

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

DHC-5228 Form C-103
Revised July 18, 2013

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

WELL API NO. 30-039-07944
5. Indicate Type of Lease STATE [ ] FEE [ ]
6. State Oil & Gas Lease No. NMSF078771
7. Lease Name or Unit Agreement Name ROSA UNIT
8. Well Number 008
9. OGRID Number 289408
10. Pool name or Wildcat Rosa Pictured Cliffs / Blanco Mesaverde
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6429'

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.)
1. Type of Well: Oil Well [ ] Gas Well [X] Other [ ]
2. Name of Operator LOGOS Operating, LLC
3. Address of Operator 2010 Afton Place, Farmington, New Mexico 87401
4. Well Location Unit Letter M : 1100 feet from the South line and 900 feet from the West line
Section 26 31N Township 06W Range NMPM Rio Arriba County
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6429'

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

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

- 1. Pre-approved Pool Division Order R-12991
2. Pools to be commingled Blanco MV 72319, Rosa Pictured Cliffs 96175
3. Perforated intervals: Blanco MV 5406' - 5689', Rosa Pictured Cliffs 3272' - 3327'
4. Fixed percentage allocation 10% Blanco MV and 90% Rosa Pictured Cliffs
5. Commingling will not reduce the value of reserves
6. Notification of working, royalty, and overriding royalty interest owners; no notice is required per R-12991
7. The BLM has been notified on sundry notice form 3160-5

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 Etta Trujillo TITLE Regulatory Specialist DATE 10/26/2022

Type or print name Etta Trujillo E-mail address: etrujillo@logosresourcesllc.com PHONE: 505-324-4154

For State Use Only

APPROVED BY: Dean R McClure TITLE Petroleum Engineer DATE 10/27/2022

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.



## DOWNHOLE COMMINGLE PROCEDURE AND ALLOCATION-NMOCD (2022)

**Rosa Unit 8**  
**30-039-07944**  
**1100' FSL & 900' FWL**  
**Section 26, T31N, R06W**  
**Rio Arriba, New Mexico**  
**LAT: 36.8664055° N LONG: -107.4381256° W**  
**Pictured Cliffs/Mesaverde**

### PROJECT OBJECTIVE:

Downhole commingle Pictured Cliffs and Mesaverde.

### 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. Rig up flow lines. Check and record casing pressure. Sell pressure down to line. Kill well if necessary.
3. Nipple down wellhead and nipple up BOP.
4. Remove all tubing and downhole equipment from the wellbore.
5. Run in hole with single 2-3/8" production tubing string.
6. Return to production as a Pictured Cliffs/Mesaverde commingle.

### PRODUCTION ALLOCATION

Historic production data from both zones in this well was gathered and analyzed. Production rates from 2005 were used to determine allocations for greater allocation accuracy.

#### Gas Production Rate

Total Gas Production Rate	119 Mcfpd
Pictured Cliffs Gas Production Rate	107 Mcfpd
Mesaverde Gas Production Rate	12 Mcfpd

