

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: 5/19/2020

Well information:

**30-039-06868 RINCON UNIT #149**

ENDURING RESOURCES, 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 24 Hours prior to commencing activities
- CBL Required
- In addition to the BLM approved tops, include the following:
  - Ensure coverage from 6500'-6400'. OCD Gallup pick @ 6450'.
  - Ensure coverage 5510'-5410'. OCD Mancos pick @ 5460'.
  - Ensure coverage 4030'-3930'. OCD & BLM Chacra pick @ 3980'.
  - Ensure coverage 2895'-2795'. OCD Fruitland pick @ 2845'.

  
\_\_\_\_\_  
NMOCD Approved by Signature

8/4/2020  
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.  
NMSF079364

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
892000916B8. Well Name and No.  
RINCON UNIT 1499. API Well No.  
30-039-06868-00-C210. Field and Pool or Exploratory Area  
BASIN DAKOTA  
BLANCO MESAVERDE

11. County or Parish, State

RIO ARRIBA COUNTY, NM

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

ENDURING RESOURCES LLC

Contact: LACEY GRANILLO

E-Mail: lgranillo@enduringresources.com

3a. Address

1050 17TH STREET SUITE 2500  
DENVER, CO 80265

3b. Phone No. (include area code)

Ph: 505-636-9743

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 30 T27N R6W SESW 0110FSL 1750FWL  
36.540970 N Lat, 107.511383 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.

P&amp;A

Enduring Resources requests to plug and abandon the above mentioned well per plugging procedure, wellbore diagram and reclamation plan.

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

**Electronic Submission #515871 verified by the BLM Well Information System  
For ENDURING RESOURCES LLC, sent to the Farmington  
Committed to AFMSS for processing by HEATHER PERRY on 05/19/2020 (20HCP0011SE)**

Name (Printed/Typed) LACEY GRANILLO

Title PERMITTING SPECIALIST

Signature (Electronic Submission)

Date 05/19/2020

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

Approved By JOE KILLINS

Title ENGINEER

Date 07/29/2020

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 Farmington

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 \*\***

AV

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: Rincon 149

**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. Submit electronic copy of the CBLs for verification to the following addresses: [jkillins@blm.gov](mailto:jkillins@blm.gov) , [jhoffman@blm.gov](mailto:jhoffman@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. Required plug coverage is based on attached BLM geologic report .
4. BLM picks top of Gallup at 6540. Ensure coverage of Gallup top 6490-6590
5. BLM picks top of Cliffhouse at 4685. Ensure coverage of Gallup top 4635-4735
6. BLM picks top of Pictured Cliffs at 3085. Ensure coverage of PC top 3035-3135
7. BLM picks top of Fruitland at 2900. Ensure coverage of Fruitland top 2850-2950
8. BLM picks top of Ojo Alamo at 2150. Ensure coverage of Ojo Alamo top 2100-2200
9. Submit a copy of the updated procedure reflecting all COAs to the following email addresses before operations commence: [jkillins@blm.gov](mailto:jkillins@blm.gov) , [jhoffman@blm.gov](mailto:jhoffman@blm.gov) and [Brandon.Powell@state.nm.us](mailto:Brandon.Powell@state.nm.us)

# BLM FLUID MINERALS Geologic Report

**Date Completed:** 6/19/20

Well No.	Rincon Unit # 149	Location	1100'	FSL	&	1750'	FWL
Lease No.	NMSF079364	Sec. 30	T27N				R6W
Operator	Enduring Resources	County	Rio Arriba	State		New Mexico	
Total Depth	7653'	PBTD 7615'	Formation	MV-Graneros-DK			
Elevation (GL) 6614'			Elevation (KB) 6626' (est.)				

