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-5359

Form C-103
Revised July 18, 2013

WELL API NO.
30-039-22537

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
NMSF078763

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 080

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 K : 1660' feet from the S line and 1780' feet from the W line
Section 08 Township 31N Range 5W NMPM County RIO ARRIBA

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
6261'

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: 5376'-5724'
Basin Dakota: 7845'-~~7909~~' 7978'
~~Fixed percentages allocation based upon production date 37% Mesa Verde and 63% 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 / R5W / SEC 8 / NESW / 36.911041 / -107.38829

County or Parish/State: RIO ARRIBA / NM

Well Number: 80

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF078763

Unit or CA Name: ROSA UNIT--DK, ROSA UNIT--MV

Unit or CA Number: NMNM78407A, NMNM78407B

US Well Number: 3003922537

Well Status: Producing Gas Well

Operator: LOGOS OPERATING LLC

Notice of Intent

Sundry ID: 2778433

Type of Submission: Notice of Intent

Type of Action: Commingling (Subsurface)

Date Sundry Submitted: 03/07/2024

Time Sundry Submitted: 01:07

Date proposed operation will begin: 03/07/2024

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

NOI Attachments

Procedure Description

FOR_REGULATORY__Rosa_Unit_80___Commingle_Allocation_Procedure_final_20240307130710.pdf

C_103_rosa_unit_80_downhole_commingle_20240307130710.pdf

Well Name: ROSA UNIT

Well Location: T31N / R5W / SEC 8 / NESW / 36.911041 / -107.38829

County or Parish/State: RIO ARRIBA / NM

Well Number: 80

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF078763

Unit or CA Name: ROSA UNIT--DK, ROSA UNIT--MV

Unit or CA Number: NMNM78407A, NMNM78407B

US Well Number: 3003922537

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 01:07 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 80
30-039-22537
1660' FSL & 1780' FWL
Section 8, T31N, R05W
Rio Arriba, New Mexico
LAT: 36.9112473° N LONG: -107.3886337° 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 ~6 months. Once uplift and an updated baseline production decline for the Mesaverde is established, the bridge plug 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 as 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 5900'. Trip out of hole with packer plucker assembly and workstring.
7. Rig up wireline to run gyro survey
8. Set bridge plug within 50' of the top Dakota perforation.
9. Based on results of the 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 completed install plunger lift to produce the Mesaverde only.
13. After ~6 months, pull the tubing, and trip in hole to mill out the bridge plug 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.

Wellbore Schematic

Well Name:	Rosa Unit 80		Date Prepared:	2/7/2024 Peace
Location:	K-08-31N-05W 1660' FSL & 1780' FWL		Reviewed By:	2/14/2024 Moss
County:	Rio Arriba, NM		Last Updated:	
API #:	30-039-22537		Spud Date:	11/22/1980
Co-ordinates:	Lat 36.9112473, Long -107.3886337 NAD83		Completion Date:	3/19/1981
Elevations:	GROUND:	6261'	Last Workover Date:	
	KB:	6275'		
Depths (KB):	PBTD:	7942'		
	TD:	8015'		

VERTICAL WELLBORE

All depths KB

Hole Size

15" 0-365'

9-7/8" 365'-3656'

6-3/4" 3576'-8015'

Surface Casing: (11/22/1980)
Drilled a 15" surface hole to 365'. Set 8 jts 10-3/4", 40.5#, K-55 csg at 365'.
Cmt'd w/ 375 sx Class B cmt). Circ 30 bbls to surface.

Intermediate Casing: (11/27/1980)
Drilled a 9-7/8" intermediate hole to 3656'. Set 89 jts 7-5/8",26.4#, K-55 csg at 3656'.
Cmt'd w/ 150 sx 65/35 12% gel (12.4 ppg, 2.05 yd). Tailed w/ 75 sx Class B
cmt (15.6 ppg, 1.171 yld). Left 120' of cmt left in pipe. TOC at 2832' (per calc)

Production Casing: (12/4/1980)
Drilled a 6-3/4" production hole to 8015'. Set 199 jts 5-1/2", 17#, N-80 csg at 8015'.
Cmt'd w/ 220 sx Class B w/ 8% gel (12.7 ppg, 2.14 yld).
Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

MV Tubing: (08/2000)	Length (ft)
KB	14
(165) 1-1/4 2.33# J-55 IJ	5340
(1) SN	1
(1) Perf'd joint	7
Set at:	5362 ft

DK Tubing: (08/2000)	Length (ft)
KB	14
(172) 1-1/2" 2.9# J-55 EUE	5842
Seal assembly	10
(2) Sub joints (3', 4')	7
(59) 1-1/2" 2.9# J-55	2020
(1) SN	1
(1) 1/2 MS collar	5
Set at:	7906 ft

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
Frac w/ 80,000# 20/40 sand.

DK: (7845'-7857', 7897'-7909', 7992'-7978')- 30, .0.37" holes, 2spf.
Acidized w/ 500 gal 15% HCL. Frac w/ 40,020 gal slickwater & sanded off with
81360# of 20/40 in perfs.

Formations:	MD		
Kirtland	2476'	Mancos	6020'
Fruitland	2893'	Gallup	6385'
Pictured Cliffs	3089'	Greenhorn	7652'
Cliffhouse	5276'	Dakota	7845'
Point Lookout	5606'		

Additional Notes:
3/1981 Drilled and completed this well as a dual MV/DK. Landed MV 1-1/4" tbg
at 5362' & DK 1-1/2" tbg at 7906'.

