Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

DHC-5358

Form C-103
Revised July 18, 2013

WELL API NO.
30-039-26599

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
NMSF078767

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
ROSA UNIT

1. Type of Well: Oil Well ☐ Gas Well X ☐ Other

8. Well Number 149B

2. Name of Operator
LOGOS OPERATING LLC

9. OGRID Number 289408

3. Address of Operator
2010 AFTON PLACE FARMINGTON, NM 87401

10. Pool name or Wildcat
BASIN DAKOTA/BLANCO MESAV

4. Well Location
Unit Letter E : 1440' feet from the N line and 335' feet from the W line
Section 12 Township 31N Range 6W NMPM County RIO ARRIBA

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
6421'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE X			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Pre-approved Pool Division Order R-13122.
Pools to be commingled: Mesa Verde (72319) and Basin Dakota (71599)
Perforated Intervals:
Mesa Verde: 4700'-6005'
Basin Dakota: 7956'-8095'
~~Fixed percentages allocation based upon production date 81.7% Mesa Verde and 18.3% Basin Dakota. This is based upon the historic production of both the Mesa Verde and Basin Dakota production zones within the well.~~
Commingling will not reduce the value of the reserves.
Interest owners in the spacing unit have not been notified of the intent of the downhole commingle per order R-12991. BLM has been notified on the sundry notice form 3160-5, attached.

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Lacey Granillo TITLE Regulatory Specialist DATE 3/4/24

Type or print name Lacey Granillo E-mail address: lgranillo@logosresourcesllc.com PHONE: 5057870118

For State Use Only

APPROVED BY: Dean R McClure TITLE Petroleum Engineer DATE 03/28/2024
Conditions of Approval (if any):

CONDITIONS OF APPROVAL

If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Permit to become inaccurate, then no later than sixty (60) days after that event, the Operator shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Permit shall terminate on the date of such action.

If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred the Operator shall submit a new downhole commingling application to OCD to amend this Permit to remove the pool that caused the decrease in value. If the Operator fails to submit a new application, this Permit shall terminate on the following day, and if OCD denies the application, this Permit shall terminate on the date of such action.

If a completed interval of the Well is altered from what is submitted within this application, then no later than sixty (60) days after the alteration, the Operator shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.

The Operator shall calculate the oil and gas production average during the fourth year after the commencement of commingling, which shall be used to establish a fixed percentage of the total oil and gas production that shall be allocated to each of the Pools ("fixed percentage allocation plan"). No later than ninety (90) days after the fourth year, the Operator shall submit a Form C-103 to the OCD Engineering Bureau that includes the fixed percentage allocation plan and all data used to determine it. If the Operator fails to do so, this Permit shall terminate on the following day. If OCD denies the fixed percentage allocation plan, this Permit shall terminate on the date of such action. If OCD approves the percentage allocation plan with or without modifications, then the approved percentage allocation plan shall be used to determine oil and gas allocation starting on the date of such action until the Well is plugged and abandoned.

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

Sundry Print Report

03/11/2024

Well Name: ROSA UNIT

Well Location: T31N / R6W / SEC 12 / SWNW / 36.971339 / -107.42192

County or Parish/State: RIO ARRIBA / NM

Well Number: 149B

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF078767

Unit or CA Name: ROSA UNIT--MV

Unit or CA Number: NMNM78407A

US Well Number: 3003926599

Well Status: Producing Gas Well

Operator: LOGOS OPERATING LLC

Notice of Intent

Sundry ID: 2778456

Type of Submission: Notice of Intent

Type of Action: Commingling (Subsurface)

Date Sundry Submitted: 03/07/2024

Time Sundry Submitted: 01:39

Date proposed operation will begin: 03/07/2024

Procedure Description: Down hole Commingle LOGOS Operating requests to downhole commingle the Mesaverde and Dakota per the attached procedure. Note: Attached C103 Commingle submitted to NMOCD

NOI Attachments

Procedure Description

FOR_REGULATORY__Rosa_Unit_149B___Commingle_Allocation_Procedure_with_attachments_20240307133905.pdf

C_103_rosa_unit_149B_downhole_commingle_20240307133905.pdf

Well Name: ROSA UNIT

Well Location: T31N / R6W / SEC 12 / SWNW / 36.971339 / -107.42192

County or Parish/State: RIO ARRIBA / NM

Well Number: 149B

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

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Unit or CA Name: ROSA UNIT--MV

Unit or CA Number: NMNM78407A

US Well Number: 3003926599

Well Status: Producing Gas Well

Operator: LOGOS OPERATING LLC

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: LACEY GRANILLO

Signed on: MAR 07, 2024 01:39 PM

Name: LOGOS OPERATING LLC

Title: REGULATORY SPECIALIST

Street Address: 2010 AFTON PLACE

City: FARMINGTON **State:** NM

Phone: (505) 324-4145

Email address: LGRANILLO@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: 03/08/2024

Signature: Kenneth Rennick

DOWNHOLE COMMINGLE PROCEDURE AND ALLOCATION-NMOCD (2024)

Rosa Unit 149B
30-039-26599
1440' FNL & 335' FWL
Section 12, T31N, R06W
Rio Arriba, New Mexico
LAT: 36.917469° N LONG: -107.4219589° W
Mesaverde/Dakota

PROJECT OBJECTIVE:

Remove packer, run gyro survey, and set a bridge plug above the Dakota perforations. Pending results of the gyro survey, an additional bridge plug may be set below the Mesaverde perforations to isolate the Mancos formation during offset development. 2-3/8" tubing will be run, and the well will remain shut in for the duration of offset development. Once offset development is completed, the Mesaverde will be produced with plunger lift via the 2-3/8" tubing, leaving the Dakota temporarily abandoned for ~six (6) months. Once uplift and an updated baseline production decline for the Mesaverde is established, the bridge plugs set above the Dakota will be milled out and the well will be downhole commingled.

WORKOVER PROCEDURE:

1. Hold safety meeting. MIRU workover rig. Place fire and safety equipment in strategic locations. Comply with all LOGOS, BLM, and NMOCD rules and regulations.
2. Lay flow lines. Check and record casing and tubing pressures. Sell pressure down to line. Kill well if necessary.
3. Nipple down wellhead and nipple up BOP.
4. Release Mesaverde tubing string. Trip out of hole with Mesaverde tubing string and lay down.
5. Release Dakota tubing string. Trip out of hole with Dakota tubing string and lay down.
6. Run in hole with packer plucker to retrieve Model D Packer at 6150'. Trip out of hole with packer plucker assembly and string.
7. Rig up wireline to run gyro survey.
8. Set bridge plug within 50' of the top Dakota perforation.
9. Based on results of gyro survey, if necessary for new well drilling, set a second bridge plug within 50' below the Mesaverde perforations.
10. Trip in hole with 2-3/8" tubing.
11. SI well for offset drilling.
12. Once offset drilling is complete, install plunger lift to produce the Mesaverde only.
13. After ~6 months, pull the tubing, and trip in hole to mill out the bridge plugs set above the Dakota perforations and push to bottom.
14. Run in hole with single 2-3/8" production tubing string and install plunger lift.
15. Return to production as a Mesaverde/Dakota commingle.

