

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'.

NMOCD Approved by Signature

11/6/19

Date

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM 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.  
JIC1236. 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**

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.  
JICARILLA 123 C 282. Name of Operator  
LOGOS OPERATING LLCContact: LARISSA FARRELL  
E-Mail: lfarrell@logosresourcesllc.com9. API Well No.  
30-039-22558-00-C13a. Address  
2010 AFTON PLACE  
FARMINGTON, NM 874013b. Phone No. (include area code)  
Ph: 505-787-202710. Field and Pool or Exploratory Area  
BLANCO  
WEST LINDRITH

## 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

## 11. County or Parish, State

RIO ARRIBA COUNTY, NM

## 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 recomple 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 recomple 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-on-site after the P&A is complete and rig moved off.

NMOCED  
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.

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***



## 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	Krista McWilliams – Engineering Manager
Cell (505) 320-3499	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.**

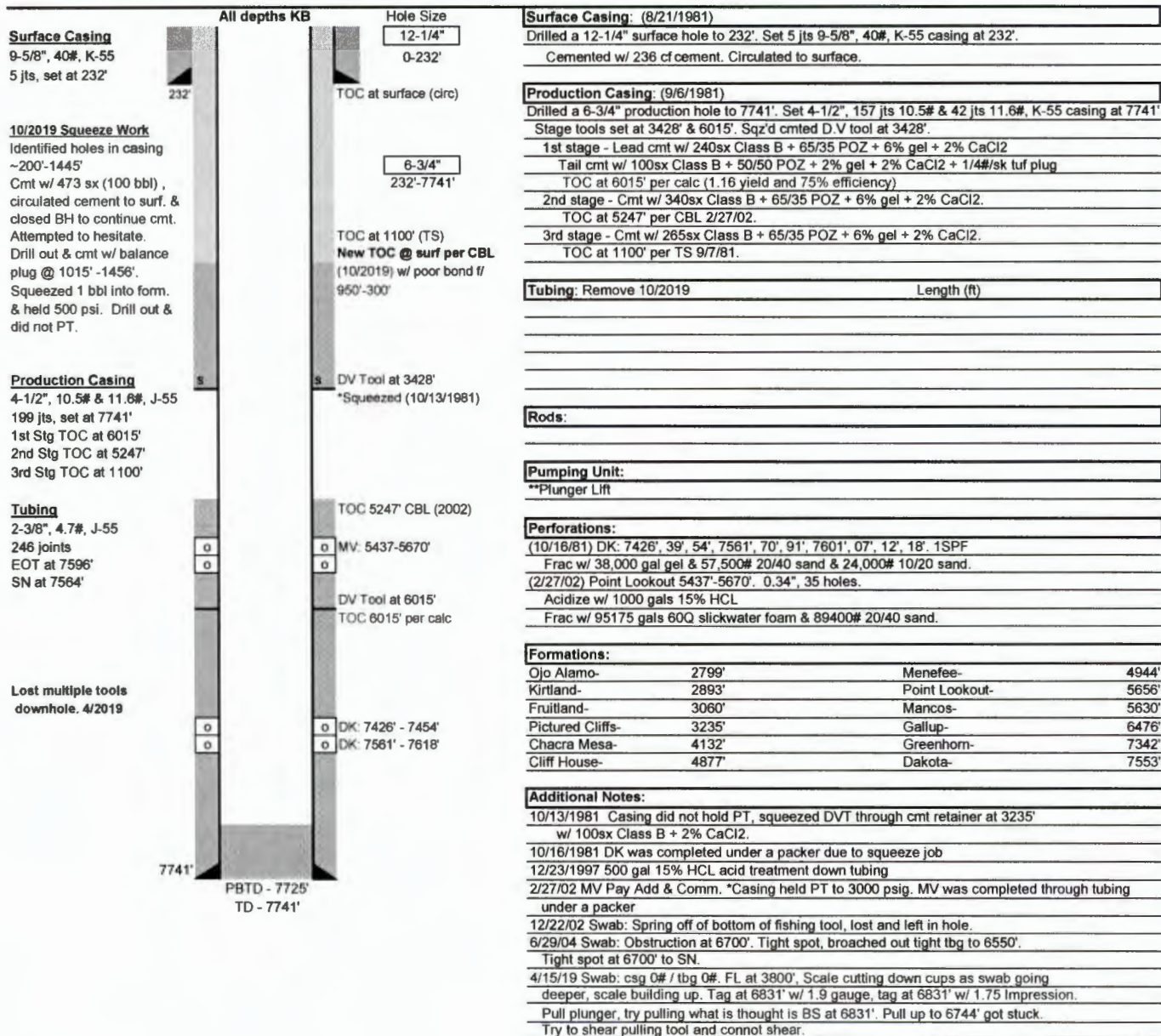
## CURRENT SCHEMATIC



## 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





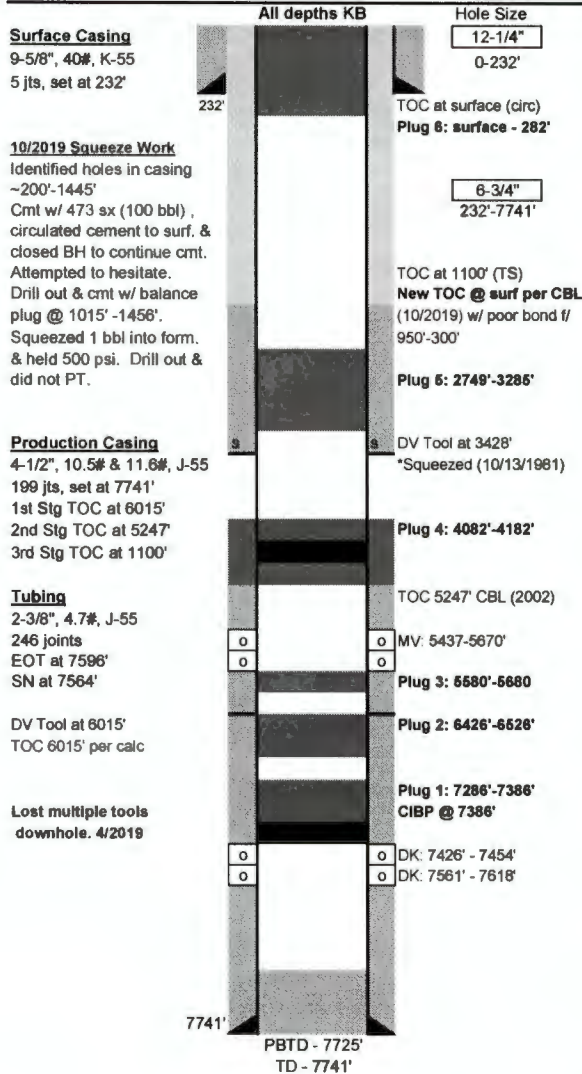
# PROPOSED SCHEMATIC



## Wellbore Schematic

Well Name: Jicarilla 123 C 28  
 Location: Sec 06, T25N, R04W 1800' FSL & 1580' FEL  
 County: Rio Arriba  
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 Co-ordinates: Lat 36.426292° Long -107.288537°  
 Elevations: GROUND: 6827'  
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 PBDT: 7725'  
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Date Prepared: 7/11/2019  
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### 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)

### 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 0# / tbg 0#. 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.



**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](mailto:jkillins@blm.gov) and [Brandon.Powell@state.nm.us](mailto: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.