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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM014375

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No. RIGGS/NMNM92467

1. Type of Well
☐ Oil Well ☐ Gas Well ☑ Other

8. Well Name and No. RIGGS/1

2. Name of Operator ENDURING RESOURCES LLC

9. API Well No. 3004529117

3a. Address 1050 17TH STREET SUITE 2500, DENVER, CO

3b. Phone No. *(include area code)* (303) 573-1222

10. Field and Pool or Exploratory Area Basin Fruitland Coal/BASIN FRUITLAND COAL

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 4/T29N/R12W/NMP

11. Country or Parish, State SAN JUAN/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ 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 perfonned 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 detennined that the site is ready for final inspection.)

ENDURING RESOURCES REQUESTS TO PLUG AND ABANDON THIS WELL PER ATTACHED PLUGGING PROCEDURE AND WELLBORE DIAGRAM. THIS WELL IS LOCATED ON FEE SURFACE AND WILL BE RECLAIMED PER NMOCD REGULATIONS. BELOW GROUND P&A MARKER WILL BE INSTALLED PER BLM/NMOCD REGULATIONS.

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* HEATHER HUNTINGTON / Ph: (505) 636-9751

Title Permitting Technician

Signature

Date 03/09/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by KENNETH G RENNICK / Ph: (505) 564-7742 / Approved

Title Petroleum Engineer

Date 03/14/2023

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

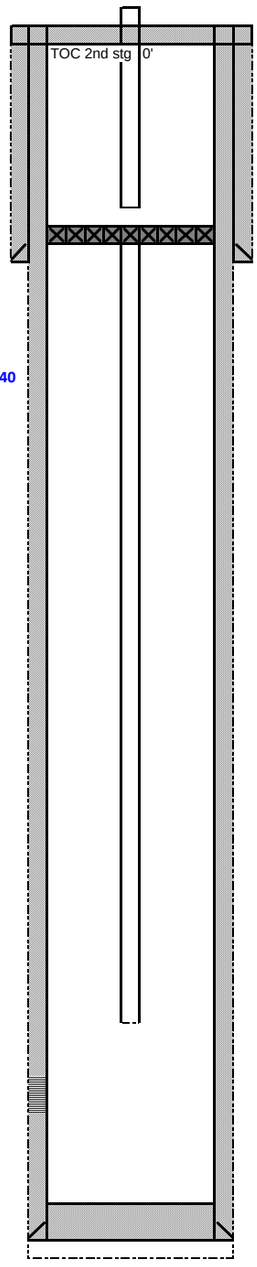
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

OPERATOR:	Enduring Resources	**CNTY:**		**FTG:**	790' FNL & 1220' FEL		
WELL:	Riggs 01	**STATE:**	NM	**Q-Q:**	NENE		
FIELD:	South San Juan	**SPUD:**	06/24/94	**SEC.:**	4	**Latitude**	36.7602460 N
API #	30-045-29117	**COMP:**	07/20/94	**TWS:**	29N	**Longitude**	108.098799 W
ER WELL #:	NM02642.01	**STATUS:**	WSI	**RGE:**	12W		
WI/NRI:	65.9000% / 52.4500%	**WBD DATE:**	02/24/23	**BY:**	GAO		

CURRENT WELLBORE DIAGRAM (TA STATUS)

KBE: 5755 '
KB: 15 '
GLE: 5740 '



12-1/4" Hole
8-5/8" 24.0# csg @ 250 '
177 ft3 Class B Cmt w/2%CaCl Cmt to surf

Estimated Cement Top 240

Top Perf 1774
Bottom Perf 1806

ORIG PBTD @ 1850 '
4-1/2" 11.6# Csg @ 1895 '

TD @ 1900 '

FORMATION TOPS

Nacimiento @	0
Ojo Alamo @	365
Kirtland @	556
Fruitland @	1402
Pictured Cliffs @	1818

CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)	Annulus Vol bbls/ft	Capacity bbls/ft
12 1/4	8 5/8	24	J55	0	250	0.0735	0.0636
7 7/8	5 1/2	15.5	J55	0	1895	0.0343	0.0238

TUBING RECORD COND: DATE:

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	TALLY (ft)	JTS	ID
2 3/8	4.7	J55	0	1829		1.6

ITEM	MAKE/MODEL	SIZE (in)	TALLY (ft)	DEPTH (ft)
RBP		5.5		150

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	STAGE	STATUS	VOL / PROP
Fruitland Coal	1774	1779	8	1	FRAC'D	59.9K GAL & 205K LBS
	1784	1806	8	1	FRAC'D	

CEMENT	sx	cu ft	Type	BOTTOM	TOP
Surface	280		Class B w/2% CaCl2	250	0
				Circulated cement to surf	
Production					
Lead	280		65:35 Poz w/6% gel, 1/4# cello flake	3711	240
Tail	140		Class G w/2% CaCl2	Circ 12 bbls cmt to surf	