PRODUCTION ALLOCATION

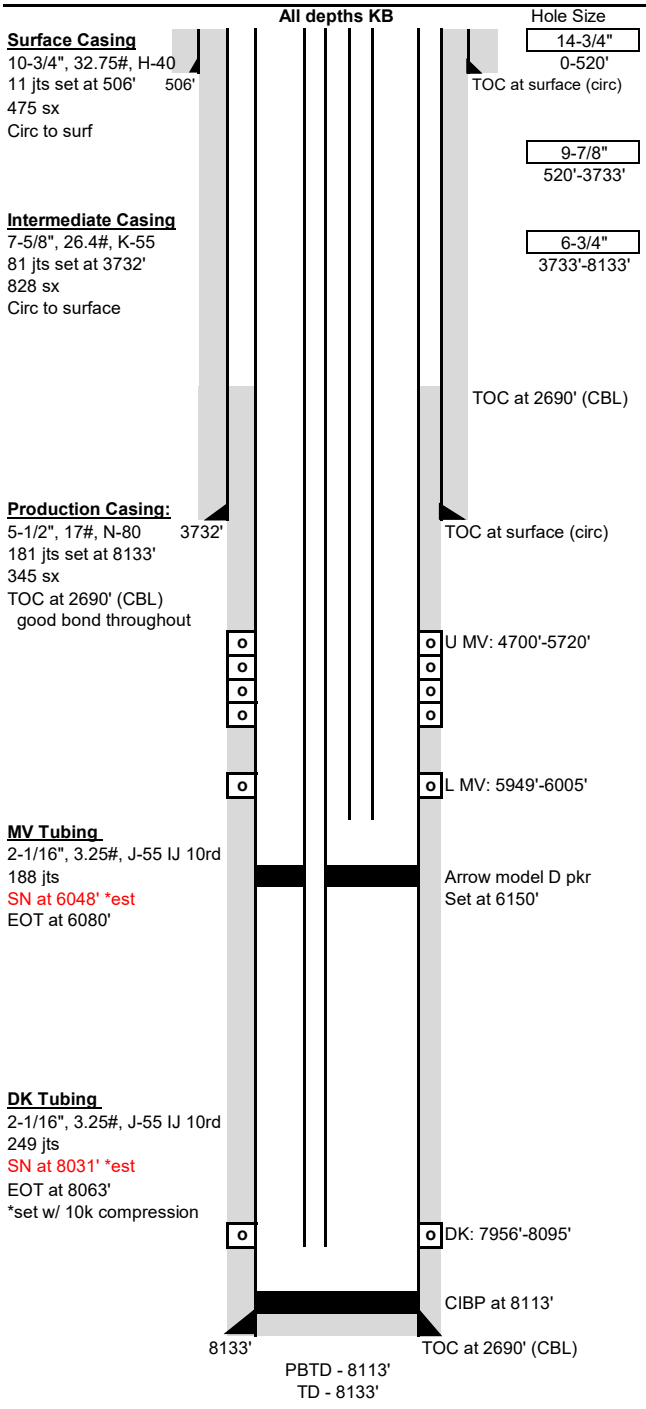
Because uplift is expected from both zones by commingling the well, a fixed production allocation established by historical well behavior is not expected to be accurate. Therefore, LOGOS proposes a six (6) month period of production testing the Mesaverde during which a bridge plug will be over the Dakota, 2-3/8" tubing and plunger lift will be installed for the Mesaverde, and a baseline Mesaverde production rate and decline will be established. After six (6) months of production, the bridge plug will be removed from the Dakota, the tubing will be landed at a depth ideal for Mesaverde and Dakota commingled production, and the commingle allocation will be made using a subtraction methodology in which gas beyond the established Mesaverde rate and decline is allocated to the Dakota. The subtraction allocation methodology will be employed for 4 years, unless both formations exhibit declines that are easily predictable by decline analysis. If such is the case, a sundry will be submitted to use a fixed percentage allocation method.

LOGOS OPERATING

Wellbore Schematic

Well Name:	Rosa Unit 149B	Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL	Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-26599	Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83	Completion Date:	11/17/2001
Elevations:	GROUND: 6421'	Last Workover Date:	N/A
	KB: 6435'		
Depths (KB):	PBTD: 8113'		
	TD: 8133'		

VERTICAL WELLBORE



Surface Casing: (9/21/2001)
Drilled a 14-3/4" surface hole to 520'. Set 11 jts 10-3/4", 32.75#, H-40 csg at 506'. Cmt'd w/ 475 sx Type III cmt (660 ft3,14.5 ppg, 1.41yd). Circ 25 bbls cmt to surface.

Intermediate Casing: (9/25/2001)
Drilled a 9-7/8" intermediate hole to 3733'. Set 81 jts 7-5/8", 26.4#, K-55 csg at 3732'. Cmt'd w/ 550 sx Type III 65/35 poz cmt w/ 8% gel (1150 ft3, 12.1 ppg, 2.08 yd). Tailed w/ 278 sx Type III cmt (386 ft3, 14.5 ppg, 1.4 yld). Circ 60 bbls to surface.

Production Casing: (9/30/2001)
Drilled a 6-3/4" production hole to 8133'. Set 181 jts 5-1/2", 17#, N-80 csg at 8133'. FC at 8108'. Cmt'd w/ 50 sx Prem Lite cmt (119 ft3, 11.5 ppg, 2.59 yld). Tailed w/ 295 sx Prem Lite cmt (588 ft3, 12.5 ppg, 1.99 yld). TOC at 2690' per CBL (2001)
**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

MV Tubing: (11/16/2001)		Length (ft)
KB		14
(188) 2-1/16" 3.25# J-55 tbg jts		6034
(1) SN w/ pump off check		1
(1) 2-1/16" Bull nose screen		31 *est
	Set at:	6080 ft

DK Tubing: (11/16/2001)		
KB		14
(190) 2-1/16" 3.25# J-55 IJ 10 rd tbg jts		6136 *est based on # jts
(1) Seal Assembly		6 *est
(59) 2-1/16" J-55 IJ 10rd tbg jts		1875 *est based on # jts
(1) SN w/ pump off check		1
(1) 1/2 Muleshoe		31 *est
**set w/ 10k compressio*	Set at:	8063 ft

Artificial Lift:
NA

Perforations: (11/2001)
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.

Formations:	MD
Pictured Cliffs	3258'
Mesaverde	5466'
Mancos	6078'
Dakota	7954'

Additional Notes:
11/2001 Initial completion. Stim'd MV & DK formations. Report states wireline issues misfires on the Upper MV perfs, but doesn't specify # or location of misfires. Set pkr at 6150'. Set 2-1/16" DK EOT at 8063' & 2-1/16" MV EOT at 6080'.

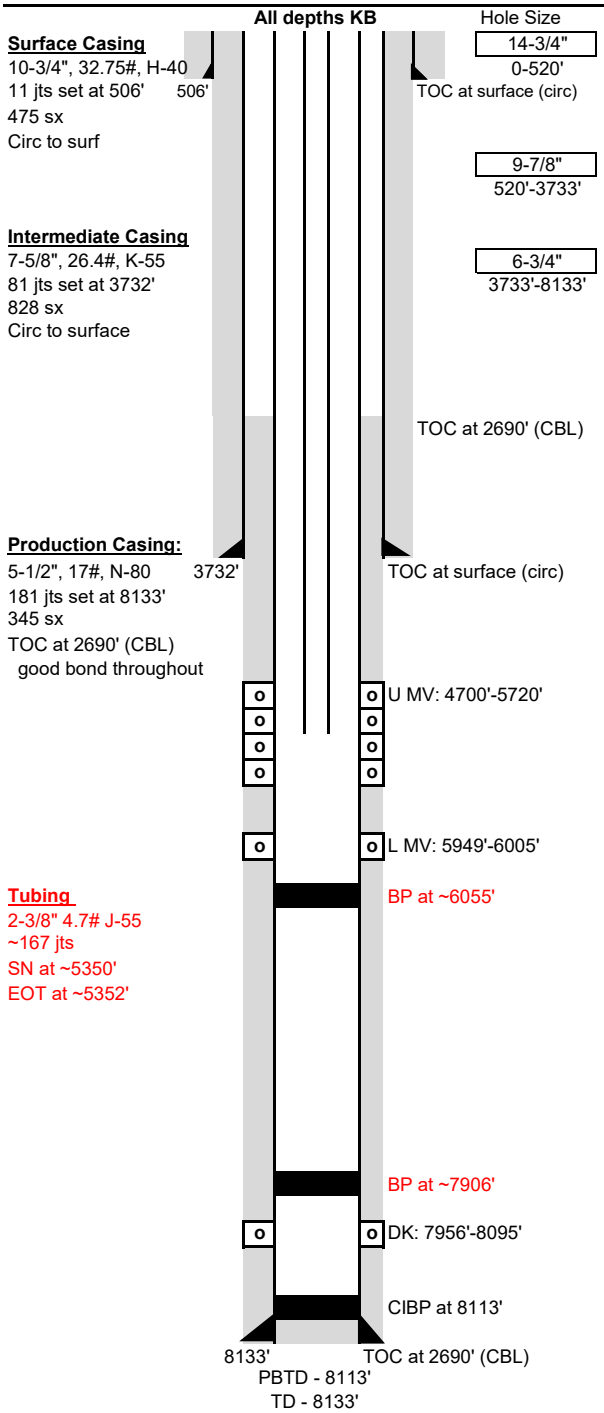
No history of any workovers since initial completion.

BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.

Proposed MV Only Wellbore Schematic

Well Name:	Rosa Unit 149B	Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL	Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-26599	Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83	Completion Date:	11/17/2001
Elevations:	GROUND: 6421'	Last Workover Date:	N/A
	KB: 6435'		
Depths (KB):	PBTD: 8113'		
	TD: 8133'		

VERTICAL WELLBORE



Surface Casing: (9/21/2001)
Drilled a 14-3/4" surface hole to 520'. Set 11 jts 10-3/4", 32.75#, H-40 csg at 506'. Cmt'd w/ 475 sx Type III cmt (660 ft3,14.5 ppg, 1.41yd). Circ 25 bbls cmt to surface.

