

Well Name: CANYON LARGO UNIT	Well Location: T25N / R6W / SEC 6 / SWNW / 36.431352 / -107.513163	County or Parish/State: RIO ARRIBA / NM
Well Number: 460	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078883	Unit or CA Name:	Unit or CA Number:
US Well Number: 3003927747	Operator: HILCORP ENERGY COMPANY	

Notice of Intent

Sundry ID: 2788139

Type of Submission: Notice of Intent	Type of Action: Plug and Abandonment
Date Sundry Submitted: 05/02/2024	Time Sundry Submitted: 12:19
Date proposed operation will begin: 05/23/2024	

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 05/1/2024 with Roger Herrera / 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

2024_04_18__CANYON_LARGO_UNIT_460__P_A_NOI_20240502121900.pdf

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Operator: HILCORP ENERGY COMPANY

Conditions of Approval

Additional

Canyon_Largo_Unit_460_Geo_Rpt_20240517093301.pdf

Authorized

General_Requirement_PxA_20240520085924.pdf

2788139_NOIA_460_3003627747_KR_05202024_20240520085904.pdf

Operator

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

Operator Electronic Signature: TAMMY JONES

Signed on: MAY 02, 2024 12:19 PM

Name: HILCORP ENERGY COMPANY

Title: Regulatory Compliance Specialist

Street Address: 382 ROAD 3100

City: AZTEC State: NM

Phone: (505) 324-5185

Email address: TAJONES@HILCORP.COM

Field

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: 05/20/2024

Signature: Kenneth Rennick



HILCORP ENERGY COMPANY
CANYON LARGO UNIT 460
P&A NOI

API #: 3003927747

JOB PROCEDURES

1. Contact NMOCD and BLM (where applicable) 24 hours prior to MIRU.
2. Hold pre-job safety meeting. Verify cathodic is off. Comply with all NMOCD, BLM, and HEC safety and environmental regulations.
3. MIRU service rig and associated equipment; NU and test BOP.
4. Set a 4-1/2" CIBP or CICR at +/- 7,192' to isolate the DK Perfs.
5. Load the well as needed. Pressure test the casing above the plug to 560 psig.
6. *NOTE: The following plug (Plug #1) is designed based on the CBL run on 5/9/2005.
7. **PLUG #1: 46sx of Class G Cement (15.8 PPG, 1.15 yield); DK Perfs @ 7,242' | DK Top @ 7,184' | GRN Top @ 7,132' | GAL Top @ 6,695':**
 Pump a 46 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 6,595' & est. BOC @ +/- 7,192'). *Note cement plug lengths & volumes account for excess.
8. TOOH w/ work string.
9. RU Wireline. Run CBL. Record Top of Cement. All subsequent plugs below are subject to change pending CBL results.
10. Load the well as needed. Pressure test the casing above the plug to 560 psig. If pressure test passes, no need to WOC or Tag on Subsequent Plugs.
11. TIH w/ work string to +/- 5,429'.
12. **PLUG #2: 12sx of Class G Cement (15.8 PPG, 1.15 yield); MCS Top @ 5,379':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 5,279' & est. BOC @ +/- 5,429'). *Note cement plug lengths & volumes account for excess.
13. POOH w/ work string to +/- 4,529'.
14. **PLUG #3: 12sx of Class G Cement (15.8 PPG, 1.15 yield); MV Top @ 4,479':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 4,379' & est. BOC @ +/- 4,529'). *Note cement plug lengths & volumes account for excess.
15. POOH w/ work string to +/- 3,777'.
16. **PLUG #4: 12sx of Class G Cement (15.8 PPG, 1.15 yield); CHC Top @ 3,727':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 3,627' & est. BOC @ +/- 3,777'). *Note cement plug lengths & volumes account for excess.
17. POOH w/ work string to +/- 2,922'.
18. **PLUG #5: 12sx of Class G Cement (15.8 PPG, 1.15 yield); PC Top @ 2,872':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 2,772' & est. BOC @ +/- 2,922'). *Note cement plug lengths & volumes account for excess.
19. POOH w/ work string to +/- 2,649'.
20. **PLUG #6: 12sx of Class G Cement (15.8 PPG, 1.15 yield); FRD Top @ 2,599':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 2,499' & est. BOC @ +/- 2,649'). *Note cement plug lengths & volumes account for excess.
21. POOH w/ work string to +/- 2,404'.
22. **PLUG #7: 23sx of Class G Cement (15.8 PPG, 1.15 yield); KRD Top @ 2,354' | OJO Top @ 2,205':**
 Pump a 23 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 2,105' & est. BOC @ +/- 2,404'). *Note cement plug lengths & volumes account for excess.
23. POOH w/ work string to +/- 1,045'.
24. **PLUG #8: 12sx of Class G Cement (15.8 PPG, 1.15 yield); NAC Top @ 995':**
 Pump a 12 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 895' & est. BOC @ +/- 1,045'). *Note cement plug lengths & volumes account for excess.
25. POOH w/ work string to +/- 412'.
26. **PLUG #9: 32sx of Class G Cement (15.8 PPG, 1.15 yield); Surf. Casing Shoe @ 362':**
 Pump a 32 sack balanced cement plug inside the 4-1/2" casing (est. TOC @ +/- 0' & est. BOC @ +/- 412').
27. ND BOP, cut off casing below casing flange. Top off cement as needed. Install a P&A marker with cement to comply with regulations. Rig down, move off location, cut off anchors, and restore location.



