

<b>Well Name:</b> BROOKHAVEN A	<b>Well Location:</b> T25N / R10W / SEC 29 / SWSE / 36.36669 / -107.91719	<b>County or Parish/State:</b> SAN JUAN / NM
<b>Well Number:</b> 2H	<b>Type of Well:</b> OTHER	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMSF078621	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3004534920	<b>Well Status:</b> Producing Gas Well	<b>Operator:</b> MARALEX RESOURCES INCORPORATED

**Notice of Intent**

**Sundry ID:** 2682859

**Type of Submission:** Notice of Intent

**Type of Action:** Plug and Abandonment

**Date Sundry Submitted:** 07/20/2022

**Time Sundry Submitted:** 11:17

**Date proposed operation will begin:** 10/26/2022

**Procedure Description:** Plug and Abandon the Brookhaven A well. Current and Proposed WBD attached. Proposed procedure attached.

**Surface Disturbance**

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

**NOI Attachments**

**Procedure Description**

5.2010\_BrookhavenA2H\_WBDCurrent\_20220720093043.pdf

7.15.2022\_BrookhavenA2H\_WBDProposed\_20220720093038.pdf

7.19.2022\_BrookhavenA2H\_PxAProcedure\_20220720093035.pdf

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Well Status: Producing Gas Well

Operator: MARALEX RESOURCES INCORPORATED

Conditions of Approval

Additional

General\_Requirement\_PxA\_20220722085142.pdf

2682859\_NOIA\_A\_2H\_3004534920\_KR\_07222022\_20220722085132.pdf

25N10W29O\_29IKf\_Brookhaven\_A\_2H\_20220721161528.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: PATRICIA HARRISON

Signed on: JUL 20, 2022 08:27 AM

Name: MARALEX RESOURCES INCORPORATED

Title: Permitting Specialist

Street Address: 775 GODDARD

City: IGNACIO State: CO

Phone: (970) 759-9545

Email address: TRISHHARRISON@EIS-LLC.COM

Field

Representative Name: Mickey O'Hare

Street Address:

City: State: Zip:

Phone: (970)799-1631

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: 07/22/2022

Signature: Kenneth Rennick

## Plug and Abandonment Procedure

July 19, 2022

### Brookhaven A 2H Basin Fruitland Coal

660' FSL, 1840' FEL, Section 29, T25N, R10W, San Juan County, New Mexico  
API 30-045-34920 / Lat/Long 36.36664/107.91727

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 B neat, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. This project requires a NMOCD C-144 CLEZ Closed-Loop System Permit for the use of an A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
2. 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.
3. Primary cement for 7" casing circulated to surface?: Yes , No   
 Temperature survey or CBL run after primary cement job?: Yes , No   
 Rods: Yes , No , Unknown   
 Tubing: Yes , No , Unknown   
 Packer: Yes , No , Unknown   
 If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.  
**Note: BLM requires a CBL log to be run on all wells where the cement did not circulate to surface or where a Temperature Survey or CBL log was not previously run. This procedure is prepared with the understanding that it may be modified if a CBL is required.**
4. Horizontal lateral plug (Fruitland Coal): Round trip 7" casing mill to 1830'. RIH with cement retainer and set at 1775'. Sting into retainer with tubing workstring. Spot a horizontal lateral plug within the Fruitland by pumping 400 sacks of Class B cement through the retainer. Sting out of retainer and spot a 50' plug (15 sacks of Class B cement) on top of retainer. WOC. Attempt to pressure test casing to 800 psi. If casing does not test then spot or tag subsequent plugs as necessary. TOH with tubing.
5. Plug #1 (Fruitland top, 1390'): Mix and pump 15 sacks of Class B cement inside casing to cover from 1365' to 1415'.
6. Plug #2 (Kirtland and Ojo Alamo tops, 900' – 700'): Mix and pump 60 sacks of Class B cement inside casing to cover from 900' through the Ojo Alamo top and up to 700'.
7. Plug #3 (10 3/4" casing shoe to surface, 222' – Surface): With the end of tubing at 222', mix and pump 120 sacks Class B cement to place a plug inside the casing and to cover from 50' below surface shoe up to the surface. TOH and LD tubing.
8. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. RD, MOL and cut off anchors. Restore location per BLM stipulations.

