

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: 11/5/2019

Well information:

30-039-22558 JICARILLA 123 C #028

LOGOS OPERATING, LLC

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.
- Include the Cliff House plug as directed in BLM COAs.
- Plug #5: 4,182'-4,082' is the Chacra plug. OCD Chacra pick @ 4132'.
- Add a plug 1,680'-1,580' to cover the Nacimiento top. OCD Nacimiento pick @ 1,630'.

A handwritten signature in blue ink that reads "Brandon Randall".

NMOCD Approved by Signature

11/6/19

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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.
JIC123

6. If Indian, Allottee or Tribe Name
JICARILLA APACHE

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

8. Well Name and No.
JICARILLA 123 C 28

9. API Well No.
30-039-22558-00-C1

10. Field and Pool or Exploratory Area
BLANCO
WEST LINDRITH

11. County or Parish, State
RIO ARRIBA COUNTY, NM

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
LOGOS OPERATING LLC
Contact: LARISSA FARRELL
E-Mail: lfarrell@logosresourcesllc.com

3a. Address
2010 AFTON PLACE
FARMINGTON, NM 87401

3b. Phone No. (include area code)
Ph: 505-787-2027

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 6 T25N R4W NWSE 1800FSL 1580FEL
36.426246 N Lat, 107.289177 W Lon

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 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.

Workover rig is currently on location for a tubing repair and discovered a casing failure. This well is uneconomic to continue to repair. Logos Operating is requesting to plug and abandon the well per the procedure and well schematic attached. Reclamation will be conducted in accordance to a pre-onsite after the P&A is complete and rig moved off.

NMOC
NOV 06 2019
DISTRICT III

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #491189 verified by the BLM Well Information System
For LOGOS OPERATING LLC, sent to the Rio Puerco
Committed to AFMSS for processing by JOE KILLINS on 11/05/2019 (20JK0003SE)**

Name (Printed/Typed) LARISSA FARRELL Title ENVIRONMENTAL/REGULATORY TECHN

Signature (Electronic Submission) Date 11/05/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JOE KILLINS Title PETROLEUM ENGINEER Date 11/05/2019

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 Rio Puerco

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.

Handwritten mark



PLUG AND ABANDON PROCEDURE

Jicarilla 123 C 28
30-039-22558
1800' FSL & 1580' FEL
Section 06, T25N, R04W
Rio Arriba County, New Mexico
LAT: 36.426292° N LONG: -107.288537° W
Mesa Verde & Dakota

CR: _____ Production Engineer
Date

KM: _____ Engineering Manager
Date

DB: _____ Production/Workover Manager
Date

PROJECT OBJECTIVE:

Permanently plug and abandon well from 7725' to surface.

EQUIPMENT REQUESTED ON LOCATION:

1. Rig & pit plus additional freshwater tank w/ freshwater for cementing (AWS already on location)
2. Cement crew, truck & pump (Drake)
3. 656 sx Class B 1.18 yield cement (Drake)
4. Single WL set 4-1/2" CIBP (Basin)
5. Wireline truck – set CIBP, run CBL, perforate (Basin)
6. 2-3/8" work string (well-owned already on location)
7. (6) 4-1/2" 10.5# cement retainers (Select or Weatherford, TBD)
8. P&A Marker

PERTINENT DATA:

| | |
|-------------------------|-----------------------------------|
| KB | 11' |
| PBTD | 7725' |
| EOT | 7596' |
| LAST WORKOVER | Casing repair already in progress |
| LAST TAG | 7650' (cleaned out 10/18/19) |
| PRODUCTION CASING SPECS | 4-1/2", 10.5# & 11.6# K-55 casing |
| TUBING SPECS | 2-3/8" 4.7# J-55 |

NOTES:

- Attempted multiple squeeze jobs 10/21-10/29
- Cement bond logs on record:
 - 2002: 4700'-5900'
 - 10/2019: surface-2000'
- Cement volumes are calculated for 100% excess outside casing and 50' excess inside casing
- P&A must be approved by NMOCD, BLM & Jicarilla. Conditions off approval will be attached and must be met.
- All plugs must be tagged due to lack of casing integrity.
- Closed loop permit system pit permit required.

