

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**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.**

5. Lease Serial No. **JIC93**  
6. If Indian, Allottee or Tribe Name  
**JICARILLA APACHE**

**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 <b>LOGOS OPERATING LLC</b>		8. Well Name and No. <b>JICARILLA 93/14</b>
3a. Address <b>2010 AFTON PLACE, FARMINGTON, NM 87401</b>	3b. Phone No. (include area code) <b>(505) 278-8720</b>	9. API Well No. <b>3003929876</b>
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) <b>SEC 32/T27N/R3W/NMP</b>		10. Field and Pool or Exploratory Area <b>BLANCO MESAVERDE/BLANCO MESAVERDE</b>
		11. Country or Parish, State <b>RIO ARRIBA/NM</b>

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"/> Hydraulic Fracturing	<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 recomplete 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 recompletion 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.)

LOGOS Operating, LLC request permission to plug and abandoned subject well per the updated attached procedure.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) <b>ETTA TRUJILLO / Ph: (505) 324-4154</b>	Title <b>Regulatory Specialist</b>
Signature (Electronic Submission)	Date <b>03/07/2024</b>

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by	Title	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	

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.

(Instructions on page 2)



## Proposed Plug and Abandonment Procedure

**Jicarilla 93 14**

**API: 30-039-29876**

### Notes:

- LOGOS requests to P&A the subject well.
  - All cement volumes use 100% excess outside pipe and 50' excess inside.
  - All cement will be Class G with a 1.15 cf/sk yield or equivalent.
  - BLM & Jicarilla will be notified at least 24 hours prior to beginning work.
  - A CBL is already on file for this well.
1. Comply with all tribal, BLM, and LOGOS safety rules and regulations. Conduct safety meeting for all personnel on location.
  2. MOL and RU. Lay flow lines. Check and record bradenhead and casing pressures.
  3. Roll hole with fresh water and pressure test the casing to 560 psi for 15 minutes.
    - a. If pressure test fails, WOC and tag and record each plug top and top off with more cement if necessary.
  4. PU work string and TIH.
  5. **Plug #1: 5475'- 5575' (Perforations: 5608' / CIBP: 5575')**: Mix and spot 12 sx Class G cement.
  6. **Plug #2: 4790'- 4890' (Chacra: 4840')**: Mix and spot 12 sx Class G cement.
  7. **Plug #3: 4070'- 4170' (TOL: 4120')**: Mix and spot 23 sx Class G cement.
  8. **Plug #4: 3584'- 3940' (Pictured Cliffs top: 3890' / Fruitland top: 3731' / Kirtland top: 3634')**: Mix and spot 78 sx Class G cement.
  9. **Plug #5: 3369'- 3469' (Ojo Alamo top: 3419')**: Mix and spot 29 sx Class G cement.
  10. **Plug #6: 2584'- 2684' (Nacimiento top: 2634')**: Mix and spot 29 sx Class G cement.
  11. **Plug #7: 0'-395' (Surface casing shoe: 345')**: Perforate squeeze holes at 395'. Attempt to establish rate. Mix and pump 156 sx Class G cement, squeeze 70 sx outside casing and leave 86 sx inside casing.
  12. ND BOP and cut off wellhead below surface casing flange. Top off with cement if needed. Install P&A marker with cement per regulations. Photograph P&A marker in place. Cut off anchors and restore location per BLM stipulations.



Jicarilla 93 14 P&A Planning

Formations	Tops (ft)
Surface	0
Csg Shoe	345
Nacimiento	2634
Ojo Alamo	3419
Kirtland	3634
Fruitland	3731
Pictured Cliffs	3890
TOL	4120
Chacra	4840
Perfs/CIBP	5575

9-5/8" csg & 7" csg capacity	0.1668	cf/ft
8-3/4" hole & 7" csg capacity	0.1503	cf/ft
7" csg capacity	0.221	cf/ft
4.5" liner capacity	0.0873	cf/ft
<b>Yield</b>	<b>1.15</b>	

