

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date: 5/13/2019

Well information:

30-045-21301 REESE MESA #004

HILCORP ENERGY COMPANY

Application Type:

☒ P&A ☐ Drilling/Casing Change ☐ Location Change

☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84; Submit Gas Capture Plan form prior to spudding or initiating recompletion operations)

☐ Other:

Conditions of Approval:

- Notify NMOCD 24hrs prior to beginning operations.
- Extend the Mesaverde Plug 6080'-5892'. OCD top:6030'
- Extend the Chacra Plug 4841'-4720'. BLM top: 4791' OCD top: 4770'
- Extend Pictured Cliffs Plug 3933'-3790'. BLM top: 3883' OCD top: 3840'
- Extend Fruitland Plug 3595'-3469'. BLM top: 3513' OCD top: 3545'
- Extend Kirtland/Ojo Alamo plug 3495'-2205'. BLM Kirtland top:2428' OCD Kirtland top: 2445'. BLM Ojo top: 2368' OCD Ojo top: 2255'

NMOCD Approved by Signature

9/25/19

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

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

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		7. If Unit of CA/Agreement, Name and/or No.
2. Name of Operator Hilcorp Energy Company		8. Well Name and No. Reese Mesa 4
3a. Address 382 Road 3100 Aztec, NM 87410	3b. Phone No. (include area code) 505-599-3400	9. API Well No. 30-045-21301
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface Unit K (NESW) 2500' FSL & 1820' FWL, Sec. 11, T32N, R08W		10. Field and Pool or Exploratory Area Blanco Mesaverde / Basin Dakota
		11. Country or Parish, State San Juan New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

Hilcorp Energy requests permission to P&A the subject well per the attached procedure, current and proposed wellbore schematics. A close loop system will be utilized. The pre-disturbance site visit was held on May 3, 2019 with Bob Switzer. The reclamation plan is attached.

NMOC
AUG 02 2019
DISTRICT III

14. I hereby certify that the foregoing is true and correct. Name (Printed Typed) Priscilla Shorty		Title Operations/Regulatory Technician - Sr.
Signature <i>Priscilla Shorty</i>		Date 5/13/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>[Signature]</i>	Petroleum Engineer Title	7-30-2019 Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office FFO

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.

(Instruction on page 2)

NMOC *fy*

PLUG AND ABANDONMENT PROCEDURE

4/18/19

Reese Mesa #4

Mesaverde/Dakota

2500' FSL and 1820' FWL, Section 11, T32N, R8W
San Juan County, New Mexico / API 30-045-21301

Note: All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class G, mixed at 15.8 ppg with a 1.15 cf/sx yield.

1. Install and test location rig anchors. Comply with all NMOCD, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. Kill well with water as necessary and at least pump tubing capacity of water down the tubing. ND wellhead and NU BOP. Function test BOP.
2. Rods: Yes ☐ , No ☒ , Unknown ☐ .
Tubing: Yes ☐ , No ☒ , Unknown ☐ , Size ☐ , Length ☐ .
Packer: Yes ☐ , No ☒ , Unknown ☐ , Type ☐ .

NOTE: Will need to pick up tubing workstring.

Plug #3 through #7 will use 100% cement excess due to casing issues.

PU tubing workstring. RIH. Release packer and let well equalize. TOH and LD packer.

Note: This well will not pressure test due to casing issues and water/gas flow.