CONTACTS:

| | |
|---|--|
| Catlain Richardson – Production Engineer Cell (505) 320-3499 | Krista McWilliams – Engineering Manager Cell (505) 419-1627 |
| Duane Bixler – Workover Rig Supervisor Cell (505) 635-1663 | |
| | |

WORKOVER PROCEDURE:

1. Comply with all NMOCD, BLM, and Jicarilla regulations. Workover rig, pump, wash up tank and freshwater tank are on location. Tubing has been removed from well.
2. Blow casing pressure down and kill well if necessary. Monitor and record casing and bradenhead pressure throughout the job.
3. Rig up wireline and RIH w/ 4-1/2" 10.5# CIBP and set **7386' - WITHIN 50' of the top DK perforation @ 7426'**.
4. RU wireline and conduct CBL to determine TOC. **CBL intervals required: from CIBP @ 7386' to 6426' & from 3428' to 2000'. Existing CBL covers all other intervals of interest. Do not log where not required.** TOOH and LD wireline. Send results of CBL to engineer.
5. PU 2-3/8" work string and RIH to top of CIBP at 7386'.
6. **Plug #1: 7286'-7386' (Top GADK perforation @ 7426')**: Mix & spot 12 sx of Class B neat cement. PU 100' above plug and reverse circulate tubing clean.
7. WOC, tag and record TOC. Notify engineer with results of tag depth.
 - a. **If TOC is below 7286'** top off with more cement. WOC, tag, and record new TOC. Notify engineer with results of new tag depth.
8. **Plug #2: 6426'-6526' (GADK top @ 6476')**
 - a. **If TOC per CBL is at 6426' or higher:** Mix & spot 12 sx of Class B neat cement. PU 100' above plug and reverse circulate tubing clean.
 - b. **If TOC per CBL is lower than 6426':** RIH w/ wireline & **perf @ 6526' (or @ TOC)**. Set CR @ 6476'. Sting into CR and mix and spot 30 sx below CR. Sting out of cement retainer and pump remaining 6 sx on top of CR. (Total 24 sx outside casing & 12 sx) inside casing.
9. WOC, tag and record TOC. Notify engineer with results of tag depth.
 - a. **If TOC is below 6426'** top off with more cement. WOC, tag, and record new TOC. Notify engineer with results of new tag depth.
10. **Plug #3: 5580'-5680' (Mancos top @ 5630')**: **Inside only plug, Mancos top is covered by cement outside of casing per 2002 CBL.** Mix & spot 12 sx of Class B neat cement. PU 100' above plug and reverse circulate tubing clean.
11. WOC, tag and record TOC. Notify engineer with results of tag depth.
 - a. **If TOC is below 5580'** top off with more cement. WOC, tag, and record new TOC. Notify engineer with results of new tag depth.
12. **Plug #4: 4082'-4182' (MV top @ 4132')**: **Inside/outside plug, TOC @ 5247' per 2002 CBL.** RIH w/ wireline & **perf @ 4182'**. Set CR @ 4132'. Sting into CR and mix and spot 30 sx below CR. Sting out of cement retainer and pump remaining 6 sx on top of CR. (Total 24 sx outside casing & 12 sx) inside casing.
13. WOC, tag and record TOC. Notify engineer with results of tag depth.
 - a. **If TOC is below 4082'** top off with more cement. WOC, tag, and record new TOC. Notify engineer with results of new tag depth.

14. **Plug #5: 2749'-3285' (Ojo Alamo top @ 2799', Kirtland top @ 2893', Fruitland top @ 3060' & Pictured Cliffs top @ 3235')**
 - a. **If TOC per CBL is at 2749' or higher:** Mix & spot 45 sx of Class B neat cement. PU 100' above plug and reverse circulate tubing clean.
 - b. **If TOC per CBL is lower than 2749':** RIH w/ wireline & perf @ 2749' (or @ TOC). Set CR @ 3235'. Sting into CR and mix and spot 131 sx below CR (125 outside & 6 inside). Sting out of cement retainer and pump remaining 39 sx on top of CR. (Total 125 sx outside casing & 45 sx) inside casing.
15. WOC, tag and record TOC. Notify engineer with results of tag depth.
 - a. **If TOC is below 2749'** top off with more cement. WOC, tag, and record new TOC. Notify engineer with results of new tag depth.
16. TOOH and LD tubing.
17. **Plug #6: surface-282' (surface casing shoe @ 232'): Inside only plug, TOC @ surface per CBL run 10/2019.** Mix and bullhead 26 sx Class B neat cement.
18. WOC and tag TOC @ surface. Top off as required.
19. ND BOP and cut off wellhead below surface casing flange per regulation. Top off w/ cement if needed. Install P&A marker w/ cement to comply w/ regulations. RD, MOL and cut off anchors. Restore location per BLM & Jicarilla stipulations.

