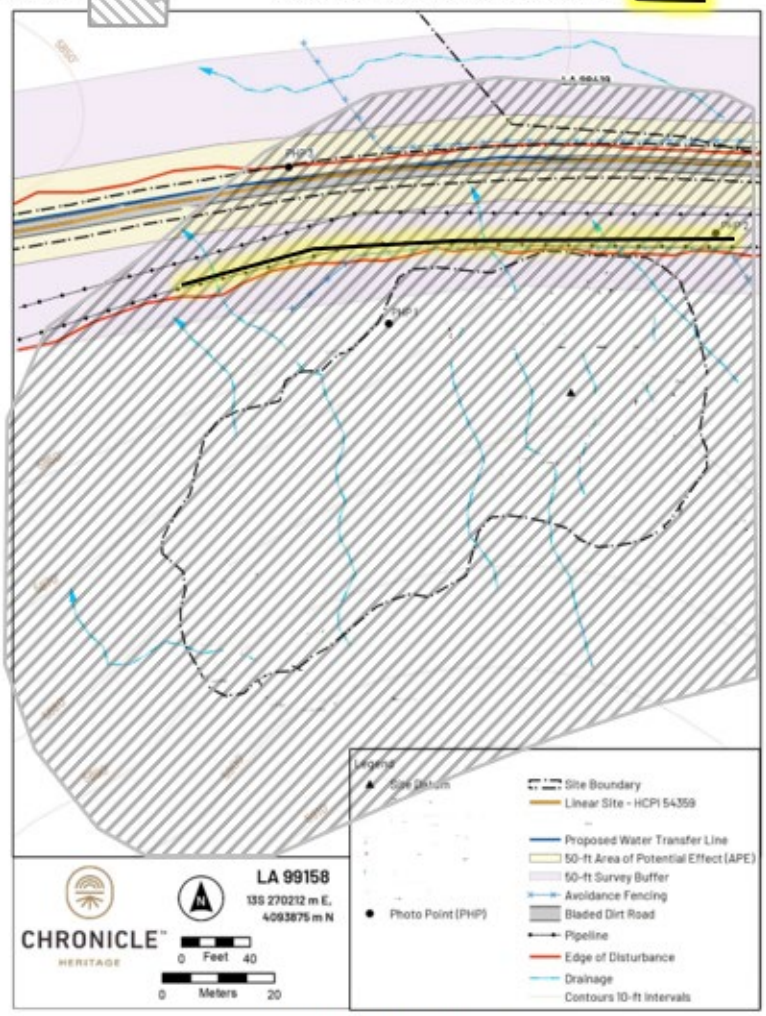


Figure 6-57. LA 99158 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

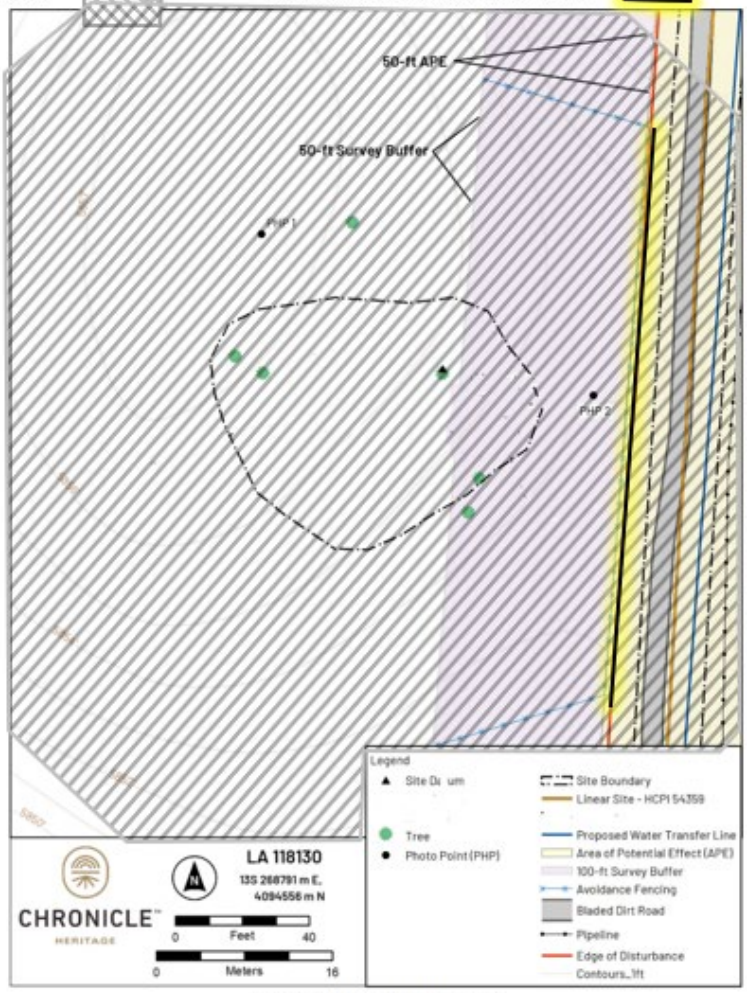


Figure 6-63. LA118130 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE =

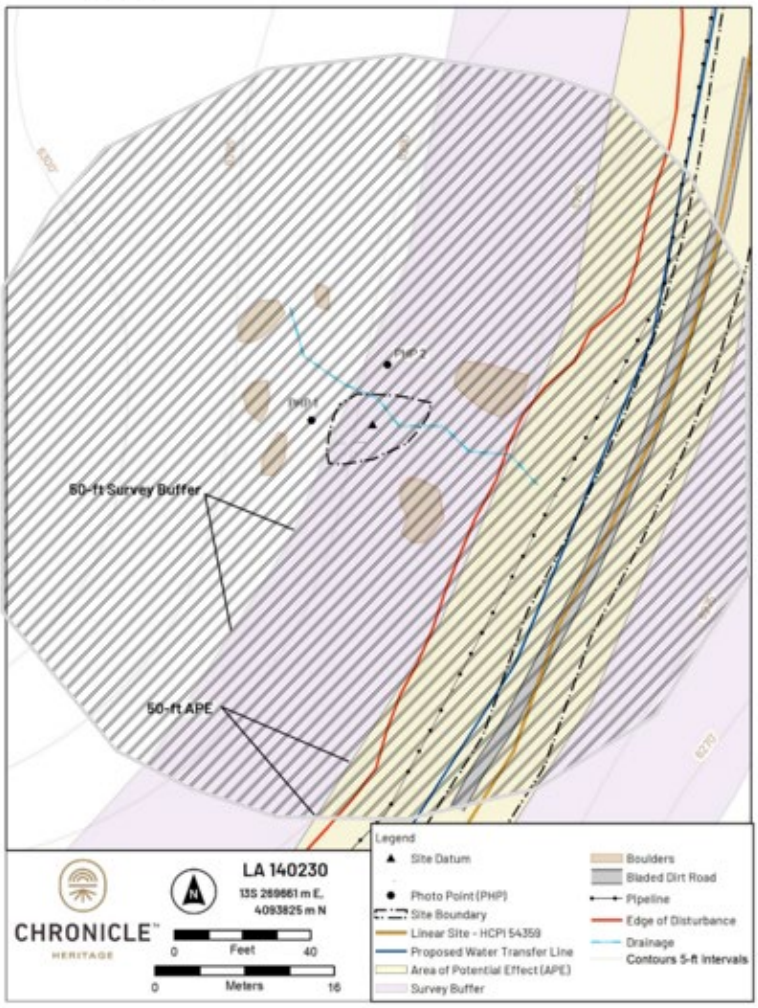


Figure 6-65. LA 140230 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

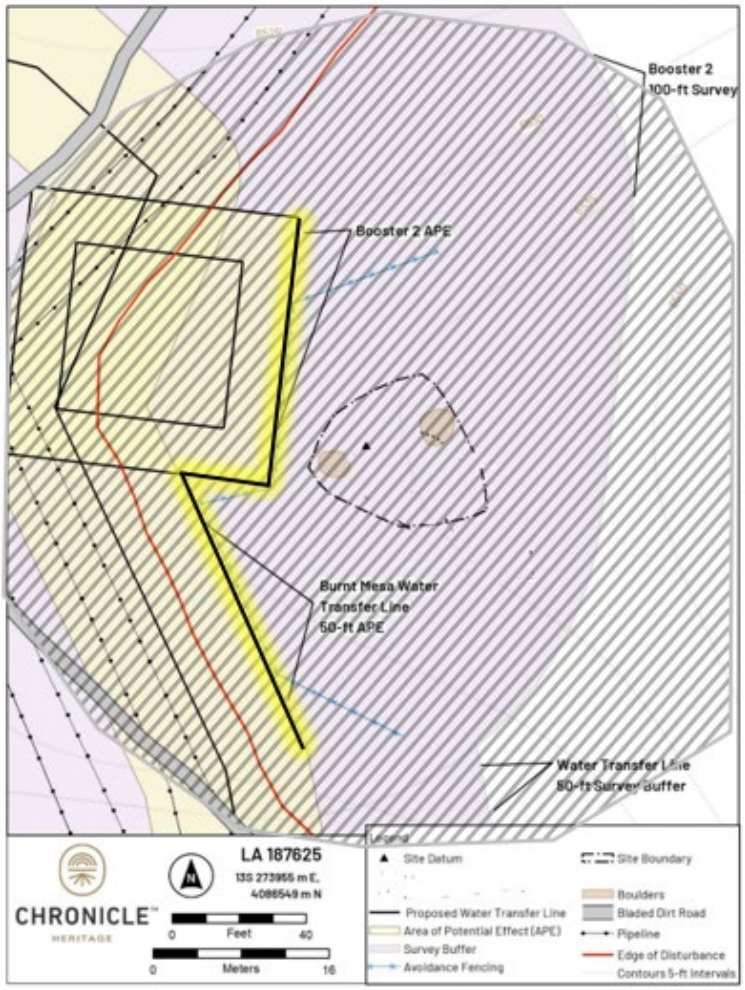


Figure 6-70. LA187625 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE =

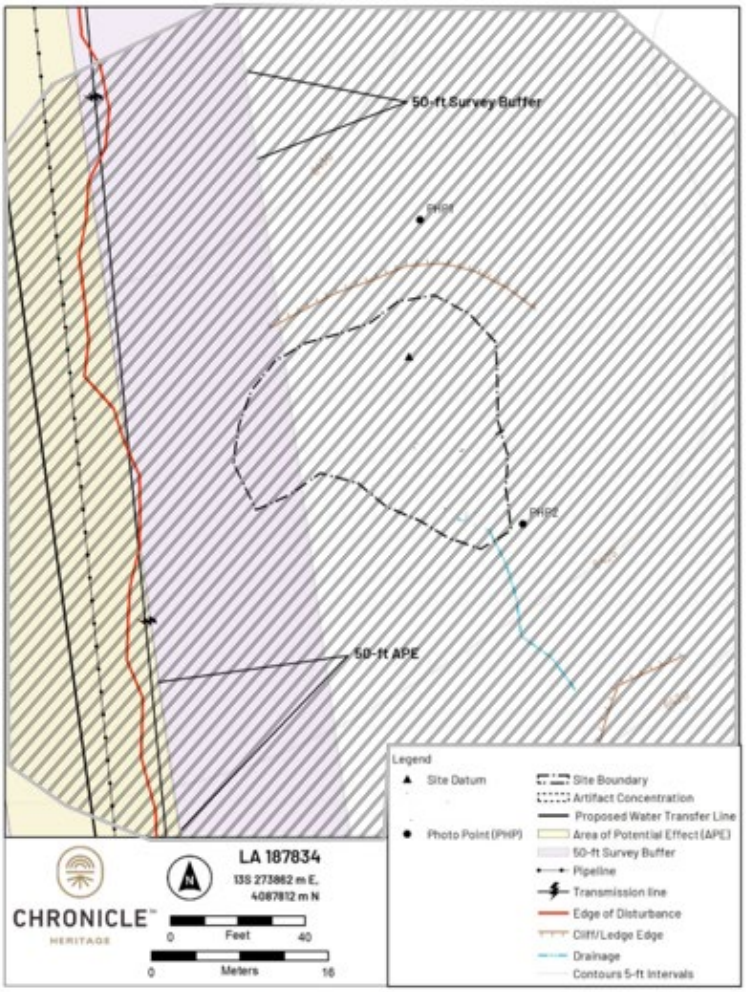


Figure 6-73. LA187834 site map.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(III)001F

Project Name: 32-8 Freshwater Waterlines Project.
Project Sponsor: Hilcorp Energy Company.