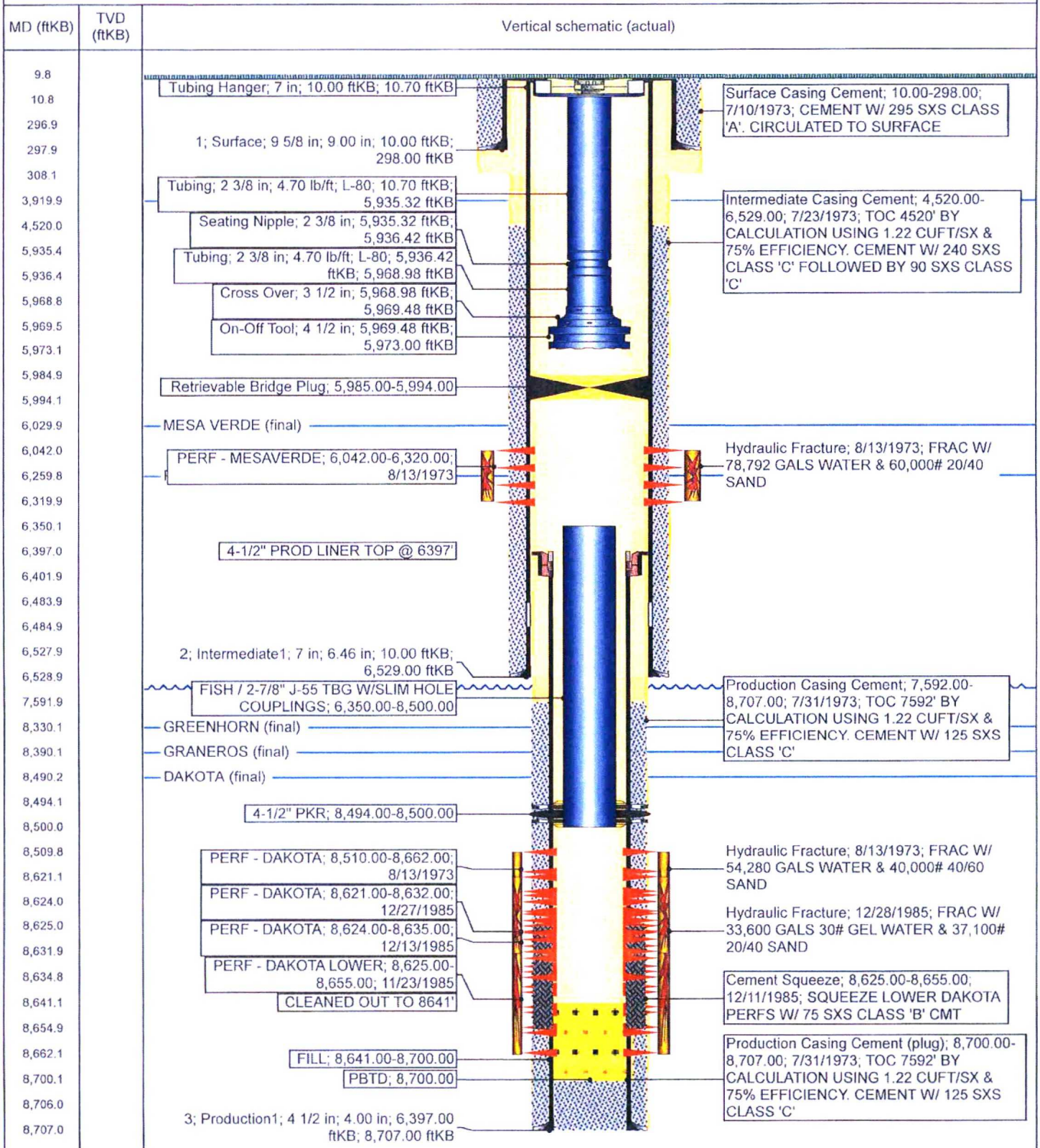
3. **Plug #1 (Dakota interval, Gallup and Mancos tops, Fish in hole, 7" casing shoe and 4.5" liner top, 8652' - 6305'):** RU A-Plus WL. Round trip 7" gauge ring and RIH to 6340' or as deep as possible. Set 7" wireline CR at 6340'. RIH with tubing workstring and sting into CR; establish injection rate. Mix and pump 85 sxs Class G cement, squeeze 25 sxs through tubing to isolate DK interval and Gallup, Mancos, Fish, casing shoe and liner top and leave 61 sxs inside 2-7/8" fish. TOH with tubing.
Plug #1a RIH with Dump Bailer and spot 7 sxs cement (35') above CR. TOH with WL.
4. **Plug #2 (Mesaverde top, 5992' - 5892'):** RIH and set 7" CR at 5992'. Spot 40 sxs Class G cement above CR. PUH.
5. **Plug #3 (Chacra top, 5315' - 5215'):** Spot 40 sxs Class G cement above CR. TOH.
6. **Plug #4 (Pictured Cliffs top, 3970' - 3870'):** Perforate squeeze holes at 3970'. Establish injection rate. RIH and set 7" CR at 3920'. Sting into CR and establish injection rate. Mix and pump 67sxs Class G cement; squeeze 27 sxs outside 7" casing and leave 40 sxs inside casing to isolate PC interval. TOH.