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm			Surface	1190'	Surface/Fresh water sands
Nacimiento Fm			1190'	2150'	Fresh water sands
Ojo Alamo Ss			2150'	2490'	Aquifer (fresh water)
Kirtland Shale			2490'	2900'	
Fruitland Fm			2900'	3085'	Coal/Gas/Possible water
Pictured Cliffs Ss			3085'	3180'	Gas
Lewis Shale(main)			3180'	3980'	
Chacra zone			3980'	4165'	Probable water or dry
Lewis stringer			4165'	4685'	
Cliff House			4685'	4785'	Possible Gas & Water
Menefee			4785'	5329'	Possible Coal, Gas & Water
Pt. Lookout Ss			5329'	5480'	Possible Gas & Water
Mancos Shale (main)			5480'	6540'	Source rock
Gallup			6540'	6750'	O&G/Water
Tocito Ss Lentil			6750'	6920'	Oil
Mancos stringer			6920'	7050'	
Juana Lopez			7050'	7120'	Marker bed
Mancos stringer			7120'	7223'	
Bridge Creek Ls			7223'	7250'	Marker bed
Graneros Shale			7250'	7318'	
Dakota			7318'	7641'	Possible Gas & Water
Morrison			7641'		Water

Remarks:

P & A

- Please ensure that the top of the Fruitland formation as well as the entire Ojo Alamo aquifer, identified in this report, are isolated by proper placement of cement plugs. This will protect the freshwater sands in this well bore.

Please note that the beds identified as Gallup are not the main Gallup but rather probable discontinuous Ss lenses at the same stratigraphic level

Please note that the BLM geologist's picks for several formation tops vary significantly from the operator's picks. These include the Ojo Alamo, Lewis Shale, Chacra zone, Mancos Shale, Gallup, and the Tocito Ss lentil.

Reference Well:

1) Enduring Resources Fm. Tops  
Same

**Prepared by:** Walter Gage



CNTY: Rio Arriba FTG: 1100' FSL / 1750' FWL  
 STATE: NM Q-Q: SESW  
 SPUD: 09/24/59 SEC.: 30  
 COMP: 11/06/59 TWS: 27N  
 STATUS: PROD RGE: 06W  
 WBD DATE: 04/08/20 BY: ACB

KBE:	<u>6627</u>	'
KB:	<u>12</u>	'
GLE:	<u>6615</u>	'

17-1/2" Hole  
13-3/8" 48# Csg @ 316'  
Cmt w/230 sxs, circ to surface

**TOC on 9-5/8" csg by TS @ 2,600 '**

12-1/4" Hole  
9-5/8" 40#/36# Csg @ 3221'  
12 jts 40# N-80 & 94 jts 36# J-55  
Cmt w/150 sx, no circ to surf

Nacimiento	@	1190
Ojo Alamo	@	2414
Kirtland	@	2517
Fruitland	@	2847
Pictured Cliffs	@	3048
Lewis	@	3275
Chacra	@	3597
Cliff House	@	4773
Menefee	@	4785
Point Lookout	@	5329
Mancos	@	5697
Gallup	@	6322
Tocito	@	6860
Greenhorn	@	7223
Graneros	@	7285
Dakota	@	7318
Morrison	@	7641

**TOC on 7" csg by TS @ 5,400 '**

8-3/4" Hole  
7" 23# Csg @ 7222'  
76 jts N-80 & 74 jts J-55 & 79 jts N-80  
Cmt w/1,006sx, no circ to surf

5" 15# Lnr Top @ 7172 '  
TOC on 5" Inr by TS @ 7,185 '

ORIG PBTD @ 7615 '  
5" 15..0# Csg @ 7651 '  
TD @ 7653 '  
Cmt w/50 sx, no circ to surface

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
17 1/2	13 3/8	48	H40	0	316
12 1/4	9 5/8	36 / 40	J-55/N-80	0	3221
8 3/4	7	23	J-55/N-80	0	7222
6 1/8	5	15	J-55	7172	7651

10 jts  
102 jts  
229 jts  
19 jts

COND: NEW      DATE: 26-Aug-11

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	TALLY (ft)	JTS
2 3/8	4.7	J-55	0	7433.00	243

ITEM	MAKE/MODEL	SIZE (in)	TALLY (ft)	DEPTH (ft)
TBG	4.7# J55 NEW	2 3/8	7431.50	7443.50
SN		2 3/8	1.00	7444.50
WL REG		2 3/8	0.50	7445.00