HILCORP ENERGY COMPANY
CANYON LARGO UNIT 460
P&A NOI

CANYON LARGO UNIT 460 - CURRENT WELLBORE SCHEMATIC

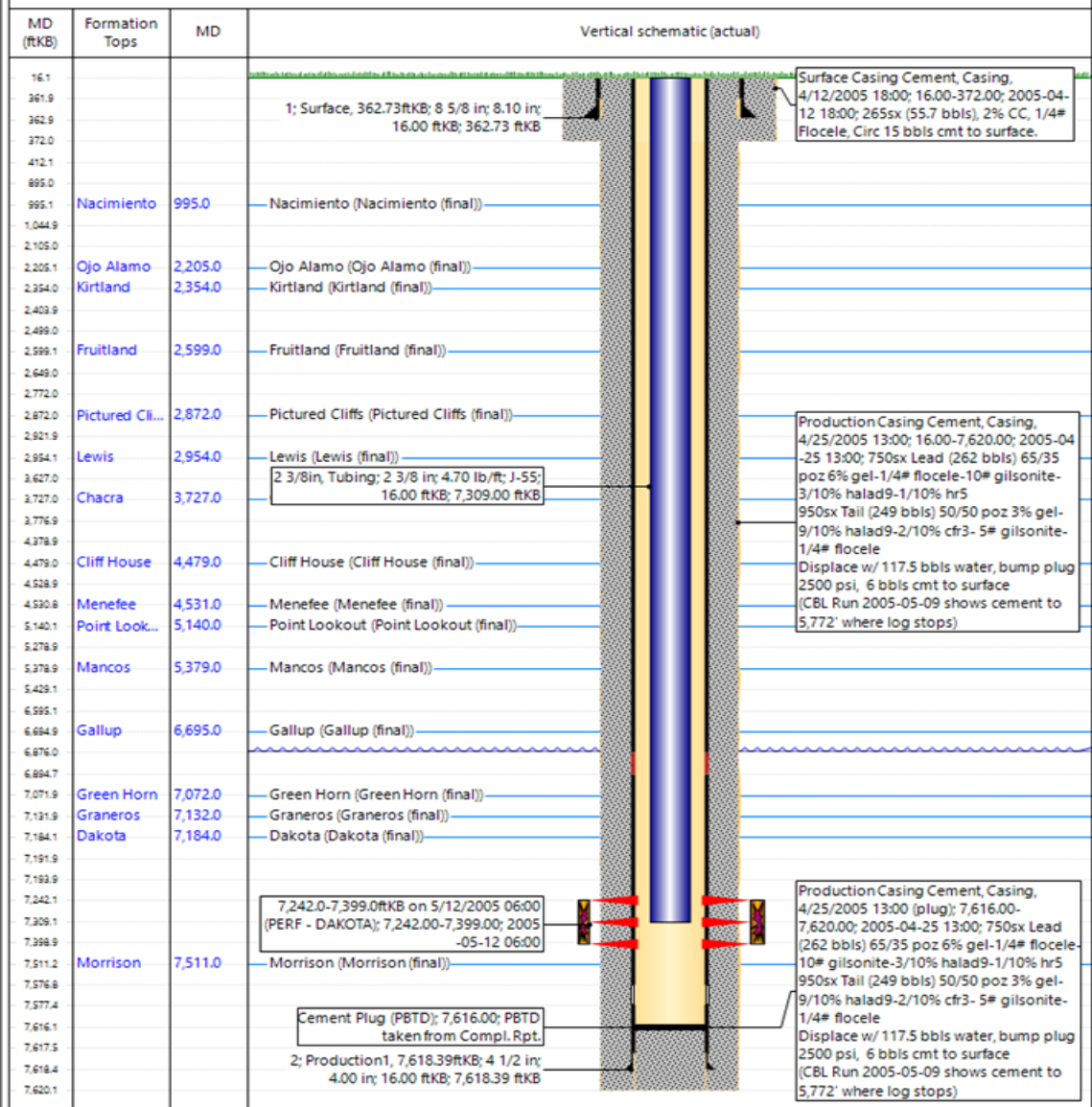


P&A WBD - Current Schematic

Well Name: CANYON LARGO UNIT #460

API / UWI 3003927747	Surface Legal Location E-6-25N-6W	Field Name	Route 0910	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,844.00	Original KB/RT Elevation (ft) 6,860.00	Tubing Hanger Elevation (ft)	KB to GL (ft) 16.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)

Original Hole [Vertical]