7. **Plug #5 (Fruitland top, 3680' – 3580'):** Perforate squeeze holes at 3680'. Establish injection rate. RIH and set 7" CR at 3630'. Sting into CR and establish injection rate. Mix and pump 67sxs Class G cement; squeeze 27 sxs outside 7" casing and leave 40 sxs inside casing to isolate Fruitland interval. TOH.
8. **NOTE:** IF water flow and gas flow has not subsided prior to Plug #6 then contact Hilcorp engineer for discussion with NMOCD. If water has stopped continue with Plug #6.
9. **Plug #6 (Kirtland top, 2632' – 2582'):** Perforate squeeze holes at 2632'. Establish injection rate. RIH and set 7" CR at 2582'. Sting into CR and establish injection rate. Mix and pump 67sxs Class G cement; squeeze 27 sxs outside 7" casing and leave 40 sxs inside casing to isolate Kirtland interval. TOH.
10. **Plug #7 (Ojo Alamo top, 2495' – 2395'):** Perforate squeeze holes at 968'. Establish injection rate. RIH and set 7" CR at 918'. Sting into CR and establish injection rate. Mix and pump 67sxs Class G cement; squeeze 27 sxs outside 7" casing and leave 40 sxs inside casing to isolate Ojo Alamo interval. TOH.
11. **Plug #8 (Nacimiento top, 968' – 868'):** Perforate squeeze holes at 2495'. Establish injection rate. RIH and set 7" CR at 2455'. Sting into CR and establish injection rate. Mix and pump 67sxs Class G cement; squeeze 27 sxs outside 7" casing and leave 40 sxs inside casing to isolate Ojo Alamo interval. TOH.
12. **Plug #9 (9-5/8" casing shoe, 348' – 0'):** Perforate squeeze holes at 348'. Establish circulation out bradenhead with water and circulate the BH annulus clean. Mix approximately 1127 sxs Class G cement and pump down the 7" casing to circulate good cement out bradenhead. Shut in well and WOC.
13. **ND cementing valves and cut off wellhead.** Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and cut off anchors. Restore location per BLM stipulations

Well Name: REESE MESA #4

API / UWI 3004521301	Surface Legal Location 011-032N-008W-K	Field Name BASIN DAKOTA (PRORATED GAS)	Route 0501	State/Province NEW MEXICO	Well Configuration Type
Ground Elevation (ft) 7,048.00	Original KB/RT Elevation (ft) 7,058.00	KB-Ground Distance (ft) 10.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Original Hole, 5/13/2019 9:12:15 AM



Reese Mesa #4 Proposed P&A

Mesaverde / Dakota

2500' FSL, 1820' FWL, Section 11, T-32-N, R-8-W

San Juan County, NM, API #30-045-21301

Today's Date: 4/17/19

Spud: 7/10/73

Completed: 8/13/73

Elevation: 7048' GI

12-1/4" hole

Nacimiento @ 918'

Ojo Alamo @ 2455'

Casing Issues 1704' - 2486' and 1084' - 1313'

Kirtland @ 2582'

Fruitland @ 3630'

Pictured Cliffs @ 3920'

Chacra @ 5265'

Mesaverde @ 6029'

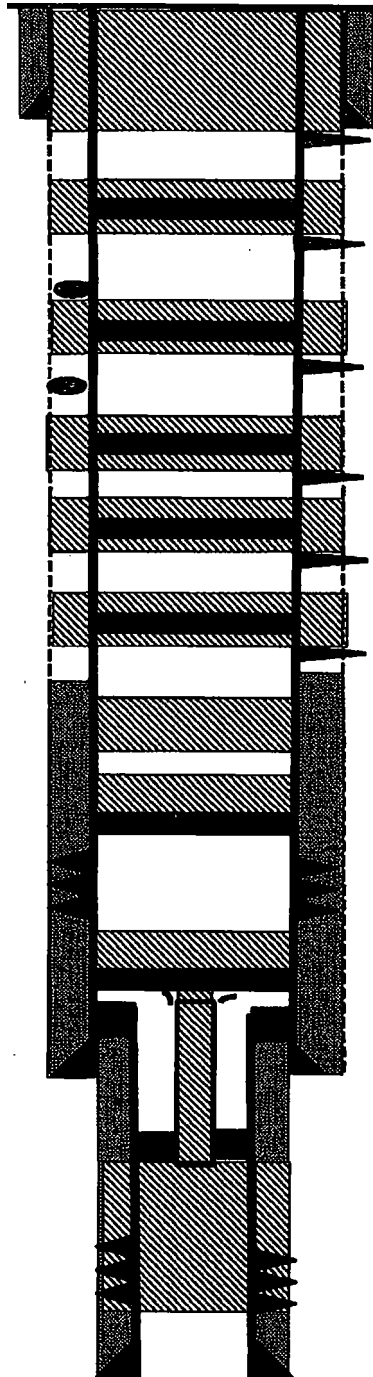
FISH: 2-7/8" tbg; couplings and packer from 6350' to 8600'. Tubing cut @ 6360' (2019)

Mancos @ 6503'

Gallup @ 7458'

Packer @ 8495'

Dakota @ 8330'



TD 8707'

Plug #9: 348' - 0'
Class B cement, 117 sxs

9-5/8" , 32.3# Casing set @ 298'
Cement with 295 sxs, circulated

Perforate @ 348'

Set CR @ 918'

Perforate @ 968'

Plug #8: 968' - 868'
Class B cement, 57 sxs
30 inside and 27 outside

CR @ 2455'