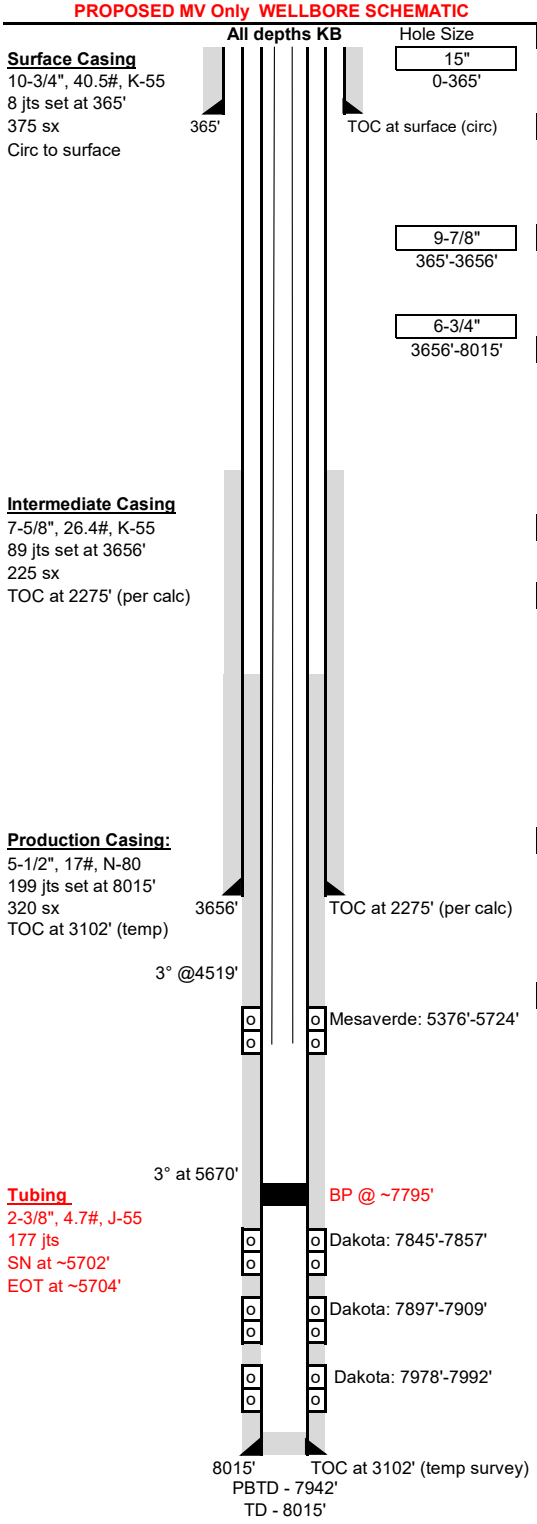
No record of any workovers since completion.
Max deviation is 3°

LOGOS OPERATING

Wellbore Schematic

Well Name:	Rosa Unit 80	Date Prepared:	2/7/2024 Peace
Location:	K-08-31N-05W 1660' FSL & 1780' FWL	Reviewed By:	2/14/2024 Moss
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-22537	Spud Date:	11/22/1980
Co-ordinates:	Lat 36.9112473, Long -107.3886337 NAD83	Completion Date:	3/19/1981
Elevations: GROUND:	6261'	Last Workover Date:	
KB:	6275'		
Depths (KB): PBTD:	7942'		
TD:	8015'		

PROPOSED MV Only WELLBORE SCHEMATIC



Surface Casing: (11/22/1980)
Drilled a 15" surface hole to 365'. Set 8 jts 10-3/4", 40.5#, K-55 csg at 365'.
Cmt'd w/ 375 sx Class B cmt). Circ 30 bbls to surface.

Intermediate Casing: (11/27/1980)
Drilled a 9-7/8" intermediate hole to 3656'. Set 89 jts 7-5/8",26.4#, K-55 csg at 3656'.
Cmt'd w/ 150 sx 65/35 12% gel (12.4 ppg, 2.05 yd). Tailed w/ 75 sx Class B
cmt (15.6 ppg, 1.171 yld). Left 120' of cmt left in pipe. TOC at 2275' (per calc, 75% effcy)

Production Casing: (12/4/1980)
Drilled a 6-3/4" production hole to 8015'. Set 199 jts 5-1/2", 17#, N-80 csg at 8015'.
Cmt'd w/ 220 sx Class B w/ 8% gel (12.7 ppg, 2.14 yld).
Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

Tubing:	Length (ft)
KB	14
(176) 2-3/8" 4.7# J-55 jts	5652
(1) 2-3/8" marker joint	4
(1) 2-3/8" 4.7# J-55 tbg jt	32
(1) SN	1
(1) MS collar w/ exp check	1
Set at:	5704 ft

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
Frac w/ 80,000# 20/40 sand.

DK: (7845'-7857', 7897'-7909', 7992'-7978')- 30, .0.37" holes, 2spf.
Acidized w/ 500 gal 15% HCL. Frac w/ 40,020 gal slickwater & sanded off with
81360# of 20/40 in perfs.

Formations:	MD		
Kirtland	2476'	Mancos	6020'
Fruitland	2893'	Gallup	6385'
Pictured Cliffs	3089'	Greenhorn	7652'
Cliffhouse	5276'	Dakota	7845'
Point Lookout	5606'		

Additional Notes:
3/1981 Drilled and completed this well as a dual MV/DK. Landed MV 1-1/4" tbg
at 5362' & DK 1-1/2" tbg at 7906'.

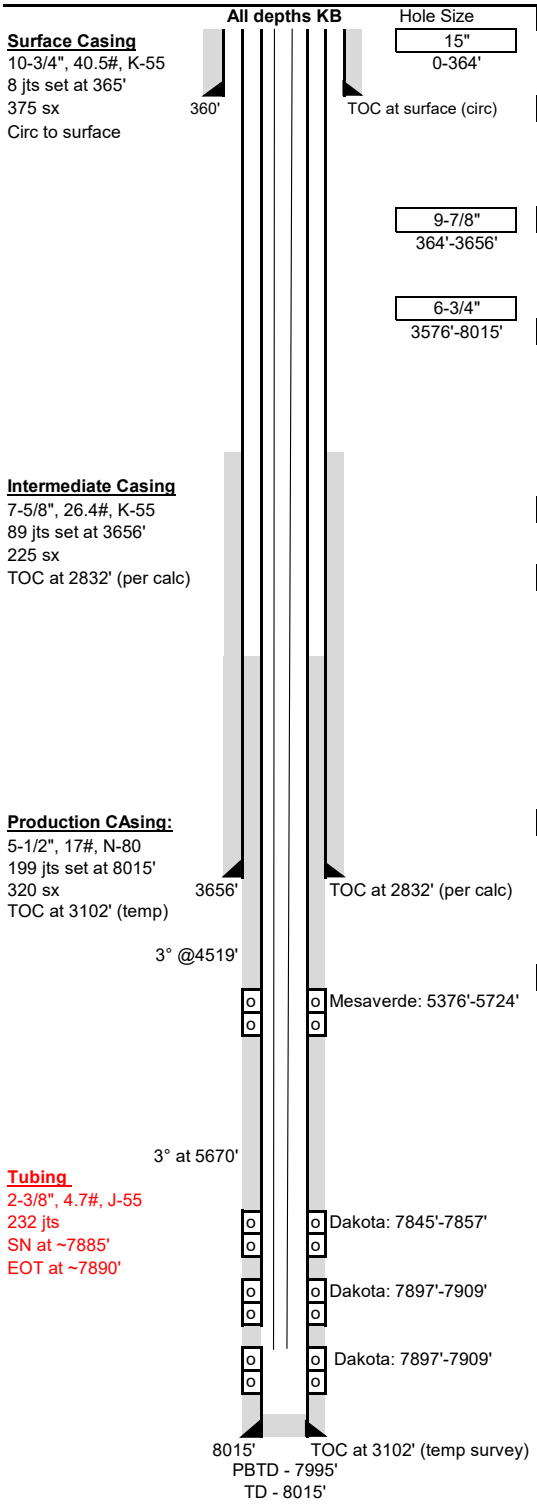
No record of any workovers since completion.
Max deviation is 3°