OPERATOR:	ENDURING RESOURCES	**CNTY:**	0	**FTG:**	790' FNL & 1220' FEL
WELL:	Riggs 01	**STATE:**	NM	**Q-Q:**	NENE
FIELD:	South San Juan	**SPUD:**	06/24/94	**SEC.:**	4
API #	30-045-29117	**COMP:**	07/20/94	**TWS:**	29N
ER WELL #:	NM02642.01	**STATUS:**	WSI	**RGE:**	12W
WI/NRI:	65.90% / 52.4500%	**WBD DATE:**	08/24/22	**BY:**	GAO

36.76024600 N
108.0987990 W

PROPOSED P&A WELLBORE DIAGRAM

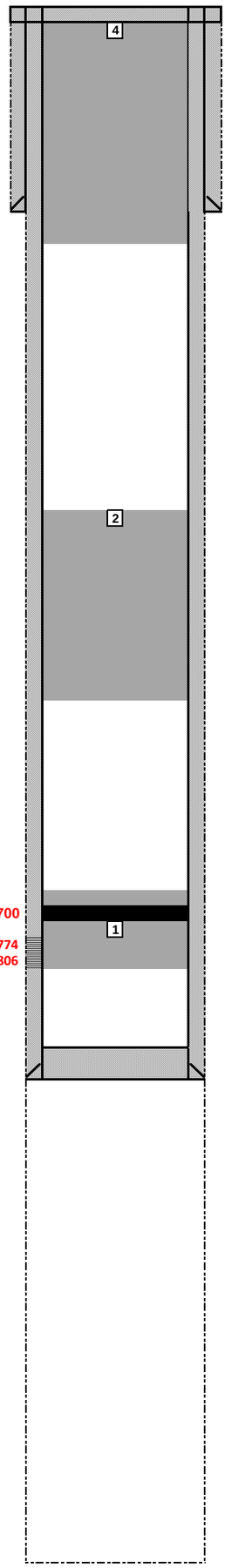
KBE: 6781 '
KB: 13 '
GLE: 6768 '
TOC @ 0' 9/19/1987

12-1/4" Hole
8-5/8" 24.0# csg @ 250 '
177 ft3 Class B Cmt w/2%CaCl Cmt to surf

CICR 1700
Top Perf 1774
Bottom Perf 1806

ORIG PBTD @ 1850 '
4-1/2" 11.6# Csg @ 1895 '

TD 1900 '



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)	ID (in)
12 1/4	8 5/8	24.00	J55	0	250	8.097
7 7/8	5 1/2	15.50	J55	0	1895	4.950

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF
CHACRA	1774	1806	8

PLUG #3: NACIMIENTO TOP, SURFACE CASING SHOE, SURFACE
BALANCED PLUG
PERF DEPTH 300
CEMENT 0.0 ' - 300 ' 350 ' interval (including 50' excess)
PLUG VOLUME 77 sx 100% excess required (outside casing)
50 'feet of excess required (inside casing)

PLUG #2: FRUITLAND AND OJO ALAMO TOPS
BALANCED PLUG
1452
Ojo Alamo@ 365
CEMENT 315 ' - 1452 ' 1187 ' interval (including 50' excess)
PLUG VOLUME 77 sx 50 'feet of excess required (inside casing)

PLUG #1: FRUITLAND COAL PERFORATIONS
PERF HOLES 224
4-1/2" CR 1700
CEMENT 1700 ' - 1806 ' 156 ' interval (including 50' excess)
PLUG VOLUME 11 sx THRU CICR 100% excess required (outside casing)
PLUG VOLUME 4 sx ABOVE CICR 50 'feet of excess required (inside casing)

FORMATION TOPS

Nacimiento @	0
Ojo Alamo @	365
Kirtland @	556
Fruitland @	1402
Pictured Cliffs @	1818
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0

PROPOSED CEMENT PLUGS ASSUME TOC AS REPORTED BASED ON TS DURING DRILLING.
PLUGS WILL BE ADJUSTED AS REQUIRED BASED ON RESULTS OF CBL AND/OR PRESSURE TESTS

CEMENT & CASING INFORMATION
- ALL PLUGS ASSUME TYPE III NEAT CEMENT
-

CEMENT DENSITY:	**14.60**	PPG
CEMENT YIELD:	**1.39**	CUFT / SX
MIX WATER REQUIRED:	**6.69**	GAL / SX
2-3/8" TUBING CAPACITY:	**0.0058**	BBLS / FT
5-1/2" CSG CAPACITY:	**0.0895**	CUFT / FT
5-1/2" CSG x 7-7/8" HOLE CAPACITY:	**0.1733**	CUFT / FT
5-1/2" CSG x 8-5/8" CSG CAPACITY	**0.1926**	CUFT / FT

