Plug & Abandon Procedure

Rosa Unit 15B

API: 30-039-29505

1. Roll hole with fresh water and pressure test casing to 560 psi for 15 minutes.
   a. **If pressure test fails, tag and record each plug top** and top off with more cement if necessary.
2. **Plug #1: 5050'-5150' (CIBP set at 5150' / Top Perforation: 5247' / Mesaverde top: 5499'):** Mix & spot 12 sx of Class G cement on CIBP.
3. **Plug #2: 4640'-4740' (Chacra top: 4690'):** Mix and spot 12 sx of Class G cement.
4. **Plug #3: 3665'-3765' (TOL: 3715'):** Mix and spot 20 sx of Class G cement.
5. **Plug #4: 3124'-3392' (Fruitland top: 3174' / Pictured Cliffs top: 3342'):** Mix and spot 61 sx of Class G cement.
6. **Plug #5: 2544'-2791' (Ojo Alamo top: 2594' / Kirtland top: 2741'):** Mix and spot 57 sx of Class G cement.
7. **Plug #6: 1088'-1188' (Nacimiento top: 1138')**: Mix and spot 29 sx Class G cement.
8. **Plug #7: Surface - 351' (Surface casing shoe: 301'):** Mix and spot 77 sx of Class G cement.
9. Wait on cement and tag top of cement at surface. Top off as required.
10. Cut off wellhead below surface casing flange per regulation. Top off with cement if needed. Install P&A marker with cement per regulation.
11. Cut off anchors and restore location per BLM stipulations.

Plug & Cement Table Planning

Rosa Unit 15B P&A Planning

Formations	Tops (ft)
Surface	0
Naciemiento	1138
Ojo Alamo	2594
Kirtland	2741
Fruitland	3174
Pictured Cliffs	3342
TOL	3715
Chacra	4690
Mesaverde	5499
Top Perforation	5247
CIBP	5150