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HILCORP ENERGY COMPANY
CANYON LARGO UNIT 460
P&A NOI

CANYON LARGO UNIT 460 - PROPOSED WELLBORE SCHEMATIC

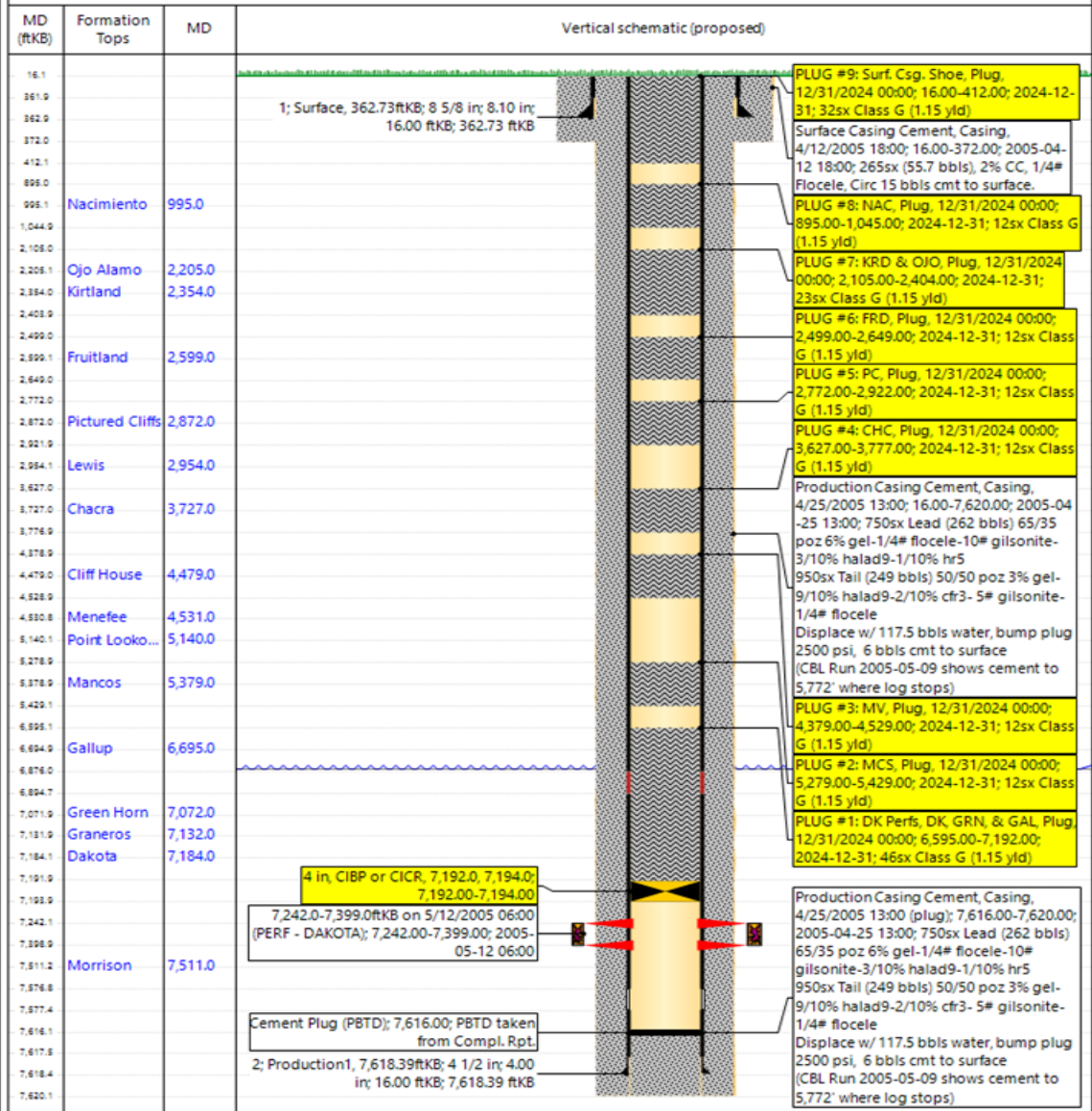


P&A WBD - Proposed Schematic

Well Name: CANYON LARGO UNIT #460

API / UWI 3003927747	Surface Legal Location E-6-25N-6W	Field Name	Route 0910	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,844.00	Original KBRT Elevation (ft) 6,860.00	Tubing Hanger Elevation (ft)	RKB to GL (ft) 16.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)

Original Hole [Vertical]