LOGOS OPERATING

Wellbore Schematic

Well Name:	Rosa Unit 80	Date Prepared:	2/7/2024 Peace
Location:	K-08-31N-05W 1660' FSL & 1780' FWL	Reviewed By:	2/14/2024 Moss
County:	Rio Arriba, NM	Last Updated:	
API #:	30-039-22537	Spud Date:	11/22/1980
Co-ordinates:	Lat 36.9112473, Long -107.3886337 NAD83	Completion Date:	3/19/1981
Elevations: GROUND:	6261'	Last Workover Date:	
KB:	6275'		
Depths (KB): PBTD:	7942'		
TD:	8015'		

PROPOSED WELLBORE SCHEMATIC



Surface Casing: (11/22/1980)
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Cmt'd w/ 375 sx Class B cmt). Circ 30 bbls to surface.

Intermediate Casing: (11/27/1980)
Drilled a 9-7/8" intermediate hole to 3656'. Set 89 jts 7-5/8",26.4#, K-55 csg at 3656'.
Cmt'd w/ 150 sx 65/35 12% gel (12.4 ppg, 2.05 yd). Tailed w/ 75 sx Class B
cmt (15.6 ppg, 1.171 yld). Left 120' of cmt left in pipe. TOC at 2832' (per calc)

Production Casing: (12/4/1980)
Drilled a 6-3/4" production hole to 8015'. Set 199 jts 5-1/2", 17#, N-80 csg at 8015'.
Cmt'd w/ 220 sx Class B w/ 8% gel (12.7 ppg, 2.14 yld).
Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

Tubing:	Length (ft)
KB	14
(232) 2-3/8" 4.7# J-55	7871
(1) 2-3/8" marker joint	4
(1) SN	1
Set at:	7890 ft

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
Frac w/ 80,000# 20/40 sand.

DK: (7845'-7857', 7897'-7909', 7992'-7978')- 30, .0.37" holes, 2spf.
Acidized w/ 500 gal 15% HCL. Frac w/ 40,020 gal slickwater & sanded off with
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at 5362' & DK 1-1/2" tbg at 7906'.

