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

Sundry Print Report

09/15/2021

Well Name: HUERFANO UNIT

Well Location: T26N / R10W / SEC 14 / NESW / 36.48555 / -107.867752

County or Parish/State: SAN JUAN / NM

Well Number: 179E

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF079617

Unit or CA Name: HUERFANO UNIT--DK

Unit or CA Number: NMNM78395C

US Well Number: 3004526672

Well Status: Producing Gas Well

Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2630683

Type of Submission: Notice of Intent

Type of Action: Plug and Abandonment

Date Sundry Submitted: 08/26/2021

Time Sundry Submitted: 05:29

Date proposed operation will begin: 09/05/2021

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 8/20/2021 with Bob Switzer/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

Huerfano_Unit_179E_Reclamation_Plan_20210826052926.pdf

Plug_and_Abandonment_Procedure___Huerfano_Unit_179E_20210826052908.pdf

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Operator: HILCORP ENERGY COMPANY

Conditions of Approval

Additional Reviews

2630683_NOIA_179E_3004526672_KR_09152021_20210915090814.pdf

General_Requirement_PxA_20210915090801.pdf

26N10W14KKd_Huerfano_Unit_179E_20210914142055.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: AMANDA WALKER

Signed on: AUG 26, 2021 05:29 AM

Name: HILCORP ENERGY COMPANY

Title: Operations/Regulatory Technician

Street Address: 1111 TRAVIS ST.

City: HOUSTON **State:** TX

Phone: (346) 237-2177

Email address: mwalker@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

Plug and Abandonment - NOI

Huerfano Unit 179E

API # - 3004526672

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 (6730')
6. TIH w/ 4 ½" casing scraper to 6600'. TOOH and LD scraper.
7. TIH w/ CICR and set at 6582'. PT tbg to 500 psi. Roll the hole w/ fresh water.
8. TOOH and RU WL and run CBL from 6582' to surface. RD WL
9. TIH open ended to 6582'
10. **Plug #1, 6582' – 6482' (Perforations: 6632' – 6786', Dakota TOP: 6705')** 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. Tag plug.

11. LD tubing to 5700'.
12. **Plug #2, 5700' – 5600' (Gallup Top: 5650')** 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. Tag plug.
13. LD tubing to 4990'.
14. **Plug #3, 4990' – 4641' (Mancos Top: 4940' Mesaverde Top: 4591')** 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. Tag plug.
15. LD tubing to 2210'.
16. **Plug #4, 2210' – 1870' (Pictured Cliffs Top: 2160' Fruitland Top: 1920')** 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. Tag plug.
17. LD tubing to 1475'.
18. **Plug #5, 1475' – 1175' (Kirtland Top: 1425' Ojo Alamo Top: 1225')** Mix & pump 28 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. Tag plug.
19. LD tubing to 223'.
20. **Plug #6, 223' - Surface' (Surface Shoe: 223')** 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. Tag plug.
21. LD the rest of tubing.
22. Ensure we have a good Bradenhead test where no communication is seen before cutting off the wellhead. (Previous squeeze was at 819').
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 #179E

API / UWI	Surface Legal Location	Field Name	License No.	State/Province	Well Configuration Type
3004526672	014-026N-010W-K	BASIN DAKOTA (PRORATED GAS)		NEW MEXICO	VERTICAL