PC allocation = PC rate/total rate = 107/119 = **90%**

MV allocation = MV rate/total rate = 12/119 = **10%**

#### Oil Production Rate

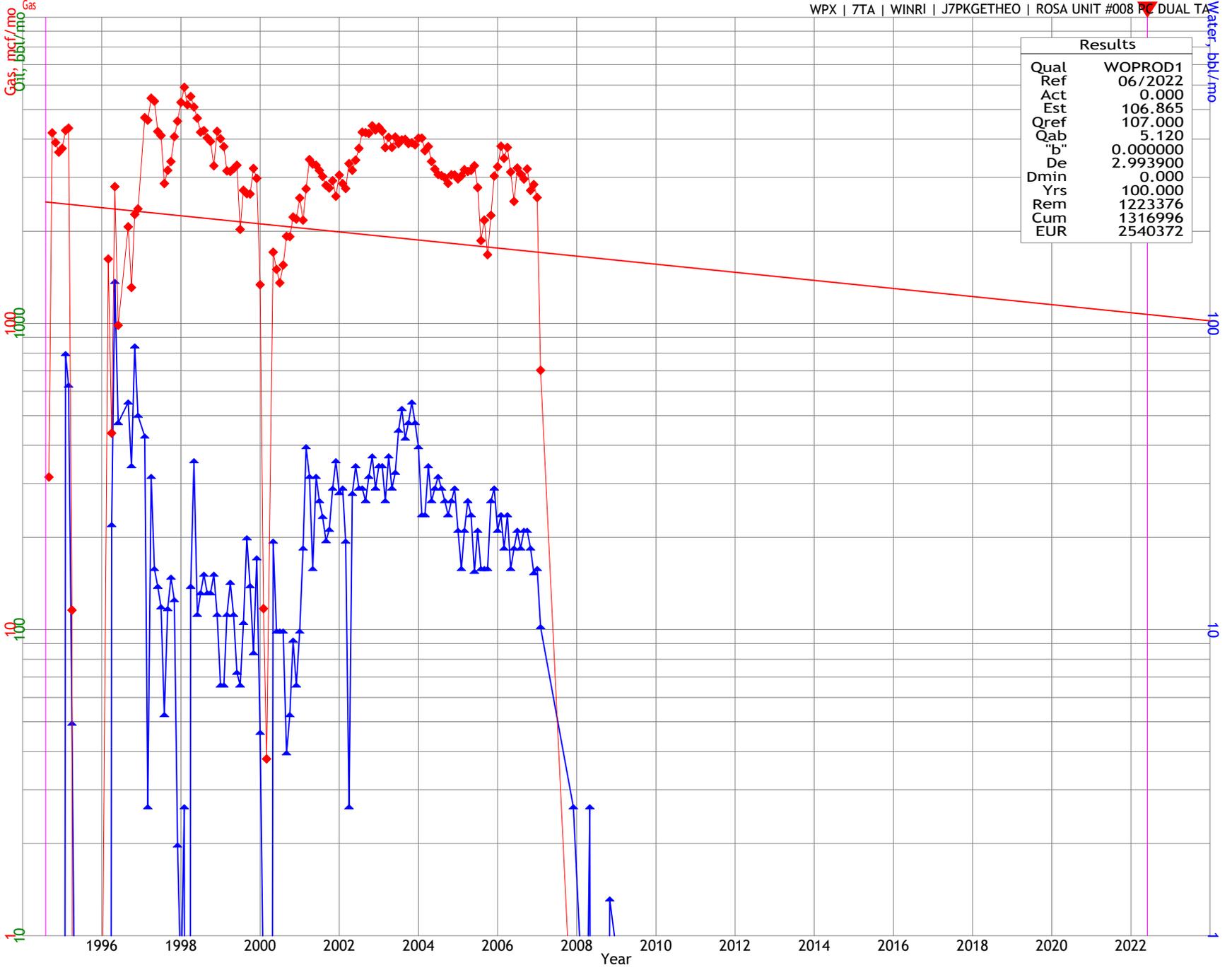
NA

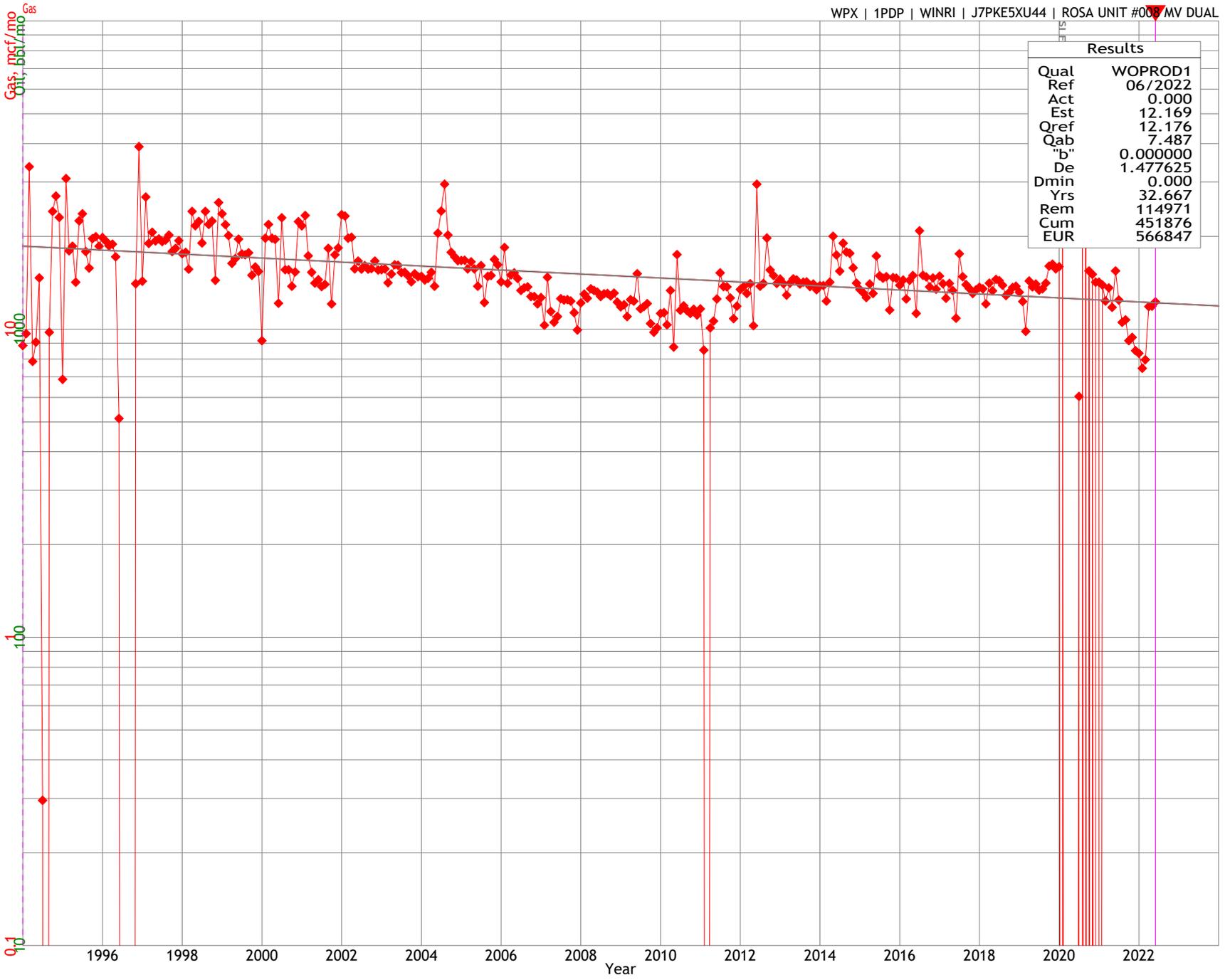
#### Water Production Rate

Total Water Production Rate	50 bwpd
Pictured Cliffs Water Production Rate	50 bwpd
Mesaverde Water Production Rate	0 bwpd