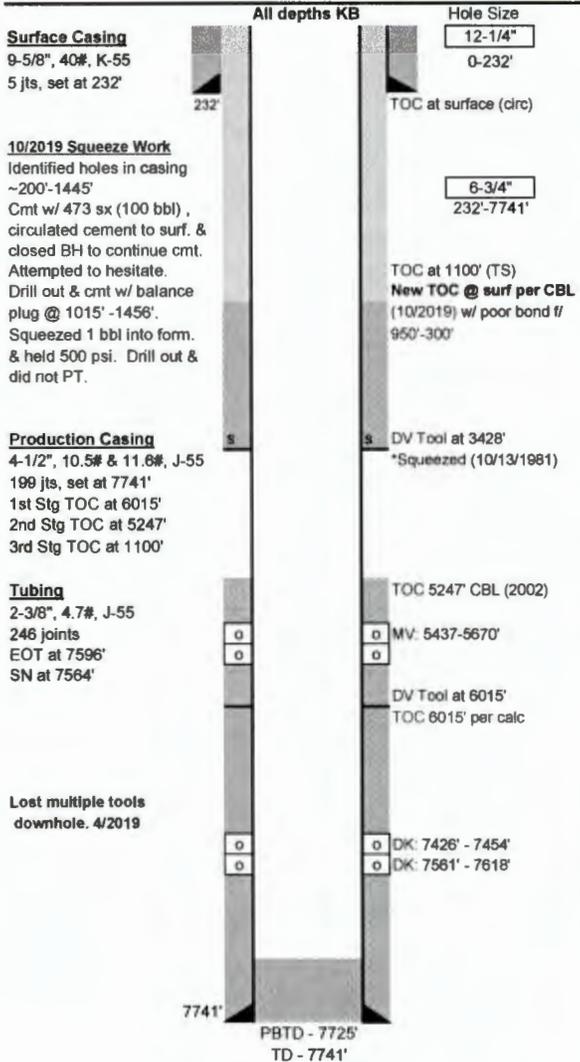
CURRENT SCHEMATIC



Wellbore Schematic

Well Name: Jicarilla 123 C 28
 Location: Sec.06, T25N, R04W 1800' FSL & 1580' FEL
 County: Rio Arriba
 API #: 30-039-22558
 Co-ordinates: Lat 36.426292° Long -107.288537°
 Elevations: GROUND: 6827'
 KB: 6838'
 PBDT: 7725'
 TD: 7741'

Date Prepared: 7/11/2019
 Last Updated: 9/26/2019 CR
 Spud Date: 8/21/1981
 Completion Date: 10/16/1981
 Last Workover Date: 4/15/2019



Surface Casing: (8/21/1981)
 Drilled a 12-1/4" surface hole to 232'. Set 5 jts 9-5/8", 40#, K-55 casing at 232'.
 Cemented w/ 236 cf cement. Circulated to surface.

Production Casing: (9/6/1981)
 Drilled a 6-3/4" production hole to 7741'. Set 4-1/2", 157 jts 10.5# & 42 jts 11.6#, K-55 casing at 7741'.
 Stage tools set at 3428' & 6015'. Sqz'd cmted D.V tool at 3428'.
 1st stage - Lead cmt w/ 240sx Class B + 65/35 POZ + 6% gel + 2% CaCl2
 Tail cmt w/ 100sx Class B + 50/50 POZ + 2% gel + 2% CaCl2 + 1/4#/sk tuf plug
 TOC at 6015' per calc (1.16 yield and 75% efficiency)
 2nd stage - Cmt w/ 340sx Class B + 65/35 POZ + 6% gel + 2% CaCl2.
 TOC at 5247' per CBL 2/27/02.
 3rd stage - Cmt w/ 265sx Class B + 65/35 POZ + 6% gel + 2% CaCl2.
 TOC at 1100' per TS 9/7/81.

| Tubing: Remove 10/2019 | Length (ft) |
|------------------------|-------------|
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Rods:

Pumping Unit:
 **Plunger Lift

Perforations:
 (10/16/81) DK: 7426', 39', 54', 7561', 70', 91', 7601', 07', 12', 18'. 1SPF
 Frac w/ 38,000 gal gel & 57,500# 20/40 sand & 24,000# 10/20 sand.
 (2/27/02) Point Lookout 5437'-5670'. 0.34", 35 holes.
 Acidize w/ 1000 gals 15% HCL
 Frac w/ 95175 gals 60Q slickwater foam & 89400# 20/40 sand.

| Formations: | | | |
|------------------|-------|----------------|-------|
| Ojo Alamo- | 2799' | Menefee- | 4944' |
| Kirtland- | 2893' | Point Lookout- | 5656' |
| Fruitland- | 3060' | Mancos- | 5630' |
| Pictured Cliffs- | 3235' | Gallup- | 6476' |
| Chacra Mesa- | 4132' | Greenhorn- | 7342' |
| Cliff House- | 4877' | Dakota- | 7553' |