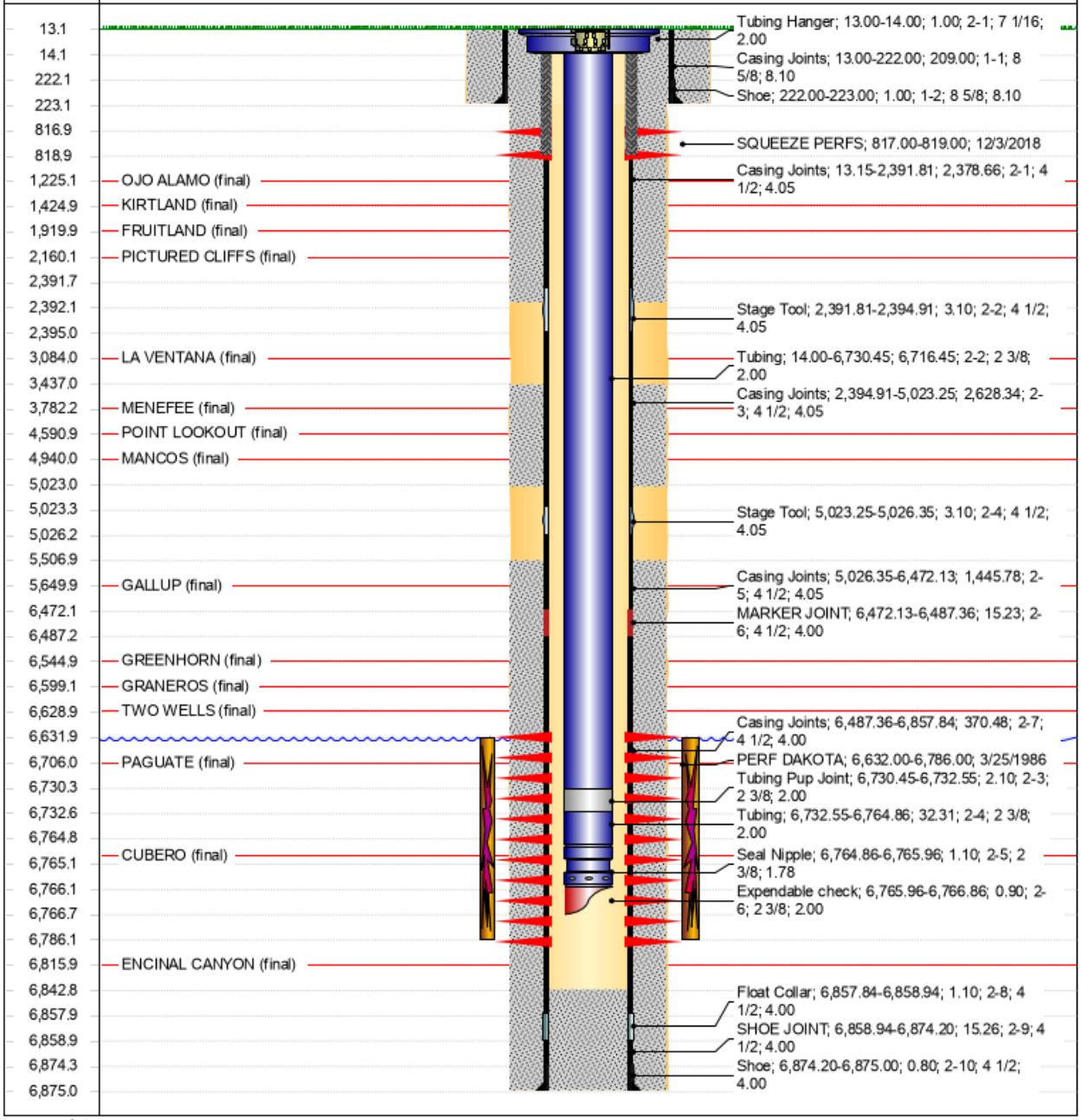
Original KB/RT Elevation (ft)	KB-Ground Distance (ft)	Original Spud Date	Rig Release Date	PBTD (All) (ftKB)	Total Depth All (TVD) (ftKB)
6,645.00	13.00	3/11/1986 00:00		Original Hole - 6,843.0	