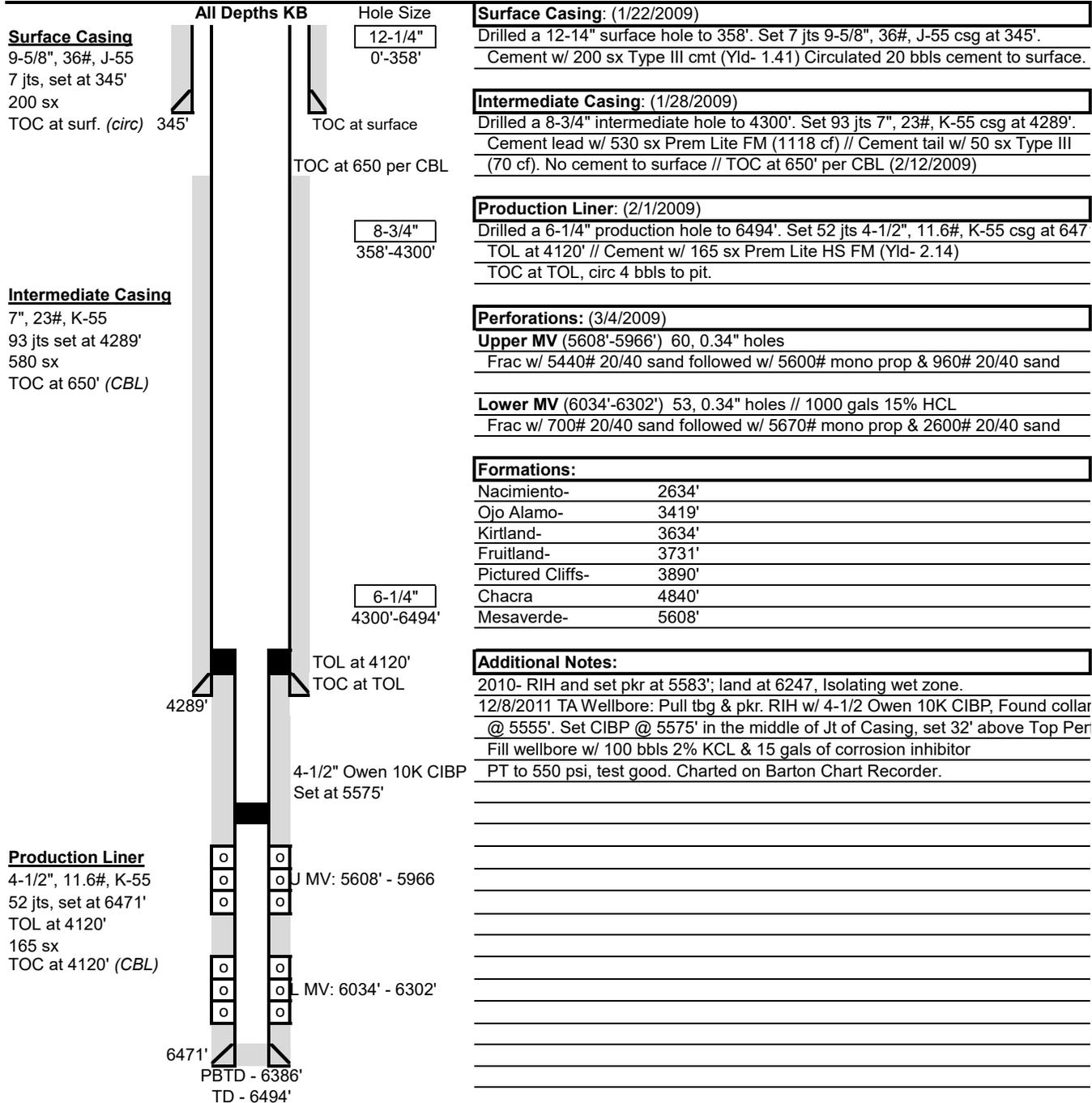
Plugs	Reason	Inside/Outside	Top	Bottom	Total Length of Plug (ft)	Inside Csg Volume (cf/ft)	Outside Csg Volume (cf/ft)	# of sx inside (1.15 yield & 50' excess)	# of sx outside (1.15 yield & 100% excess)	Total # sx
1	Perfs/CIBP	Inside	5475	5575	100	0.0873	-	12		12
2	Chacra	Inside	4790	4890	100	0.0873	-	12		12
3	TOL	Inside	4070	4170	100	0.0873/0.221	-	23		23
4	PC/FL/Kirt	Inside	3584	3940	356	0.221	-	78		78
5	Ojo	Inside	3369	3469	100	0.221	-	29		29
6	Nacimiento	Inside	2584	2684	100	0.221	-	29		29
7	Surface	Inside/Outside	0	395	395	0.221	0.1668/0.1503	86	70	156
									Grand total cmt	339



**Wellbore Schematic**

Well Name: Jicarilla 93 14  
 Location: Sec 32, T27N, R03W 1935' FNL & 105' FEL  
 County: Rio Arriba  
 API #: 30-039-29876  
 Co-ordinates: Lat 36.5317879° Long -107.1594543°  
 Elevations: GROUND: 7155'  
 KB: 7169'  
 Depths (KB): PBDT: 6386'  
 TD: 6494'

Date Prepared: 8/4/2021 M.Hespe  
 Reviewed By: 8/6/2021 S. Gomez  
 Spud Date: 1/21/2009  
 Completion Date: 3/4/2009  
 Last Workover Date: 12/8/2011 TA