ZONE	TOP (ft)	BTM (ft)	SPF	STAGE	STATUS	VOL / PROP
MV (PL+MF)	5166	5496		3	water frac	100,000
Graneros	7320	7366		2	oil frac	22,000
Dakota	7450	7534		1	oil frac	50,000
						172,000



OPERATOR:	ENDURING RESOURCES		
WELL:	RINCON UNIT 149		
FIELD:	RINCON		
API #	30-039-06868		
ER WELL #:	NM02809.01		
WI/NRI:	76.8200%	/	63.8100%

CNTY:	<u>Rio Arriba</u>	FTG:	<u>1100' FSL &amp; 1750' FWL</u>
STATE:	<u>NM</u>	Q-Q:	<u>SESW</u>
SPUD:	<u>09/24/59</u>	SEC.:	<u>30</u>
COMP:	<u>11/06/59</u>	TWS:	<u>T27N</u>
STATUS:	<u>PROD</u>	RGE:	<u>R06W</u>
WBD DATE:	<u>05/04/20</u>	BY:	<u>ACB</u>

## PROPOSED P&A WELLBORE DIAGRAM

KBE:	<u>6627</u>	'
KB:	<u>12</u>	'
GLE:	<u>6615</u>	'

TD (ft): 7653 '  
PBTD (ft): 7615 '

17-1/2" Hole  
13-3/8" 48# Csg @ 316'  
Cmt w/230 sxs, circ to surface

**TOC on 9-5/8" csg by TS @ 2,600 '**

12-1/4" Hole  
9-5/8" 40#/36# Csg @ 3221'  
12 jts 40# N-80 & 94 jts 36# J-55  
Cmt w/150 sx, no circ to surf

## FORMATION TOPS

Nacimiento	@	1190
Ojo Alamo	@	2414
Kirtland	@	2517
Fruitland	@	2847
Pictured Cliffs	@	3048
Lewis	@	3275
Chacra	@	3597
Cliff House	@	4773
Menefee	@	4785
Point Lookout	@	5329
Mancos	@	5697
Gallup	@	6322
Tocito	@	6860
Greenhorn	@	7223
Graneros	@	7285
Dakota	@	7318
Morrison	@	7641

TOC on 7" csg by TS @ 5,400 '

8-3/4" Hole  
7" 23# Csg @ 7222'  
76 jts N-80 & 74 jts J-55 & 79 jts N-80  
Cmt w/1,006sx, no circ to surf

5" 15# Lnr Top @ 7172 '  
TOC on 5" Lnr by TS @ 7,185 '

### CEMENT & CASING INFORMATION

- ALL PLUGS ASSUME CLASS G NEAT CEMENT  
- STABILIZNG WELLBORE FLUID IS 8.3 PPG, SUFFICIENT  
TO BALANCE ALL WELLBORE PRESSURES, UNLESS  
NOTED OTHERWISE IN PROCEDURE

CEMENT DENSITY:	15.80 PPG
CEMENT YIELD:	1.15 CUFT / SX
MIX WATER REQUIRED:	5.00 GAL / SX
5" CSG CAPACITY:	0.1059 CUFT / FT
7" CSG CAPACITY:	0.2210 CUFT / FT
8-3/4" HOLE CAPACITY:	0.4176 CUFT / FT
9-5/8" CSG CAPACITY:	0.4340 CUFT / FT
7" CSG x 8-3/4" HOLE CAPACITY:	0.1503 CUFT / FT
7" CSG x 9-5/8" CSG CAPACITY:	0.1668 CUFT / FT
9-5/8" CSG x 12-1/4" HOLE CAPACIT	0.3132 CUFT / FT
9-5/8" CSG x 13-3/8" CSG CAPACITY	0.3765 CUFT / FT

ORIG PBTD @ 7615 '  
5" 15# Csg @ 7651 '  
TD @ 7653 '  
Cmt w/50 sx, no circ to surface

## CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
17 1/2	13 3/8	48	H40	0	316
12 1/4	9 5/8	36 / 40	J-55/N-80	0	3221
8 3/4	7	23	J-55/N-80	0	7222
6 1/8	5	15	J-55	7172	7651

## PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)
MV (PL+MF)	5166	5496
Graneros	7320	7366
Dakota	7450	7534

### PLUG #10: SURFACE CASING SHOE & SURFACE PLUG

SQZ HOLES	366 '		
9-5/8" CICR	316 '		
CEMENT	0 ' -	366 '	
PLUG VOLUME	270 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	139 sx	ABOVE CICR	50 ' excess required (inside casing)

### PLUG #9: NACIMIENTO TOP

SQZ HOLES	1240 '		
9-5/8" CICR	1190 '		
CEMENT	1140 ' -	1240 '	
PLUG VOLUME	74 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	38 sx	ABOVE CICR	50 ' excess required (inside casing)

### PLUG #8: KIRTLAND TOP & OJO ALAMO TOP

SQZ HOLES	2567 ' -		
9-5/8" CICR	2517 ' -		
CEMENT	2364 ' -	2567 ' -	
PLUG VOLUME	130 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	77 sx	ABOVE CICR	50 ' excess required (inside casing)

### PLUG #7: PICTURED CLIFFS TOP & FRUITLAND TOP

BALANCED PLUG CEMENT	2797 ' -	3098 '	
PLUG VOLUME	58 sx		50 ' excess required (inside casing)

**PLUG #6: 7" CASING STUB & 9-5/8" CASING SHOE**

CEMENT	3171 ' -	3271 '	
PLUG VOLUME	42 sx	8-3/4" OH	100% excess required (outside casing)
PLUG VOLUME	38 sx	9-5/8" CSG	50 ' excess required (inside casing)

**7" CASING CUT @ 3,271' (50' BELOW 9-5/8" CASING SHOE)**

## PLUG #5: CHACRA TOP

SQZ HOLES	3647 '		
7" CICR	3597 '		
CEMENT	3547 ' -	3647 '	
PLUG VOLUME	36 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	20 sx	ABOVE CICR	50 ' excess required (inside casing)

## PLUG #4: CLIFFHOUSE TOP

SQZ HOLES	4823 ' -		
7" CICR	4773 ' -		
CEMENT	4723 ' -	4823 ' -	
PLUG VOLUME	36 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	20 sx	ABOVE CICR	50 ' excess required (inside casing)

### PLUG #3: POINT LOOKOUT & MENEFEE PERFORATIONS

SQZ HOLES	5116 '		
7" CICR	5066 '		
CEMENT	5016 ' -	5116 '	
PLUG VOLUME	36 sx	THRU CICR	100% excess required (outside casing)
PLUG VOLUME	20 sx	ABOVE CICR	50 ' excess required (inside casing)

## PLUG #2: GALLUP TOP

7" CICR	6372 '	
CEMENT	6272 ' -	6372 '
PLUG VOLUME	29 sx	ABOVE CICR 50 ' excess required (inside casing)

**PLUG #1: DAKOTA & GRANEROS PERFORATIONS, GRANEROS TOP, LINER TOP**

5" CICR	7270 '	
CEMENT	7122 ' -	7270 '
PLUG VOLUME	29 sx	ABOVE CICR 50 ' excess required (inside casing)

**CBL WILL BE RUN ON 7" CASING AFTER SETTING PLUG #1 TO VERIFY TOC; SUBSEQUENT CEMENT PLUGS WILL BE ADJUSTED AS REQUIRED DEPENDING ON RESULTS OF CBL. UNTIL VERIFICATION FROM CBL, THE PROCEDURE ASSUMES THAT ALL PLUGS IN THE 7" CASING ABOVE 5,400' (TOC BY TS) WILL REQUIRE CEMENT INSIDE & OUTSIDE CASING.**