MONITOR ZONE = SITE PROTECTION BARRIER =

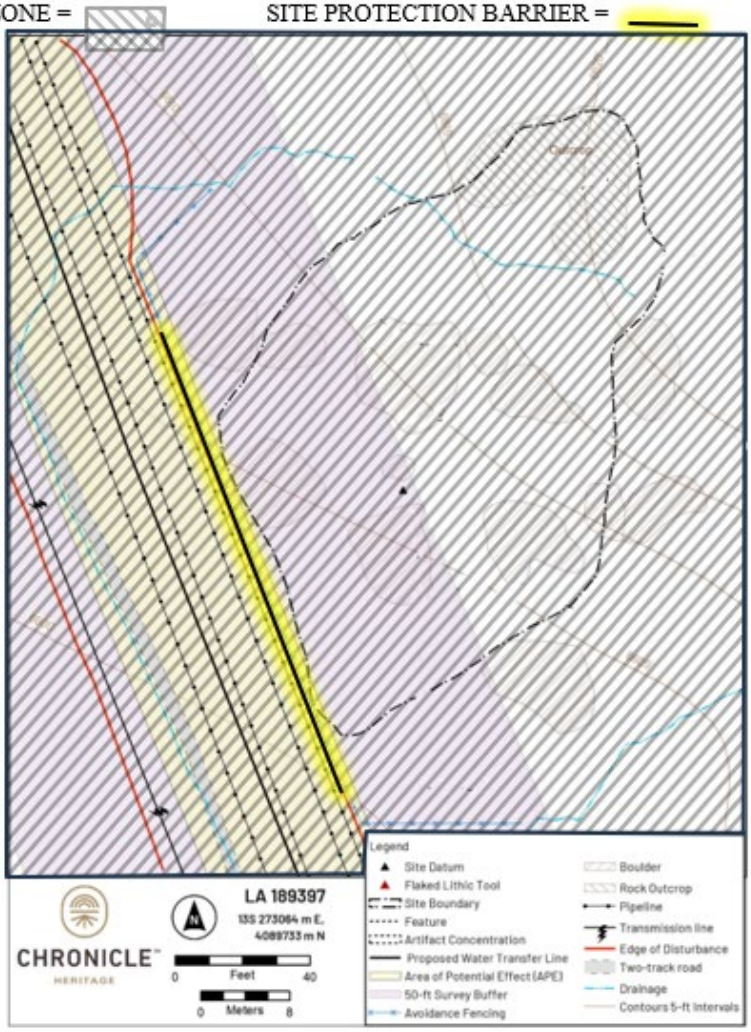


Figure 6-78. LA189397 site map.

Approval Date: 04/19/2024

BLM Report Number: 2024(I)018F
USGS Map: Burnt Mesa, NM
Activity Code: 1430
NMCRIS No: 151267

CULTURAL RESOURCE RECORD OF REVIEW
BUREAU OF LAND MANAGEMENT
FARMINGTON FIELD OFFICE

1. Description of Report/Project:
Project Name: Burnt Mesa Pipeline.
Project Sponsor: Harvest Four Corners, LLC
Arch. Firm & Report No.: Stratified Environmental and Archaeological Services, LLC; SEAS Report No. 22-043. (Chronicle took on this project after SEAS was sold to them).
Location: T32N R7W Sections 26, 27, & 34.
Well Footages: N/A
Split Estate: No
Project Dimensions: 7,295 ft x 50 ft – pipeline.
0.93 acres – TUA 1
0.17 acres – TUA 2
Sites Located: LA4270/NM-01-881 (NRHP: Eligible; Update; Partially Avoided).
LA4820/NM-01-38236 (NRHP: Eligible; Update; Partially Avoided).
LA4825/NM-01-37198 (NRHP: Eligible; Update; Avoided).
LA50496/NM-01-32894 (NRHP: Eligible; Update; Avoided).
HCPI 53627/NM-210-49555 (NRHP: Not Eligible; No Further Work).
Note: Four additional sites (LA4821, LA4822, LA4823, & LA4824) were subsumed into LA4270.
Determination: No Adverse Effect to Historic Properties.
2. Field Check: none.
3. Cultural ACEC: No.
4. Sensitive Cultural Area: No.
5. Recommendation: *PROCEED WITH ACTION:* X *STIPULATIONS ATTACHED*: _X_
6. Reviewer /Archaeologist: Kim Adams **Date**: 3/25/2024