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Hilcorp Energy

Canyon Largo 460

36.43108, -107.51227

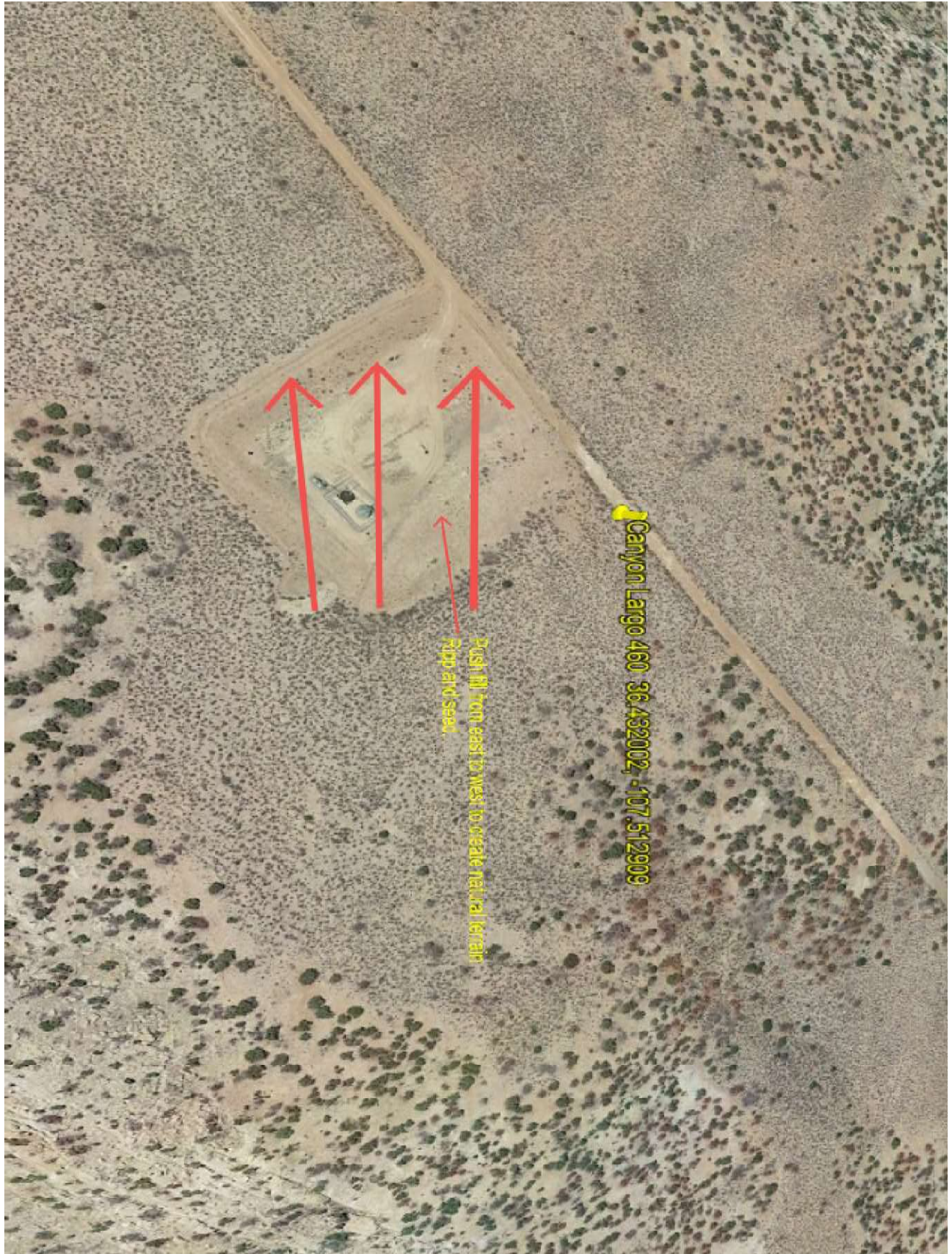
API-30-039-27747

25N-06W SEC 06

Final Reclamation Plan

Onsite Completed on 5/1/2024 with Roger Herrera and Bryan Hall

1. Pick up and remove all trash, metal, cable, and any foreign debris within 100' of location.
2. Remove anchors.
3. Strip equipment off facility.
4. Remove piping and cables.
5. Plug Cathodic well.
6. Push fill from east side of location to west corner.
7. Enterprise to remove meter run and piping 50' off location.
8. Reclaim road back to nearest well (Canyon Largo 455), approximately 4500'. Add rolling dips, or silt traps as necessary to control water. Pull edges of road back into road and Rip, as much as possible due to Enterprise PL on edge of road.
9. Build 3 strand Fence, with t-posts and t-Post Braces at the start of the road.
10. Rip compacted soil, leaving rough terrain.
11. Re-seed all disturbed areas. Drill where applicable at rate per acre defined by seed mix(6.5 acres), and broadcast seed and harrow, at double the rate, all other disturbed areas. BLM Special seed mix will be used.





**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), through the Automated Fluid Minerals Support System (AFMSS) 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 - FFO - Geologic Report

Well No.	Canyon Largo Unit	# 460	Surf. Loc.	1325	FNL	1315	FWL
Lease No.	NMSF078883		Sec	6		T25N	R6W
Operator	Hilcorp Energy Co.		County	Rio Arriba		State	New Mexico
TVD	7620	PBTD	7620	Formation	Blanco Mesa Verde		
Elevation	GL	6844	Elevation	Est. KB	6856	(Estimated)	

Date Completed 5/16/2024

Geologic Formations	Est. tops	Subsea Elev.	Remarks
San Jose Fm.	Surface		
Nacimiento Fm.	1159	5697	Surface /fresh water sands
Ojo Alamo Ss	1979	4877	Fresh water aquifer
Kirtland Fm.	2319	4537	
Fruitland Fm.	2579	4277	Coal/gas/possible water
Pictured Cliffs	2739	4117	Possible gas/water
Lewis Shale (Main)	2959	3897	Source rock
Huerfanito Bentonite	3219	3637	Reference bed
Chacra (lower)	3924	2932	Possible gas/water
Cliff House Ss	4412	2444	Possible gas/water
Menefee Fm.	4649	2207	Coal/water/possible gas
Point Lookout Fm.	5074	1782	Possible gas/water
Mancos Shale	5394	1462	Source rock
Gallup	6249	607	Oil & gas
Mancos Stringer	6419	437	Source rock
Juana Lopez	6499	357	
Mancos Stringer	6679	177	
Brdge Crk/Grnhn	6784	72	
Graneros Shale	7029	-173	
Dakota Ss	7142	-286	Possible gas/water
DK Perfs	7242	-386	
Morrison Fm.	7467	-611	Possible water

Remarks:

-Vertical wellbore, all formation depths are TVD from KB at the wellhead.

Modify the Plug 1 TOC to at least 6784' to cover the BLM geologist's pick for the Greenhorn top.

Modify the Plug 1 TOC to 6149', the Plug 2 BOC to 6299' or add a plug to protect the BLM geologist's pick for the Gallup interval.

Modify the Plug 3 BOC to 4462' and the TOC to 4312' to account for the BLM Geologist's pick for the Cliff House formation top.

Modify the Plug 4 BOC to 3974' and the TOC to 3824' to account for the BLM Geologist's pick for the Lower Chacra top.

Modify the Plug 5 BOC to 2789' and the TOC to 2639' to account for the BLM Geologist's pick for the Pictured Cliffs formation top.

Modify the Plug 6 BOC to 2629' and the TOC to 2479' to account for the BLM Geologist's pick for the Fruitland formation top.

Modify the Plug 7 BOC to 2369' and the TOC to 1879' to account for the BLM Geologist's pick for the Kirtland and Ojo Alamo formation tops.

Modify the Plug 8 BOC to 1209' and the TOC to 1059' to account for the BLM Geologist's pick for the Nacimiento formation top.

