U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Sundry Print Report

09/15/2021

| | | |
|---|---|---|
| **Well Name:** HUERFANO UNIT | **Well Location:** T26N / R9W / SEC 26 / NWNE / 36.463074 / -107.755493 | **County or Parish/State:** SAN JUAN / NM |
| **Well Number:** 181E | **Type of Well:** CONVENTIONAL GAS WELL | **Allottee or Tribe Name:** |
| **Lease Number:** NMSF078103 | **Unit or CA Name:** HUERFANO UNIT--DK | **Unit or CA Number:** NMNM78395C |
| **US Well Number:** 3004526657 | **Well Status:** Producing Gas Well | **Operator:** HILCORP ENERGY COMPANY |

## Notice of Intent

**Sundry ID:** 2630499

**Type of Submission:** Notice of Intent

**Type of Action:** Plug and Abandonment

**Date Sundry Submitted:** 08/25/2021

**Time Sundry Submitted:** 11:47

**Date proposed operation will begin:** 09/07/2021

**Procedure Description:** Hilcorp Energy Company requests permission to P&A the subject well per the attached procedures, current and proposed wellbore schematics. The Pre-Disturbance Site Visit was held on 8/19/2021 with Bob Swizter, BLM. The Re-Vegetation Plan is attached. A closed loop system will be used.

## Surface Disturbance

**Is any additional surface disturbance proposed?:** No

## NOI Attachments

**Procedure Description**

Plug_and_Abandonment_Procedure___Huerfano_Unit_181E_20210825114604.pdf

Huerfano_Unit_181E_Reclamation_Plan_20210825114603.pdf

**Well Name:** HUERFANO UNIT

**Well Location:** T26N / R9W / SEC 26 / NWNE / 36.463074 / -107.755493

**County or Parish/State:** SAN JUAN / NM

**Well Number:** 181E

**Type of Well:** CONVENTIONAL GAS WELL

**Allottee or Tribe Name:**

**Lease Number:** NMSF078103

**Unit or CA Name:** HUERFANO UNIT--DK

**Unit or CA Number:** NMNM78395C

**US Well Number:** 3004526657

**Well Status:** Producing Gas Well

**Operator:** HILCORP ENERGY COMPANY

## Conditions of Approval

**Additional Reviews**

General_Requirement_PxA_20210915090644.pdf

2630499_NOIA_181E_3004526657_KR_09152021_20210915090531.pdf

26N09W26BKd_Huerfano_Unit_181E_20210914151320.pdf

## Operator Certification

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

**Operator Electronic Signature:** KANDIS ROLAND

**Signed on:** AUG 25, 2021 11:46 AM

**Name:** HILCORP ENERGY COMPANY

**Title:** Operation Regulatory Tech

**Street Address:** 382 Road 3100

**City:** Farmington **State:** NM

**Phone:** (505) 599-3400

**Email address:** kroland@hilcorp.com

## Field Representative

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

## BLM Point of Contact

**BLM POC Name:** KENNETH G RENNICK

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5055647742

**BLM POC Email Address:** krennick@blm.gov

**Disposition:** Approved

**Disposition Date:** 09/15/2021

**Signature:** Kenneth Rennick

# GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON FIELD OFFICE

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.

5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.

5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.

5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.

6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain $H_2S$.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), five copies, with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

# BLM FLUID MINERALS
# P&A Geologic Report

**Date Completed:** 09/14/2021

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Well No. Huerfano Unit #181E (API# 30-045-26657) | | | Location | 1180 FNL | & | 1820 FEL | |
| Lease No. NMSF-078103 | | | Sec. 26 | T26N | | R09W | |
| Operator Hilcorp Energy Company | | | County | San Juan | State | New Mexico | |
| Total Depth 6732’ | PBTD 6704’ | | Formation Dakota | | | | |
| Elevation (GL) 6470’ | | | Elevation (KB) 6483’ | | | | |