Report Summary	BLM	Other	Total
Acres Inventoried	31.39	0.00	31.39
Sites Recorded	1	0	1
Prev. Recorded Sites	4	0	4
Sites Avoided	2	0	2
Sites Treated	0	0	0

Discovery of Resources in the Absence of any previously historic or cultural Cultural Presence or Monitoring: If unidentified prehistoric resources are discovered during construction or project operations, work in the vicinity of the discovery will be suspended and the discovery will promptly be reported to the BLM Field Manager.
Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

CULTURAL RESOURCE STIPULATIONS
Farmington Field Office

BLM Report Number: 2024(I)018F

Project Name: Burnt Mesa Pipeline.
Project Sponsor: Harvest Four Corners, LLC

1. SITE PROTECTION AND EMPLOYEE EDUCATION:
All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

2. ARCHAEOLOGICAL MONITORING IS REQUIRED:
A copy of these stipulations will be supplied to the archeological monitor at least two working days prior to the start of construction activities. No construction activities, including vegetation removal, may begin before the arrival of the archaeological monitor.

The monitor will:

- Ensure that all work stays within the existing disturbance within the site boundaries for LA4270, and LA4820.
- Ensure that site protection barriers are located as indicated on the attached maps in the vicinity of LA4270, LA4820, LA4825, & LA50496.
- Inform BLM-FFO archaeologists that monitoring will be occurring within 24 hours of the scheduled monitoring.
- Observe all construction within 100'of LA4270, LA4820, LA4825, & LA50496.
- Submit a report of the monitoring activities within 30 days of completion of monitoring unless other arrangements are made with the BLM. These stipulations must be attached to the report.

3. SITE PROTECTION BARRIER:

- The temporary site protection barriers will be erected prior to the start of construction. The barriers will consist of upright wooden survey lath spaced no more than 10 feet apart and marked with blue flagging or blue paint. The barriers will remain in place through reclamation and reseeding and shall be promptly removed after reclamation.
- The barriers will be placed as indicated on the attached map.
- There will be no surface-disturbing activities or vehicle traffic past the barriers.

Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(I)018F

Project Name: Burnt Mesa Pipeline. **All work must stay within existing disturbance within the site boundary.**
Project Sponsor: Harvest Four Corners, LLC. **ROW will be restricted within the site boundary.**
MONITOR ZONE = TEMPORARY FENCING =