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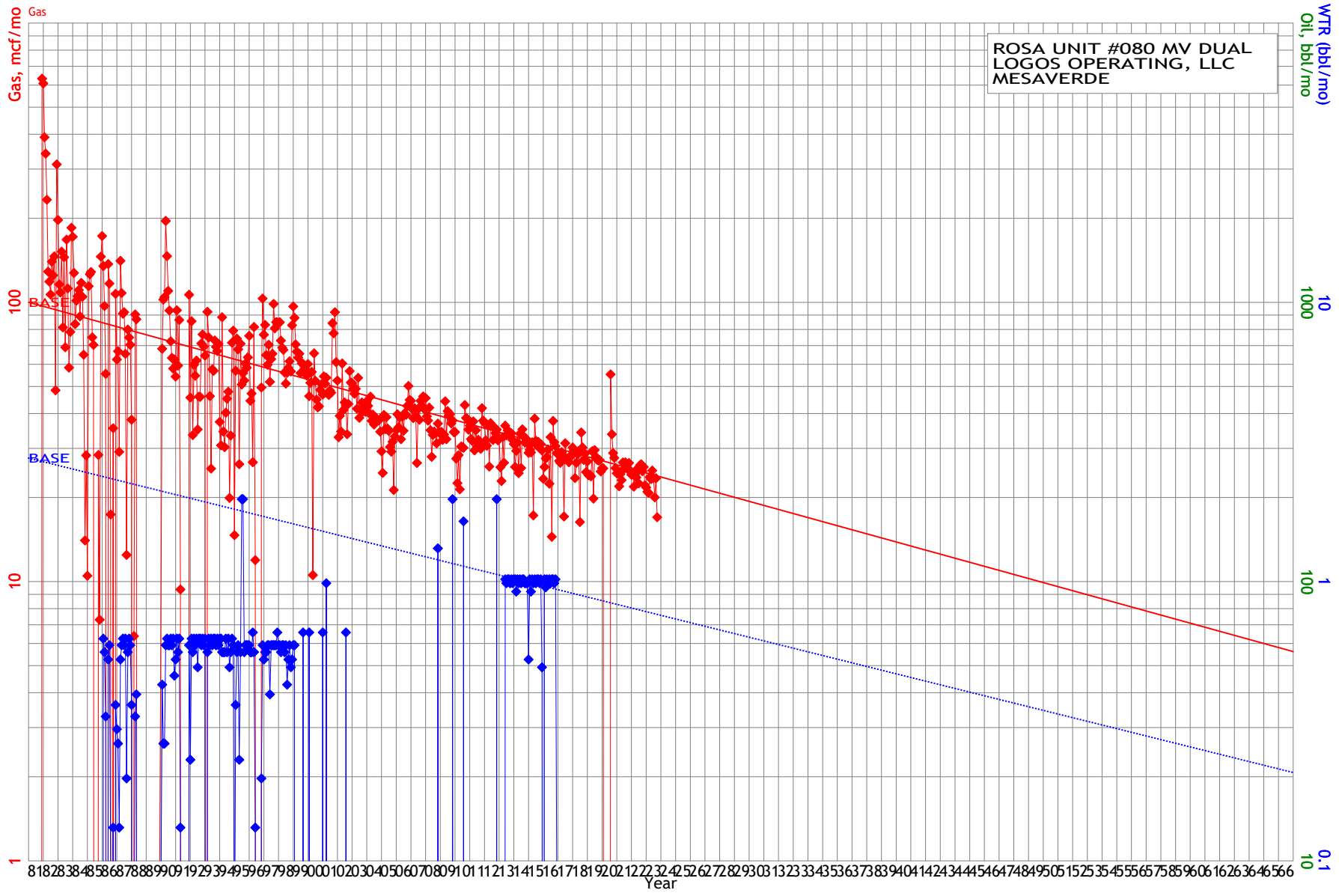
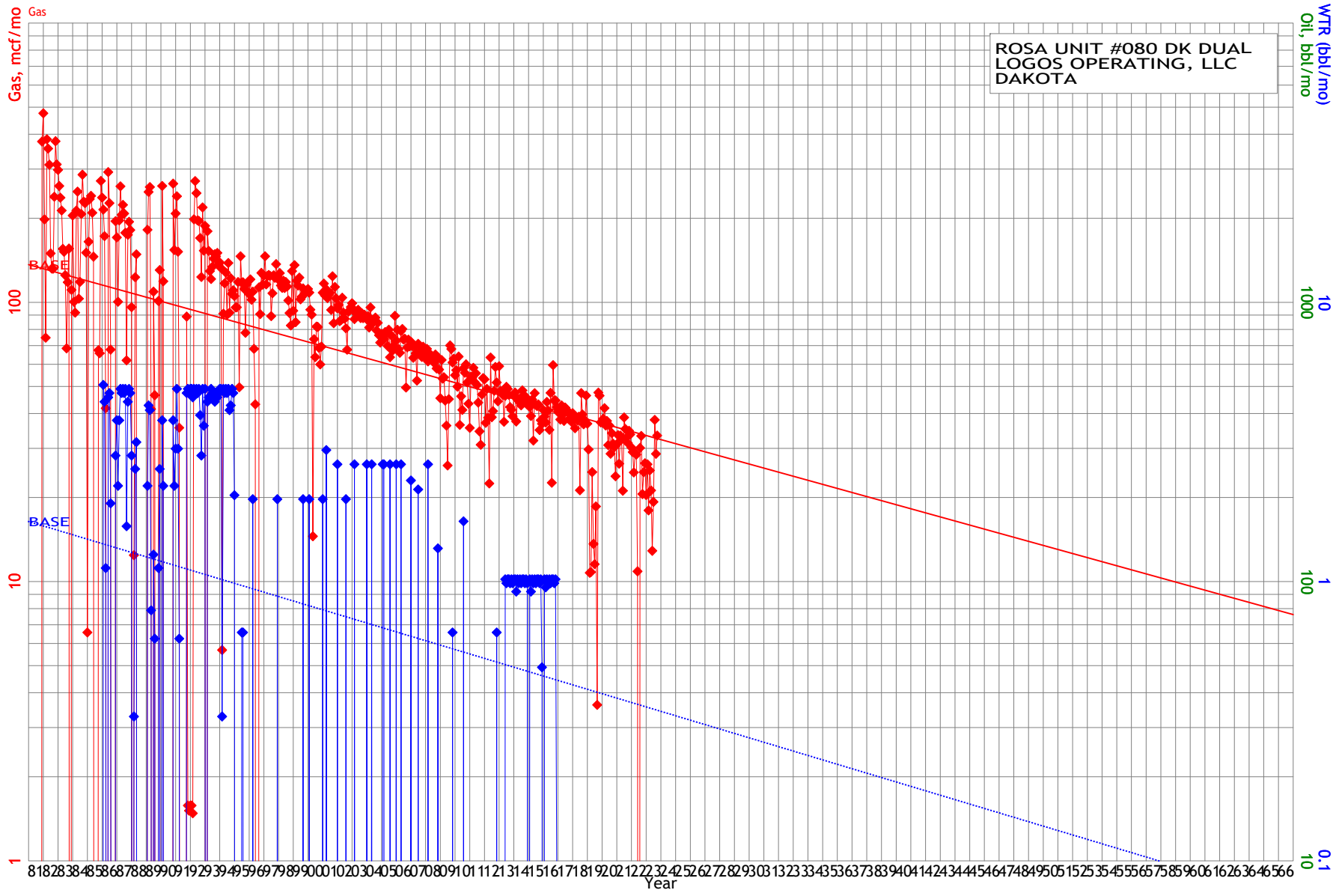


Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	BASE	Ref=	10/2023	Qual=	BASE
Ref=	10/2023	Cum=	0	Ref=	10/2023
Cum=	768946			Cum=	3602
Rem=	249934			Rem=	8042
EUR=	1018880			EUR=	11644
Yrs=	96.000			Yrs=	67.917
Qi=	23.9			Qi=	0.8
b=	0.000000			b=	0.000000
De=	3.294250			De=	2.970185
Qab=	1.0			Qab=	0.1



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	BASE	Ref=	10/2023	Qual=	BASE
Ref=	10/2023	Cum=	0	Ref=	10/2023
Cum=	1288584			Cum=	11857
Rem=	340527			Rem=	3355
EUR=	1629111			EUR=	15212
Yrs=	98.083			Yrs=	93.417
Qi=	32.5			Qi=	0.3
b=	0.000000			b=	0.000000
De=	3.299933			De=	3.574805
Qab=	1.2			Qab=	0.0

From:	McClure, Dean, EMNRD
To:	"Catlain Richardson"; Lacey Granillo
Cc:	Vanessa Fields; Roberts, Kelly, EMNRD; Kaitlyn Moss; Etta Trujillo; Krista McWilliams; Courtney Peace; Marcia Brueggenjohann
Subject:	RE: [EXTERNAL] Re: Action ID: 319887; DHC-5359
Date:	Thursday, March 28, 2024 12:23:00 PM
Attachments:	image001.png

Catlain,

Please submit a Form C-103 for record cleanup with a description of the placement of the additional perforations which should include the approximate date of when the work was completed, range of the perforations, SPF, etc.