| Geologic Formations | Est. Top | Est. Bottom | Log Top | Log Bottom | Remarks |
|---|---|---|---|---|---|
| San Jose Fm | | | | | |
| Nacimiento Fm | | | Surface | 1208 | Fresh water sands |
| Ojo Alamo Ss | | | 1208 | 1360 | Aquifer (fresh water) |
| Kirtland Shale | | | 1360 | 1826 | |
| Fruitland Fm | | | 1826 | 2070 | Coal/Gas/Possible water |
| Pictured Cliffs Ss | | | 2070 | 2168 | Gas |
| Lewis Shale | | | 2168 | 2940 | |
| Chacra (La Ventana) | | | 2940 | 3000 | |
| Cliff House Ss | | | 3000 | 3060 | Water/Possible gas |
| Menefee Fm | | | 3060 | 4471 | Coal/Ss/Water/Possible O&G |
| Point Lookout Ss | | | 4471 | 4720 | Probable water/Possible O&G |
| Mancos Shale | | | 4720 | 5510 | |
| Gallup | | | 5510 | 6371 | O&G/Water |
| Greenhorn | | | 6371 | 6421 | |
| Graneros Shale | | | 6421 | 6540 | |
| Dakota Ss | | | 6540 | PBTD | O&G/Water |

Remarks:
P & A

- P&A procedure includes running a CBL prior to pumping any plugs.
- BLM geologist estimates for the tops of the Point Lookout, Menefee, Cliff House (Mesaverde), and Lewis formations vary from Operators.
- Add a plug to cover the BLM estimate for the Cliff House formation top @ 3000’ and Chacra formation top @ 2940’. Recommend one plug to cover both intervals.
- The plugs proposed in the P&A procedure, along with recommendations to add/change plugs described above, will adequately protect any freshwater sands in this well bore.
- Dakota perforations @ 6450’ – 6662’.

Reference Well:
1) **Formation Tops**
Same

**Prepared by:** *Chris Wenman*

**UNITED STATES DEPARTMENT OF THE INTERIOR**
**BUREAU OF LAND MANAGEMENT**
**FARMINGTON DISTRICT OFFICE**
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

Attachment to notice of
Intention to Abandon

Re: Permanent Abandonment
Well: Huerfano Unit 181E

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."

2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.

3. The following modifications to your plugging program are to be made:

   a) Add a plug to cover the BLM estimate for the Cliff House formation top at 3000 feet and Chacra formation top at 2940 feet.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.

K. Rennick 9/15/2021

**Plug and Abandonment - NOI**

**Huerfano Unit 181E**

**API # - 3004526657**

**Procedure**:

Hold PJSM prior to beginning any and all operations. Properly document all operations via the JSA process. Ensure that all personnel onsite abide by HEC safety protocol, including PPE, housekeeping, and standard guidelines.

Verify cathodic protection is off and wellhead instrumentation is properly disconnected from the wellhead. Comply with all NMOCD, BLM, and HEC safety and environmental regulations.

Verify there is no H2S present prior to beginning operations. If any H2S is present, take the necessary actions to ensure that the location is safe prior to beginning operations.

Observe and record pressures across all string daily, prior to beginning operations. **Remember to notify NMOCD 24 hours prior to starting operations on location.**

NOTE: **This procedure is contingent upon P&A sundry approval by NMOCD**. All cement volumes use 100% excess outside pipe and 50' excess inside (unless otherwise stated). All cement will be Class G, mixed at 15.8 ppg w/ a 1.15 cf/sx yield. The stabilizing wellbore fluid will be an 8.3 ppg fluid, sufficient to balance all exposed formation pressures.

1. This project will use a steel tank to handle waste fluids circulated from the well and cement wash up.
2. Test anchors if not using a base beam. Comply with all NMOCD, BLM, and HEC safety regulations. MIRU and conduct safety meeting for all personnel on location.
3. Record casing, tubing, and bradenhead pressures. Remove existing piping on casing valve. RU blow lines from casing valves and begin BD casing pressure. Kill well with water as necessary. Ensure well is dead or on a vacuum.
4. ND wellhead and NU BOP. Function test BOP. RU floor and 2 3/8" handling tools.
5. TOOH and tally 2 3/8" tubing inspecting each joint (6503')
6. TIH w/ 4 ½" casing scraper to 6420'. TOOH and LD scraper.
7. TIH w/ CICR and set at 6400'. PT tbg to 500 psi. Roll the hole w/ fresh water.
8. TOOH and RU WL and run CBL from 6400' to surface. RD WL
9. TIH open ended to 6400'
10. **Plug #1, 6400' – 6300' (Perforations: 6450' – 6662', Dakota TOP: 6540')** Mix & pump 12 sxs of class G cement and spot plug on top of CICR to cover Dakota perforations and Dakota top. PU and reverse circulate clean. WOC.