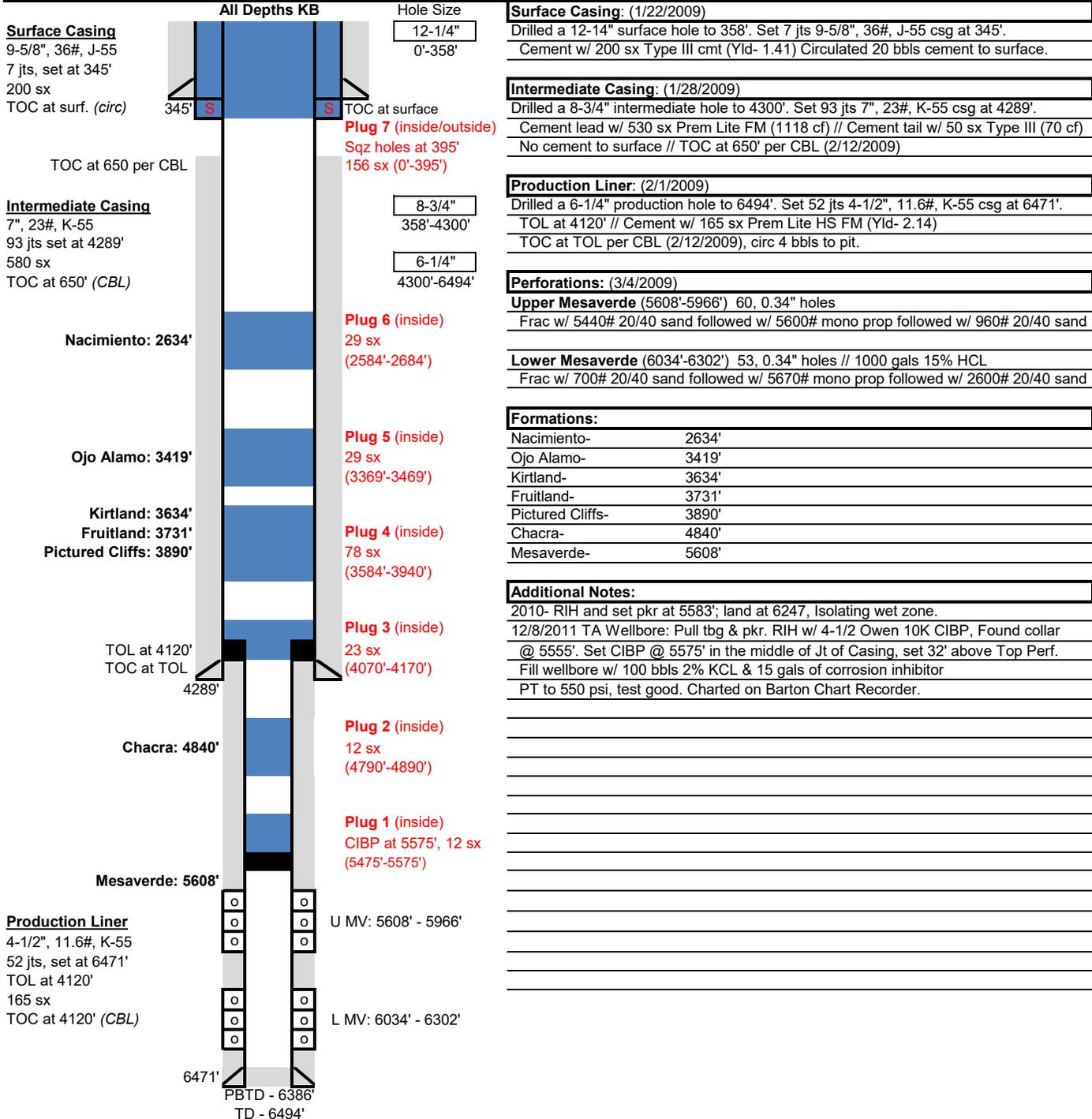




**Proposed Wellbore Schematic**

Well Name: Jicarilla 93 14  
 Location: Sec 32, T27N, R03W 1935' FNL & 105' FEL  
 County: Rio Arriba  
 API #: 30-039-29876  
 Co-ordinates: Lat 36.5317879° Long -107.1594543°  
 Elevations: GROUND: 7155'  
 KB: 7169'  
 Depths (KB): PBD: 6386'  
 TD: 6494'

Date Prepared: 8/4/2021 M.Hespe  
 Reviewed By: 8/6/2021 S. Gomez  
 Spud Date: 1/21/2009  
 Completion Date: 3/4/2009  
 Last Workover Date: 12/8/2011 TA



<b>Well Name:</b> JICARILLA 93	<b>Well Location:</b> T27N / R3W / SEC 32 / SENE / 36.5317831 / -107.1588008	<b>County or Parish/State:</b> RIO ARRIBA / NM
<b>Well Number:</b> 14	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b> JICARILLA APACHE
<b>Lease Number:</b> JIC93	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3003929876	<b>Well Status:</b> Temporarily Abandoned	<b>Operator:</b> LOGOS OPERATING LLC

**Notice of Intent**

**Sundry ID:** 2773321

**Type of Submission:** Notice of Intent

**Type of Action:** Plug and Abandonment

**Date Sundry Submitted:** 02/05/2024

**Time Sundry Submitted:** 10:02

**Date proposed operation will begin:** 03/29/2024

**Procedure Description:** LOGOS Operating, LLC request permission to plug and abandoned subject well per the attached procedure.

