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

Sundry Print Report

10/15/2021

Well Name: HARGRAVE

Well Location: T27N / R10W / SEC 4 / NWNW / 36.608871 / -107.906479

County or Parish/State: SAN JUAN / NM

Well Number: 4

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF077382

Unit or CA Name:

Unit or CA Number:

US Well Number: 3004520333

Well Status: Gas Well Shut In

Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2635193

Type of Submission: Notice of Intent

Type of Action: Plug and Abandonment

Date Sundry Submitted: 09/21/2021

Time Sundry Submitted: 08:59

Date proposed operation will begin: 10/03/2021

Procedure Description: Hilcorp Energy Company requests permission to P&A the subject well per the attached procedure, current and proposed wellbore schematics. The pre-disturbance site visit was held on 9/20/2021 with Bob Switzer from 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___Hargrave_4_20210921085909.pdf

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Lease Number: NMSF077382	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3004520333	**Well Status:** Gas Well Shut In	**Operator:** HILCORP ENERGY COMPANY

Conditions of Approval

Additional Reviews

General_Requirement_PxA_20211015074802.pdf

2635193_NOIA_4_3004520333_KR_10152021_20211015074715.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:** SEP 21, 2021 08:59 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:** 10/15/2021

Signature: Kenneth Rennick

Plug and Abandonment - NOI

Hargrave 4

API # - 3004520333

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. NU relief line and blow down well. Kill well with water as necessary. Ensure well is dead or on a vacuum.
4. **Plug #1, 2000'-1750' (Fruitland Top: 1790', Pictured Cliffs Top: 2034')** RU WL and RIH GR to 2000'. POOH and RIH CIBP, set at 2000'. POOH WL and pick up cement bailer. RIH and spot 50' of cement on CIBP.
5. PU strip gun and RIH to 930', perforate squeeze holes and drop guns.
6. **Plug #2, 980' - 880' (Kirtland Top: 1129' Ojo Alamo Top: 930') and Plug #3, 175' - Surface (Surface Shoe: 139')** Establish circulation to bradenhead with water. Circulate cement to bradenhead, minimum of 15 bbl. of cement must be pumped.

7. ND BOP and cut off wellhead below surface casing flange per regulation. Top off w/cement if needed. Install P&A marker with cement to comply with regulations. RD, MOL and cut off anchors. Restore location.

Hilcorp Energy Company

Schematic - Current

Well Name: HARGRAVE #4

API / UWI	Surface Legal Location	Field Name	License No.	State/Province	Well Configuration Type
3004520333	004-027N-010W-D	FULCHER KUTZ PC (GAS		NEW MEXICO	