Reference Well:

Hilcorp Energy Co.
Canyon Largo Unit No. 455
1285' FSL, 1300' FEL
1P-25N-7W
GL= 6881', KB= 6897'

Prepared by: Walter Gage

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

AFMSS 2 Sundry ID 2788139

Attachment to notice of Intention to Abandon

Well: Canyon Largo Unit 460

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. The following modifications to your plugging program are to be made:
 - a. Modify the Plug 1 TOC to at least 6784' to cover the BLM geologist's pick for the Greenhorn top.
 - b. Modify the Plug 1 TOC to 6149', the Plug 2 BOC to 6299' or add a plug to protect the BLM geologist's pick for the Gallup interval.
 - c. Modify the Plug 3 BOC to 4462' and the TOC to 4312' to account for the BLM Geologist's pick for the Cliff House formation top.
 - d. Modify the Plug 4 BOC to 3974' and the TOC to 3824' to account for the BLM Geologist's pick for the Lower Chacra top.
 - e. Modify the Plug 5 BOC to 2789' and the TOC to 2639' to account for the BLM Geologist's pick for the Pictured Cliffs formation top.
 - f. Modify the Plug 6 BOC to 2629' and the TOC to 2479' to account for the BLM Geologist's pick for the Fruitland top.
 - g. Modify the Plug 7 BOC to 2369' and the TOC to 1879' to account for the BLM Geologist's pick for the Kirtland and Ojo Alamo formation tops.
 - h. Modify the Plug 8 BOC to 1209' and the TOC to 1059' to account for the BLM Geologist's pick for the Nacimiento formation top.
3. Farmington Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.

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 05/20/2024

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
Standard Plugging Conditions



This document provides OCD's general plugging conditions of approval. It should be noted that the list below may not cover special plugging programs in unique and unusual cases, and OCD expressly reserves the right to impose additional requirements to the extent dictated by project conditions. The OCD also reserves the right to approve deviations from the below conditions if field conditions warrant a change. A C-103F NOI to P&A must be approved prior to plugging operations. Failure to comply with the conditions attached to a plugging approval may result in a violation of 19.15.5.11 NMAC, which may result in enforcement actions, including but not limited to penalties and a requirement that the well be re-plugged as necessary.

1. Notify OCD office at least 24 hours before beginning work and seek prior approval to implementing any changes to the C-103 NOI to PA.
 - North Contact, Monica Kuehling, 505-320-0243, monica.kuehling@emnrd.nm.gov
 - South Contact, Gilbert Cordero, 575-626-0830, gilbert.cordero@emnrd.nm.gov
2. A Cement Bond Log is required to ensure strata isolation of producing formations, protection of water and correlative rights. A CBL must be run or be on file that can be used to properly evaluate the cement behind the casing.

Note: Logs must be submitted to OCD via OCD permitting. A copy of the log may be emailed to OCD inspector for faster review times, but emailing does not relieve the operators obligation to submit through OCD permitting.

3. Once Plugging operations have commenced, the rig must not rig down until the well is fully plugged without OCD approval. If gap in plugging operations exceeds 30 days, the Operator must file a subsequent sundry of work performed and revised NOI for approval on work remaining. At no time shall the rig be removed from location if it will result in waste or contamination of fresh water.
4. Insure all bradenheads have been exposed, identified and valves are operational prior to rig up.
5. Fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
 - North, water or mud laden fluids
 - South, mud laden fluids
6. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to an OCD permitted disposal facility.
7. Class of cement shall be used in accordance with the below table for depth allowed.

Class	TVD Lower Limit (feet)
Class A/B	6,000
Class I/II	6,000
Class C or III	6,000
Class G and H	8,000
Class D	10,000

Class E	14,000
Class F	16,000

8. After cutting the well head any "top off cement jobs" must remain static for 30 minutes. Any gas bubbles or flow during this 30 minutes shall be reported to the OCD for approval of next steps.
9. Trucking companies being used to haul oilfield waste fluids (Commercial or Private) to a disposal facility shall have an approved OCD C-133 permit.
 - A copy of this permit shall be available in each truck used to haul waste products.
 - It is the responsibility of the Operator and Contractor to verify that this permit is in place prior to performing work.
 - Drivers shall be able to produce a copy upon request of an OCD Compliance Officer.
10. Filing a [C-103] Sub. Plugging (C-103P) will serve as notification that the well has been plugged.
11. A [C-103] Sub. Release After P&A (C-103Q) shall be filed no later than a year after plugging and a site inspection by OCD Compliance officer to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to meet OCD standards before bonding can be released.
12. Produced water or brine-based fluids **may not** be used during any part of plugging operations without **prior OCD approval**.
13. Cementing;
 - All cement plugs will be neat cement and a minimum of 100' in length. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
 - If cement does not exist between or behind the casing strings at recommended formation depths, the casing perforations will be shot at 50' below the formation top and the cement retainer shall be set no more than 50' from the perforations.
 - WOC (Wait on Cement) time will be:
 - 4 hours for accelerated (calcium chloride) cement.
 - 6 hours on regular cement.
 - Operator must tag all cement plugs unless it meets the below condition.
 - The operator has a passing pressure test for the casing annulus and the plug is only an inside plug.
 - If perforations are made operator must tag all plugs using the work string to tag unless given approval to tag with wireline by the correct contact from COA #1 of this document.
 - This includes plugs pumped underneath a cement retainer to ensure retainer seats properly after cement is pumped.
 - Cement can only be bull-headed with specific prior approval.
 - Squeeze pressures are not to exceed the exposed formations frac gradient or the burst pressure of the casing.
14. A cement plug is required to be set from 50' below to 50' above (straddling) formation tops, casing shoes, casing stubs, any attempted casing cut offs, anywhere the casing is perforated, DV tools.
 - Perforation/Formation top plug. (When there is less than 100ft between the top perforation to the formation top.) These plugs are required to be started no greater than

50ft from the top perforation. However, the plug should be set below the formation top or as close to the formation top as possible for the maximum isolation between the formations. The plug is required to be a 100ft cement plug plus excess.