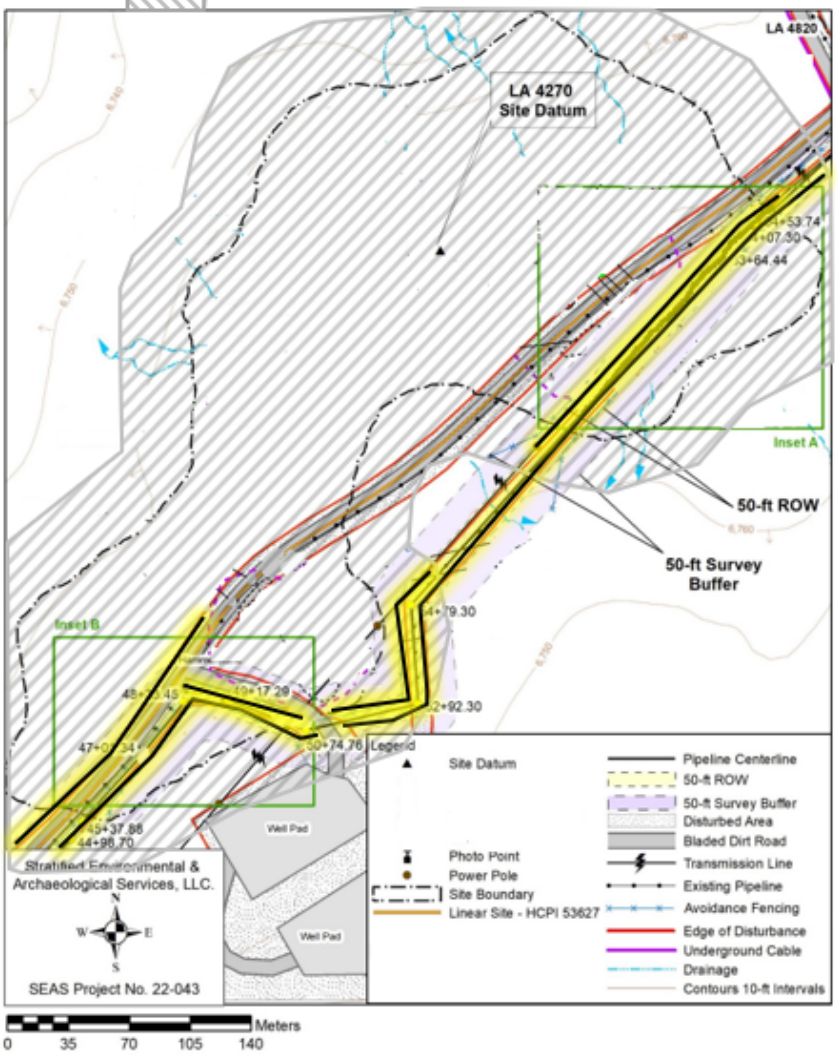
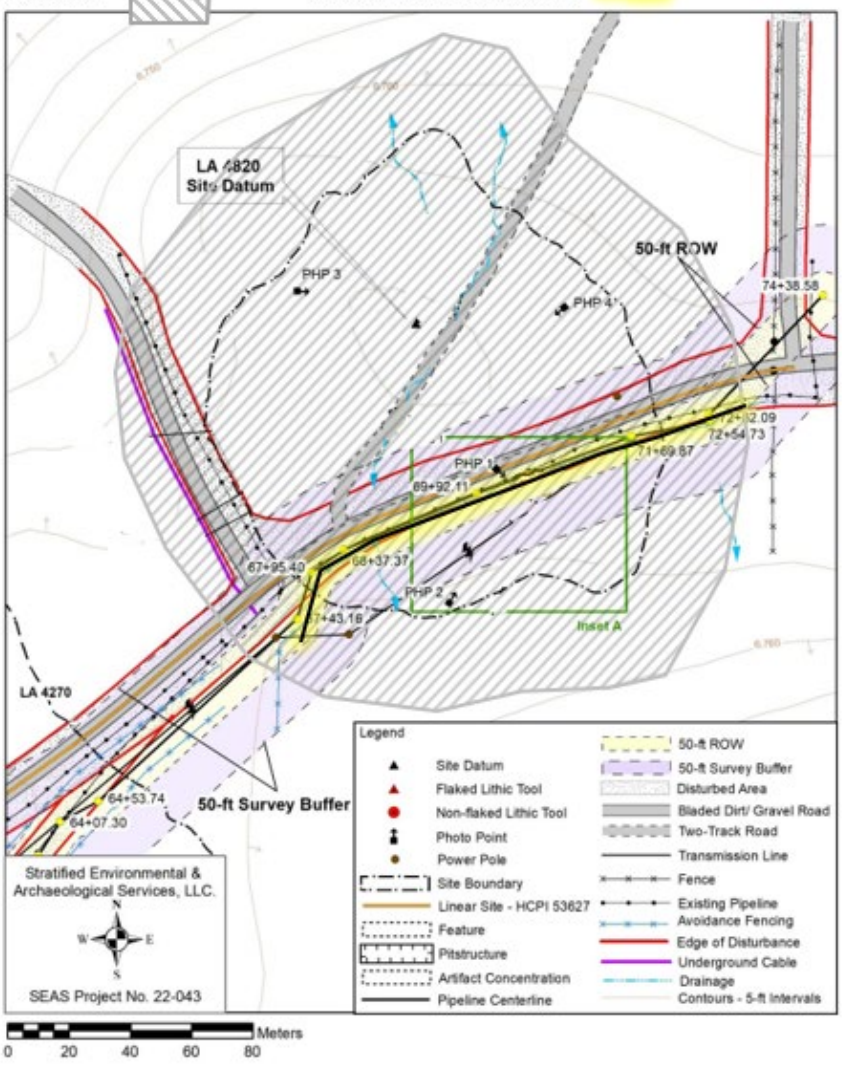


Figure 6-1. Site Plan Map, LA4270

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(I)018F

Project Name: Burnt Mesa Pipeline. **All work must stay within existing disturbance within the site boundary.**
Project Sponsor: Harvest Four Corners, LLC **ROW will be restricted within the site boundary.**
MONITOR ZONE = TEMPORARY FENCING =



Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(I)018F

Project Name: Burnt Mesa Pipeline.
Project Sponsor: Harvest Four Corners, LLC
MONITOR ZONE = TEMPORARY FENCING =