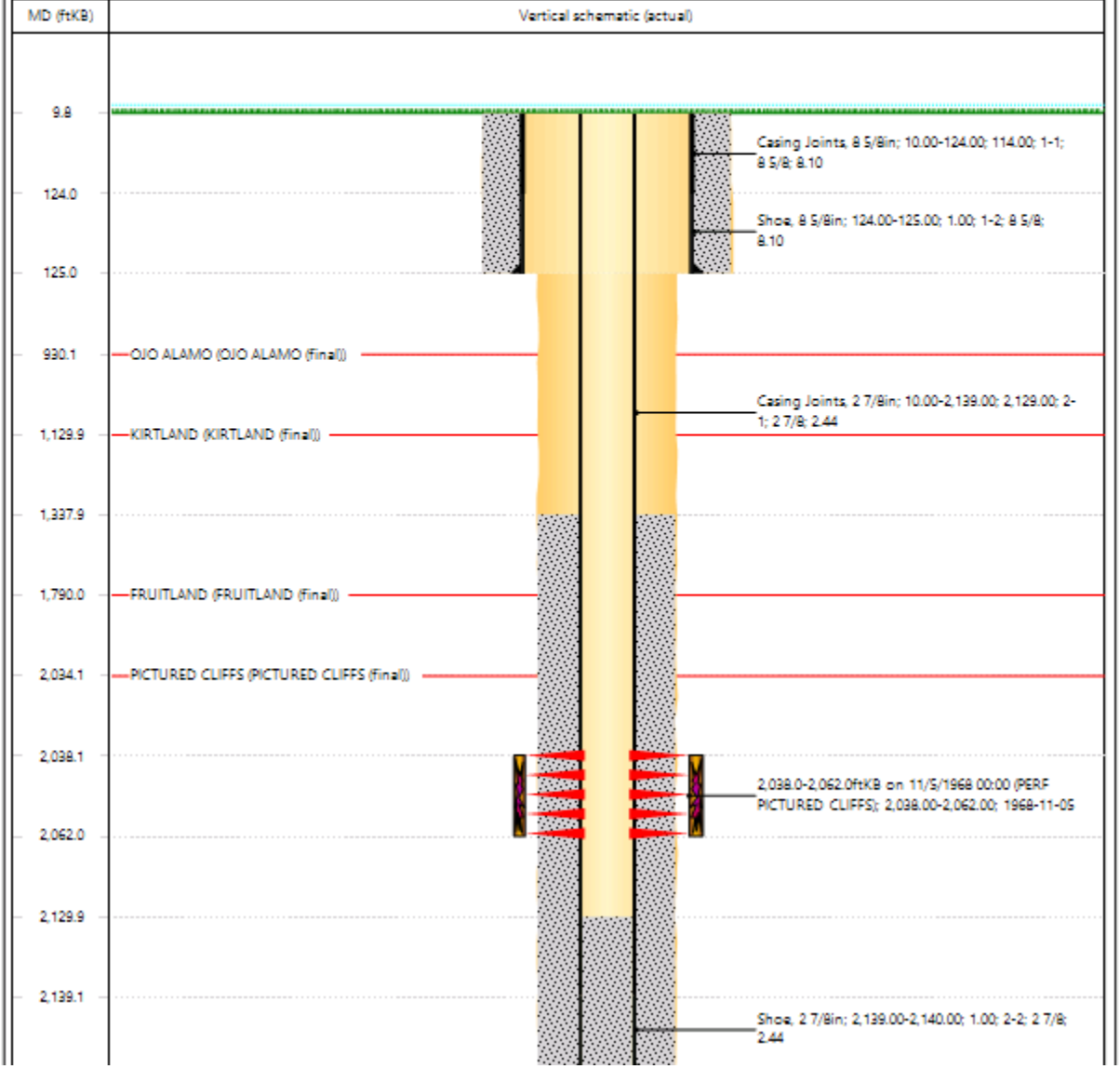
Original KB/RT Elevation (ft)	KB-Ground Distance (ft)	Original Spud Date	Rig Release Date	PBTD (All) (ftKB)	Total Depth All (TVD) (ftKB)
5,112.00	10.00	10/3/1968 00:00	9/20/1999 16:00	Original Hole - 2,130.0	

Most Recent Job

Job Category	Primary Job Type	Secondary Job Type	Actual Start Date	End Date
Expense Workover	OTHER	CASING CLEANOUT	7/1/2021	7/1/2021

TD: 2,140.0

Original Hole



Hilcorp Energy Company

Schematic - Proposed

Well Name: HARGRAVE #4

API / UWI	Surface Legal Location	Field Name	License No.	State/Province	Well Configuration Type
3004520333	004-027N-010W-D	FULCHER KUTZ PC (GAS		NEW MEXICO	