4.5" csg capacity	0.0896
7" csg capacity	0.221

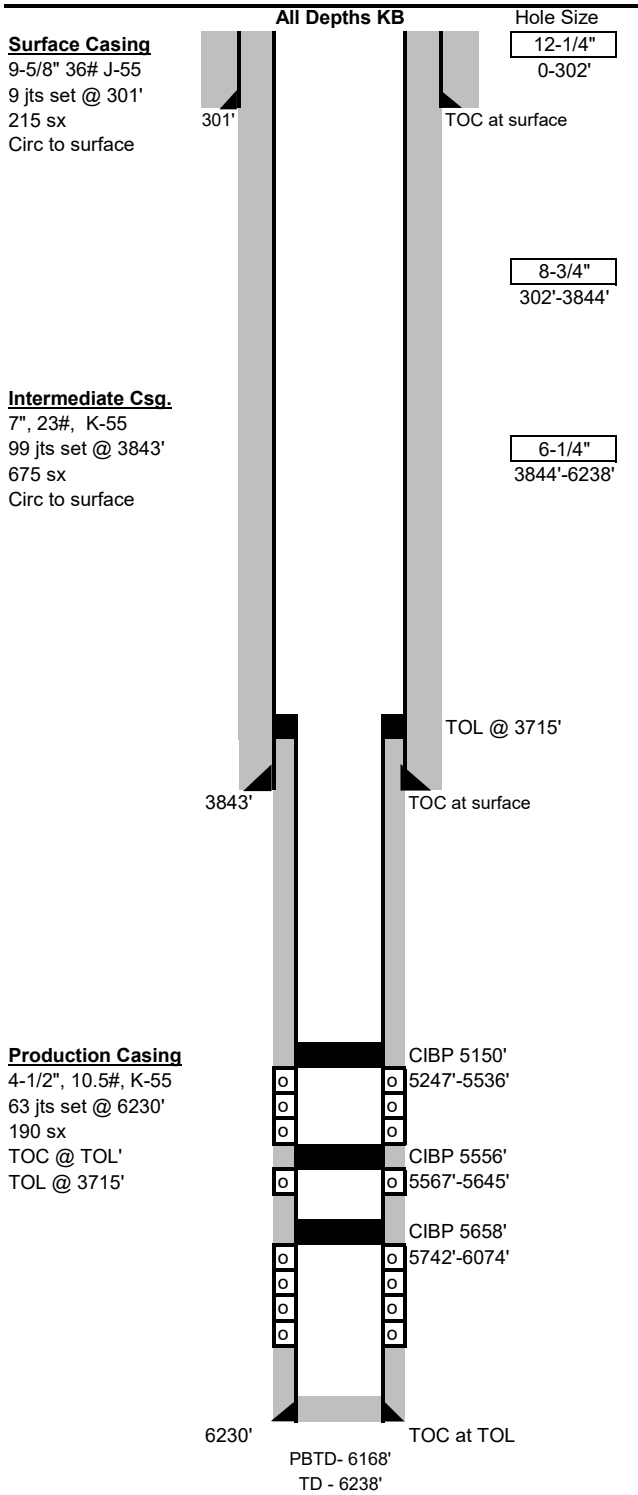
Yield	1.15

Plugs	Reason	Inside/Outside	Top	Bottom	Total Length of Plug (ft)	Csg Volume (cf/ft)	# of sx (1.15 yield)	excess (ft)	Cmt volume for excess	Total # sx
1	Perforations/MV Top	Inside	5050	5150	100	0.0896	8	50	4	12
2	Chacra Top	Inside	4640	4740	100	0.0896	8	50	4	12
3	TOL	Inside	3665	3765	100	0.0896/0.221	14	50	7	20
4	Fruitland/PC Top	Inside	3124	3392	268	0.221	52	50	10	61
5	Ojo/Kirtland Top	Inside	2544	2791	247	0.221	47	50	10	57
6	Nacimiento Top	Inside	1088	1188	100	0.221	19	50	10	29
7	Surface	Inside	0	351	351	0.221	67	50	10	77

Grand total cmt	268

Current Wellbore Schematic

Well Name:	Rosa Unit 15B	Date Prepared:	10/16/2020 Gomez
Location:	Sec 29, T31N, R5W 2465' FSL & 1715' FEL	Reviewed By:	9/16/2022 Peace
County:	Rio Arriba	Last Updated:	9/21/2022 Moss
API #:	30-039-29505	Spud Date:	8/26/2005
Co-ordinates:	Lat 36.8700752 Long -107.382515	Completion Date:	12/1/2005
Elevations:	GROUND: 6451'	Last Workover Date:	1/26/2011
	KB: 6465'		
Depths (KB):	PBTD: 6168'		
	TD: 6238'		



Surface Casing: (8/27/2005)
Drilled 12-1/4" surface hole to 302'. Set 9 jts. 9-5/8", 36#, J-55 casing set at 301'. Cemented w/ 215 sx Type III cmt w/ 2% CaCl2, 1/4 #/sk Celloflake. Circulated 20 bbls cmt to surface.

Intermediate Casing: (9/1/2005)
Drilled 8-3/4" intermediate hole to 3844'. Set 99 jts. 7", 23#, K-55 casing set at 3843'. Cmt lead w/ 625 sx Type III cmt w/ CaCl2 and 1/4 #/sk Celloflake. Cmt tail w/ 50 sx Type III cmt w/ 1/4 #/sk Celloflake and 1% CaCl2. Circulate 81 bbls cmt to surface.

Production Casing: (9/4/2005)
Drilled 6-1/4" production hole to 6238'. Set 63 jts. 4-1/2", 10.5# K-55 casing set at 6230' TOL at 3715'. Cemented lead w/ 75 sx Type III cmt 65/35 Poz w/ 8% gel, 1% CaCl2 and 1/4 #/sk Celloflake. Cmt tail w/ 115 sx Type III cmt w/ 1/4 #/sk Celloflake and 1% CaCl2. Circulate 20 bbls to surface.

Perforations: (12/1/2005)
Stage 1: 5742', 46', 49', 52', 68', 72', 76', 80', 84', 88', 92', 96', 5800', 04', 08', 13', 18', 22', 26', 30', 34', 39', 44', 49', 57', 61', 70', 78', 83', 91', 96', 5900', 02', 06', 13', 19', 23', 31', 43', 58', 63', 67', 71', 95', 6012', 24', 38', 54', 74'. (1 SPF).
Frac w/ 10,400# 14/30 Lite Prop 125 f/w 3,200# 20/40 Brady sand in 1977 bbls SW.
Stage 2: 5247', 54', 64', 75', 82', 85', 96', 5300', 04', 10', 5476', 79', 90', 5500', 06', 13', 16', 18', 23', 30', 36', 67', 70', 73', 76', 83', 89', 92', 95', 98', 5612', 15', 18', 21' 24', 27', 34', 39', 42', 45' (1 SPF). Frac w/ 9,320# 14/30 Lite Prop 125 f/w 3,180# 20/40 Brady sand in 1952 bbls SW.