11. LD tubing to 5560'.
12. **Plug #2, 5560' – 5460' (Gallup Top: 5510')** Mix & pump 12 sxs of Class G cement and spot a balanced plug to cover the Gallup top. PU and reverse circulate tubing clean. WOC.
13. LD tubing to 4770'.
14. **Plug #3, 4770' – 4421' (Mancos Top: 4720' Mesaverde Top: 4471')** Mix & pump 32 sxs of Class G cement and spot a balanced plug to cover the Mancos and Mesaverde tops. PU and reverse circulate tubing clean. WOC.
15. LD tubing to 2120'.
16. **Plug #4, 2120' – 1776' (Pictured Cliffs Top: 2070' Fruitland Top: 1826')** Mix & pump 31 sxs of Class G cement and spot a balanced plug to cover the Pictured Cliffs and Fruitland Coal tops. PU and reverse circulate tubing clean. WOC.
17. LD tubing to 1410'.
18. **Plug #5, 1410' – 1158' (Kirtland Top: 1360' Ojo Alamo Top: 1208')** Mix & pump 24 sxs of Class G cement and spot a balanced plug to cover the Kirtland and Ojo Alamo tops. PU and reverse circulate tubing clean. WOC.
19. LD tubing to 273'.
20. **Plug #6, 273' - Surface' (Surface Shoe: 273')** Mix & pump 26 sxs of Class G cement and spot a balanced plug to cover the Kirtland and Ojo Alamo tops. PU and reverse circulate tubing clean. WOC.
21. LD the rest of tubing.
22. Ensure we have a good Bradenhead test where no communication is seen before cutting off the wellhead.
23. ND BOP and cut off wellhead below surface casing flange per regulation. Top off w/ cement if needed. Install PxA marker w/ cement to comply w/ regulations.
24. RD, MOL and cut off anchors. Restore location per BLM stipulations.

Hilcorp Energy Company

# Schematic - Current

**Well Name: HUERFANO UNIT #181E**

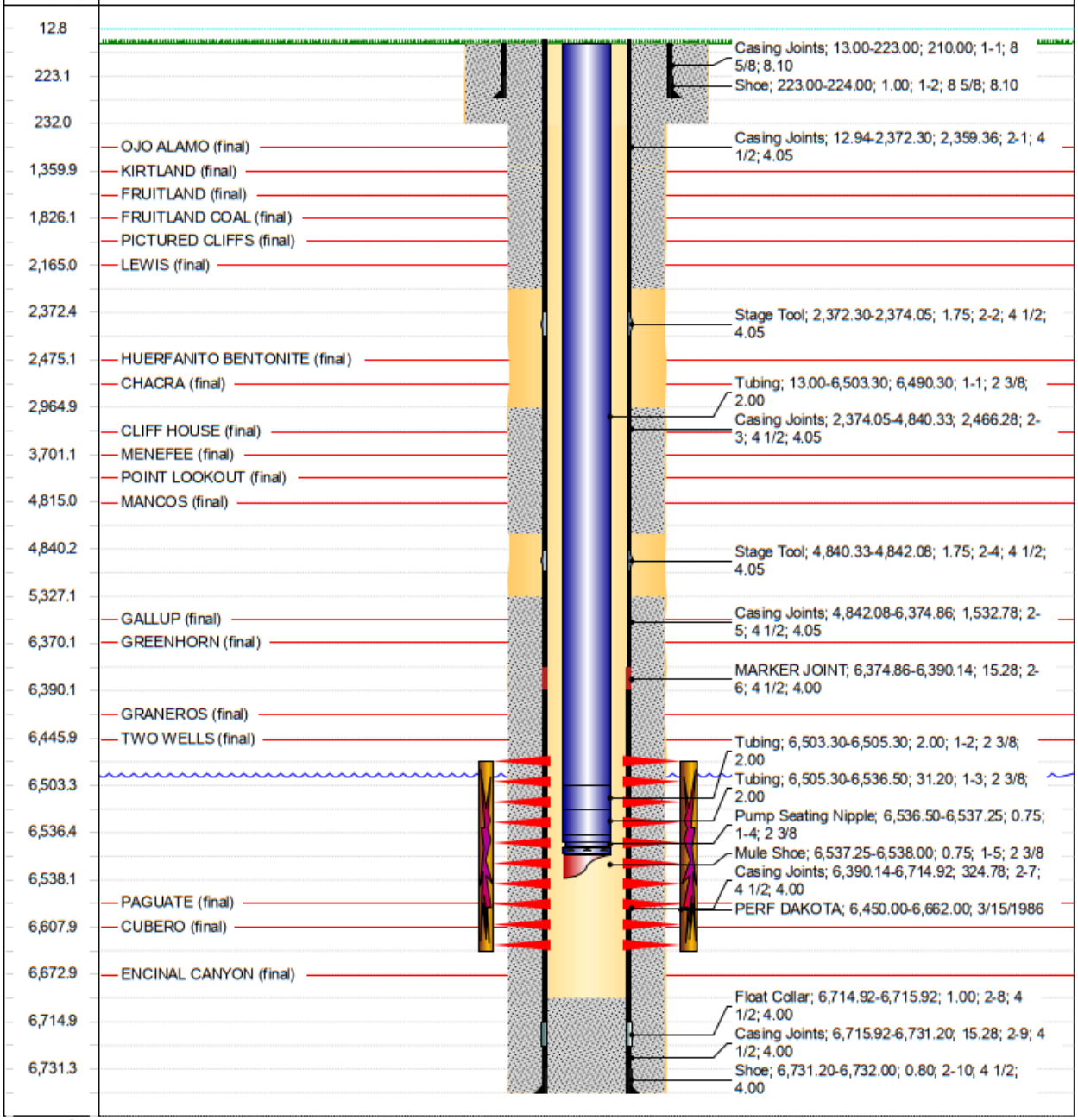
| API / UWI | Surface Legal Location | Field Name | License No. | State/Province | Well Configuration Type |
|---|---|---|---|---|---|
| 3004526657 | 026-026N-009W-B | BASIN DAKOTA (PRORATED GAS) | | NEW MEXICO | VERTICAL |