Original KB/RT Elevation (ft)	KB-Ground Distance (ft)	Original Spud Date	Rig Release Date	PBTD (All) (ftKB)	Total Depth All (TVD) (ftKB)
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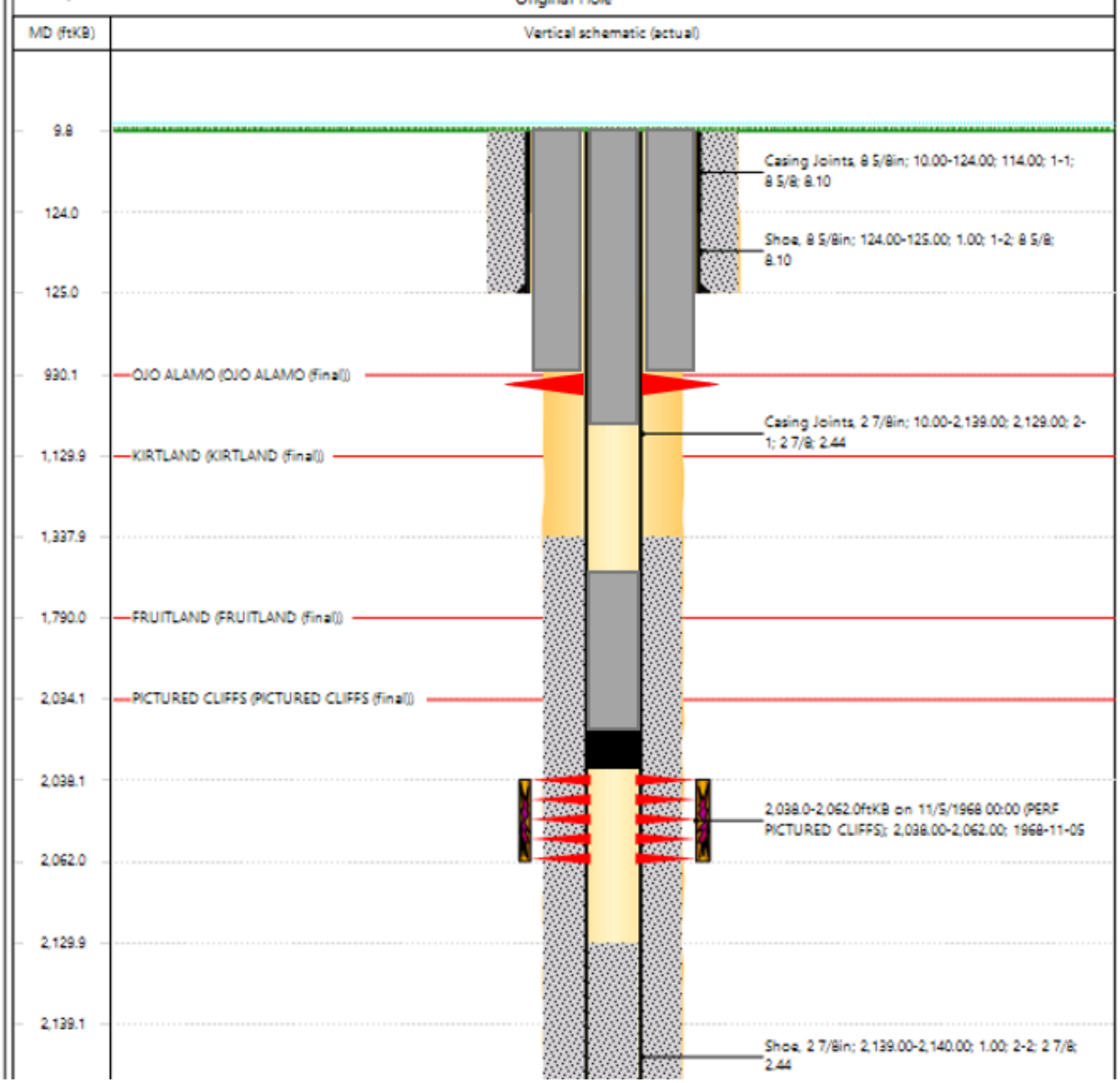

Hilcorp Energy
P&A Final Reclamation Plan
Hargrave 4
API: 30-045-20333
T27N-R010W-Sec. 4-Unit D
LAT: 36.60887 LONG: -107.90648 NAD 27
Footage: 800' FNL & 800' FWL
San Juan County, NM

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 September 20, 2021.