PC allocation = PC rate/total rate = 50/50 = **100%**

WPX | 7TA | WINRI | J7PKGETHEO | ROSA UNIT #008 PC DUAL TA





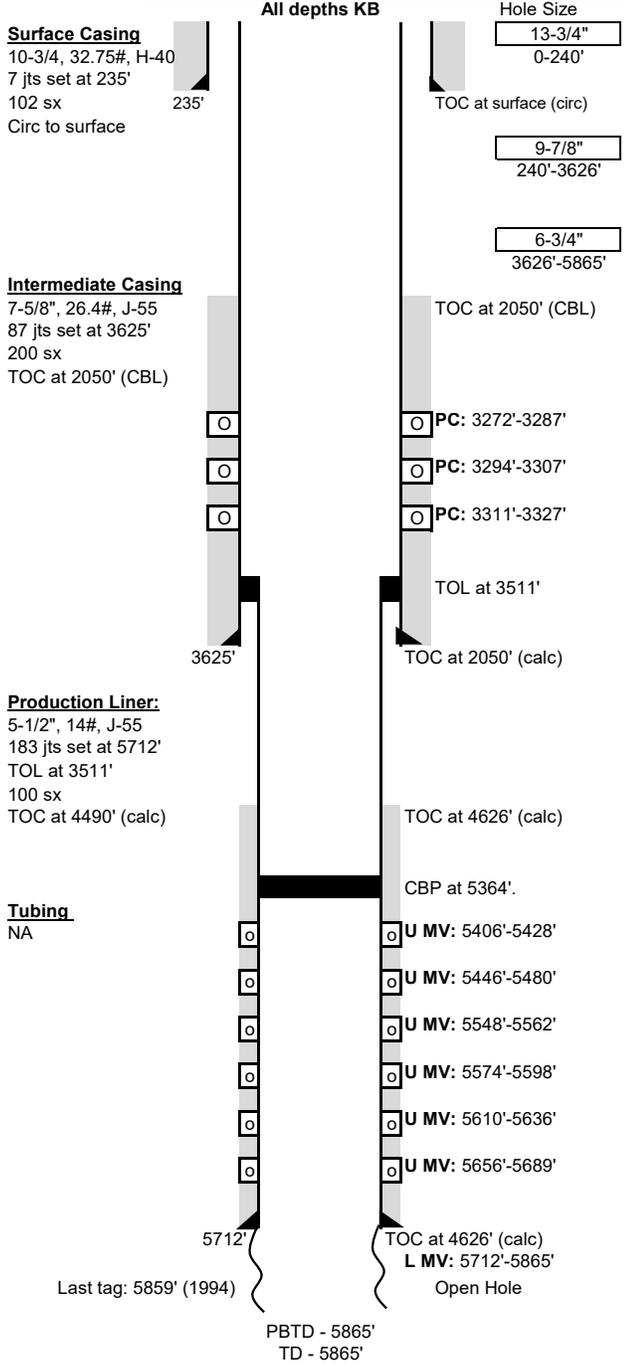


**Wellbore Schematic**

Well Name: Rosa Unit 8  
 Location: M-26-31N-06W 1100' FSL & 900' FWL  
 County: Rio Arriba, NM  
 API #: 30-039-07944  
 Co-ordinates: Lat 36.8664055, Long -107.4381256  
 Elevations: GROUND: 6429'  
 KB: 6440'  
 Depths (KB): PBDT: 5865'  
 TD: 5865'

Date Prepared: 7/22/2022 Moss  
 Reviewed By: 7/25/2022 Gomez  
 Last Updated: 10/17/2022 Moss  
 Spud Date: 7/2/1955  
 Completion Date: 8/23/1955  
 Last Workover Date: 8/4/2022

**VERTICAL WELLBORE**



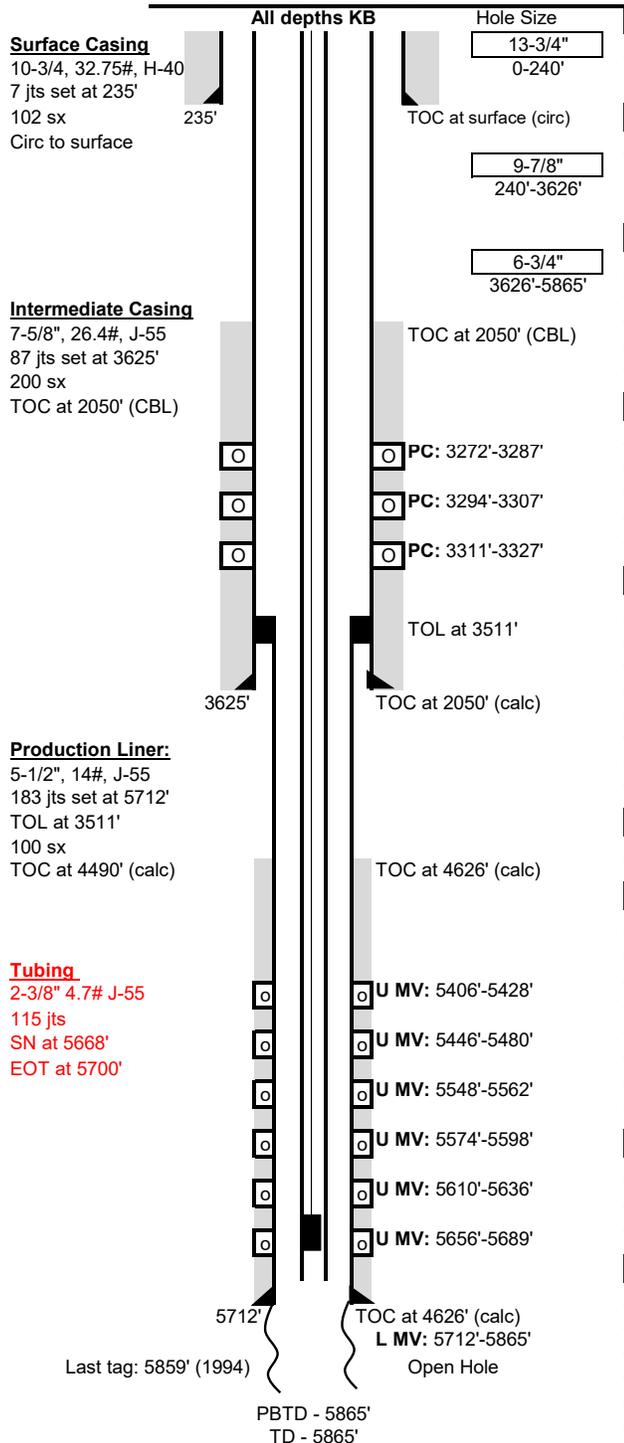


**Proposed Wellbore Schematic**

Well Name: Rosa Unit 8  
 Location: M-26-31N-06W 1100' FSL & 900' FWL  
 County: Rio Arriba, NM  
 API #: 30-039-07944  
 Co-ordinates: Lat 36.8664055, Long -107.4381256  
 Elevations: GROUND: 6429'  
 KB: 6440'  
 Depths (KB): PBSD: 5865'  
 TD: 5865'

Date Prepared: 7/22/2022 Moss  
 Reviewed By: 7/25/2022 Gomez  
 Last Updated: 10/24/2022 Moss  
 Spud Date: 7/2/1955  
 Completion Date: 8/23/1955  
 Last Workover Date: 8/4/2022

**VERTICAL WELLBORE**



**Surface Casing: (07/03/1955)**  
 Drilled a 13-3/4" surface hole to 240'. Set 7 jts, 10-3/4", 32.75#, H-40 csg at 235'.  
 Cmt'd w/ 102 sx 4% gel (158 cu ft). Circ to surface.