Formations:

San Jose	Surface
Nacimiento	1138'
Ojo Alamo	2594'
Kirtland	2741
Fruitland	3174'
Pictures Cliffs	3342'
Chacra	4690'
Mesaverde	5499'

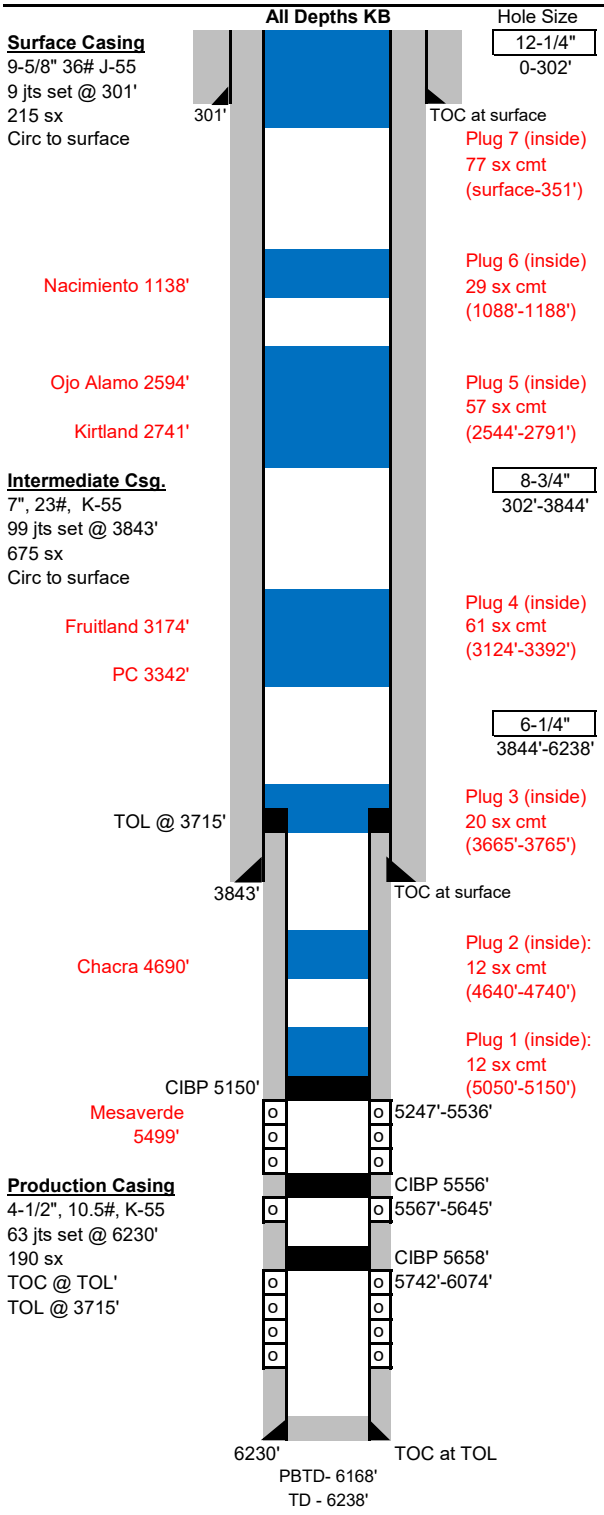
Additional Notes:
4/20/2008- A beam rod pump was installed to produce the well.
7/14/2008- Diagnosed w/ a hole in tubing. An RTP was performed. Rods parted. There was 1500' of bad rods and 56 tubing joints were replaced.
3/2/2010- Parted rods. The rods & pump were pulled out of hole and laid down.
10/20/2010- CIBP set at 5658' and a second CIBP was set at 5556'.
1/26/2011- The well was TA'd by setting a CIBP at 5150'. Passed pressure test.