- Perforation Plug when a formation top is not included. These plugs are required to be started within 50ft of the top perforation. The plug is required to be a 100ft cement plug plus excess.
- Cement caps on top of bridge plugs or cement retainers for perforation plugs, that are not straddling a formation top, may be set using a bailer with a minimum of 35' of cement in lieu of the 100' plug. The bridge plug or retainer must be set within 50ft of the perforations.
- Perforations are required below the surface casing shoe if cement does not exist behind the casing, a 30-minute minimum wait time will be required immediately after perforating 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. If gas is detected contact the OCD office for directions.

15. No more than 3000 feet is allowed between cement plugs in cased hole and no more than 2000 feet is allowed in open hole.

16. Formation Tops to be isolated with cement plugs, but not limited to are:

- Northwest See Figure A
- South (Artesia) See Figure B
- Potash See Figure C
 - In the R-111-P (Or as subsequently revised) Area a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, woe 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.
- South (Hobbs) See Figure D1 and D2
- Areas not provided above will need to be reviewed with the OCD on a case by case basis.

17. Markers

- Dry hole marker requirements 19.15.25.10.
The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches in diameter set in cement and extending at least four feet above mean ground level. The marker must include the below information:
 1. Operator name
 2. Lease name and well number
 3. API number
 4. Unit letter
 5. Section, Township and Range
- AGRICULTURE (Below grade markers)
In Agricultural areas a request can be made for a below ground marker. For a below ground marker the operator must file their request on a C-103 notice of intent, and it must include the following;
 - A) Aerial photo showing the agricultural area
 - B) Request from the landowner for the below ground marker.

C) Subsequent plugging report for a well using a below ground marker must have an updated C-102 signed by a certified surveyor for SHL.

Note: A below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to OCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to OCD. OCD requires a current survey to verify the location of the below ground marker, however OCD will accept a GPS coordinate that were taken with a GPS that has an accuracy of within 15 feet.

18. If work has not commenced within 1 year of the approval of this procedure, the approval is automatically expired. After 1 year a new [C-103] NOI Plugging (C-103F) must be submitted and approved prior to work.

Figure A

North Formations to be isolated with cement plugs are:

- San Jose
- Nacimiento
- Ojo Alamo
- Kirtland
- Fruitland
- Picture Cliffs
- Chacra (if below the Chacra Line)
- Mesa Verde Group
- Mancos
- Gallup
- Basin Dakota (plugged at the top of the Graneros)
- Deeper formations will be reviewed on a case-by-case basis

Figure B

South (Artesia) Formations to be isolated with cement plugs are:

- Fusselman
- Montoya
- Devonian
- Morrow
- Strawn
- Atoka
- Permo-Penn
- Wolfcamp
- Bone Springs
- Delaware , in certain areas where the Delaware is subdivided into;
 - 1. Bell Canyon
 - 2. Cherry Canyon
 - 3. Brushy Canyon
- Any salt sections
- Abo
- Yeso
- Glorieta
- San Andres
- Greyburg
- Queen
- Yates

Figure C

Potash Area R-111-P

T 18S – R 30E

Sec 10 Unit P. Sec 11 Unit M,N. Sec 13 Unit L,M,N. Sec 14 Unit C -P. Sec 15 Unit A G,H,I,J,K,N,O,P. Sec 22 Unit All
except for M. Sec 23, Sec 24 Unit C,D,E,L, Sec 26 Unit A-G, Sec 27 Unit A,B,C

T 19S – R 29E

Sec 11 Unit P. Sec 12 Unit H-P. Sec 13. Sec 14 Unit A,B,F-P. Sec 15 Unit P. Sec 22 Unit A,B,C,F,G,H,I,J K,N,O,P. Sec 23.
Sec 24. Sec 25 Unit D. Sec 26 Unit A- F. Sec 27 Unit A,B,C,F,G,H.

T 19S – R 30E

Sec 2 Unit K,L,M,N. Sec 3 Unit I,L,M,N,O,P. Sec 4 Unit C,D,E,F,G,I-P. Sec 5 Unit A,B,C,E-P. Sec 6 Unit I,O,P. Sec 7 – Sec
10. Sec 11 Unit D, G—P. Sec 12 Unit A,B,E-P. Sec 13 Unit A-O. Sec 14-Sec 18. Sec 19 Unit A-L, P. Sec 20 – Sec 23. Sec
24 Unit C,D,E,F,L,M,N. Sec 25 Unit D. Sec 26 Unit A-G, I-P. Sec 27, Sec 28, Sec 29 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 32
Unit A,B,G,H,I,J,N,O,P. Sec 33. Sec 34. Sec 35. Sec 36 Unit D,E,F,I-P.

T 19S – R 31E

Sec 7 Unit C,D,E,F,L. Sec 18 Unit C,D,E,F,G,K,L. Sec 31 Unit M. Sec 34 Unit P. Sec 35 Unit M,N,O. Sec 36 Unit O,P.

T 20S – R 29E

Sec 1 Unit H,I,P. Sec 13 Unit E,L,M,N. Sec 14 Unit B-P. Sec 15 Unit A,H,I,J,N,O,P. Sec 22 Unit A,B,C,F,G,H,I,J,O,P. Sec
23. Sec 24 Unit C,D,E,F,G,J-P. Sec 25 Unit A-O. Sec 26. Sec 27 Unit A,B,G,H,I,J,O,P. Sec 34 Unit A,B,G,H. Sec 35 Unit
A-H. Sec 36 Unit B-G.