**Intermediate Casing: (07/30/1955)**  
 Drilled a 9-7/8" intermediate hole to 3626'. Set 87 jts 7-5/8", 26.4#, J-55 csg at 3625'.  
 Cmt'd w/ 150 sx 8% gel tailed w/ 50 sx neat cmt. (347 cu ft).  
 TOC at 2050' per CBL (1994).

**Production Liner: (08/16/1955)**  
 Drilled a 6-3/4" production hole to 5712'. Set 183 jts 5-1/2", 14#, J-55 csg at 5712'.  
 Cmt'd w/ 100 sx 2% gel (136 cu ft). TOC at 4626' per calc. DO past cmt to 5865',  
 4-3/4" open hole below csg.  
**1994-** Ran free-point calc & backed off csg at ~3542', pulled 113 jts & 15' cutoff. Ran  
 1 new 5-1/2" csg jt & screwed into csg stub at 3547' & set liner hanger at 3511'.

Tubing:	Length (ft)
KB	11
(115) 2-3/8" 4.7#, J-55 tbg jts	5657
(1) SN	1
(1) 2-3/8" MS MA	31
Set at: 5700 ft	

**Rods:**

(1) 1-1/4" x 22' polished rod w/ 1-1/2" x 10' liner	22
(81) 7/8" plain rods	2025
(137) 3/4" plain rods	3425
(2) 3/4" x 8' plain pony rods	16
(8) 1-1/4" sinker bars	200
(1) 21k shear tool	1
(1) 3/4" x 8' guided pony rods	8
(1) 2" x 1-1/2" x 16' RWAC pump	16

**Pumping Unit:**  
 Dansco 228-246-86, 86" stroke length

**Perforations:**

1955- **L MV:** (5712'-5865') Open hole. Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1955- **U MV:** (5406'-28', 5446'-80', 5548'-62', 5574'-98', 5610'-36', 5656'-5689').  
 5406'-28', 4 SPF & 5446'-5689', 2 SPF. Acidize w/ 500 gal acid.  
 Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1994- **PC:** (3272'-3287', 3294'-3307', 3311'-3327'). 1 SPF, 47, 0.36" holes.  
 Acidize w/ 1000 gal 7.5% HCL. Frac w/ 98,300# 20/40 mesh in 18,396 gal  
 of 30# borate x-link gel in 70Q N2 foam.

Formations:	MD	MD
Kirtland-	2588'	Cliff House 5387'
Fruitland-	3090'	Menefee 5438'
Pictured Cliffs-	3266'	Point Lookout 5658'

**Additional Notes:**

**08/1955** Initial completion. Perf'd & stim'd MV formation. Set 2-3/8" tbg at 5692'.  
**08/1994** Re-complete. Backed off 5-1/2" csg, pulled 113 jts & 15' cutoff. Ran new  
 5-1/2" csg, screwed into csg stub at 3547', TOL at 3511'. Perf'd & stim'd the PC  
 formation. CO to 5859', had 1/2" pieces of shale & sand. Set pkr & landed 1-1/2"  
 MV string at 5713'. Set 1-1/2" PC string at 3324'.

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No. **NMSF078771**

6. If Indian, Allottee or Tribe Name

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

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator **LOGOS OPERATING LLC**

3a. Address **2010 AFTON PLACE, FARMINGTON, NM 87401** 3b. Phone No. (include area code)  
**(505) 278-8720**

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)  
**SEC 26/T31N/R6W/NMP**

7. If Unit of CA/Agreement, Name and/or No.  
**ROSA UNIT--MV/NMNM78407A**

8. Well Name and No. **ROSA UNIT/8**

9. API Well No. **3003907944**

10. Field and Pool or Exploratory Area  
**ROSA PICTURED CLIFFS/BLANCO MESAVERDE**

11. Country or Parish, State  
**RIO ARRIBA/NM**

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

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Downhole Commingle	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

LOGOS Resources requests permission to downhole commingle subject well with the existing Pictured Cliffs and Blanco Mesaverde formations. Attached is the downhole commingle procedure and allocation. The DHC application will be submitted and approved before work proceeds.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
**ETTA TRUJILLO / Ph: (505) 324-4154**

Title **Regulatory Specialist**

Signature *Etta Trujillo*

Date **10/25/2022**

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

Approved by

Title Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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

(Instructions on page 2)

<b>Well Name:</b> ROSA UNIT	<b>Well Location:</b> T31N / R6W / SEC 26 / SWSW / 36.86639 / -107.43758	<b>County or Parish/State:</b> RIO ARRIBA / NM
<b>Well Number:</b> 8	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMSF078771	<b>Unit or CA Name:</b> ROSA UNIT--MV	<b>Unit or CA Number:</b> NMNM78407A
<b>US Well Number:</b> 300390794400D1	<b>Well Status:</b> Producing Gas Well	<b>Operator:</b> LOGOS OPERATING LLC

**Notice of Intent**

**Sundry ID:** 2699630

**Type of Submission:** Notice of Intent

**Type of Action:** Commingling (Subsurface)

**Date Sundry Submitted:** 10/25/2022

**Time Sundry Submitted:** 12:15

**Date proposed operation will begin:** 10/25/2022

**Procedure Description:** LOGOS Resources requests permission to downhole commingle subject well with the existing Pictured Cliffs and Blanco Mesaverde formations. Attached is the downhole commingle procedure and allocation. The DHC application will be submitted and approved before work proceeds.