Intermediate Casing: (9/25/2001)
Drilled a 9-7/8" intermediate hole to 3733'. Set 81 jts 7-5/8", 26.4#, K-55 csg at 3732'. Cmt'd w/ 550 sx Type III 65/35 poz cmt w/ 8% gel (1150 ft3, 12.1 ppg, 2.08 yd). Tailed w/ 278 sx Type III cmt (386 ft3, 14.5 ppg, 1.4 yld). Circ 60 bbls to surface.

Production Casing: (9/30/2001)
Drilled a 6-3/4" production hole to 8133'. Set 181 jts 5-1/2", 17#, N-80 csg at 8133'. FC at 8108'. Cmt'd w/ 50 sx Prem Lite cmt (119 ft3, 11.5 ppg, 2.59 yld). Tailed w/ 295 sx Prem Lite cmt (588 ft3, 12.5 ppg, 1.99 yld). TOC at 2690' per CBL (2001)
**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

Tubing:	Length (ft)
KB	14
(~166) 2-3/8" 4.7# J-55 tbg jts	5302
(1) 2-3/8' x 2' marker jt	2
(1) 2-3/8" 4.7# J-55 tbg jt	32
(1) SN	1
(1) MS collar w/ exp check	1
Set at:	5352 ft

Artificial Lift:
NA

Perforations: (11/2001)
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.

Formations:	MD
Pictured Cliffs	3258'
Mesaverde	5466'
Mancos	6078'
Dakota	7954'

Additional Notes:
11/2001 Initial completion. Stim'd MV & DK formations. Report states wireline issues misfires on the Upper MV perfs, but doesn't specify # or location of misfires. Set D pkr at 6150'. Set 2-1/16" DK EOT at 8063' & 2-1/16" MV EOT at 6080'.
No history of any workovers since initial completion.

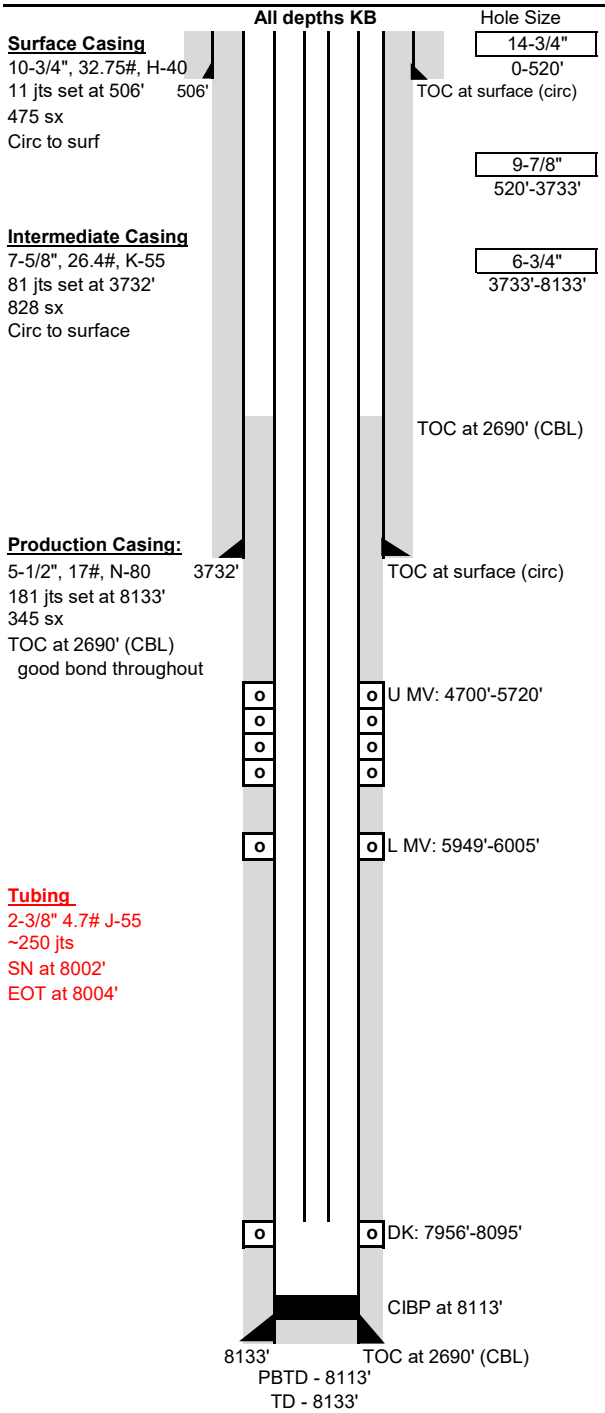
BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.

LOGOS OPERATING

Proposed Downhole Commingle Wellbore Schematic

Well Name:	Rosa Unit 149B	Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL	Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-26599	Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83	Completion Date:	11/17/2001
Elevations:	GROUND: 6421'	Last Workover Date:	N/A
	KB: 6435'		
Depths (KB):	PBTD: 8113'		
	TD: 8133'		

VERTICAL WELLBORE



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Intermediate Casing: (9/25/2001)
Drilled a 9-7/8" intermediate hole to 3733'. Set 81 jts 7-5/8", 26.4#, K-55 csg at 3732'. Cmt'd w/ 550 sx Type III 65/35 poz cmt w/ 8% gel (1150 ft3, 12.1 ppg, 2.08 yd). Tailed w/ 278 sx Type III cmt (386 ft3, 14.5 ppg, 1.4 yld). Circ 60 bbls to surface.

Production Casing: (9/30/2001)
Drilled a 6-3/4" production hole to 8133'. Set 181 jts 5-1/2", 17#, N-80 csg at 8133'. FC at 8108'. Cmt'd w/ 50 sx Prem Lite cmt (119 ft3, 11.5 ppg, 2.59 yld). Tailed w/ 295 sx Prem Lite cmt (588 ft3, 12.5 ppg, 1.99 yld). TOC at 2690' per CBL (2001)
**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

Tubing:	Length (ft)
KB	14
(~249) 2-3/8" 4.7# J-55 tbg jts	7952
(1) 2-3/8' x 4' marker jt	4
(1) 2-3/8" 4.7# J-55 tbg jt	32
(1) SN	1
(1) MS collar w/ exp check	1
Set at:	8004 ft

Artificial Lift:
NA

Perforations: (11/2001)
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.