T 20S – R 30E

Sec 1 – Sec 4. Sec 5 Unit A,B,C,E-P. Sec 6 Unit E,G-P. Sec 7 Unit A-H,I,J,O,P. Sec 8 – 17. Sec 18 Unit A,B,G,H,I,J,O,P.
Sec 19 Unit A,B,G,H,I,J,O,P. Sec 20 – 29. Sec 30 Unit A-L,N,O,P. Sec 31 Unit A,B,G,H,I,P. Sec 32 – Sec 36.

T 20S – R 31E

Sec 1 Unit A,B,C,E-P. Sec 2. Sec 3 Unit A,B,G,H,I,J,O,P. Sec 6 Unit D,E,F,J-P. Sec 7. Sec 8 Unit E-P. Sec 9 Unit E,F,J-P.
Sec 10 Unit A,B,G-P. Sec 11 – Sec 36.

T 21S – R 29E

Sec 1 – Sec 3. Sec 4 Unit L1 – L16,I,J,K,O,P. Sec 5 Unit L1. Sec 10 Unit A,B,H,P. Sec 11 – Sec 14. Sec 15 Unit A,H,I. Sec
23 Unit A,B. Sec 24 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 25 Unit A,O,P. Sec 35 Unit G,H,I,J,K,N,O,P. Sec 36 A,B,C,F – P.

T 21S – R 30E

Sec 1 – Sec 36

T 21S – R 31E

Sec 1 – Sec 36

T 22S – R 28E

Sec 36 Unit A,H,I,P.

T 22S – R 29E

Sec 1. Sec2. Sec 3 Unit I,J,N,O,P. Sec 9 Unit G – P. Sec 10 – Sec 16. Sec 19 Unit H,I,J. Sec 20 – Sec 28. Sec 29 Unit

A,B,C,D,G,H,I,J,O,P. Sec 30 Unit A. Section 31 Unit C – P. Sec 32 – Sec 36

T 22S – R 30E

Sec 1 – Sec 36

T 22S – R 31E

Sec 1 – Sec 11. Sec 12 Unit B,C,D,E,F,L. Sec 13 Unit E,F,K,L,M,N. Sec 14 – Sec 23. Sec 24 Unit C,D,E,F,K,L,M,N. Sec 25

Unit A,B,C,D. Sec 26 Unit A,BC,D,G,H. Sec 27 – Sec 34.

T 23S – R 28E

Sec 1 Unit A

T 23S – R 29E

Sec 1 – Sec 5. Sec 6 Unit A – I, N,O,P. Sec 7 Unit A,B,C,G,H,I,P. Sec 8 Unit A – L, N,O,P. Sec 9 – Sec 16. Sec 17 Unit

A,B,G,H,I,P. Sec 21 – Sec 23. Sec 24 Unit A – N. Sec 25 Unit D,E,L. Sec 26. Sec 27. Sec 28 Unit A – J, N,O,P. Sec 33

Unit A,B,C. Sec 34 Unit A,B,C,D,F,G,H. Sec 35. Sec 36 Unit B,C,D,E,F,G,K,L.

T 23S – R 30E

Sec 1 – Sec 18. Sec 19 Unit A – I,N,O,P. Sec 20, Sec 21. Sec 22 Unit A – N, P. Sec 23, Sec 24, Sec 25. Sec 26 Unit

A,B,F-P. Sec 27 Unit C,D,E,I,N,O,P. Sec 28 Unit A – H, K,L,M,N. Sec 29 Unit A – J, O,P. Sec 30 Unit A,B. Sec 32 A,B. Sec

33 Unit C,D,H,I,O,P. Sec 34, Sec 35, Sec 36.

T 23S – R 31E

Sec 2 Unit D,E,J,O. Sec 3 – Sec 7. Sec 8 Unit A – G, K – N. Sec 9 Unit A,B,C,D. Sec 10 Unit D,P. Sec 11 Unit G,H,I,J,M,N,O,P. Sec 12 Unit E,L,K,M,N. Sec 13 Unit C,D,E,F,G,J,K,L,M,N,O. Sec 14. Sec 15 Unit A,B,E – P.

Sec 16 Unit

I, K – P. Sec 17 Unit B,C,D,E, I – P. Sec 18 – Sec 23. Sec 24 Unit B – G, K,L,M,N. Sec 25 Unit B – G, J,K,L. Sec 26 – Sec

34. Sec 35 Unit C,D,E.

T 24S – R 29E

Sec 2 Unit A, B, C, D. Sec 3 Unit A

T 24S – R 30E

Sec 1 Unit A – H, J – N. Sec 2, Sec 3. Sec 4 Unit A,B,F – K, M,N,O,P. Sec 9 Unit A – L. Sec 10 Unit A – L, O,P. Sec 11.

Sec 12 Unit D,E,L. Sec 14 Unit B – G. Sec 15 Unit A,B,G,H.

T 24S – R 31E

Sec 3 Unit B – G, J – O. Sec 4. Sec 5 Unit A – L, P. Sec 6 Unit A – L. Sec 9 Unit A – J, O, P. Sec 10 Unit B – G, K – N. Sec

35 Unit E – P. Sec 36 Unit E, K, L, M, N.

T 25S – R 31E

Sec 1 Unit C, D, E, F. Sec 2 Unit A – H.