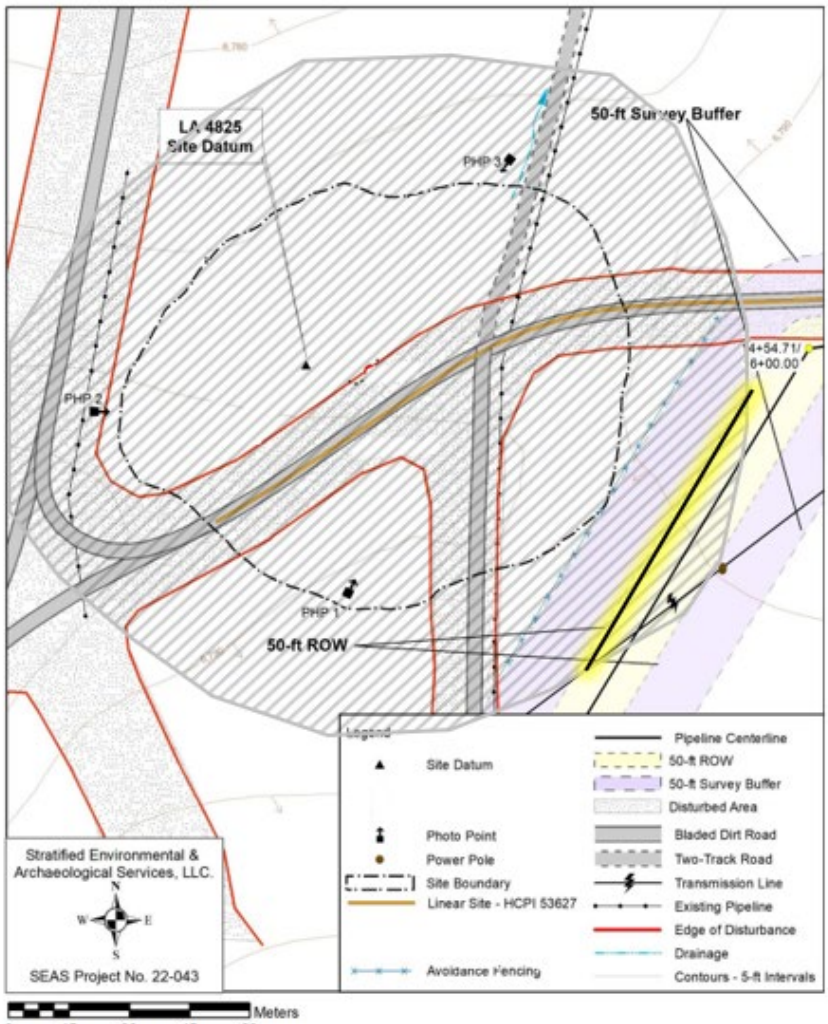


Figure 6-10. Site Plan Map, LA4825

Approval Date: 04/19/2024

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18)
CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2024(I)018F

Project Name: Burnt Mesa Pipeline. **ROW will be restricted in order to avoid the site boundary.**
Project Sponsor: Harvest Four Corners, LLC
MONITOR ZONE = TEMPORARY FENCING =