Formations:	MD
Pictured Cliffs	3258'
Mesaverde	5466'
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Additional Notes:
11/2001 Initial completion. Stim'd MV & DK formations. Report states wireline issues misfires on the Upper MV perfs, but doesn't specify # or location of misfires. Set D pkr at 6150'. Set 2-1/16" DK EOT at 8063' & 2-1/16" MV EOT at 6080'.
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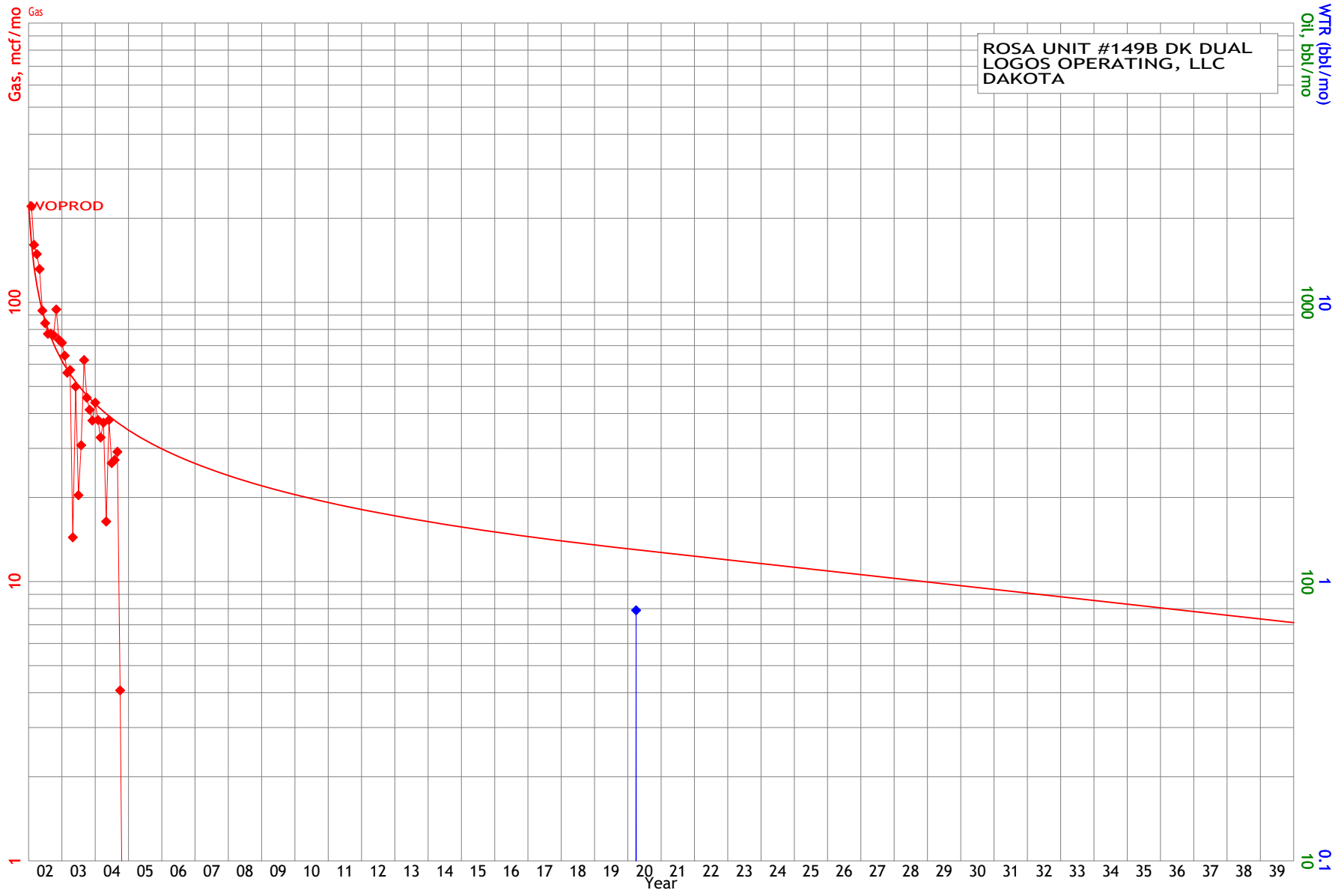
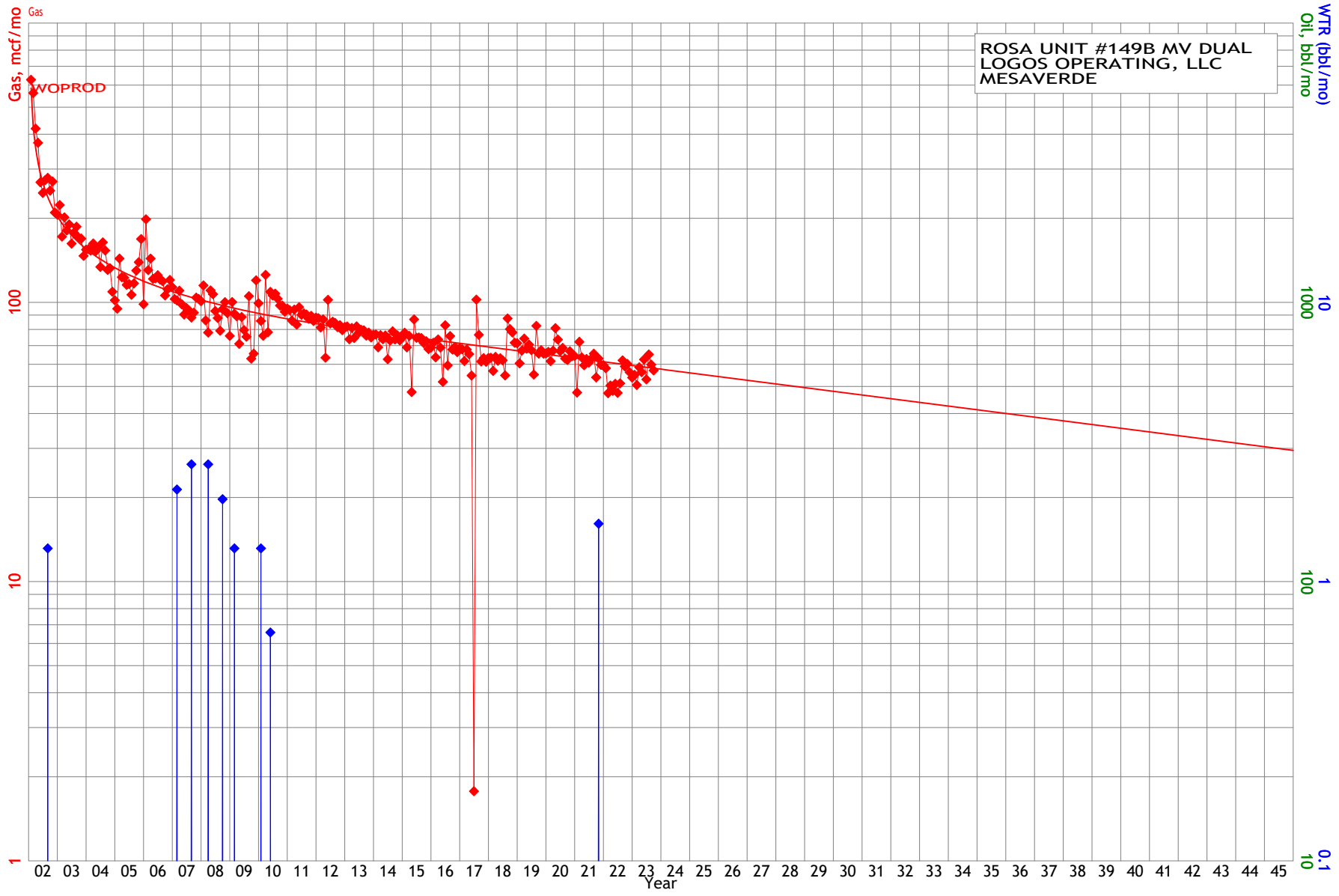
BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	WOPROD	Ref=	1/2021	Ref=	1/2021
Ref=	1/2021	Cum=	0	Cum=	24
Cum=	63524				
Rem=	144928				
EUR=	208452				
Yrs=	99.167				
Qi=	12.7				
b=	0.000000				
De=	3.000000				
Qab=	0.6				



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	WOPROD	Ref=	10/2023	Ref=	10/2023
Ref=	10/2023	Cum=	0	Cum=	479
Cum=	790842				
Rem=	652250				
EUR=	1443092				
Yrs=	90.750				
Qi=	58.1				
b=	0.000000				
De=	3.000000				
Qab=	3.7				

From: Lacey Granillo
To: McClure, Dean, EMNRD
Cc: Vanessa Fields; Roberts, Kelly, EMNRD; Etta Trujillo; Vanessa Fields; Catlain Richardson; Kaitlyn Moss; Courtney Peace; Krista McWilliams
Subject: RE: [EXTERNAL] RE: Action ID: 319990; DHC-5358
Date: Wednesday, March 27, 2024 1:46:14 PM
Attachments: image001.png
FOR REGULATORY_ Rosa Unit 149B - Commingle Allocation-Procedure_with attachments_3-27-24_FINAL.pdf

Good afternoon, Dean-

Please see attached updated DHC allocation procedure for the Rosa Unit 149B.

Thank you,

Lacey Granillo
Regulatory Specialist
Cell: 505-787-0118
lgranillo@logosresourcesllc.com

LOGOS OPERATING

From: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Sent: Tuesday, March 26, 2024 4:14 PM
To: Lacey Granillo <lgranillo@logosresourcesllc.com>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Vanessa Fields <vfields@logosresourcesllc.com>; Catlain Richardson <CRichardson@logosresourcesllc.com>; Kaitlyn Moss <kmoss@logosresourcesllc.com>; Courtney Peace <cpeace@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>
Subject: RE: [EXTERNAL] RE: Action ID: 319990; DHC-5358

Lacey,

Additionally, it appears that Logos is proposing a production for the Dakota as if it is going to produce in a state of advanced decline. Considering the lack of production from it for the last 20 years, why does Logos feel this will be the case? Assuming this is the case, does Logos feel there is enough production history available to accurately predict the decline curve?

Dean McClure

Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

From: Lacey Granillo <lgranillo@logosresourcesllc.com>
Sent: Tuesday, March 26, 2024 3:53 PM
To: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Vanessa Fields <vfields@logosresourcesllc.com>; Catlain Richardson <CRichardson@logosresourcesllc.com>; Kaitlyn Moss <kmoss@logosresourcesllc.com>; Courtney Peace <cpeace@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>
Subject: [EXTERNAL] RE: Action ID: 319990; DHC-5358

Dean,

We have reason to believe that the Dakota tubing is plugged based on the observed tubing shut in pressure of the Dakota of 0 psi. Beyond resolving the plugged tubing issue, the Dakota in this well will benefit from removal of the packer and, to a lesser extent, the installation of a larger tubing string. While a plunger can be run in 2-1/16" tubing, the annular volume of the Dakota side below the packer does not provide adequate gas volume to reliably unload liquids from the well. For the entirety of its life, the Dakota has produced below critical lift in 2-1/16" tubing which is approximately 175 mcfd at 60 pounds of line pressure. Because the well's potential is substantially below critical lift in 2-1/16" tubing and because the packer is limiting the annular volume for running a plunger, we have reason to believe that by commingling the well, the Dakota can be returned to its original production potential.