**Max deviation 1 degree at 262'*

LOGOS RESOURCES II, LLC

Proposed P&A Wellbore Schematic

Well Name:	Rosa Unit 15B	Date Prepared:	10/16/2020 Gomez
Location:	Sec 29, T31N, R5W 2465' FSL & 1715' FEL	Reviewed By:	9/16/2022 Peace
County:	Rio Arriba	Last Updated:	9/23/2022 Moss
API #:	30-039-29505	Spud Date:	8/26/2005
Co-ordinates:	Lat 36.8700752 Long -107.382515	Completion Date:	12/1/2005
Elevations:	GROUND: 6451'	Last Workover Date:	1/26/2011
	KB: 6465'		
Depths (KB):	PBTD: 6168'		
	TD: 6238'		



Surface Casing: (8/27/2005)
Drilled 12-1/4" surface hole to 302'. Set 9 jts. 9-5/8", 36#, J-55 casing set at 301'. Cemented w/ 215 sx Type III cmt w/ 2% CaCl2, 1/4 #/sk Celloflake. Circulated 20 bbls cmt to surface.

Intermediate Casing: (9/1/2005)
Drilled 8-3/4" intermediate hole to 3844'. Set 99 jts. 7", 23#, K-55 casing set at 3843'. Cmt lead w/ 625 sx Type III cmt w/ CaCl2 and 1/4 #/sk Celloflake. Cmt tail w/ 50 sx Type III cmt w/ 1/4 #/sk Celloflake and 1% CaCl2. Circulate 81 bbls cmt to surface.

Production Casing: (9/4/2005)
Drilled 6-1/4" production hole to 6238'. Set 63 jts. 4-1/2", 10.5# K-55 casing set at 6230'. TOL at 3715'. Cemented lead w/ 75 sx Type III cmt 65/35 Poz w/ 8% gel, 1% CaCl2 and 1/4 #/sk Celloflake. Cmt tail w/ 115 sx Type III cmt w/ 1/4 #/sk Celloflake and 1% CaCl2. Circulate 20 bbls to surface.

Perforations: (12/1/2005)
Stage 1: 5742', 46', 49', 52', 68', 72', 76', 80', 84', 88', 92', 96', 5800', 04', 08', 13', 18', 22', 26', 30', 34', 39', 44', 49', 57', 61', 70', 78', 83', 91', 96', 5900', 02', 06', 13', 19', 23', 31', 43', 58', 63', 67', 71', 95', 6012', 24', 38', 54', 74'. (1 SPF).
Frac w/ 10,400# 14/30 Lite Prop 125 f/w 3,200# 20/40 Brady sand in 1977 bbls SW.
Stage 2: 5247', 54', 64', 75', 82', 85', 96', 5300', 04', 10', 5476', 79', 90', 5500', 06', 13', 16', 18', 23', 30', 36', 67', 70', 73', 76', 83', 89', 92', 95', 98', 5612', 15', 18', 21', 24', 27', 34', 39', 42', 45' (1 SPF). Frac w/ 9,320# 14/30 Lite Prop 125 f/w 3,180# 20/40 Brady sand in 1952 bbls SW.

Formations:

San Jose	Surface
Nacimiento	1138'
Ojo Alamo	2594'
Kirtland	2741
Fruitland	3174'
Pictures Cliffs	3342'
Chacra	4690'
Mesaverde	5499'

Additional Notes:
4/20/2008- A beam rod pump was installed to produce the well.
7/14/2008- Diagnosed w/ a hole in tubing. An RTP was performed. Rods parted. There was 1500' of bad rods and 56 tubing joints were replaced.
3/2/2010- Parted rods. The rods & pump were pulled out of hole and laid down.
10/20/2010- CIBP set at 5658' and a second CIBP was set at 5556'.
1/26/2011- The well was TA'd by setting a CIBP at 5150'. Passed pressure test.

**Max deviation 1 degree at 262'*

Vanessa Fields

From: Vanessa Fields
Sent: Thursday, September 15, 2022 3:51 PM
To: Mankiewicz, David J; Tafoya, Jeffrey J; Wenman, Christopher P; Gage, Walter J
Cc: Marcia Brueggenjohann; Krista McWilliams; Jay Paul McWilliams
Subject: RE: Man Camp on the Rosa Unit 15B well pad P&A

Good afternoon Dave,

Thank you very much for the email. LOGOS will submit a P&A Procedure to Plug the Rosa Unit #015B.