**NOI Attachments**

**Procedure Description**

Documents\_for\_Rosa\_Unit\_8\_DHC\_20221025121416.pdf

**Conditions of Approval**

**Specialist Review**

2699630\_DHC\_8\_3003907944\_KR\_10262022\_20221026134455.pdf

Well Name: ROSA UNIT

Well Location: T31N / R6W / SEC 26 / SWSW / 36.86639 / -107.43758

County or Parish/State: RIO ARRIBA / NM

Well Number: 8

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF078771

Unit or CA Name: ROSA UNIT--MV

Unit or CA Number: NMNM78407A

US Well Number: 300390794400D1

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: ETTA TRUJILLO

Signed on: OCT 25, 2022 12:14 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: 10/26/2022

Signature: Kenneth Rennick



**DOWNHOLE COMMINGLE PROCEDURE AND ALLOCATION-NMOCD (2022)**

**Rosa Unit 8**  
**30-039-07944**  
**1100' FSL & 900' FWL**  
**Section 26, T31N, R06W**  
**Rio Arriba, New Mexico**  
**LAT: 36.8664055° N LONG: -107.4381256° W**  
**Pictured Cliffs/Mesaverde**

**PROJECT OBJECTIVE:**

Downhole commingle Pictured Cliffs and Mesaverde.

**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. Rig up flow lines. Check and record casing pressure. Sell pressure down to line. Kill well if necessary.
3. Nipple down wellhead and nipple up BOP.
4. Remove all tubing and downhole equipment from the wellbore.
5. Run in hole with single 2-3/8" production tubing string.
6. Return to production as a Pictured Cliffs/Mesaverde commingle.

**PRODUCTION ALLOCATION**

Historic production data from both zones in this well was gathered and analyzed. Production rates from 2005 were used to determine allocations for greater allocation accuracy.

**Gas Production Rate**

Total Gas Production Rate	119 Mcfpd
Pictured Cliffs Gas Production Rate	107 Mcfpd
Mesaverde Gas Production Rate	12 Mcfpd

PC allocation = PC rate/total rate = 107/119 = **90%**  
 MV allocation = MV rate/total rate = 12/119 = **10%**

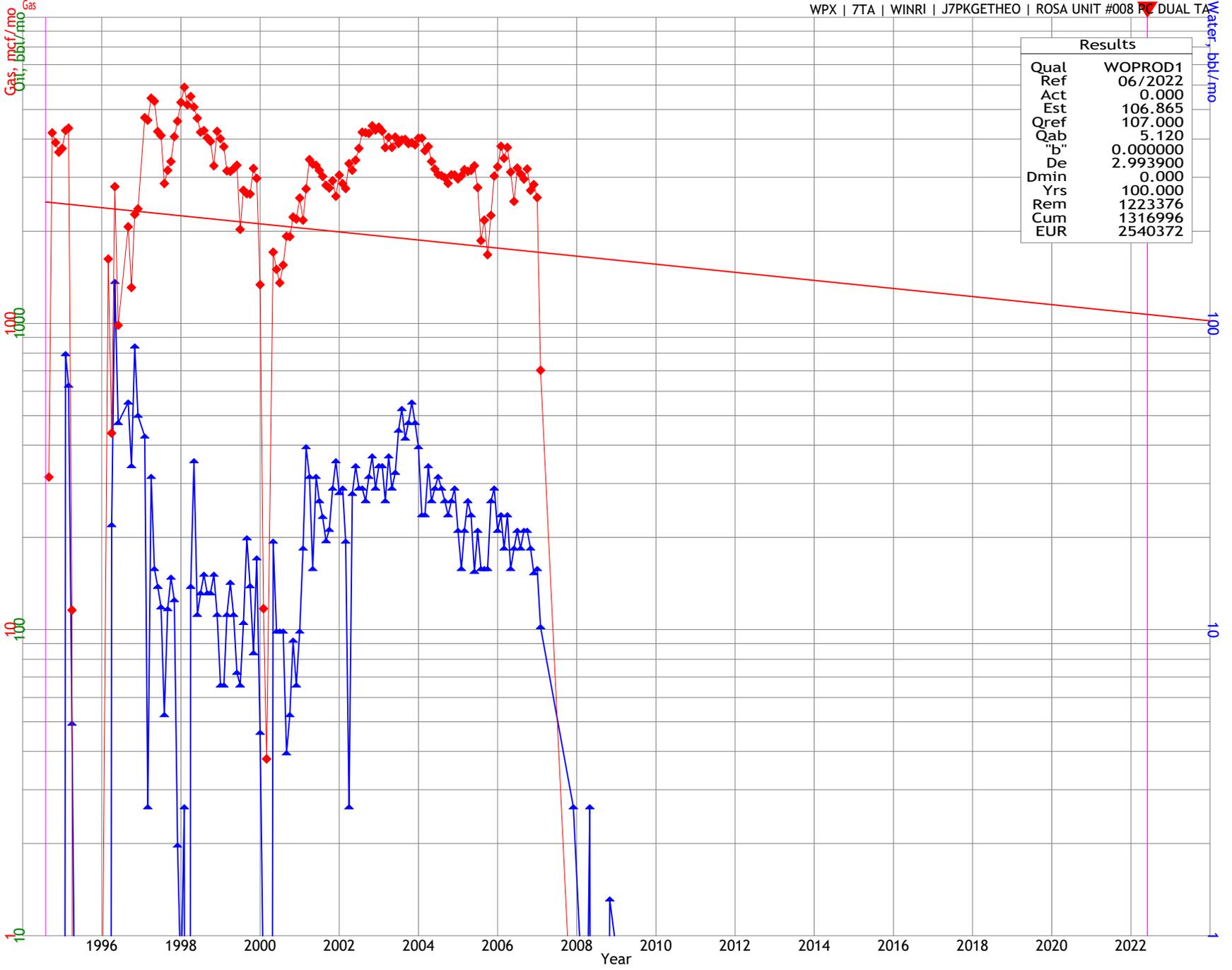
**Oil Production Rate** NA

**Water Production Rate**

Total Water Production Rate	50 bwpd
Pictured Cliffs Water Production Rate	50 bwpd
Mesaverde Water Production Rate	0 bwpd