Additionally, please submit an amended Form C-105 which includes the additional perforations.

This process may be done concurrently with review and approval of the DHC, but should hopefully be taken care of within the near future. Once submitted, please provide me with the action IDs for a faster review.

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

From: Catlain Richardson <CRichardson@logosresourcesllc.com>
Sent: Wednesday, March 27, 2024 5:44 PM
To: Lacey Granillo <lgranillo@logosresourcesllc.com>; McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>; Kaitlyn Moss <kmoss@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>; Courtney Peace <cpeace@logosresourcesllc.com>; Marcia Brueggenjohann <mbrueggenjohann@logosresourcesllc.com>
Subject: [EXTERNAL] Re: Action ID: 319887; DHC-5359

Dean,

We owe you a follow up on the Rosa Unit 080 perforations discrepancy you identified yesterday.

During our well history review, it was identified that there are lower Dakota perforations in the well that the operator at the time did not report to the NMOCD when the well was completed.

The lower Dakota perforations within this well schematic are accurate.

Thank you,

Catlain Richardson

Production and Completion Engineering Manager

Phone: 505-278-8720

Mobile: 505-320-3499

Email: crichardson@logosresourcesllc.com

2010 Afton Place

Farmington, NM 87401

www.logosenergyllc.com

From: Lacey Granillo <lgranillo@logosresourcesllc.com>
Sent: Wednesday, March 27, 2024 1:48 PM
To: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>; Catlain Richardson <CRichardson@logosresourcesllc.com>; Kaitlyn Moss <kmoss@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>; Courtney Peace <cpeace@logosresourcesllc.com>; Marcia Brueggenjohann <mbrueggenjohann@logosresourcesllc.com>
Subject: RE: Action ID: 319887; DHC-5359

Good afternoon, Dean-

Please see attached updated DHC allocation procedure for the Rosa Unit 080.

Thank you,

Lacey Granillo
Regulatory Specialist

Cell: 505-787-0118
lgranillo@logosresourcesllc.com

From: McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>
Sent: Tuesday, March 26, 2024 3:38 PM
To: Lacey Granillo <lgranillo@logosresourcesllc.com>
Cc: Vanessa Fields <vfields@logosresourcesllc.com>; Roberts, Kelly, EMNRD <Kelly.Roberts@emnrd.nm.gov>
Subject: Action ID: 319887; DHC-5359

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

The Division is reviewing the following application:

Action ID	319887
Admin No.	DHC-5359
Applicant	Logos Operating, LLC (289408)
Title	Rosa Unit #80
Sub. Date	3/4/2024

Please provide the following additional supplemental documents:

-

Please provide additional information regarding the following:

- Logos is proposing a fixed percentage allocation based off of cumulative production. However, it appears that current production rates deviate from that fixed percentage. Please note that a fixed percentage assigned at this time should be representative of the remaining production predicted to be derived from each pool. Please provide additional information regarding why Logos feels its currently proposed fixed percentage will accurately allocate the remaining production within the well, or diversely please re-evaluate and propose a new allocation. Due to the advanced decline of the well, it may be suitable to consider the current production rates, but Logos may consider using the decline curves to predict a cumulative value for the next 5 years and then determine a fixed percentage from that.
- There appears to be a discrepancy regarding the perforation range for the Dakota formation within Logos's application and within the well file. The well file and sundry indicate that the perforation range is 7845' to 7909', but the provided well bore diagram indicates that the perforation range is 7845' to 7978'. Please provide the perforation range for the Dakota and provide an amended document for whichever is in error.

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 (2024)

Rosa Unit 80
30-039-22537
1660' FSL & 1780' FWL
Section 8, T31N, R05W
Rio Arriba, New Mexico
LAT: 36.9112473° N LONG: -107.3886337°
Mesaverde/Dakota

PROJECT OBJECTIVE:
Remove packer and run gyro survey and pending results, set a bridge plug below the Mesaverde & above the Dakota perforations and load hole to isolate the perforations during offset Mancos drilling. Once drilling 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. Sell pressure down to line. Kill well as 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 5900'. Trip out of hole with packer plucker assembly and workstring.
7. Run gyro survey to determine the proximity of the well to the planned new drill.
8. If gyro results indicate the well is near enough to require isolation, set bridge plug within 50' above of the Dakota perforations and 50' below the Mesaverde. SI for drilling.
9. Once drilling is completed, trip in hole and remove the bridge plugs.
10. Run in hole with single 2-3/8" production tubing string.
11. Return to production as Mesaverde/Dakota commingle.