Thank you,

Lacey Granillo
Regulatory Specialist
Cell: 505-787-0118
lgranillo@logosresourcesllc.com

LOGOS OPERATING

From: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Sent: Tuesday, March 26, 2024 2:32 PM
To: Lacey Granillo <lgranillo@logosresourcesllc.com>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>
Subject: Action ID: 319990; DHC-5358

To whom it may concern (c/o Lacey Granillo for Logos Resources, LLC),

The Division is reviewing the following application:

Action ID	319990
Admin No.	DHC-5358
Applicant	Logos Operating, LLC (289408)
Title	ROSA UNIT #149B
Sub. Date	03/04/2024

Please provide the following additional supplemental documents:

-

Please provide additional information regarding the following:

- Reference is made in the application to a failure that impacted production. It appears that production from the Dakota was impacted ~2004 and production since was discounted when determining the production curve. Please provide a bit more information regarding the failure that took place and why allocation should be determined based off the production curve generated from prior to that failure.

Additional notes:

-

All additional supplemental documents and information may be provided via email and should be done by replying to this email. The produced email chain will be uploaded to the file for this application.

Please note that failure to take steps to address each of the requests made in this email within 10 business days of receipt of this email may result in the Division rejecting the application requiring the submittal of a new application by the applicant once it is prepared to address each of the topics raised.

Dean McClure
Petroleum Engineer, Oil Conservation Division

New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

LOGOS OPERATING

DOWNHOLE COMMINGLE PROCEDURE AND ALLOCATION-NMOCD (3/2024)

Rosa Unit 149B
30-039-26599
1440' FNL & 335' FWL
Section 12, T31N, R06W
Rio Arriba, New Mexico
LAT: 36.917469° N LONG: -107.4219589° W
Mesaverde/Dakota

PROJECT OBJECTIVE:

Remove packer, run gyro survey, and, pending results, set a bridge plug above the Dakota perforations and a bridge plug below the Mesaverde perforations to isolate the Mancos formation during offset development. Once offset development is complete, remove bridge plugs and downhole commingle Mesaverde and Dakota.

WORKOVER PROCEDURE:

1. Hold safety meeting. MIRU workover rig. Place fire and safety equipment in strategic locations. Comply with all LOGOS, BLM, and NMOCD rules and regulations.
2. Lay flow lines. Check and record casing and tubing pressures. Bleed well pressure down to line. Kill well if necessary.
3. Nipple down wellhead and nipple up BOP.
4. Release Mesaverde tubing string. Trip out of hole with Mesaverde tubing string and lay down.
5. Release Dakota tubing string. Trip out of hole with Dakota tubing string and lay down.
6. Run in hole with packer plucker to retrieve Model D packer at 6150'. Trip out of hole with packer plucker assembly and string.
7. Rig up wireline to run gyro survey. Based on results of gyro survey, if necessary for new well drilling, set bridge plug within 50' of the top Dakota perforation. Set second bridge plug within 50' below the Mesaverde perforations.
8. SI well for offset drilling.
9. Once offset drilling is complete, trip in hole and mill out bridge plugs and push to bottom.
10. Run in hole with single 2-3/8" production tubing string.
11. Return to production as a Mesaverde/Dakota commingle.

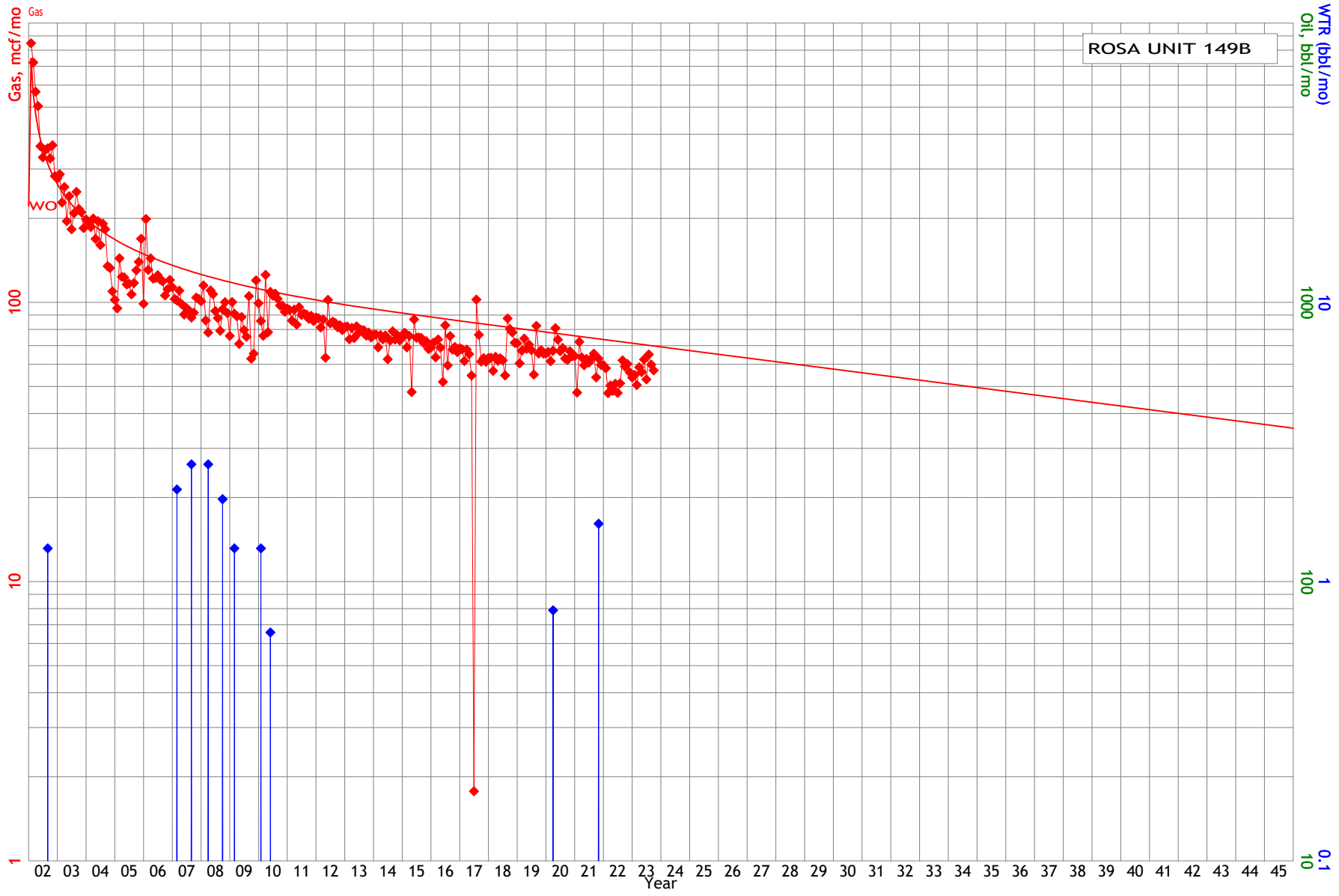
PRODUCTION ALLOCATION

Historic production data from both zones in this well was gathered and analyzed. Historical and forecasted rates were used to determine allocations due to a failure that impacted production potential and cumulative allocation accuracy.