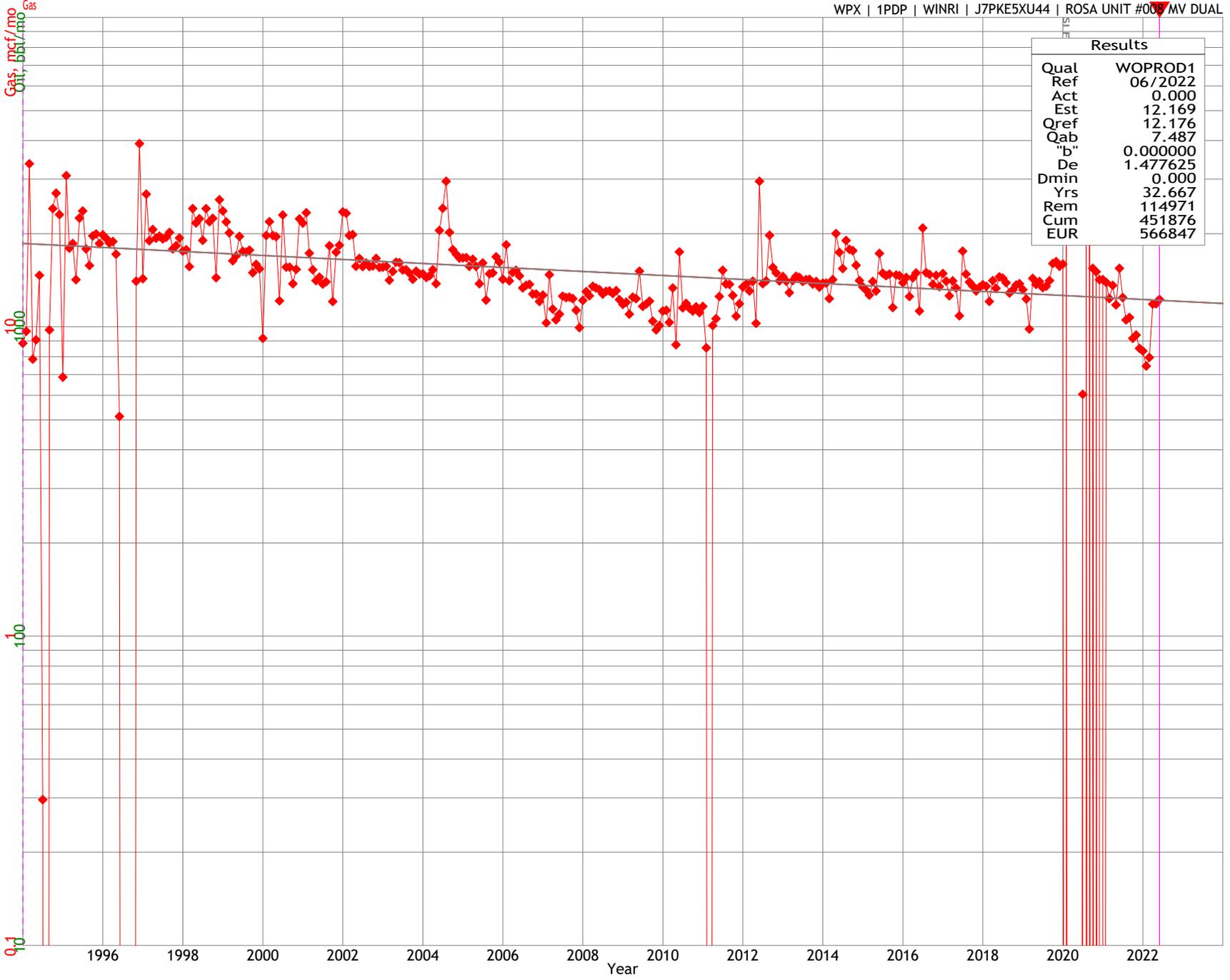
PC allocation = PC rate/total rate = 50/50 = **100%**

WPX | 7TA | WINRI | J7PKGETHEO | ROSA UNIT #008 PC DUAL TA



Results	
Qual	WOPROD1
Ref	06/2022
Act	0.000
Est	106.865
Qref	107.000
Qab	5.120
"b"	0.000000
De	2.993900
Dmin	0.000
Yrs	100.000
Rem	1223376
Cum	1316996
EUR	2540372