LOGOS Operating, LLC
Rosa Unit 080
mmingle
P 2 of 2

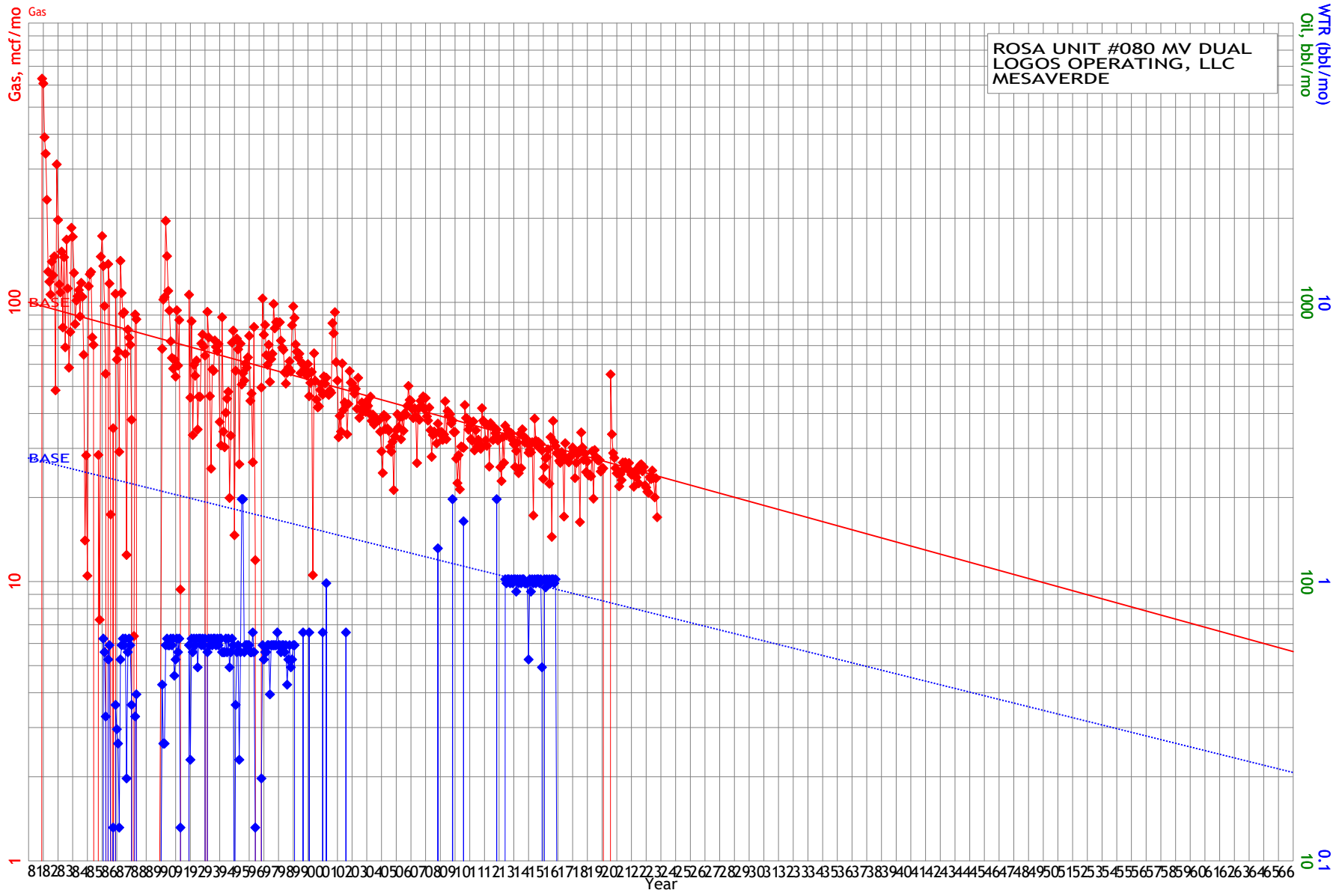
PRODUCTION ALLOCATION

Historic production data from both zones in this well was gathered and analyzed. Cumulative production was used to determine allocations and allocations were verified with recent production history.

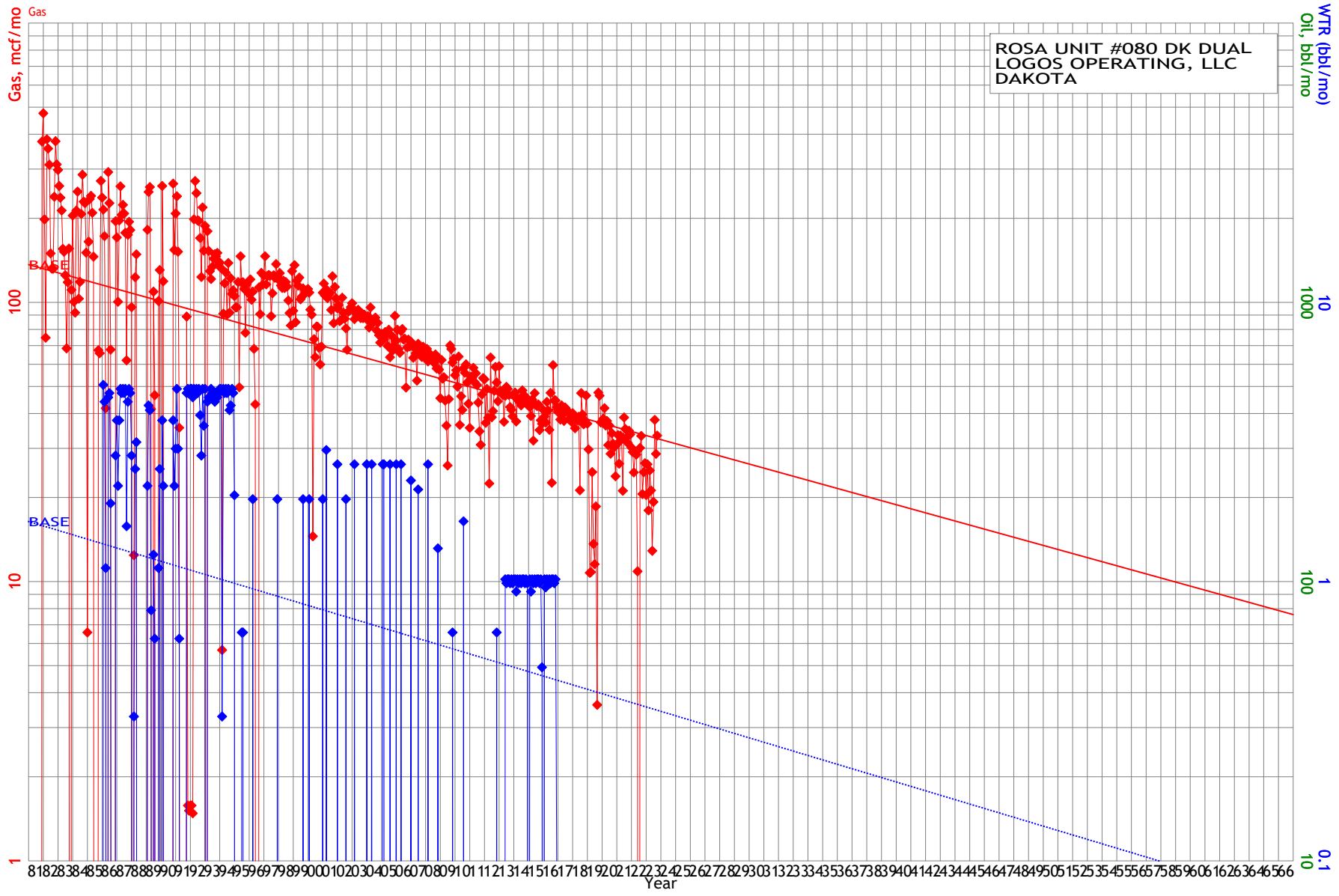
Cumulative Production

Cumulative production from well	2057.5 MMcf
Cumulative MV production	768.9 MMcf
Cumulative DK production	1288.6 MMcf