Figure D1 and D2

South (Hobbs) Formations to be isolated with cement plugs are:

The plugging requirements in the Hobbs Area are based on the well location within specific areas of the Area (See Figure D1). The Formations in the Hobbs Area to be isolated with cement plugs are (see Figure D2)

Figure D1 Map

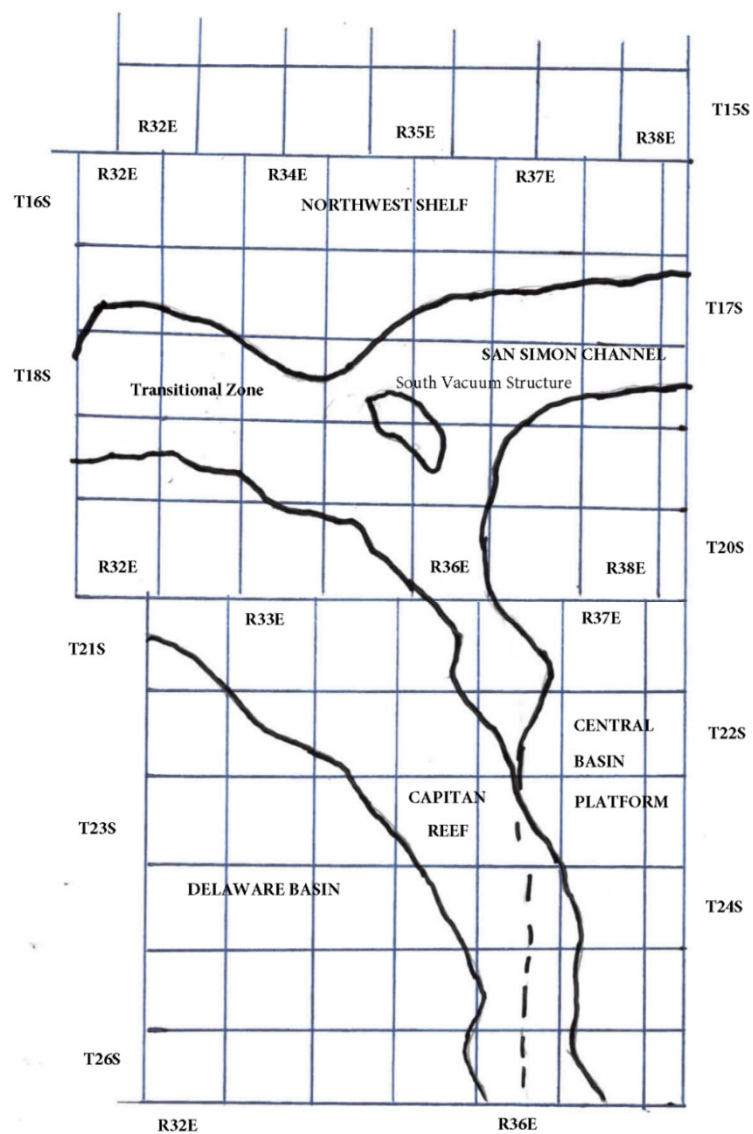


Figure D2 Formation Table

100' Plug to isolate upper and lower fresh water zones (typically 250' to 350')						
Northwest Shelf	Captan Reef Area	Transition Zone	San Simon Channel	South Vacuum Structure	Delaware Basin	Central Basin Platform
Granit Wash (Detrital basement material and fractured pre-Cambrian basement rock)	Siluro-Devonian	Morrow	Siluro-Devonian	Ellenburger	Siluro-Devonian	Granit Wash (Detrital basement material, fractured pre-Cambrian basement rock and fracture Mafic Volcanic intrusives).
Montoya	Mississippian	Atoka	Morrow	McKee	Morrow	Ellenburger
Fusselman	Morrow	Strawn	Wolfcamp	Siluro-Devonian	Atoka	Connell
Woodford	Atoka	Cisco	Abo Reef	Woodford	Strawn	Waddell
Siluro-Devonian	Strawn	Pennsylvanian	Bone Spring	Mississippian	Pennsylvanian	McKee
Chester	Pennsylvanian	Wolfcamp	Delaware	Barnett Shale	Lower Wolfcamp	Simpson Group
Austin	Wolfcamp	Bone Spring	San Andres	Morrow	Upper Wolfcamp	Montoya
Mississippian	Abo Reef, if present	Delaware	Queen	Atoka	Wolfcamp	Fusselman
Morrow	Abo, if present	San Andres	Yates	Strawn	Third Bone Spring Sand (Top of Wolfbone)	Silurian
Atoka	Queen, if present	Grayburg-San Andres	Base of Salt	Canyon	First Bone Spring Sand (Top of Lower Bone Spring)	Devonian
Lower Pennsylvanian	Bone Spring	Queen	Rustler	Pennsylvanian	Bone Spring	Strawn
Cisco-Canyon	Delaware	Seven Rivers		Blinbry	Brushy Canyon	Pennsylvanian
Pennsylvanian	Base Capitan Reef	Yates		Bone Spring	Delaware (Base of Salt)	Wolfcamp
Bough	Seven Rivers	Base of Salt		San Andres	Rustler	Abo
Wolfcamp	Yates	Rustler		Queen		Abo Reef
Abo	Top Capitan Reef			Base of Salt		Drinkard
Abo Reef, if present	Base of Salt			Rustler		Tubb
Yeso (Township 15 South to Township 17 South)	Rustler					Blinbry
Drinkard or Lower Yeso (Township 15 South to Township 17 South)						Paddock
Tubb (Township 15 South to Township 17 South)						Glorieta
Blinbry (Township 15 South to Township 17 South)						San Andres
Paddock (Township 15 South to Township 17 South)						Grayburg
Glorieta						Grayburg-San Andres
San Andres						Queen
Queen (Township 15 South to Township 17 South)						Seven Rivers
Seven Rivers (Township 15 South to Township 17 South)						Yates
Yates (Township 15 South to Township 17 South)						Base of Salt
Base of Salt						Rustler
Rustler						

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District II
811 S. First St., Artesia, NM 88210
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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

Action 345690

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 345690
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	Notify NMOCD 24 hours prior to moving on - monitor string pressures daily report on subsequent - submit all logs prior to subsequent	5/22/2024
mkuehling	NMOCD concurs with BLM picks for formation tops	5/23/2024