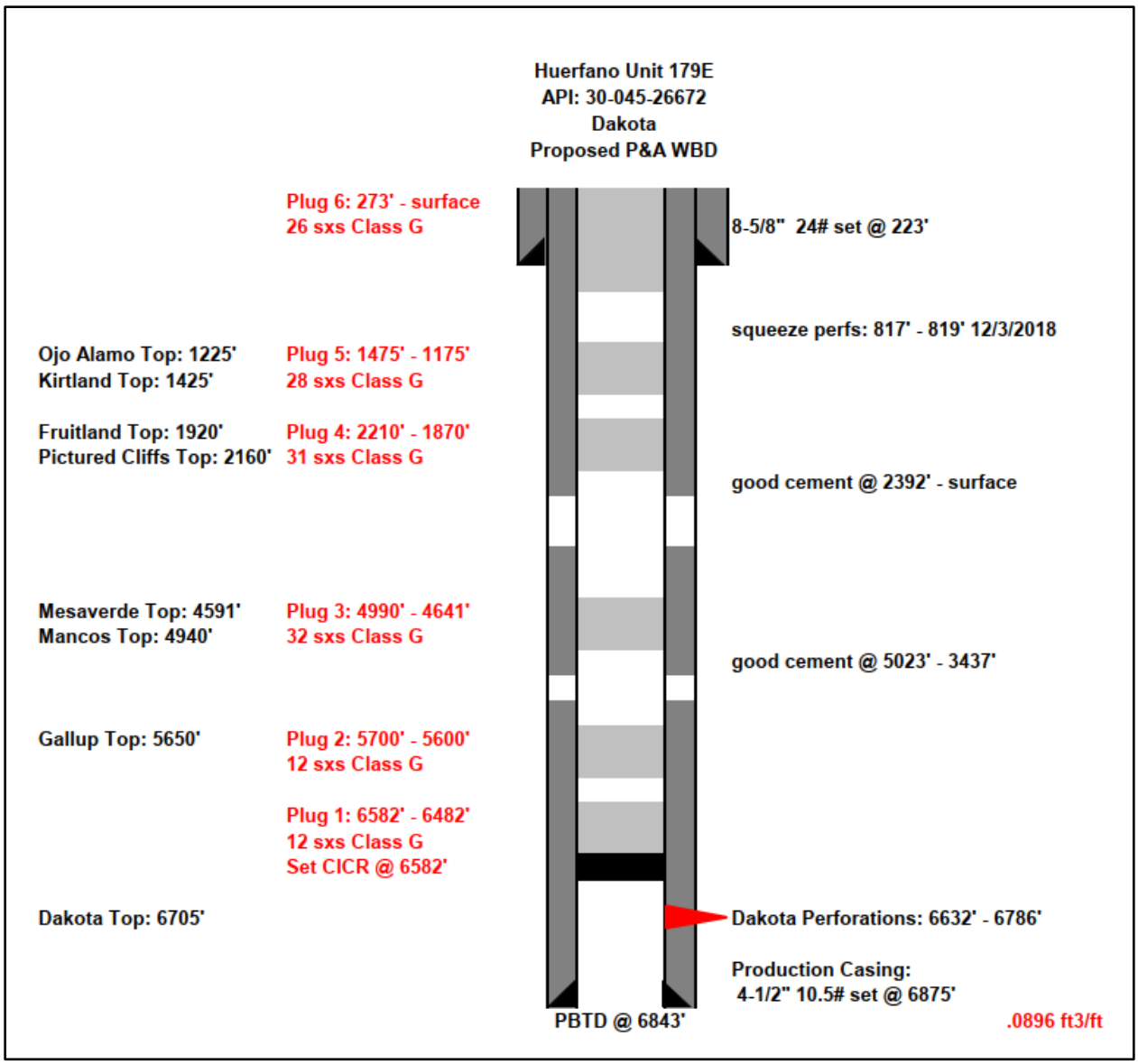
Most Recent Job

Job Category	Primary Job Type	Secondary Job Type	Actual Start Date	End Date
Expense Workover	BRADENHEAD REPAIR	BRADENHEAD REPAIR	11/28/2018	12/10/2018

TD: 6,875.0

VERTICAL, Original Hole, 4/30/2020 1:12:56 AM




Huerfano Unit 179E
API: 30-045-26672
Dakota
Proposed P&A WBD
Plug 6: 273' - surface
26 sxs Class G
8-5/8" 24# set @ 223'
squeeze perfs: 817' - 819' 12/3/2018
Ojo Alamo Top: 1225'
Kirtland Top: 1425'
Plug 5: 1475' - 1175'
28 sxs Class G
Fruitland Top: 1920'
Pictured Cliffs Top: 2160'
Plug 4: 2210' - 1870'
31 sxs Class G
good cement @ 2392' - surface
Mesaverde Top: 4591'
Mancos Top: 4940'
Plug 3: 4990' - 4641'
32 sxs Class G
good cement @ 5023' - 3437'
Gallup Top: 5650'
Plug 2: 5700' - 5600'
12 sxs Class G
Plug 1: 6582' - 6482'
12 sxs Class G
Set CICR @ 6582'
Dakota Top: 6705'
Dakota Perforations: 6632' - 6786'
Production Casing:
4-1/2" 10.5# set @ 6875'
PBTD @ 6843'
.0896 ft3/ft