WPX | 1PDP | WINRI | J7PKE5XU44 | ROSA UNIT #008 | MV DUAL



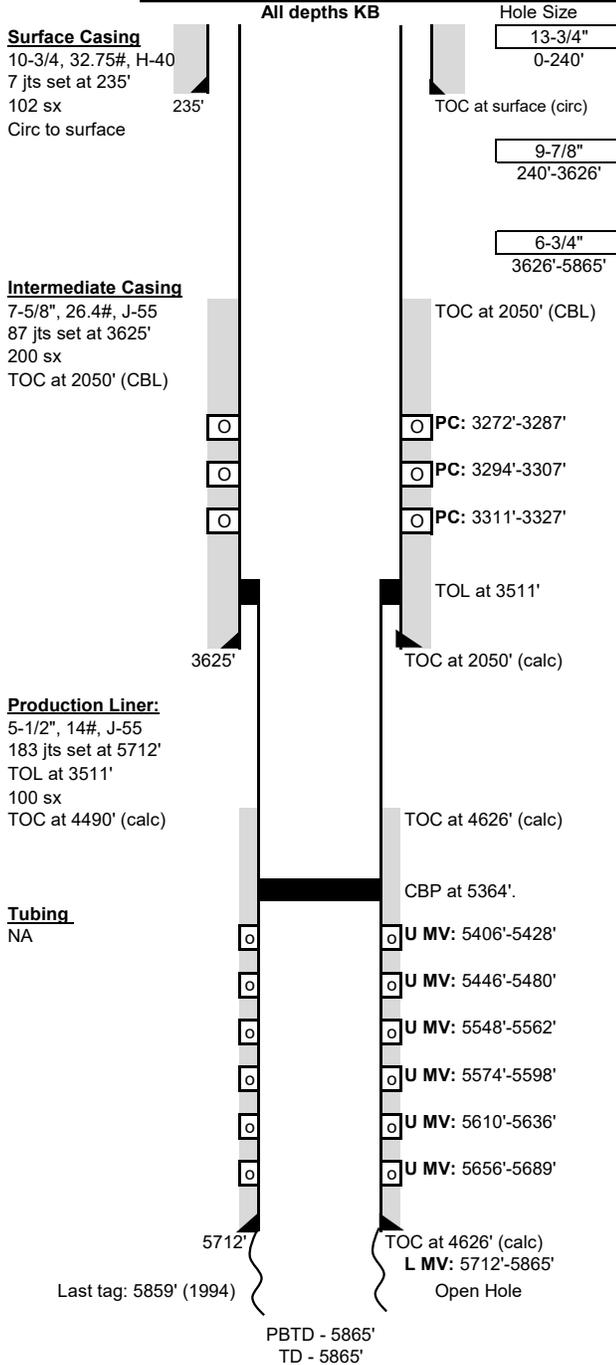


**Wellbore Schematic**

Well Name: Rosa Unit 8  
 Location: M-26-31N-06W 1100' FSL & 900' FWL  
 County: Rio Arriba, NM  
 API #: 30-039-07944  
 Co-ordinates: Lat 36.8664055, Long -107.4381256  
 Elevations: GROUND: 6429'  
 KB: 6440'  
 Depths (KB): PBDT: 5865'  
 TD: 5865'

Date Prepared: 7/22/2022 Moss  
 Reviewed By: 7/25/2022 Gomez  
 Last Updated: 10/17/2022 Moss  
 Spud Date: 7/2/1955  
 Completion Date: 8/23/1955  
 Last Workover Date: 8/4/2022

**VERTICAL WELLBORE**



**Surface Casing: (07/03/1955)**  
 Drilled a 13-3/4" surface hole to 240'. Set 7 jts, 10-3/4", 32.75#, H-40 csg at 235'.  
 Cmt'd w/ 102 sx 4% gel (158 cu ft). Circ to surface.

**Intermediate Casing: (07/30/1955)**  
 Drilled a 9-7/8" intermediate hole to 3626'. Set 87 jts 7-5/8", 26.4#, J-55 csg at 3625'.  
 Cmt'd w/ 150 sx 8% gel tailed w/ 50 sx neat cmt. (347 cu ft).  
 TOC at 2050' per CBL (1994).

**Production Liner: (08/16/1955)**  
 Drilled a 6-3/4" production hole to 5712'. Set 183 jts 5-1/2", 14#, J-55 csg at 5712'.  
 Cmt'd w/ 100 sx 2% gel (136 cu ft). TOC at 4626' per calc. DO past cmt to 5865',  
 4-3/4" open hole below csg.  
**1994-** Ran free-point calc & backed off csg at ~3542', pulled 113 jts & 15' cutoff. Ran  
 1 new 5-1/2" csg jt & screwed into csg stub at 3547' & set liner hanger at 3511'.

**PC Tubing:** Length (ft)  
 KB 11  
 Pulled & LD in 8/2022

**MV Tubing:**  
 KB 11  
 Pulled & LD in 2022

**Artificial Lift:**  
 NA

**Perforations:**  
 1955- **L MV:** (5712'-5865') Open hole. Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1955- **U MV:** (5406'-28', 5446'-80', 5548'-62', 5574'-98', 5610'-36', 5656'-5689').  
 5406'-28', 4 SPF & 5446'-5689', 2 SPF. Acidize w/ 500 gal acid.  
 Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1994- **PC:** (3272'-3287', 3294'-3307', 3311'-3327'). 1 SPF, 47, 0.36" holes.  
 Acidize w/ 1000 gal 7.5% HCL. Frac w/ 98,300# 20/40 mesh in 18,396 gal  
 of 30# borate x-link gel in 70Q N2 foam.

Formations:	MD	MD
Kirtland-	2588'	Cliff House 5387'
Fruitland-	3090'	Menefee 5438'
Pictured Cliffs-	3266'	Point Lookout 5658'

**Additional Notes:**  
**08/1955** Initial completion. Perf'd & stim'd MV formation. Set 2-3/8" tbg at 5692'.  
**08/1994** Re-complete. Backed off 5-1/2" csg, pulled 113 jts & 15' cutoff. Ran new  
 5-1/2" csg, screwed into csg stub at 3547', TOL at 3511'. Perf'd & stim'd the PC  
 formation. CO to 5859', had 1/2" pieces of shale & sand. Set pkr & landed 1-1/2"  
 MV string at 5713'. Set 1-1/2" PC string at 3324'.  
**08/2022** Trip & LD PC tbg string. Work PC string out of pkr. Tagged pkr at 4000'.  
 Mill on pkr & TOOH w/ pkr. Mill to 5400'. Set CBP at 5364'. Did NOT run tbg.