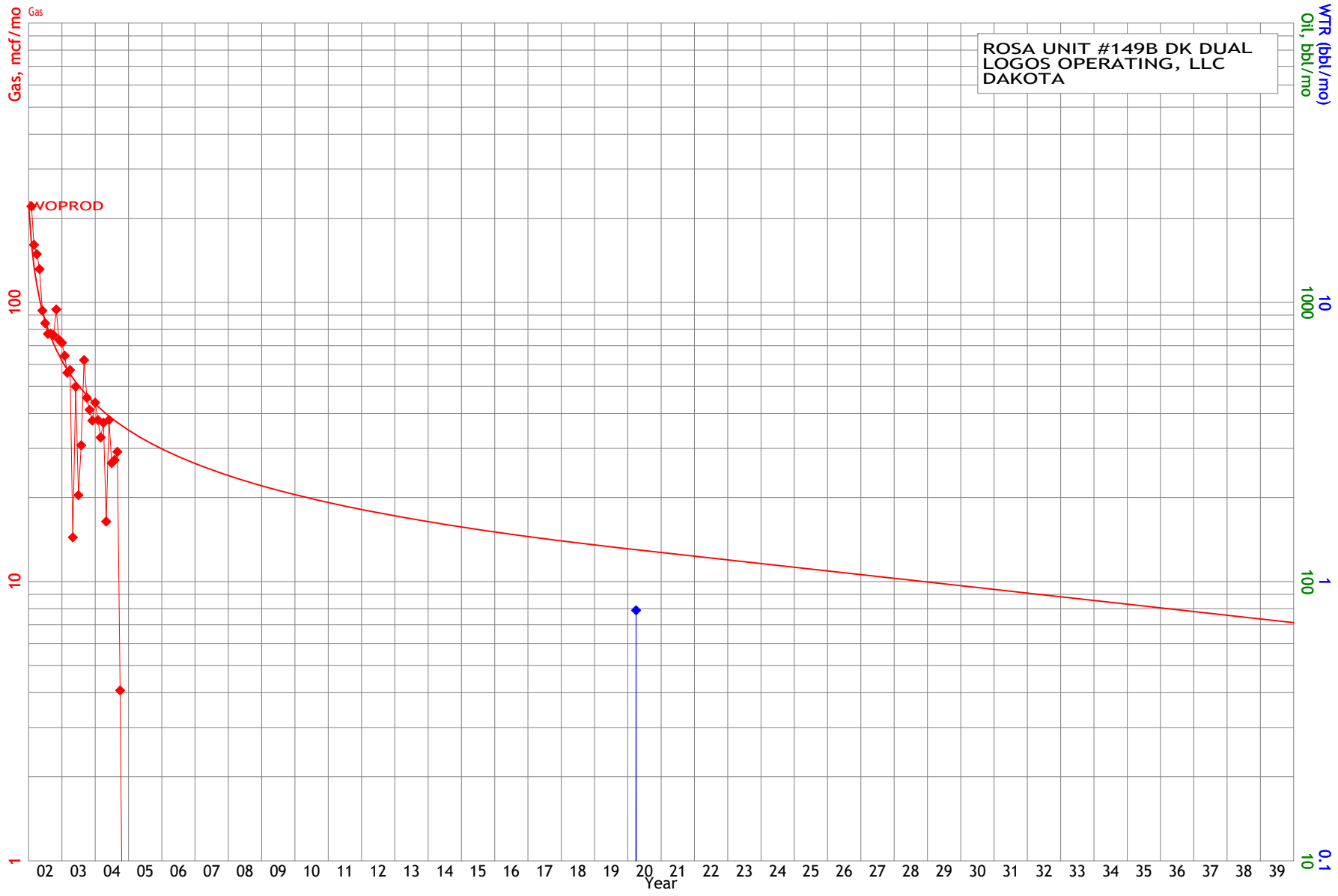
Production Rates

Total Production Rate	71 Mcfpd
Mesaverde Production Rate	58 Mcfpd
Dakota Production Rate	13 Mcfpd

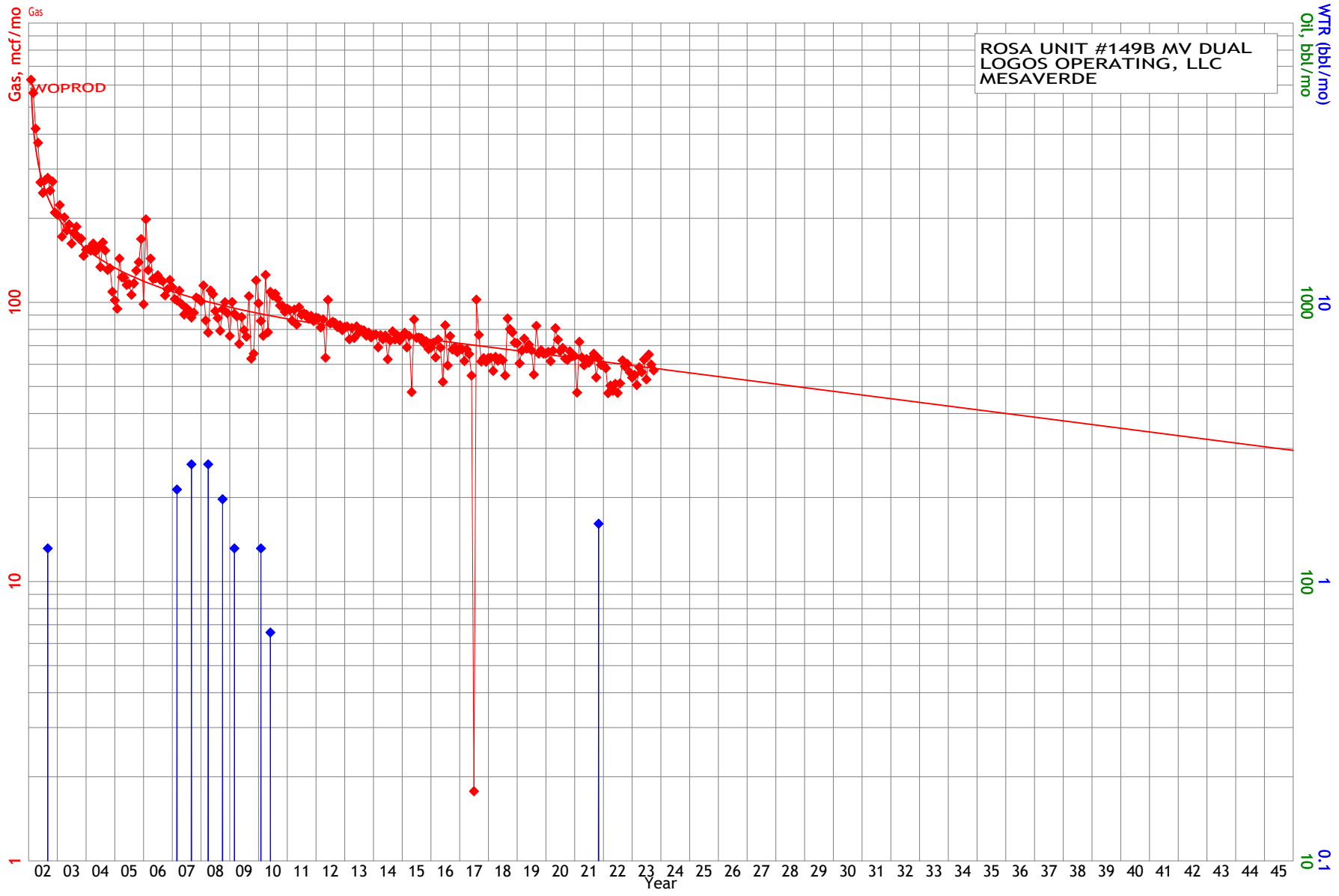
MV allocation = MV rate/total rate = 58/71 = **81.7%**
DK allocation = DK rate/total rate = 13/71 = **18.3%**



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Calc=	WO	Ref=	10/2023	Ref=	10/2023
Ref=	10/2023	Cum=	0	Cum=	503
Cum=	866608				
Rem=	784935				
EUR=	1651544				
Yrs=	96.417				



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	WOPROD	Ref=	1/2021	Ref=	1/2021
Ref=	1/2021	Cum=	0	Cum=	24
Cum=	63524				
Rem=	144928				
EUR=	208452				
Yrs=	99.167				
Qi=	12.7				
b=	0.000000				
De=	3.000000				
Qab=	0.6				