2. LOCATION RECLAMATION PROCEDURE

   1. Reclamation work will begin in summer/ fall time period.
   2. Removal of all equipment, anchors, compressor shed, and flowlines.
   3. All trash and debris will be removed within a 50' buffer outside of the location disturbance during reclamation.
   4. Rip compacted soil and walk down disturbed portion of well pad.
   5. Location is close to grade so no recontouring is required.
   6. Remove all gravel from berms, pads, and meter run.
   7. Harvest needs to remove line from location to dog leg.

3. ACCESS ROAD RECLAMATION PROCEDURE

   1. The well access road will be blocked at the intersection to the R P Hargrave L 1E with a berm.
   2. Reclaim road by ripping and broadcast seeding.
   3. Insert small water bars for erosion control down road to help with runoff.

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 noxious weeds were identified during this onsite.

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.

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: Hargrave 4

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) Plug 1: Confirm the length of the plug. The procedure has noted that only 50 feet of cement will be capped at the CIBP (located at 2000 feet depth). With the BLM pick of the Fruitland formation top at 1764 feet depth, adjust the proposed plug to cover the depth interval from 2000 to 1714 feet
   b) Plug 2: Adjust plug to cover the entire Ojo Alomo formation 50 feet below and above. The BLM picks for the Ojo Alamo are 1135 (bottom) and 930 (top) feet depth. Plug should be designed for both inside and outside of the casing.
   c) Plug 3: Confirm the location of the surface casing shoe. The procedure has 139 feet depth, while the schematic and other wellbore data has the shoe has 125 feet. If indeed 125 feet, no modifications. If 139 feet, the plug will need to be adjusted to be 50 feet below surface casing depth.

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 10/15/2021

BLM - FFO - Geologic Report

Date Completed 10/15/2021

Well No.	Hargrave	# 4	Surf. Loc.	800	FNL	800	FWL
			Sec.	4	T27N		R10W
Lease No.	NMSF077382						
Operator	Hilcorp Energy Co.		County	San Juan		State	New Mexico
TVD	2140	PBTD 2140	Formation	Pictured Cliffs			
Elevation	GL	6102	Elevation	Est. KB	6112		

Geologic Formations	Est. tops	Subsea Elev.	Remarks
Nacimiento Fm.	Surface	6102	Surface /fresh water sands
Ojo Alamo Ss	930	5182	Fresh water aquifer
Kirtland Fm.	1170	4942	
Fruitland Fm.	1764	4348	Coal/gas/possible water
Pictured Cliffs	2010	4102	Possible water

Remarks:

-Vertical wellbore, all formation depths are TVD

-The Cliff House should be used as the top of the Mesa Verde for plugging purposes.

-Plug 1: The diagram and the procedure both describe Plug 1 as a 250' long plug-1130'-930' with a CIBP at its base. However, elsewhere in the procedure only 50' of cement is placed on the CIBP. The procedure needs to be amended to fix this discrepancy. Also, BLM Fruitland formation top is 1764', CIBP placement is acceptable. Plug should be 2000'-1714'

-Cover the entire Ojo Alamo with Plug 2, both inside and out. BLM Ojo Alamo formation top and bottom at 930' and 1135', respectively.

-The surface shoe depth is listed as 125' on the diagram and 139' in the procedure. The procedure or the diagram needs to be amended to fix this discrepancy and the surface plug shooting depth amended in the procedure, if necessary.

Reference Wells:

1) Fm Tops
Hilcorp Energy Co.
Same

Prepared by: Walter Gage

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 56232

COMMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 56232
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 10/18/2021	10/18/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 56232

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 56232
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	10/18/2021
kpickford	CBL Required	10/18/2021
kpickford	Extend plug #1 2000-1714. Fruitland top @ 1764'.	10/18/2021
kpickford	Extend Plug #2 1220-880, inside/outside. Kirtland Top @ 1170, Ojo Alamo top @ 930'.	10/18/2021
kpickford	Extend Plug #2 139-0, inside/outside. Casing shoe @ 139'.	10/18/2021