Thank you,
Vanessa Fields
Regulatory Manager
Email: vfields@logosresourcesllc.com
Office: 505-787-2218
Cell: 505-320-1243

LOGOS RESOURCES II, LLC

From: Mankiewicz, David J <dmankiew@blm.gov>
Sent: Thursday, September 15, 2022 1:58 PM
To: Vanessa Fields <vanessa@walsheng.net>
Cc: Tafoya, Jeffrey J <JTafoya@blm.gov>; Rennick, Kenneth G <krennick@blm.gov>; Wenman, Christopher P <cwenman@blm.gov>; Gage, Walter J <WGage@blm.gov>
Subject: Man Camp on the Rosa Unit 15B well pad

Vanessa:
The BLM is in receipt of Logos's request for a Man Camp on the Rosa Unit 15B well pad. The well is currently in a TA status which expires November 11, 2022(not 2025 as stated in the application). It is expected that the well will be plugged and abandoned prior to setting of the Man Camp. Any reclamation that is required can be conducted after the Man Camp is teminated. Thank you.

David J. Mankiewicz
Assistant Field Manager, Minerals
Phone: (505) 564-7731
Cell: (505) 592-3714

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.

BLM FLUID MINERALS
P&A Geologic Report

Date Completed: 09/22/2022

Well No. Rosa Unit 15B (API# 30-039-29505)		Location:	NWSE		
Lease No. NMSF078764		Sec. 29	T31N		R5W
Operator Logos Operating LLC		County	Rio Arriba	State	New Mexico
Total Depth 6238'	PBTD 6168'				
Elevation (GL) 6451'		Elevation (KB) 6465'			

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					Surface/freshwater sands
Nacimiento Fm	1138				Possible freshwater sands
Ojo Alamo Ss	2594				Aquifer (possible freshwater)
Kirtland Shale	2741				
Fruitland Fm	3174				Coal/Gas/Possible water
Pictured Cliffs Ss	3342				Gas
Lewis Shale					
Chacra			4690		Gas
Cliff House			5499		Water/Possible gas
Menefee Fm					Coal/Ss/Water/Possible O&G
Point Lookout Ss					Probable water/Possible O&G
Mancos					Water/Possible gas
Gallup					O&G/Water
Greenhorn					
Graneros Shale					
Dakota Ss					O&G/Water

Remarks:
P & A

Reference Well:

Raster logs are limited in depth. For the formations that were not logged, used the estimated depths by the operator. Appropriate for the area.

Recommend Changes:

- Inform the BLM Farmington Field Office if the casing pressure test fails.
- Add an inside plug for the Chacra formation at 4690'. And a plug for the Top of Liner at 3175'. Minimum cement coverage is 50 feet below and above with excess.

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 2694188

Attachment to notice of Intention to Abandon

Well: Rosa Unit 15B

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. The following modifications to your plugging program are to be made:
   - Inform the BLM Farmington Field Office if the casing pressure test fails.
   - Add an inside plug for the Chacra formation at 4690'. And a plug for the Top of Liner at 3175'. Minimum cement coverage is 50 feet below and above with excess.

Farmington Office is to be notified at least 24 hours before the plugging operations commence (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 9/22/2022

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

09/28/2022

Well Name: ROSA UNIT	**Well Location:** T31N / R5W / SEC 29 / NWSE / 36.870079 / -107.38254	**County or Parish/State:** RIO ARRIBA / NM
Well Number: 15B	**Type of Well:** CONVENTIONAL GAS WELL	**Allottee or Tribe Name:**
Lease Number: NMSF078764	**Unit or CA Name:** ROSA UNIT--MV	**Unit or CA Number:** NMNM78407A
US Well Number: 300392950500S1	**Well Status:** Temporarily Abandoned	**Operator:** LOGOS OPERATING LLC

Notice of Intent

Sundry ID: 2695158

Type of Submission: Notice of Intent

Type of Action: Plug and Abandonment

Date Sundry Submitted: 09/27/2022

Time Sundry Submitted: 03:09

Date proposed operation will begin: 09/27/2022

Procedure Description: *See attached P&A procedure with updated COAs.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

3160_5_Rosa_Unit_015B_NOI_P_A_Procedure_Updated_with_COAs_20220927150744.pdf

Well Name: ROSA UNIT

Well Location: T31N / R5W / SEC 29 / NWSE / 36.870079 / -107.38254

County or Parish/State: RIO ARRIBA / NM

Well Number: 15B

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF078764

Unit or CA Name: ROSA UNIT--MV

Unit or CA Number: NMNM78407A

US Well Number: 300392950500S1

Well Status: Temporarily Abandoned

Operator: LOGOS OPERATING LLC

Conditions of Approval

Specialist Review

2695158_NOIA_15B_3003929505_KR_09282022_20220928134624.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: SEP 27, 2022 03:09 PM

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: 09/28/2022

Signature: Kenneth Rennick

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 147088

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 147088
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	10/3/2022