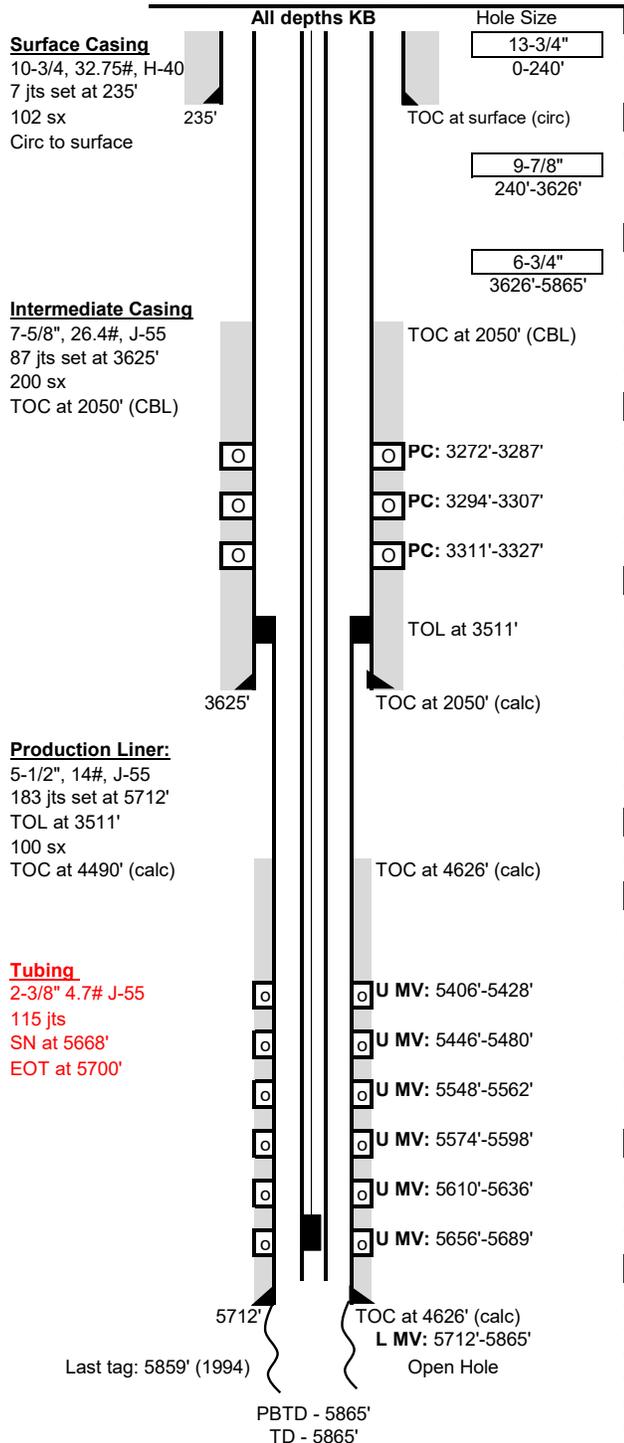


**Proposed Wellbore Schematic**

Well Name: Rosa Unit 8  
 Location: M-26-31N-06W 1100' FSL & 900' FWL  
 County: Rio Arriba, NM  
 API #: 30-039-07944  
 Co-ordinates: Lat 36.8664055, Long -107.4381256  
 Elevations: GROUND: 6429'  
 KB: 6440'  
 Depths (KB): PBDT: 5865'  
 TD: 5865'

Date Prepared: 7/22/2022 Moss  
 Reviewed By: 7/25/2022 Gomez  
 Last Updated: 10/24/2022 Moss  
 Spud Date: 7/2/1955  
 Completion Date: 8/23/1955  
 Last Workover Date: 8/4/2022

**VERTICAL WELLBORE**



**Surface Casing: (07/03/1955)**  
 Drilled a 13-3/4" surface hole to 240'. Set 7 jts, 10-3/4", 32.75#, H-40 csg at 235'.  
 Cmt'd w/ 102 sx 4% gel (158 cu ft). Circ to surface.

**Intermediate Casing: (07/30/1955)**  
 Drilled a 9-7/8" intermediate hole to 3626'. Set 87 jts 7-5/8", 26.4#, J-55 csg at 3625'.  
 Cmt'd w/ 150 sx 8% gel tailed w/ 50 sx neat cmt. (347 cu ft).  
 TOC at 2050' per CBL (1994).

**Production Liner: (08/16/1955)**  
 Drilled a 6-3/4" production hole to 5712'. Set 183 jts 5-1/2", 14#, J-55 csg at 5712'.  
 Cmt'd w/ 100 sx 2% gel (136 cu ft). TOC at 4626' per calc. DO past cmt to 5865',  
 4-3/4" open hole below csg.  
**1994-** Ran free-point calc & backed off csg at ~3542', pulled 113 jts & 15' cutoff. Ran  
 1 new 5-1/2" csg jt & screwed into csg stub at 3547' & set liner hanger at 3511'.

Tubing:	Length (ft)
KB	11
(115) 2-3/8" 4.7#, J-55 tbg jts	5657
(1) SN	1
(1) 2-3/8" MS MA	31
Set at: 5700 ft	

**Rods:**

(1) 1-1/4" x 22' polished rod w/ 1-1/2" x 10' liner	22
(81) 7/8" plain rods	2025
(137) 3/4" plain rods	3425
(2) 3/4" x 8' plain pony rods	16
(8) 1-1/4" sinker bars	200
(1) 21k shear tool	1
(1) 3/4" x 8' guided pony rods	8
(1) 2" x 1-1/2" x 16' RWAC pump	16

**Pumping Unit:**  
 Dansco 228-246-86, 86" stroke length

**Perforations:**  
 1955- **L MV:** (5712'-5865') Open hole. Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1955- **U MV:** (5406'-28', 5446'-80', 5548'-62', 5574'-98', 5610'-36', 5656'-5689').  
 5406'-28', 4 SPF & 5446'-5689', 2 SPF. Acidize w/ 500 gal acid.  
 Frac w/ 20,000# 20/40 sand in 20,000 gal fluid.  
 1994- **PC:** (3272'-3287', 3294'-3307', 3311'-3327'). 1 SPF, 47, 0.36" holes.  
 Acidize w/ 1000 gal 7.5% HCL. Frac w/ 98,300# 20/40 mesh in 18,396 gal  
 of 30# borate x-link gel in 70Q N2 foam.

Formations:	MD	MD
Kirtland-	2588'	Cliff House 5387'
Fruitland-	3090'	Menefee 5438'
Pictured Cliffs-	3266'	Point Lookout 5658'

**Additional Notes:**  
**08/1955** Initial completion. Perf'd & stim'd MV formation. Set 2-3/8" tbg at 5692'.  
**08/1994** Re-complete. Backed off 5-1/2" csg, pulled 113 jts & 15' cutoff. Ran new  
 5-1/2" csg, screwed into csg stub at 3547', TOL at 3511'. Perf'd & stim'd the PC  
 formation. CO to 5859', had 1/2" pieces of shale & sand. Set pkr & landed 1-1/2"  
 MV string at 5713'. Set 1-1/2" PC string at 3324'.

**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 153805

**CONDITIONS**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 153805
	Action Type: [C-107] Down Hole Commingle (C-107A)

**CONDITIONS**

Created By	Condition	Condition Date
dmcclosure	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.	10/27/2022
dmcclosure	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.	10/27/2022
dmcclosure	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.	10/27/2022