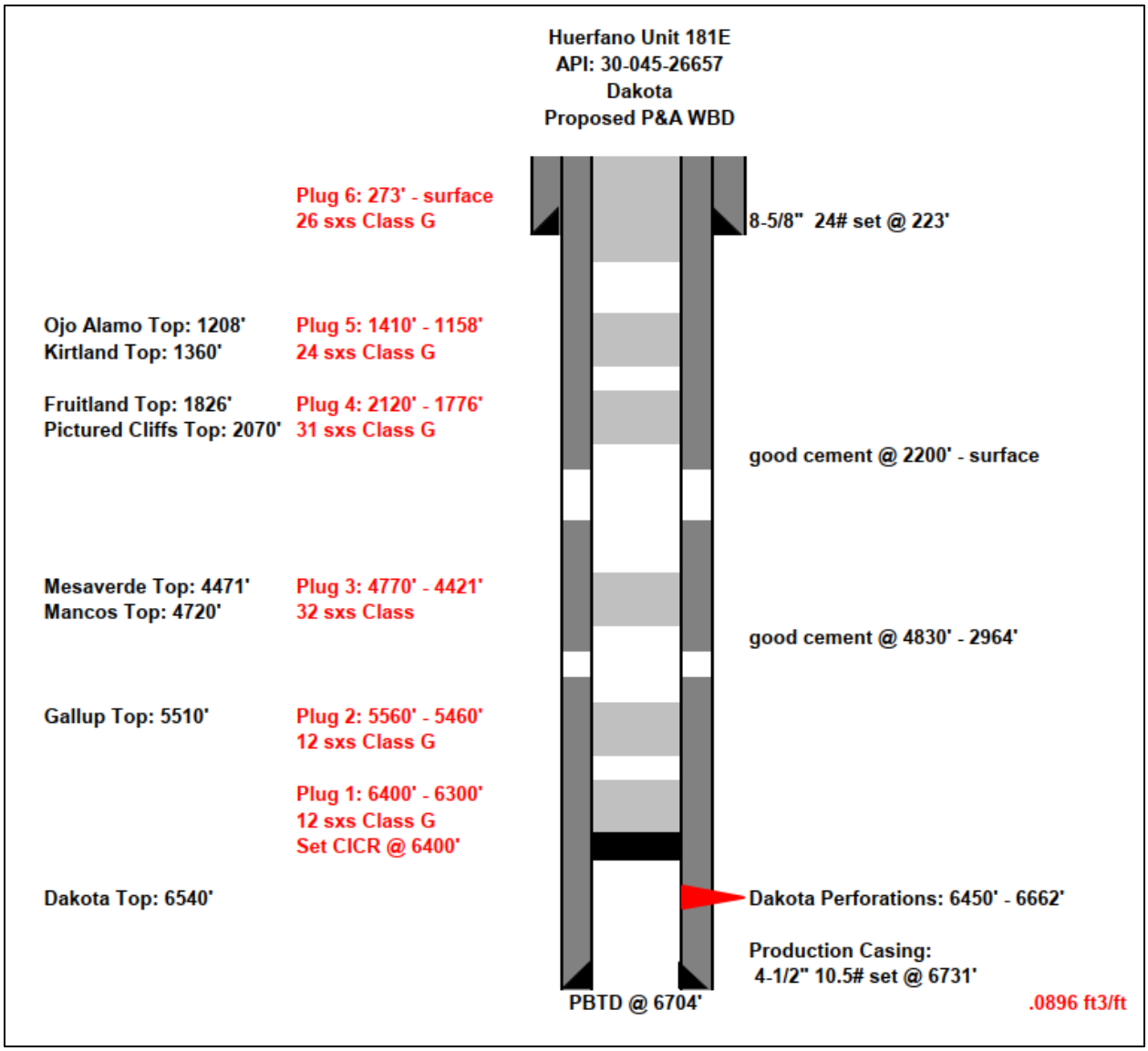
| Original KB/RT Elevation (ft) | KB-Ground Distance (ft) | Original Spud Date | Rig Release Date | PBTD (All) (ftKB) | Total Depth All (TVD) (ftKB) |
|---|---|---|---|---|---|
| 6,483.00 | 13.00 | 2/26/1986 00:00 | | Original Hole - 6,704.0 | |