Hilcorp Energy
P&A Final Reclamation Plan
Huerfano Unit 179E
API: 30-045-26672
T26N-R010W-Sec. 14-Unit K
LAT: 36.48555 LONG: -107.86775
Footage: 1660' FSL & 1830' FWL
San Juan County, NM

1. **PRE- RECLAMATION SITE INSPECTION**

A pre-reclamation site inspection was completed with Bob Switzer from the BLM and Eufracio Trujillo, Hilcorp Energy SJ South Construction Foreman on August 20, 2021.

2. **LOCATION RECLAMATION PROCEDURE**

1. Reclamation work will begin in summer/ fall time period.
2. Removal of all equipment, anchors, and flowlines.
3. Below Grade Tank will be sampled and tested. It will be closed after approval has been given.
4. All trash and debris will be removed within a 50' buffer outside of the location disturbance during reclamation.
5. Rip compacted soil and walk down entire well pad.
6. Remove berms.
7. Pull in soil from sides of location.
8. Remove cathodic on location and strip out wire to main lease road.
9. Remove all gravel from berms, pads, and meter run.

3. **ACCESS ROAD RECLAMATION PROCEDURE**

1. The main lease access will be blocked at the main lease road with a berm.
2. Reclaim road by ripping and broadcast seeding.
3. Insert small catch diversions down road to help with runoff towards the main road.

4. **SEEDING PROCEDURE**

1. A Pinion/Juniper seed mix mixed with some sage will be used for all reclaimed and disturbed areas of the well pad and lease road.
2. Drill seed will be done where applicable, and all other disturbed areas will be broadcast seeded and harrowed. Broadcast seeding will be applied at a double the rate of seed.
3. Timing of the seeding will be when the ground is not frozen or saturated.

5. **WEED MANAGEMENT**

1. No action is required at this time for weed management, no noxious weeds were identified during this onsite.

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 179E

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 3134 feet and Chacra formation top at 3084 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

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 #179E (API# 30-045-26672)		Location	1660 FSL	&	1830 FWL	
Lease No. NMSF-079617		Sec. 14	T26N		R10W	
Operator Hilcorp Energy Company		County	San Juan	State	New Mexico	
Total Depth 6875’	PBTD 6843’	Formation	Dakota			
Elevation (GL) 6632’		Elevation (KB)				

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					
Nacimiento Fm	Surface	1225			Fresh water sands
Ojo Alamo Ss	1225	1425			Aquifer (fresh water)
Kirtland Shale	1425	1920			
Fruitland Fm	1920	2160			Coal/Gas/Possible water
Pictured Cliffs Ss	2160	2290			Gas
Lewis Shale	2290	3084			
Chacra (La Ventana)	3084	3134			
Cliff House Ss	3134	3224			Water/Possible gas
Menefee Fm	3224	4752			Coal/Ss/Water/Possible O&G
Point Lookout Ss	4752	4940			Probable water/Possible O&G
Mancos Shale	4940	5650			
Gallup	5650	6545			O&G/Water
Greenhorn	6545	6599			
Graneros Shale	6599	6705			
Dakota Ss	6705	PBTD			O&G/Water

Remarks:
P & A

- No well log available for the subject well, Reference Well #1 was used to estimate formation tops. 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 @ 3134’ and Chacra formation top @ 3084’. Recommend one plug to cover both.
- The plugs proposed in the P&A procedure, along with recommendations to add the plug described above, would adequately protect any freshwater sands in this well bore.
- Dakota perforations @ 6632’ – 6786’.

Reference Well:
1) **Formation Tops**
Hilcorp Energy Company
Huerfano Unit #179
1750’ FNL, 1650’ FWL
Sec. 14, T26N, R10W
GL 6659’ KB 6671’

Prepared by: *Chris Wenman*

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 49014

COMMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 49014
	Action Type: [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
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Phone:(575) 748-1283 Fax:(575) 748-9720
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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: 49014
	Action Type: [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