**Surface Disturbance**

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

**NOI Attachments**

**Procedure Description**

Jicarilla\_93\_14\_P\_A\_Procedure\_20240205095902.pdf

<b>Well Name:</b> JICARILLA3	<b>Well Location:</b> T27N / R3W / SEC 32 / SENE / 36.5317831 / -107.1588008	<b>County or Parish/State:</b> RIO ARRIBA / NM
<b>Well Number:</b> 14	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b> JICARILLA APACHE
<b>Lease Number:</b> JIC93	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3003929876	<b>Well Status:</b> Temporarily Abandoned	<b>Operator:</b> LOGOS OPERATING LLC

**Conditions of Approval**

**Specialist Review**

General\_Requirement\_PxA\_20240207135638.pdf  
 27N03W32\_Jic\_93\_14\_Geo\_KR\_20240207135627.pdf  
 2773321\_NOIA\_93\_14\_3003929876\_KR\_02052024\_20240207135627.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:** ETTA TRUJILLO **Signed on:** FEB 05, 2024 10:03 AM  
**Name:** LOGOS OPERATING LLC  
**Title:** Regulatory Specialist  
**Street Address:** 2010 AFTON PLACE  
**City:** Farmington **State:** NM  
**Phone:** (505) 324-4154  
**Email address:** ETRUJILLO@LOGOSRESOURCESLLC.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:** 02/07/2024  
**Signature:** Kenneth Rennick

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

AFMSS 2 Sundry ID 2773321

Attachment to notice of Intention to Abandon

Well: Jicarilla 93 14

**CONDITIONS OF APPROVAL**

1. Plugging work must be completed by November 1, 2024.
2. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
3. The following modifications to your plugging program are to be made:
  - a. Add a plug to cover a minimum 50 ft below and above the BLM selected formation top location of the Chacra at 4840 ft-depth.
4. Farmington Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.
5. Before or within 30 days after completing work, Logos Operating LLC must contact a BLM Farmington Field Office surface inspection staff to schedule a reclamation onsite.

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 02/07/2024

## BLM FLUID MINERALS P&A Geologic Report

**Date Completed:** 02/07/2024

Well No. Jicarilla 93 14 (API 30-039-29876)		Location	NWNW			
Lease No. JIC93		Sec. 32	T 27N		R 3W	
Operator Logos Operating LLC		County	Rio Arriba	State	New Mexico	
Total Depth 6494'	PBTD 6386'	Formation Mesaverde				
Elevation (GL) 7155'		Elevation (KB) 7169'				

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					Surface/freshwater sands
Nacimiento Fm			2634		Possible freshwater sands
Ojo Alamo Ss			3419		Aquifer (possible freshwater)
Kirtland Shale			3634		
Fruitland Fm			3731		Coal/Gas/Possible water
Pictured Cliffs Ss			3890		Gas
Lewis Shale					
Chacra			4840		Gas
Cliff House Ss			5608		Water/Possible gas
Menefee Fm					Coal/Ss/Water/Possible O&G
Point Lookout Ss					Probable water/Possible O&G
Mancos Shale					
Gallup					O&G/Water
Greenhorn					
Graneros Shale					
Dakota Ss					O&G/Water

**Remarks:**

Limited raster log data for the formation tops of Mesaverde and Chacra. The Apache #001E reference well justifies the location of the Mesaverde/ Cliffhouse top by the operator. **And the location selected by the BLM for Chacra top at 4840 ft-depth. A plug will have to be added for the Chacra top location.**

The raster log data and Tribal 05 #001 justifies the formation top locations for the Pictured Cliffs to the Nacimiento selected by the operator.

The raster log and the reference wells did not indicate a San Jose formation top location below surface.

**Reference Well:**

Tribal 05 #001  
(Pictured Cliffs – Nacimiento)  
US Well No. 30-039-29238  
T 26N, R 3W  
Rio Arriba County, NM

Apache #001E  
(Mesaverde – Chacra)  
US Well No. 30-039-22689  
T 26N, R 3W  
Rio Arriba County, NM

**Prepared by: Kenneth Rennick**

**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 run 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), 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.

**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 321344

**CONDITIONS**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 321344
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

**CONDITIONS**

Created By	Condition	Condition Date
mkuehling	approved for record	3/11/2024