**CBL WILL BE RUN ON 9-5/8" CASING AFTER SETTING PLUG ON 7" CASING STUB AND 9-5/8" CASING SHOE TO VERIFY TOC; SUBSEQUENT CEMENT PLUGS WILL BE ADJUSTED AS REQUIRED DEPENDING ON CBL RESULTS. UNTIL VERIFICATION FROM CBL, THE PROCEDURE ASSUMES THAT ALL PLUGS IN THE 9-5/8" CASING ABOVE 2,600' (TOC BY TS) WILL REQUIRE CEMENT INSIDE & OUTSIDE CASING.**

**HUERFANITO BENTONITE @ 3,537'.**



ENDURING RESOURCES IV, LLC

PLUG AND ABANDONMENT PROCEDURE

WELL: RINCON UNIT 149

API: 30-039-06868

ER WELL: NM02809.01

LOCATION: 1100' FSL & 1750' FWL, Sec.30, T27N, R06W

COUNTY: Rio Arriba

STATE: NM

- NOTES:
- 1) All cement volumes assume 100% excess volume outside pipe and 50' excess inside pipe. Cement will be Class 'G' (15.8 ppg and 1.15 cuft/sx). A stabilizing wellbore fluid with density of 8.3 ppg will be sufficient to balance pressures encountered in the well.
  - 2) Any waste fluids circulated from the well to surface, including excess cement, will be stored in steel tanks and then disposed of at an approved disposal facility.
  - 3) Notify BLM and NMOCD prior to beginning well-work operations. Comply with all BLM and NMOCD regulations. Obtain approval from BLM and NMOCD prior to making any changes or adjustments to the procedure.
  - 4) Plugs will be adjusted as necessary depending on the results of the RCBLs.
  - 5) Wait on cement, tag, and spot additional cement plugs as necessary depending on results of casing pressure tests.
  - 6) Hold safety meetings daily (minimum) with all personnel on location. Record tubing, casing, and bradenhead pressures daily on reports.
  - 7) Test and install rig anchors, if necessary (if rig does not have a base-beam).

- PROCEDURE:
- 1) MIRU daylight pulling unit and associated equipment.
  - 2) Blow down well. Kill well. ND WH. NU BOPE and test.
  - 3) TOH and LD production tubing
  - 4) PU and TIH with 2-7/8" work-string and 5" casing scraper to 7,320'. TOH. LD scraper.
  - 5) **PLUG #1: DAKOTA & GRANEROS PERFORATIONS, GRANEROS TOP, LINER TOP**  
TIH with 5" CICR on 2-7/8" work-string. Set CICR. MIRU Cementers. Pump cement. TOH.

5" CICR:	7,270'		
Plug Coverage:	7,122'	to	7,270'
Cement Volume:	29 sx	ABOVE CICR	
	29 sx	TOTAL	

- 6) PU and TIH with 2-7/8" work-string and 7" casing scraper to 7,122' (top of cement plug #1). TOH. LD scraper.
- 7) MIRU WLU. Run RCBL on 7" casing from 7,122' (top of cement plug #1) to surface. Review RCBL and send copies to BLM and NMOCD before proceeding. RD WL. Note: depending on the fluid column that can be supported by the well, an additional RCBL may need to be run after setting plug #3 or prior to setting plug #3 using an RBP set at 5,141' (RBP will be removed after running CBL and prior to setting plug #3).
- 8) **PLUG #2: GALLUP TOP**

TIH with 7" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

7" CICR:	6,372'		
Plug Coverage:	6,272'	to	6,372'
Cement Volume:	29 sx	ABOVE CICR	
	<b>29 sx</b>	<b>TOTAL</b>	

**9) PLUG #3: POINT LOOKOUT & MENEFFEE PERFORATIONS**

RIH with WL. Perf squeeze holes. TIH with 7" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

Squeeze holes:	5,116'		
7" CICR:	5,066'		
Plug Coverage:	5,016'	to	5,116'
Cement Volume:	36 sx	THRU CICR	
	20 sx	ABOVE CICR	
	<b>56 sx</b>	<b>TOTAL</b>	

**10) PLUG #4: CLIFFHOUSE TOP**

RIH with WL. Perf squeeze holes. TIH with 7" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