MV allocation = MV cumulative/total cumulative = 768.9/2057.5 = **37%**
DK allocation = DK cumulative total cumulative = 1288.6/ =**63%**



Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	BASE	Ref=	10/2023	Qual=	BASE
Ref=	10/2023	Cum=	0	Ref=	10/2023
Cum=	768946			Cum=	3602
Rem=	249934			Rem=	8042
EUR=	1018880			EUR=	11644
Yrs=	96.000			Yrs=	67.917
Qi=	23.9			Qi=	0.8
b=	0.000000			b=	0.000000
De=	3.294250			De=	2.970185
Qab=	1.0			Qab=	0.1

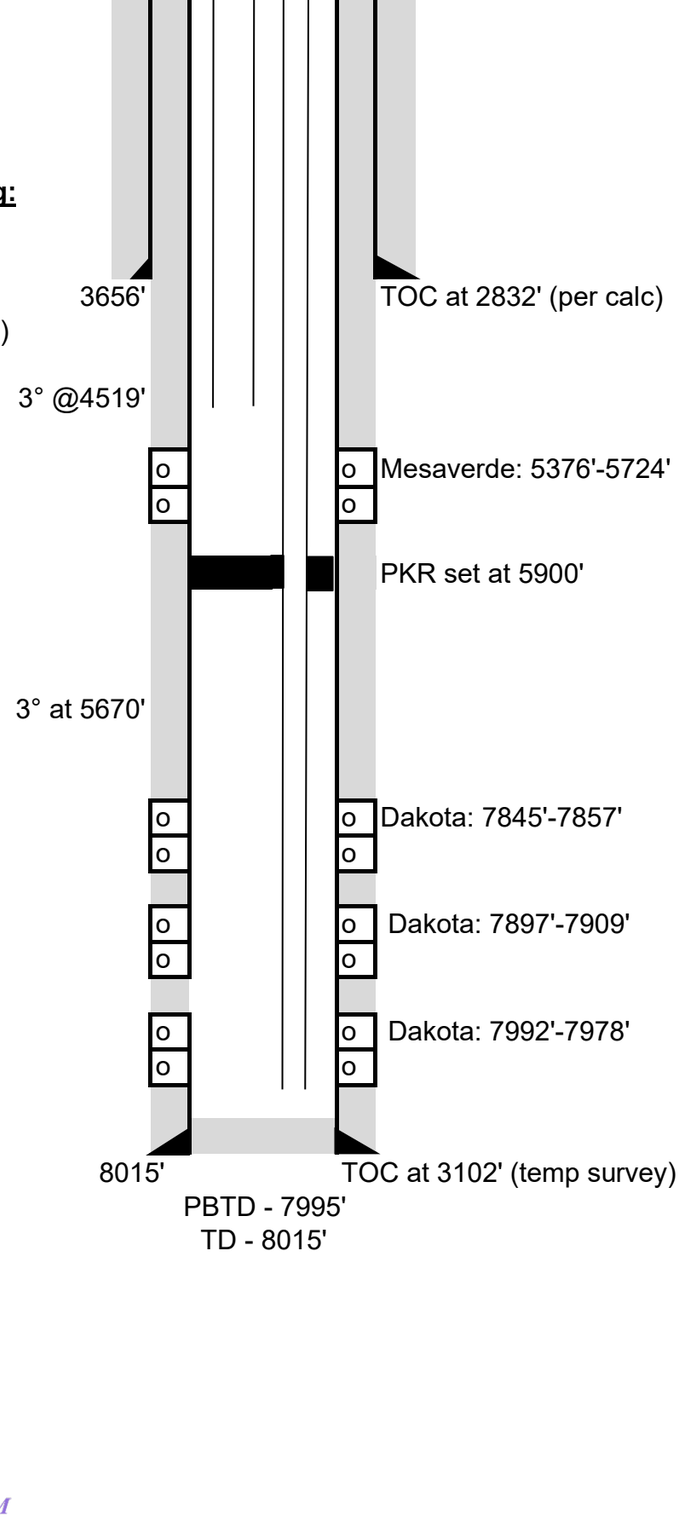


Gas, mcf/mo		Oil, bbl/mo		WTR (bbl/mo)	
Qual=	BASE	Ref=	10/2023	Qual=	BASE
Ref=	10/2023	Cum=	0	Ref=	10/2023
Cum=	1288584			Cum=	11857
Rem=	340527			Rem=	3355
EUR=	1629111			EUR=	15212
Yrs=	98.083			Yrs=	93.417
Qi=	32.5			Qi=	0.3
b=	0.000000			b=	0.000000
De=	3.299933			De=	3.574805
Qab=	1.2			Qab=	0.0

Wellbore Schematic

Well Name:	Rosa Unit 80		Date Prepared:	2/7/2024 Peace
Location:	K-08-31N-05W 1660' FSL & 1780' FWL		Reviewed By:	2/14/2024 Moss
County:	Rio Arriba, NM		Last Updated:	
API #:	30-039-22537		Spud Date:	11/22/1980
Co-ordinates:	Lat 36.9112473, Long -107.3886337 NAD83		Completion Date:	3/19/1981
Elevations:	GROUND:	6261'	Last Workover Date:	
	KB:	6275'		
Depths (KB):	PBTD:	7942'		
	TD:	8015'		

VERTICAL WELLBORE



Hole Size

15" 0-365'

9-7/8" 365'-3656'

6-3/4" 3576'-8015'

Surface Casing: (11/22/1980)
Drilled a 15" surface hole to 365'. Set 8 jts 10-3/4", 40.5#, K-55 csg at 365'.
Cmt'd w/ 375 sx Class B cmt). Circ 30 bbls to surface.