**Well Name:** Brookhaven A 2H

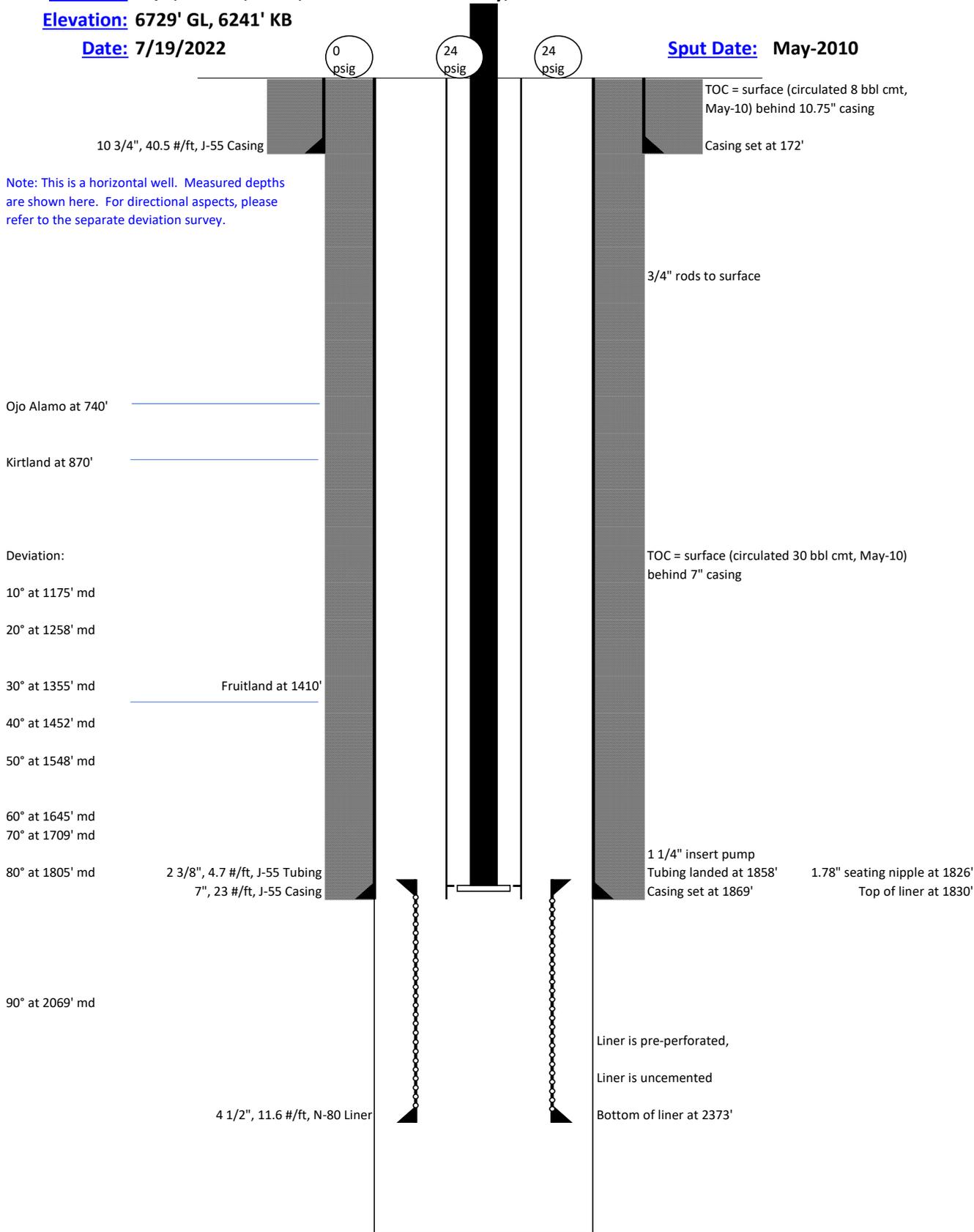
**API #:** 30-045-34920

**Location:** SE/4, Sec. 29, T24N, R10W San Juan County, New Mexico

**Elevation:** 6729' GL, 6241' KB

**Date:** 7/19/2022

**Sput Date:** May-2010



**Well Name:** Brookhaven A 2H

**Proposed PxA**

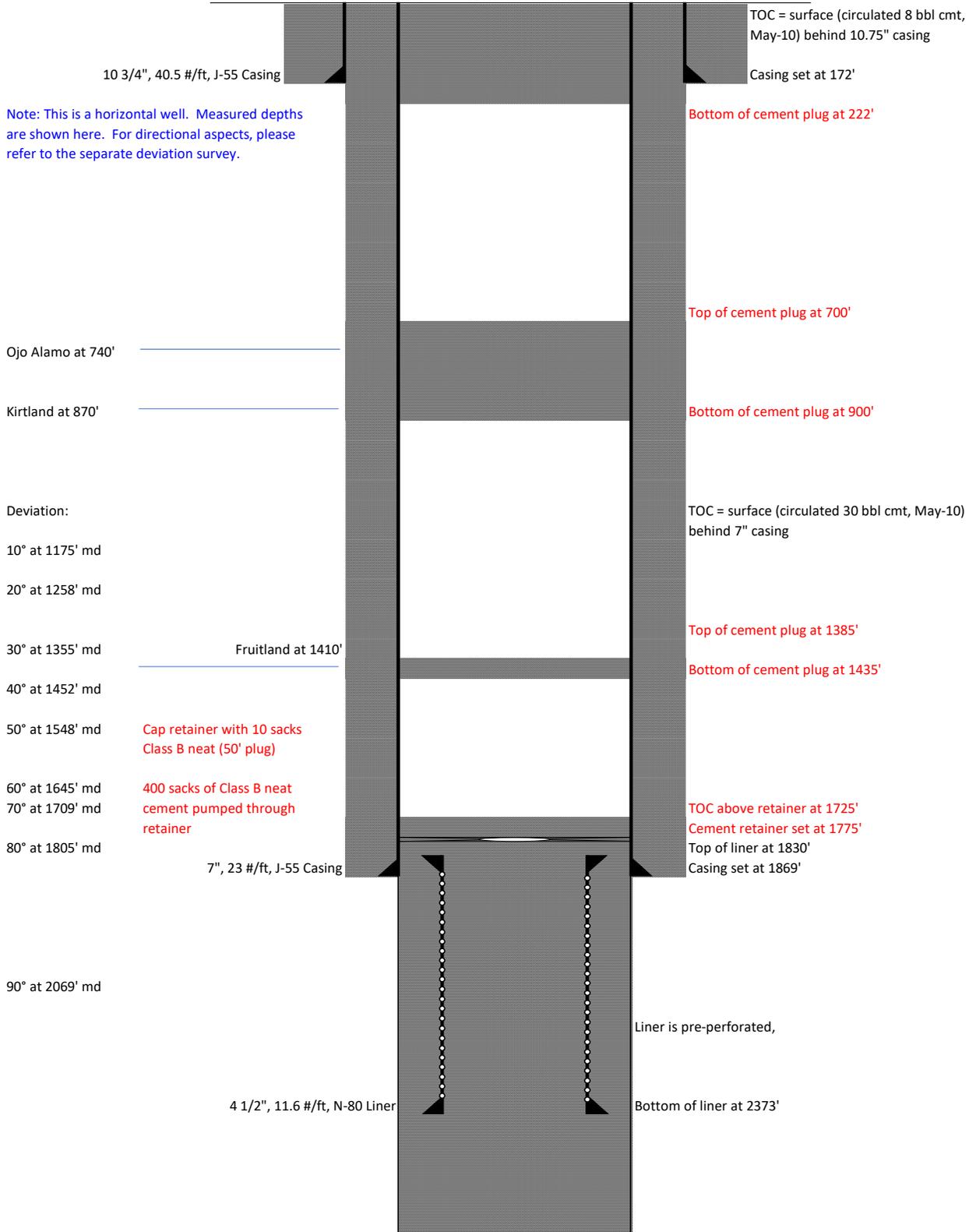
**API #:** 30-045-34920

**Location:** SE/4, Sec. 29, T24N, R10W San Juan County, New Mexico

**Elevation:** 6729' GL, 6241' KB

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

AFMSS 2 Sundry ID 2682859

Attachment to notice of Intention to Abandon

Well: Brookhaven A 2H

**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. Abandonment of Brookhaven A 2H must be done by December 1, 2022.
3. The following modifications to your plugging program are to be made:
  - a) Lengthen proposed Fruitland plug so that it covers the interval from 1360' – 1460'.
  - b) Lengthen proposed Kirtland and Ojo Alamo plug so that it covers the interval from 690' – 920'.
  - c) A final reclamation onsite needs to be performed with BLM Surface inspection staff and a reclamation procedure should be submitted for review following the onsite.