Additional Notes:
 10/13/1981 Casing did not hold PT, squeezed DVT through cmt retainer at 3235' w/ 100sx Class B + 2% CaCl2.
 10/16/1981 DK was completed under a packer due to squeeze job
 12/23/1997 500 gal 15% HCL acid treatment down tubing
 2/27/02 MV Pay Add & Comm. *Casing held PT to 3000 psig. MV was completed through tubing under a packer
 12/22/02 Swab: Spring off of bottom of fishing tool, lost and left in hole.
 6/29/04 Swab: Obstruction at 6700'. Tight spot, broached out tight tbg to 6550'. Tight spot at 6700' to SN.
 4/15/19 Swab: csg O# / tbg O#. FL at 3800'. Scale cutting down cups as swab going deeper, scale building up. Tag at 6831' w/ 1.9 gauge, tag at 6831' w/ 1.75 Impression. Pull plunger, try pulling what is thought is BS at 6831'. Pull up to 6744' got stuck. Try to shear pulling tool and cannot shear.

Lost multiple tools downhole. 4/2019

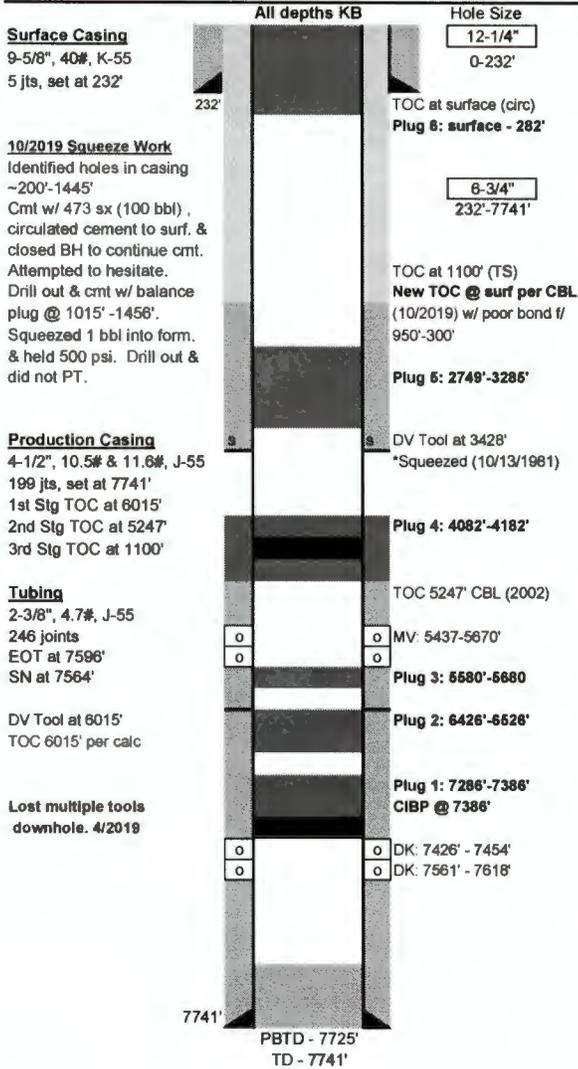
PROPOSED SCHEMATIC



Wellbore Schematic

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 TOC at 6015' per calc (1.16 yield and 75% efficiency)
 2nd stage - Cmt w/ 340sx Class B + 65/35 POZ + 6% gel + 2% CaCl2.
 TOC at 5247' per CBL 2/27/02.
 3rd stage - Cmt w/ 265sx Class B + 65/35 POZ + 6% gel + 2% CaCl2.
 TOC at 1100' per TS 9/7/81.

Tubing: Remove 10/2019 Length (ft)

Rods:

Pumping Unit:
 **Plunger Lift

Perforations:
 (10/16/81) DK: 7426', 39', 54', 7561', 70', 91', 7601', 07', 12', 18'. 1SPF
 Frac w/ 38,000 gal gel & 57,500# 20/40 sand & 24,000# 10/20 sand.
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 Pull plunger, try pulling what is thought is BS at 6831'. Pull up to 6744' got stuck.
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**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402**

Attachment to notice of
Intention to Abandon:

Re: Permanent Abandonment
Well: Jicarilla 123 C 28

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 plug 4 from 4000' 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 volumes meet required excess inside and outside casing. Current outside volumes do not include required 100% excess.
4. Extend plug #3 or add an additional plug to cover point lookout. (5406 – 5506)
5. Add an additional plug to cover cliffhouse and menefee. (4865-4994)
6. Add additional cement to plug 4 to ensure 100% excess outside assuming 4-1/2 x 7-7/8 annular diameter if outside plug required. (approximately 12 sx inside and 40 sx outside)
7. Add additional cement to plug 5 to ensure 100% excess outside assuming 4-1/2 x 7-7/8 annular diameter if outside plug required. (approximately 45 sx inside and 206 sx outside)
8. Reclamation plan to be submitted in no more than 7 days from approval.