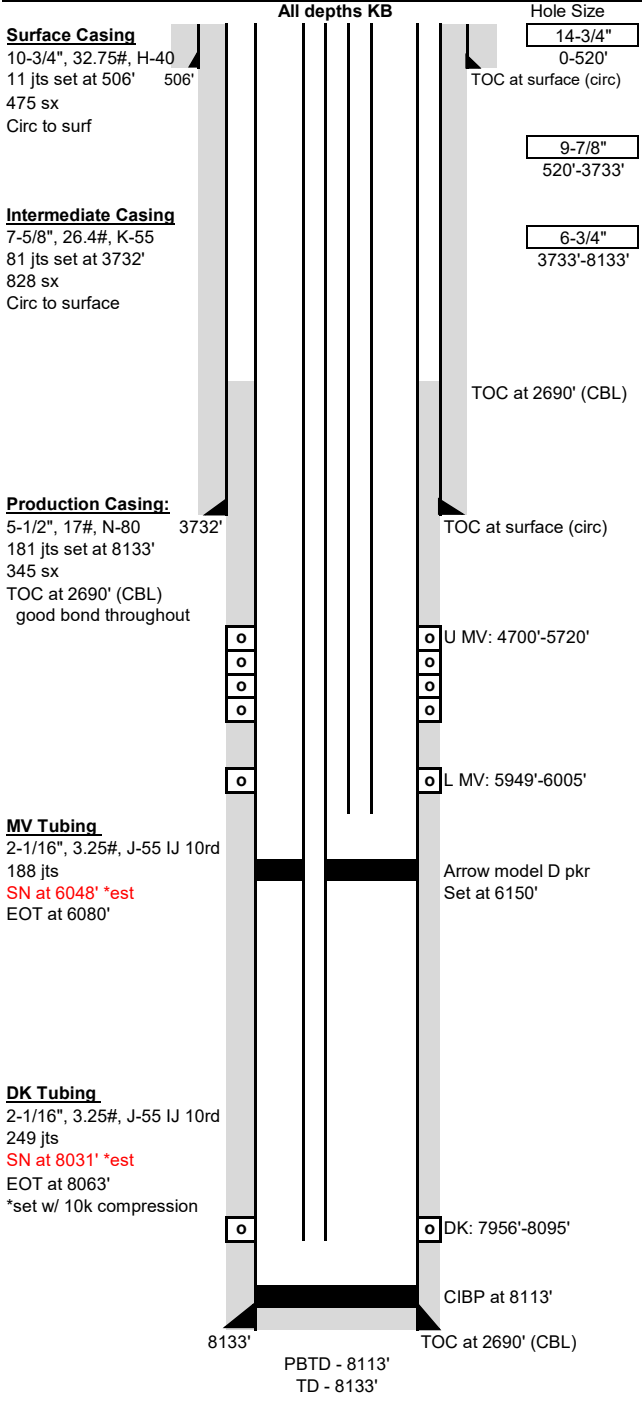
Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	WOPROD	Ref=	10/2023	Ref=	10/2023
Ref=	10/2023	Cum=	0	Cum=	479
Cum=	790842				
Rem=	652250				
EUR=	1443092				
Yrs=	90.750				
Qi=	58.1				
b=	0.000000				
De=	3.000000				
Qab=	3.7				

LOGOS OPERATING

Wellbore Schematic

Well Name:	Rosa Unit 149B		Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL		Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM		Last Updated:	
API #:	30-039-26599		Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83		Completion Date:	11/17/2001
Elevations:	GROUND:	6421'	Last Workover Date:	N/A
	KB:	6435'		
Depths (KB):	PBTD:	8113'		
	TD:	8133'		

VERTICAL WELLBORE



Surface Casing: (9/21/2001)
Drilled a 14-3/4" surface hole to 520'. Set 11 jts 10-3/4", 32.75#, H-40 csg at 506'.
Cmt'd w/ 475 sx Type III cmt (660 ft3,14.5 ppg, 1.41yd). Circ 25 bbls cmt to surface.

Intermediate Casing: (9/25/2001)
Drilled a 9-7/8" intermediate hole to 3733'. Set 81 jts 7-5/8", 26.4#, K-55 csg at 3732'.
Cmt'd w/ 550 sx Type III 65/35 poz cmt w/ 8% gel (1150 ft3, 12.1 ppg, 2.08 yd).
Tailed w/ 278 sx Type III cmt (386 ft3, 14.5 ppg, 1.4 yld). Circ 60 bbls to surface.

Production Casing: (9/30/2001)
Drilled a 6-3/4" production hole to 8133'. Set 181 jts 5-1/2", 17#, N-80 csg at 8133'.
FC at 8108'. Cmt'd w/ 50 sx Prem Lite cmt (119 ft3, 11.5 ppg, 2.59 yld). Tailed w/
295 sx Prem Lite cmt (588 ft3, 12.5 ppg, 1.99 yld). TOC at 2690' per CBL (2001)
**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

MV Tubing: (11/16/2001)		Length (ft)
KB		14
(188) 2-1/16" 3.25# J-55 tbg jts		6034
(1) SN w/ pump off check		1
(1) 2-1/16" Bull nose screen		31 *est
	Set at:	6080 ft

DK Tubing: (11/16/2001)		
KB		14
(190) 2-1/16" 3.25# J-55 IJ 10 rd tbg jts		6113 *est based on # jts
(1) Seal Assembly at 6209'		6 *est
(59) 2-1/16" J-55 IJ 10rd tbg jts		1898 *est based on # jts
(1) SN w/ pump off check		1
(1) 1/2 Muleshoe		31 *est
**set w/ 10k compressio*	Set at:	8063 ft

Artificial Lift:
NA

Perforations: (11/2001)
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.

Formations:	MD
Pictured Cliffs	3258'
Mesaverde	5466'
Mancos	6078'
Dakota	7954'

Additional Notes:
11/2001 Initial completion. Stim'd MV & DK formations. Report states wireline issues misfires on the Upper MV perfs, but doesn't specify # or location of misfires. Set pkr at 6150'. Set 2-1/16" DK EOT at 8063' & 2-1/16" MV EOT at 6080'.
No history of any workovers since initial completion.

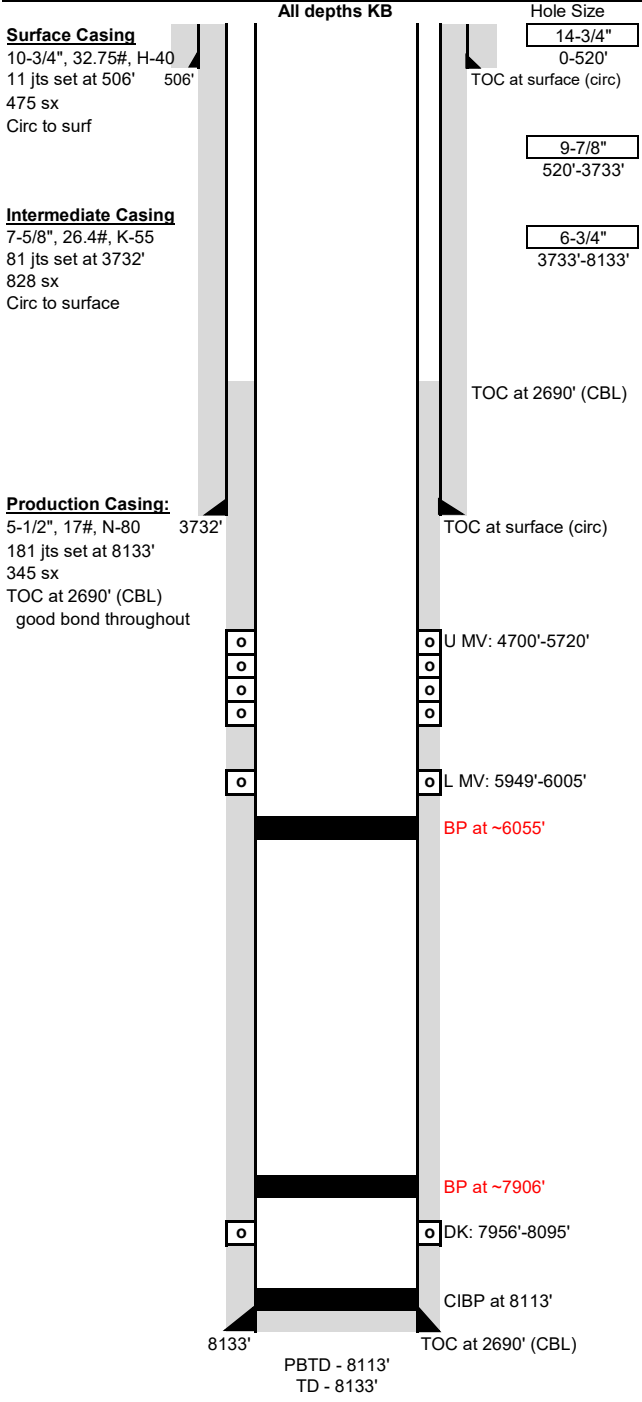
BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.

LOGOS OPERATING

Proposed Isolation Wellbore Schematic

Well Name:	Rosa Unit 149B	Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL	Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-26599	Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83	Completion Date:	11/17/2001
Elevations:	GROUND: 6421'	Last Workover Date:	N/A
	KB: 6435'		
Depths (KB):	PBTD: 8113'		
	TD: 8133'		

VERTICAL WELLBORE



Surface Casing: (9/21/2001)
Drilled a 14-3/4" surface hole to 520'. Set 11 jts 10-3/4", 32.75#, H-40 csg at 506'. Cmt'd w/ 475 sx Type III cmt (660 ft3,14.5 ppg, 1.41yd). Circ 25 bbls cmt to surface.