ENDURING RESOURCES IV, LLC

PLUG AND ABANDONMENT PROCEDURE

WELL: Riggs 01
API: 30-045-29117
ER WELL: NM02642.01
LOCATION: 790' FNL & 1220' FEL, Sec.4, 29N, 12W
COUNTY: South San Juan
STATE: NM
AFE:

Latitude **36.76024600 N**
Longitude **108.0987990 W**

DRIVING DIRECTIONS: **From the intersection of US HWY 550 & US HWY 64 in Bloomfield, NM:**
From the West intersection of US HWY 550 (South) & US HWY 64 in Bloomfield, NM: West on US HWY 64 for 6.3 mi to T of County Rd 350 intersection; Right (North) on Rd 350 for 3.9 mi to intersection of Cty Rd 3100/3720; Left (West) on Cty Rd 3720 for 0.8 miles to T; Right (North) on Cty Rd 3773 (just past Rd 3721) for 0.8 mi to T; Straight (West) continuing on Cty Rd 3773 for 0.1 mi to T; Left (South) on lease rd for 0.1 mi to onto location.

NOTES:

1) All cement volumes assume 100% excess volume outside pipe and 50' excess inside pipe. Cement will be Type III (14.6 ppg and 1.39 cuft/sx), or similar. 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 P&A 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 approved procedure.
4) Plugs will be adjusted as necessary depending on the results of of any RCBLs and pressure tests. All logs and pressure test results will be submitted / reported to Regulatory Agencies.
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, if necessary (well is currently in TA status; should not require blowing down or killing).
3) ND WH. NU BOPE. Release RBP and POH with tubing. RU wireline. A CBL was ran from PBTD to surface 7/8/94 and is availble on state website - web address is below.

OCD Online: Imaging (nm.gov)

4) PU and TIH with 4-1/2" cast iron cement retainer (CICR) on 2-3/8" work-string to 1,700'. Set CICR, sting out, load annulus and press test to 500 psi. Sting in and establish injection rate minimum of 2 bpm
5) ***PLUG #1: FRUITLAND COAL PERFORATIONS***

TIH with 4-1/2" CR on 2-3/8" work-string. Pump cement, 11 sx below CICR, sting out, pump remainder of 4 sx on top of the CR. Pull 3 stds and reverse tubing clean. TOOH to 1,413' MD.

Perf holes:	1762 to 1804'		
4-1/2" CR:	1,700'		
Plug Coverage:	1,700'	to	1,806'
Cement Volume Below CICR:	11 sx		
Cement Volume Above CICR:	4 sx		
	15 sx	***TOTAL***	

7) TIH with tubing to 1,452' MD. Pump cement as follows:

8) ***PLUG #2: FRUITLAND AND OJO ALAMO TOPS***

Spot balanced plug down work-string displacing cement with 1 bbl clean water. TOOH to 200'. Reverse out tubing. POH.

Plug Coverage:	315	to	1,452
Cement Volume:	77 sx		
	77 sx	***TOTAL***	

9) TIH with tubing to 300' MD. Pump cement as follows:

10) ***PLUG #3: NACIMIENTO TOP, SURFACE CASING SHOE, SURFACE***

Circulate cement down 4.5" casing.

Plug Coverage:	0'	to	300'
Cement Volume:	77 sx	*0*	
	sx	*0*	
	77 sx	***TOTAL***	

11) 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 P&A marker to comply with BLM and NMOCD regulations. RDMO.

12) Complete surface reclamation as per approved reclamation plan.

Created by: G Olson 2/24/2023

BLM FLUID MINERALS
P&A Geologic Report

Date Completed: 03/13/2023

Well No. Riggs 01 (API 30-045-29117)		Location	NENE		
Lease No. NMNM014375		Sec. 4	T29N		R12W
Operator Enduring Resources		County	San Juan	State	New Mexico
Total Depth 1900’	PBTD 1850’	Formation	Fruitland Coal		
Elevation (GLE) 5740’		Elevation (KBE)	5755’		

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					Surface/freshwater sands
Nacimiento Fm					Possible freshwater sands
Ojo Alamo Ss			365		Aquifer (possible freshwater)
Kirtland Shale			556		
Fruitland Fm			1402		Coal/Gas/Possible water
Pictured Cliffs Ss			1818		Gas
Lewis Shale					
Chacra					Gas
Cliff House Ss					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:
P & A

Reference Well:

- Fruitland Coal Perforations 1774 – 1806’.

Prepared by: *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 2719895

Attachment to notice of Intention to Abandon

Well: Riggs 1

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 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 3/13/2023

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_2S.

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 198236

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 198236
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Add to PBTD to base of BFC perforations to cover the PC top @ 1818'.	3/20/2023
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	3/20/2023
kpickford	Adhere to BLM approved COAs and plugs. See BLM COAs and GEO report.	3/20/2023