Intermediate Casing: (11/27/1980)
Drilled a 9-7/8" intermediate hole to 3656'. Set 89 jts 7-5/8",26.4#, K-55 csg at 3656'.
Cmt'd w/ 150 sx 65/35 12% gel (12.4 ppg, 2.05 yd). Tailed w/ 75 sx Class B
cmt (15.6 ppg, 1.171 yld). Left 120' of cmt left in pipe. TOC at 2832' (per calc)

Production Casing: (12/4/1980)
Drilled a 6-3/4" production hole to 8015'. Set 199 jts 5-1/2", 17#, N-80 csg at 8015'.
Cmt'd w/ 220 sx Class B w/ 8% gel (12.7 ppg, 2.14 yld).
Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

MV Tubing: (08/2000)	Length (ft)
KB	14
(165) 1-1/4 2.33# J-55 IJ	5340
(1) SN	1
(1) Perf'd joint	7
Set at:	5362 ft

DK Tubing: (08/2000)	Length (ft)
KB	14
(172) 1-1/2" 2.9# J-55 EUE	5842
Seal assembly	10
(2) Sub joints (3', 4')	7
(59) 1-1/2" 2.9# J-55	2020
(1) SN	1
(1) 1/2 MS collar	5
Set at:	7906 ft

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
Frac w/ 80,000# 20/40 sand.

DK: (7845'-7857', 7897'-7909', 7992'-7978')- 30, .0.37" holes, 2spf.
Acidized w/ 500 gal 15% HCL. Frac w/ 40,020 gal slickwater & sanded off with
81360# of 20/40 in perfs.

Formations:	MD		
Kirtland	2476'	Mancos	6020'
Fruitland	2893'	Gallup	6385'
Pictured Cliffs	3089'	Greenhorn	7652'
Cliffhouse	5276'	Dakota	7845'
Point Lookout	5606'		

Additional Notes:
3/1981 Drilled and completed this well as a dual MV/DK. Landed MV 1-1/4" tbg
at 5362' & DK 1-1/2" tbg at 7906'.

No record of any workovers since completion.
Max deviation is 3°

Wellbore Schematic

Well Name:	Rosa Unit 80		Date Prepared:	2/7/2024 Peace
Location:	K-08-31N-05W 1660' FSL & 1780' FWL		Reviewed By:	2/14/2024 Moss
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Co-ordinates:	Lat 36.9112473, Long -107.3886337 NAD83		Completion Date:	3/19/1981
Elevations:	GROUND:	6261'	Last Workover Date:	
	KB:	6275'		
Depths (KB):	PBTD:	7942'		
	TD:	8015'		

PROPOSED WELLBORE ISOLATION SCHEMATIC

Surface Casing: (11/22/1980)
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Cmt'd w/ 220 sx Class B w/ 8% gel (12.7 ppg, 2.14 yld).
Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

Tubing: Length (ft)

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
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LOGOS OPERATING

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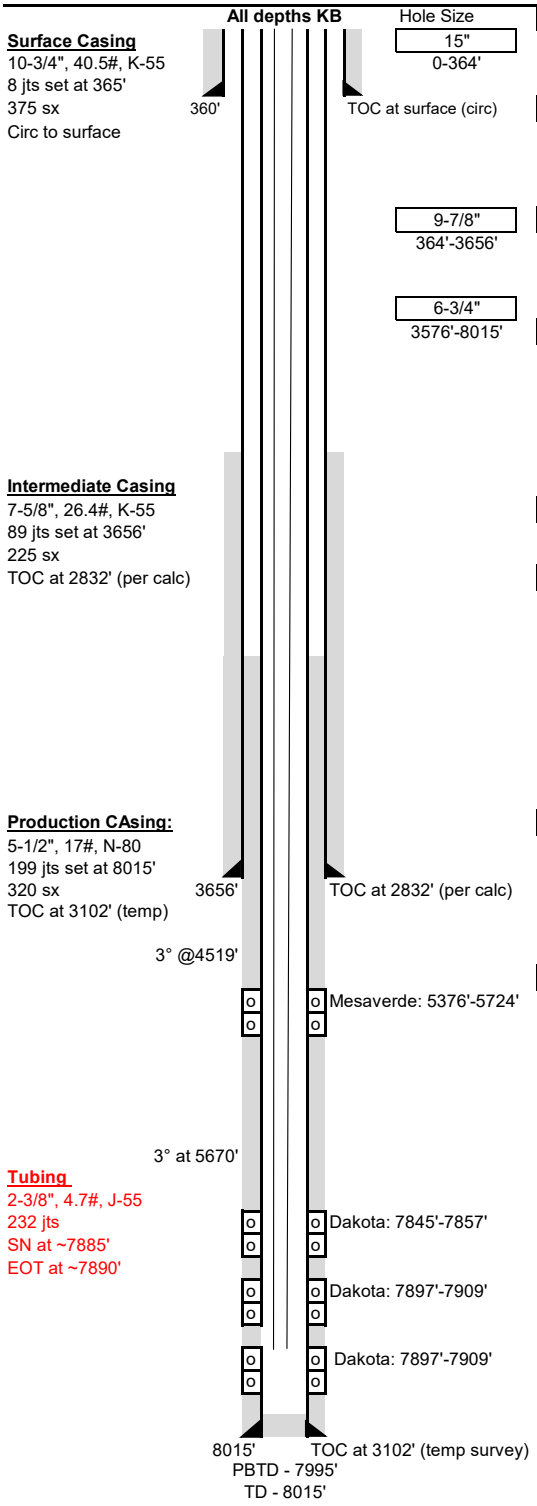

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Tailed w/ 100 sx Class B (15.6ppg, 1.171 yld). Circ 12 bbls.
TOC at 3102' (temp survey).

Tubing:	Length (ft)
KB	14
(232) 2-3/8" 4.7# J-55	7871
(1) 2-3/8" marker joint	4
(1) SN	1
Set at:	7890 ft

Artificial Lift:
N/A

Perforations: (1/1981)
MV: (5376'-5724') - 30, 0.37" holes, 1-2 spf. Acidized w/ 1000 gal 7-1/2% HCL.
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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 319887

COMMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 319887
	Action Type: [C-107] Down Hole Commingle (C-107A)

COMMENTS

Created By	Comment	Comment Date
dmcclure	DHC-5359	3/28/2024

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CONDITIONS

Action 319887

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 319887
	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