Intermediate Casing: (9/25/2001)
Drilled a 9-7/8" intermediate hole to 3733'. Set 81 jts 7-5/8", 26.4#, K-55 csg at 3732'. Cmt'd w/ 550 sx Type III 65/35 poz cmt w/ 8% gel (1150 ft3, 12.1 ppg, 2.08 yd). Tailed w/ 278 sx Type III cmt (386 ft3, 14.5 ppg, 1.4 yld). Circ 60 bbls to surface.

Production Casing: (9/30/2001)
Drilled a 6-3/4" production hole to 8133'. Set 181 jts 5-1/2", 17#, N-80 csg at 8133'. FC at 8108'. Cmt'd w/ 50 sx Prem Lite cmt (119 ft3, 11.5 ppg, 2.59 yld). Tailed w/ 295 sx Prem Lite cmt (588 ft3, 12.5 ppg, 1.99 yld). TOC at 2690' per CBL (2001)
**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

Tubing:	Length (ft)
KB	14
NA - pulled for isolation	
Set at:	ft

Artificial Lift:
NA

Perforations: (11/2001)
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.

Formations:	MD
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Mesaverde	5466'
Mancos	6078'
Dakota	7954'

Additional Notes:
11/2001 Initial completion. Stim'd MV & DK formations. Report states wireline issues misfires on the Upper MV perfs, but doesn't specify # or location of misfires. Set D pkr at 6150'. Set 2-1/16" DK EOT at 8063' & 2-1/16" MV EOT at 6080'.
No history of any workovers since initial completion.

BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.

LOGOS OPERATING

Proposed Downhole Commingle Wellbore Schematic

Well Name:	Rosa Unit 149B	Date Prepared:	2/7/2024 Moss
Location:	E-12-31N-06W 1440' FNL & 335' FWL	Reviewed By:	2/13/2024 Peace
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-26599	Spud Date:	9/19/2001
Co-ordinates:	Lat 36.917469, Long -107.4219589 NAD83	Completion Date:	11/17/2001
Elevations:	GROUND: 6421'	Last Workover Date:	N/A
	KB: 6435'		
Depths (KB):	PBTD: 8113'		
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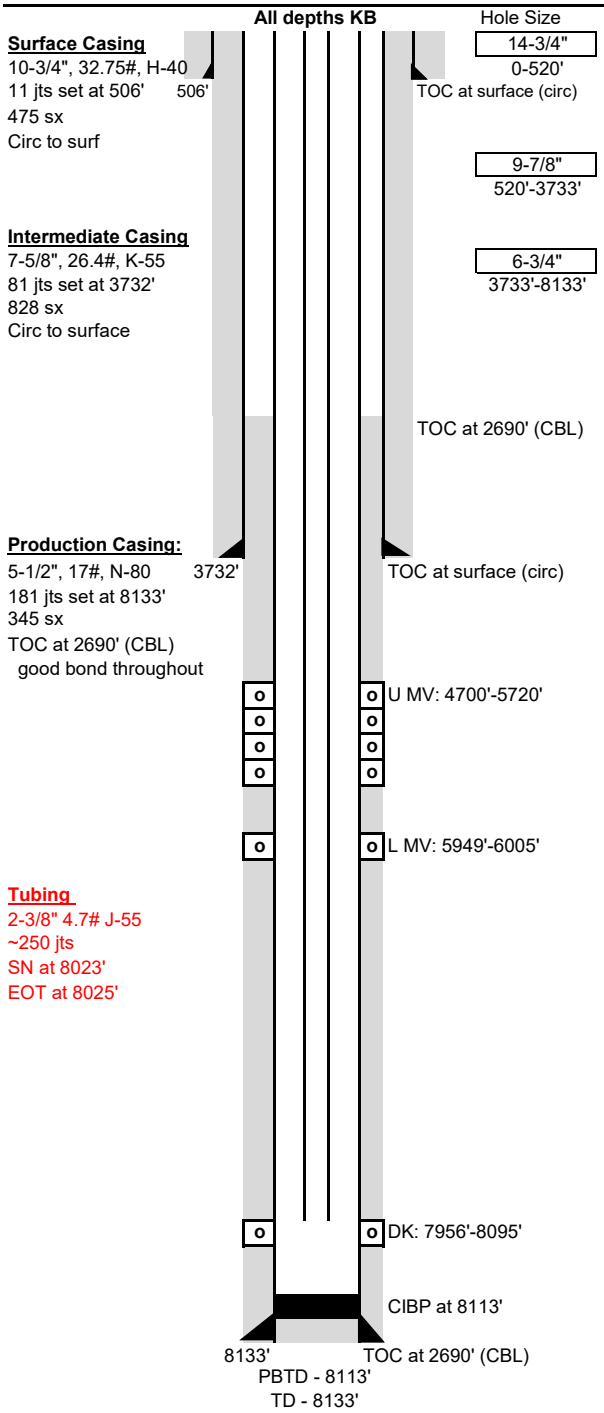
VERTICAL WELLBORE



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**After cmting, drilled out cmt & float collar to 8114'. Set CIBP at 8113'.*

Tubing:	Length (ft)
KB	14
(~249) 2-3/8" 4.7# J-55 tbg jts	7975
(1) 2-3/8' x 2' marker jt	2
(1) 2-3/8" 4.7# J-55 tbg jt	32
(1) SN	1
(1) MS collar	1
Set at:	8025 ft

Artificial Lift:
NA

Perforations: (11/2001)
DK: (7956'-8095') 1 SPF. 22, 0.38" holes. 7956', 58, 60, 62, 64, 96, 98, 8004', 06, 10, 12, 16, 19, 21, 23, 33, 49, 70, 88, 90, 93, 8095'. Acidize w/ 500 gal 15% HCL. Frac w/ 90,000# 20/40 sand in 60Q spectra G foam. 799 bbls total H2O & 1,319,700 scfm total nitrogen.
L MV: (5949'-6005') 1 SPF, 22, 0.38" holes. 5949', 53, 67, 69, 71, 73, 77, 79, 83, 5808', 30, 38, 41, 58, 70, 5828', 47, 55, 82, 84, 6001', 05'. Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1887 bbls slickwater.
U MV: (4700'-5720') 1 SPF, 34, 0.38" holes. 4700', 08, 20, 4826', 69, 75, 5267', 5311',5484', 87, 92, 5515', 17, 28, 31, 33, 37, 39, 40, 61, 64, 66, 69, 77, 81, 5727', 29, 41, 46, 48, 91, 94, 96, 5720'. ***Wireline issues w/ misfires.** Acidized w/ 1000 gal 15% HCL. Frac w/ 80,000# 20/40 sand in 1921 bbls slickwater.

Formations:	MD
Pictured Cliffs	3258'
Mesaverde	5466'
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No history of any workovers since initial completion.

BLM completion report lists PBTD at the float collar at 8108', but the completion reports state that after cementing the production string, they drilled out cmt & float collar down to 8114' & then set a CIBP at 8113'.

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

COMMENTS

Action 319990

COMMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 319990
	Action Type: [C-107] Down Hole Commingle (C-107A)

COMMENTS

Created By	Comment	Comment Date
dmcclure	DHC-5358	3/28/2024

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 319990

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 319990
	Action Type: [C-107] Down Hole Commingle (C-107A)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Permit to become inaccurate, then no later than sixty (60) days after that event, the Operator shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Permit shall terminate on the date of such action.	3/28/2024
dmcclure	If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred the Operator shall submit a new downhole commingling application to OCD to amend this Permit to remove the pool that caused the decrease in value. If the Operator fails to submit a new application, this Permit shall terminate on the following day, and if OCD denies the application, this Permit shall terminate on the date of such action.	3/28/2024
dmcclure	If a completed interval of the Well is altered from what is submitted within this application, then no later than sixty (60) days after the alteration, the Operator shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.	3/28/2024
dmcclure	The Operator shall calculate the oil and gas production average during the fourth year after the commencement of commingling, which shall be used to establish a fixed percentage of the total oil and gas production that shall be allocated to each of the Pools (“fixed percentage allocation plan”). No later than ninety (90) days after the fourth year, the Operator shall submit a Form C-103 to the OCD Engineering Bureau that includes the fixed percentage allocation plan and all data used to determine it. If the Operator fails to do so, this Permit shall terminate on the following day. If OCD denies the fixed percentage allocation plan, this Permit shall terminate on the date of such action. If OCD approves the percentage allocation plan with or without modifications, then the approved percentage allocation plan shall be used to determine oil and gas allocation starting on the date of such action until the Well is plugged and abandoned.	3/28/2024