Perforate @ 2495'

Plug #7: 2495' - 2395'
Class B cement, 67 sxs
40 inside and 27 outside
(100% excess due to casing issues)

CR @ 2582'

Perforate @ 2632'

Plug #6: 2632' - 2532'
Class B cement, 67 sxs
40 inside and 27 outside
(100% excess due to casing issues)

CR @ 3630'

Perforate @ 3680'

Plug #5: 3680' - 3580'
Class B cement, 67 sxs
40 inside and 27 outside
(100% excess due to casing issues)

CR @ 3920'

Perforate @ 3970'

Plug #4: 3970' - 3870'
Class B cement, 67 sxs
40 inside and 27 outside
(100% excess due to casing issues)

TOC 4520' (Calc)

Plug #3: 5315' - 5215'
Class G cement, 40 sxs
(100% excess due to casing issues)

Set CR @ 5992'

Mesaverde Perforations: (100% excess due to casing issues)
6042' - 6320'

Plug #2: 5992' - 5892'
Class G cement, 40 sxs

Plug #1A: 6340' - 6305'
Class G cement, Dump ball
7 sxs cement above CR (35')

Wireline Set 7" CR @ 6340'

4.5" TOL @ 6397'

Plug #1: 6305' - 8652'
Class G cement, 85 sxs:
61 Inside tubing and 25
(Including 100%) to isolate
DK intervals and
Gallup/Mancos top.

Dakota Perforations:
8510' - 8655'
(Note: DK perms 8652' - 8655'
Sq'd with 75 sxs (1985))

4.5" liner set @ 8707'
Cement with 250 sxs

Hilcorp Energy
P&A Final Reclamation Plan
Reese Mesa #4
API: 30-045-21301
K – Sec.11-T032N-R008W
Lat: 36.99754, Long: -107.6449
Footage: 2500' FSL & 1820' FWL
San Juan County, NM

1. PRE-RECLAMATION SITE INSPECTION

- 1.1) A pre-reclamation site inspection was done by Bob Switzer with the BLM and Chad Perkins construction Foreman for Hilcorp Energy on May 3, 2019.

2. LOCATION RECLAMATION PROCEDURE

- 2.1) Reclamation work will begin in the spring/summer of 2019.
2.2) Remove all equipment and strip all piping.
2.3) All trash and debris will be removed within 50' buffer outside of the location disturbance during reclamation.
2.4) Rip compacted soil and walk down entire well pad.
2.5) Pull soil from fill slope and push to cut slope, re-contour into shallow swales or silt traps to create rolling terrain that matches natural drainage features to limit erosion.

3. ACCESS ROAD RECLAMATION PROCEDURE:

- 3.1) The main lease access road is approximately one tenth of a mile long and has zero culverts that need to be removed.
3.2) All trash and debris will be removed within 50' buffer outside of the road disturbance during reclamation.
3.3) Re-contour lease road with shallow swells, berms, or silt traps as needed to match natural drainage features.

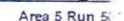
4. SEEDING PROCEDURE

- 4.1) A Pinion/Juniper seed mix will be used for all reclaimed and disturbed areas of the location and lease road.
4.2) Drill seeding 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.
4.3) Timing of the seeding will take place when the ground is not frozen or saturated.

5. WEED MANAGEMENT

- 5.1) No action is required at this time for weed management, no noxious weeds were identified during the 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

Well: Hilcorp Reese Mesa #4

API: 30-045-21301

Re: Permanent Abandonment

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. CBL required after setting CR@5992' from 5970' to surface to confirm TOC. Submit electronic copy of the log for verification to the following addresses: jkillins@blm.gov and Brandon.Powell@state.nm.us . Based on CBL results inside/outside plugs and volumes will be adjusted accordingly. Please review the General Requirements document to ensure all volumes meet required excess inside and outside casing.
4. The following modifications to the plugging program:
 - a. Plug 3: BLM picks top of Chacra at 4791'. Required top of plug 4741'
 - b. Plug 4: BLM picks top of Pictured Cliffs at 3883'. Perforate at 3933'. Set CR at 3883'. Required top of plug 3833'.
 - c. Plug 5: BLM picks top of Fruitland at 3513'. Perforate at 3563'. Set CR at 3513'. Required top of plug 3463'.
 - d. Plug 6: BLM picks top of Kirtland at 2428'. Perforate at 2478'. Set CR at 2428'. Required top of plug 2378'.
 - e. Plug 7: BLM picks top of Ojo Alamo at 2368'. Perforate at 2418'. Set CR at 2368'. Required top of plug 2318'.
 - f. Plug 8: BLM picks top of Nacimiento at 1322'. Perforate at 1372'. Set CR at 1322'. Required top of plug 1272'.

**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 H₂S.

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.