4. 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 7/22/2022

### BLM FLUID MINERALS P&A Geologic Report

**Date Completed:** 07/21/2022

Well No. Brookhaven A #2H (API# 30-045-34920)		SHL BHL	660 1554	FSL FSL	& &	1840 1037	FEL FEL
Lease No. NMSF078621		Sec. 29	T25N			R10W	
Operator Maralex Resources, Inc.		County	San Juan		State	New Mexico	
Total Depth	1623' (TVD) 2608' (MD)	PBTD	1615' (TVD) 2373' (MD)	Formation Fruitland Coal			
Elevation (GL) 6712'		Elevation (KB) 6729'					

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					
Nacimiento Fm	Surface	740			Surface/possible freshwater sands
Ojo Alamo Ss	740	870			Aquifer (possible freshwater)
Kirtland Shale	870	1410			Possible gas
Fruitland Fm	1410	PBTD			Coal/Gas/Water
Pictured Cliffs Ss					
Lewis Shale					
Chacara					
Cliff House Ss					
Menefee Fm					
Point Lookout Ss					
Mancos Shale					
Gallup					
Greenhorn					
Graneros Shale					
Dakota Ss					
Morrison Fm					

Remarks:

P & A

- Horizontal well. All formation tops are reported as MD from KB elevation. No logs available for subject well. Operator submitted formation tops are acceptable based on Reference Well #1.
- Lengthen proposed Fruitland plug so that it covers the interval from 1360' – 1460'.
- Lengthen proposed Kirtland and Ojo Alamo plug so that it covers the interval from 690' – 920'.
- A final reclamation onsite needs to be performed with BLM Surface inspection staff and a reclamation procedure should be submitted following the onsite.
- The plugs proposed in the P&A procedure will adequately protect any freshwater sands in this well bore.
- Uncemented slotted liner in Fruitland Coal from 1830' – 2373'.

Reference Well:

1) **Formation Tops**  
Skelly Oil Co.  
East Bisti Unit #45  
1650' FSL, 1650' FWL  
Sec. 29, T25N, R10W

Prepared by: Chris Wenman

**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<sub>2</sub>S.

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.

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 127253

**CONDITIONS**

Operator: MARALEX RESOURCES INC P.O. Box 338 Ignacio, CO 81137	OGRID: 13998
	Action Number: 127253
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

**CONDITIONS**

Created By	Condition	Condition Date
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	8/11/2022
kpickford	Adhere to BLM approved plugs and COAs. See GEO Report	8/11/2022