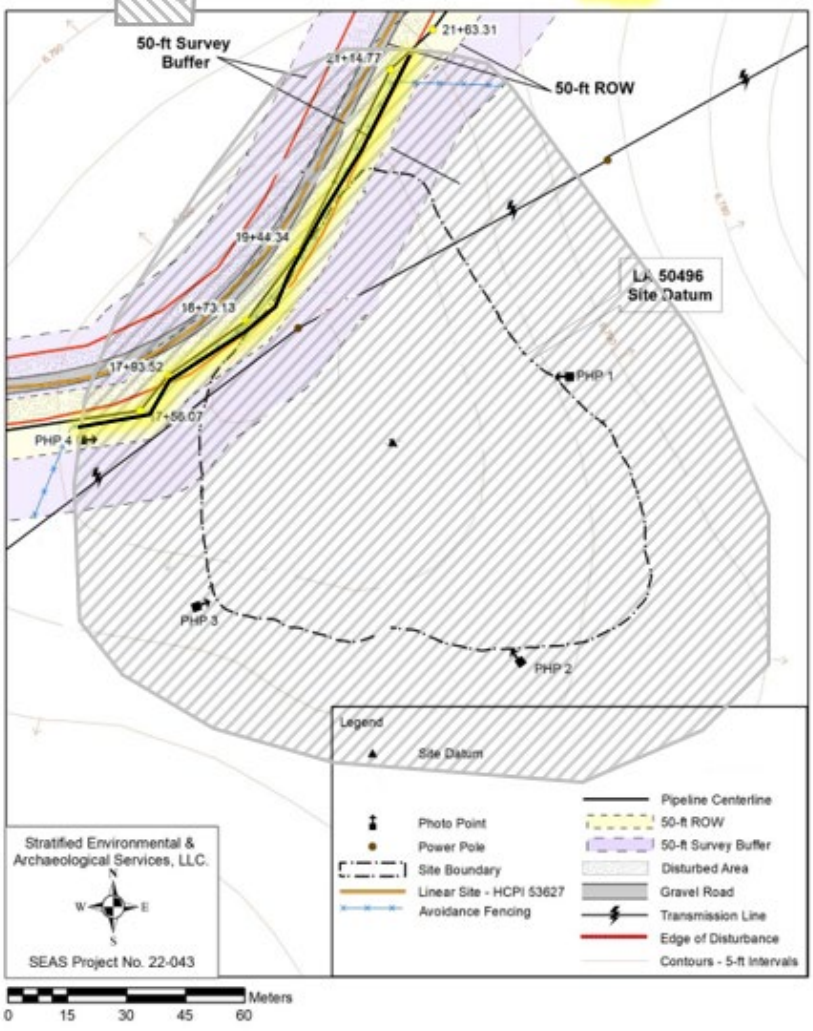


Figure 6-12. Site Plan Map, LA50496

Approval Date: 04/19/2024

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402

In Reply Refer To:
3162.3-1(NMF0110)

*HILCORP ENERGY COMPANY

#605H SAN JUAN 32 7 603 Federal Com

Lease: NMNM2995 Agreement: TBD
SH: SW¼SW¼ Section 26, T.32 N., R.7 W.
San Juan County, New Mexico
BH: NE¼NE¼ Section 32, T.32 N., R.7 W.
San Juan County, New Mexico
***Above Data Required on Well Sign**

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

The following special requirements apply and are effective when **checked**:

A. ☒ Note all surface/drilling conditions of approval attached.

B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated

C. ☒ Test all casing strings below the conductor casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield (burst) for a minimum of 30 minutes. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

D. ☒ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales.

E. ☐ The use of co-flex hose is authorized contingent upon the following:
1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

I. GENERAL

A. Full compliance with all applicable laws and regulations, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.

B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).

C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.

D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.

E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).

F. BOP equipment (except the annular preventer) shall be tested utilizing a test plug to full working pressure for 10 minutes. No bleed-off of pressure is acceptable.

G. The operator shall have sufficient weighting materials and lost circulation materials on location in the event of a pressure kick or in the event of lost circulation.

H. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare.

I. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a Notice of Intent sundry within three business days. **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to Virgil Lucero at 505-793-1836.**

J. The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.

K. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two-year extension may be granted if submitted prior to expiration.

L. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all times, unless the well is secured with blowout preventers or cement plugs.

M. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

N. **Commingling**: No production (oil, gas, and water) from the subject well should start until Sundry Notices (if necessary) granting variances from applicable regulations as related to commingling and off-lease measurement are approved by this office.

II. REPORTING REQUIREMENTS

A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.

B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.

1. Provide complete information concerning.

   a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.

   b. Intervals tested, perforated (include size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.

   c. Subsequent Report of Abandonment, show the way the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.

2. Well Completion Report will be submitted with 30 days after well has been completed.

   a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.

3. Submit a cement evaluation log if cement is not circulated to surface.

C. Production Startup Notification is required no later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site or resumes production in the case of a well which has been off production for more than 90 days. The operator shall notify the Authorized Officer by letter or Sundry Notice, Form 3160-5, or orally to be followed

by a letter or Sundry Notice, of the date on which such production has begun or resumed. CFR 43 3162.4-1(c).

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results, 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results, and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of * Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

*30 days, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the first gas to surface.

V. SAFETY

A. All rig heating stoves are to be of the explosion-proof type.

B. Rig safety lines are to be installed.

C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

A. Any changes of plans required to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.

B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.

C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

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

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 357022
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	7/15/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/15/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/15/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	7/15/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	7/15/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	7/15/2024