**Most Recent Job**

| Job Category | Primary Job Type | Secondary Job Type | Actual Start Date | End Date |
|---|---|---|---|---|
| FACILITIES | TUBING REPAIR | TUBING REPAIR | 6/19/2003 | 6/23/2003 |

**TD: 6,732.0** VERTICAL, Original Hole, 4/30/2020 1:35:06 AM




Huerfano Unit 181E
API: 30-045-26657
Dakota
Proposed P&A WBD
Plug 6: 273' - surface
26 sxs Class G
8-5/8" 24# set @ 223'
Ojo Alamo Top: 1208'
Kirtland Top: 1360'
Plug 5: 1410' - 1158'
24 sxs Class G
Fruitland Top: 1826'
Pictured Cliffs Top: 2070'
Plug 4: 2120' - 1776'
31 sxs Class G
good cement @ 2200' - surface
Mesaverde Top: 4471'
Mancos Top: 4720'
Plug 3: 4770' - 4421'
32 sxs Class
good cement @ 4830' - 2964'
Gallup Top: 5510'
Plug 2: 5560' - 5460'
12 sxs Class G
Plug 1: 6400' - 6300'
12 sxs Class G
Set CICR @ 6400'
Dakota Top: 6540'
Dakota Perforations: 6450' - 6662'
Production Casing:
4-1/2" 10.5# set @ 6731'
PBTD @ 6704'
.0896 ft3/ft

**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

COMMENTS

Action 49061

## COMMENTS

| | |
|---|---|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171 |
| | Action Number:<br>49061 |
| | Action Type:<br>[C-103] NOI Plug & Abandon (C-103F) |

**COMMENTS**

| Created By | Comment | Comment Date |
|---|---|---|
| kpickford | KP GEO Review 9/20/2021 | 9/20/2021 |

**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:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171 |
| | Action Number:<br>49061 |
| | Action Type:<br>[C-103] NOI Plug & Abandon (C-103F) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| kpickford | Notify NMOCD 24 Hours Prior to beginning operations | 9/20/2021 |
| kpickford | CBL required. | 9/20/2021 |
| kpickford | Adhere to BLM approved plugs | 9/20/2021 |