Squeeze holes:	4,823'		
7" CICR:	4,773'		
Plug Coverage:	4,723'	to	4,823'
Cement Volume:	36 sx	THRU CICR	
	20 sx	ABOVE CICR	
	<b>56 sx</b>	<b>TOTAL</b>	

**11) PLUG #5: CHACRA TOP**

RIH with WL. Perf squeeze holes. TIH with 7" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

Squeeze holes:	3,647'		
7" CICR:	3,597'		
Plug Coverage:	3,547'	to	3,647'
Cement Volume:	36 sx	THRU CICR	
	20 sx	ABOVE CICR	
	<b>56 sx</b>	<b>TOTAL</b>	

**12)** MU casing cutting tools and TIH/RIH. Depending on conditions encountered in the well, a tubing-conveyed mechanical cutter or wireline-conveyed chemical cutter may be used to cut the casing. Cut 7" casing at 3,271' (50' below 9-5/8" casing shoe). TOH/POH with cutting tools. MIRU casing crew & casing handling tools. TOH and LD 7" casing. RDMO casing crew.

**13)** TIH with 9-5/8" casing scraper to 3,221' (9-5/8" casing shoe). TOH. LD scraper.

**14)** RU WL. Run RCBL on 9-5/8" casing from 3,221' (casing shoe) to surface. Review RCBL and send copies to BLM and NMOCD before proceeding. RD WL.

**15) PLUG #6: 7" CASING STUB & 9-5/8" CASING SHOE**

TIH with work-string. Spot plug. Pull up hole.

Plug Coverage:	3,171'	to	3,271'
Cement Volume:	42 sx	8-3/4" OH	
	38 sx	9-5/8" CSG	
	<b>80 sx</b>	<b>TOTAL</b>	

**16) PLUG #7: PICTURED CLIFFS TOP & FRUITLAND TOP**

Spot balanced plug. TOH.



Plug Coverage:	2,797'	to	3,098'
Cement Volume:	58 sx		
	<b>58 sx</b>	<b>TOTAL</b>	

**17) PLUG #8: KIRTLAND TOP & OJO ALAMO TOP**

RIH with WL. Perf squeeze holes. TIH with 9-5/8" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

Squeeze holes:	2,567'		
9-5/8" CICR:	2,517'		
Plug Coverage:	2,364'	to	2,567'
Cement Volume:	130 sx	THRU CICR	
	77 sx	ABOVE CICR	
	<b>207 sx</b>	<b>TOTAL</b>	

**18) PLUG #9: NACIMIENTO TOP**

RIH with WL. Perf squeeze holes. TIH with 9-5/8" CICR on 2-7/8" work-string. Set CICR. Pump cement. TOH.

Squeeze holes:	1,240'		
9-5/8" CICR:	1,190'		
Plug Coverage:	1,140'	to	1,240'
Cement Volume:	74 sx	THRU CICR	
	38 sx	ABOVE CICR	
	<b>112 sx</b>	<b>TOTAL</b>	

**19) PLUG #10: SURFACE CASING SHOE & SURFACE PLUG**

RIH with WL. Perf squeeze holes. RDMO WL. TIH with 9-5/8" CICR on 2-7/8" work-string. Set CICR. Establish circulation down work-string and out bradenhead. Pump cement. TOH and LD work-string.

Squeeze holes:	366'		
9-5/8" CICR:	316'		
Plug Coverage:	0'	to	366'
Cement Volume:	270 sx	THRU CICR	
	139 sx	ABOVE CICR	
	<b>409 sx</b>	<b>TOTAL</b>	

**20)** ND BOPE. Cut off casing and wellhead (minimum of 3' below finished grade). Top off annulus and casing with cement, if required. RDMO cement equipment. Install below-grade P&A marker (minimum 1/4" thick steel plate with weep hole, welded in place covering the well, well information permanently inscribed). RDMO.

**21)** Complete surface reclamation as per approved reclamation plan.

**Created by:** A. Bridge 5/4/2020