

Well Name: ROSA UNIT	Well Location: T31N / R5W / SEC 36 / NWNW / 36.861925 / -107.320894	County or Parish/State: RIO ARRIBA / NM
Well Number: 830H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078768	Unit or CA Name: ROSA UNIT	Unit or CA Number: NMNM78407E
US Well Number: 3003931363	Operator: LOGOS OPERATING LLC	

Notice of Intent

Sundry ID: 2874001

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 09/17/2025

Time Sundry Submitted: 09:29

Date proposed operation will begin: 09/17/2025

Procedure Description: LOGOS Operating request a change in plans for subject well (based on KB elevation) per the operations plan attached.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Rosa_Unit_830H_C_102_Plat_20250911_signed_20250917092801.pdf

Rosa_Unit_830H_Operations_Plan_3_string_Prelim_WP5_9.3.2025_20250917092801.pdf

Logos__Rosa_Unit_830H_Plan_Data_p5_20250917092800.pdf

Well Name: ROSA UNIT

Well Location: T31N / R5W / SEC 36 /
NWNW / 36.861925 / -107.320894County or Parish/State: RIO
ARRIBA / NM

Well Number: 830H

Type of Well: CONVENTIONAL GAS
WELL

Allottee or Tribe Name:

Lease Number: NMSF078768

Unit or CA Name: ROSA UNIT

Unit or CA Number:
NMNM78407E

US Well Number: 3003931363

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: SEP 17, 2025 09:30 AM

Name: LOGOS OPERATING LLC

Title: Regulatory Specialist

Street Address: 2010 AFTON PLACE

City: FARMINGTON

State: NM

Phone: (505) 324-4154

Email address: ETRUJILLO@LOGOSRESOURCESLLC.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 09/17/2025

Signature: Kenneth Rennick

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type	☐ Initial Submittal
			☒ Amended Report
		☐ As Drilled	

WELL LOCATION INFORMATION

API Number 30-039-31363	Pool Code 97232	Pool Name BASIN MANCOS
Property Code 320608	Property Name ROSA UNIT	Well Number 830H
OGRID No. 289408	Operator Name LOGOS OPERATING, LLC	Ground Level Elevation 6563'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL D	Section 36	Township 31N	Range 5W	Lot	Feet from N/S Line 525' NORTH	Feet from E/W Line 492' WEST	Latitude 36.861925 °N	Longitude -107.320894 °W	County RIO ARRIBA
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Bottom Hole Location

UL I	Section 28	Township 31N	Range 5W	Lot	Feet from N/S Line 1530' SOUTH	Feet from E/W Line 1002' EAST	Latitude 36.867555 °N	Longitude -107.362072 °W	County RIO ARRIBA
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Dedicated Acres 1280.00	Penetrated Spacing Unit S/2 - Sections 25, 26, 27 & 28	Infill or Defining Well INFILL	Defining Well API	Overlapping Spacing Unit ☐ Yes ☒ No	Consolidation Code UNITIZATION
Order Numbers R-13457			Well setbacks are under Common Ownership: ☐ Yes ☒ No		

Kick Off Point (KOP)

UL M	Section 25	Township 31N	Range 5W	Lot	Feet from N/S Line 825' SOUTH	Feet from E/W Line 736' WEST	Latitude 36.865634 °N	Longitude -107.320057 °W	County RIO ARRIBA
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First Take Point (FTP)

UL M	Section 25	Township 31N	Range 5W	Lot	Feet from N/S Line 998' SOUTH	Feet from E/W Line 105' WEST	Latitude 36.866108 °N	Longitude -107.322215 °W	County RIO ARRIBA
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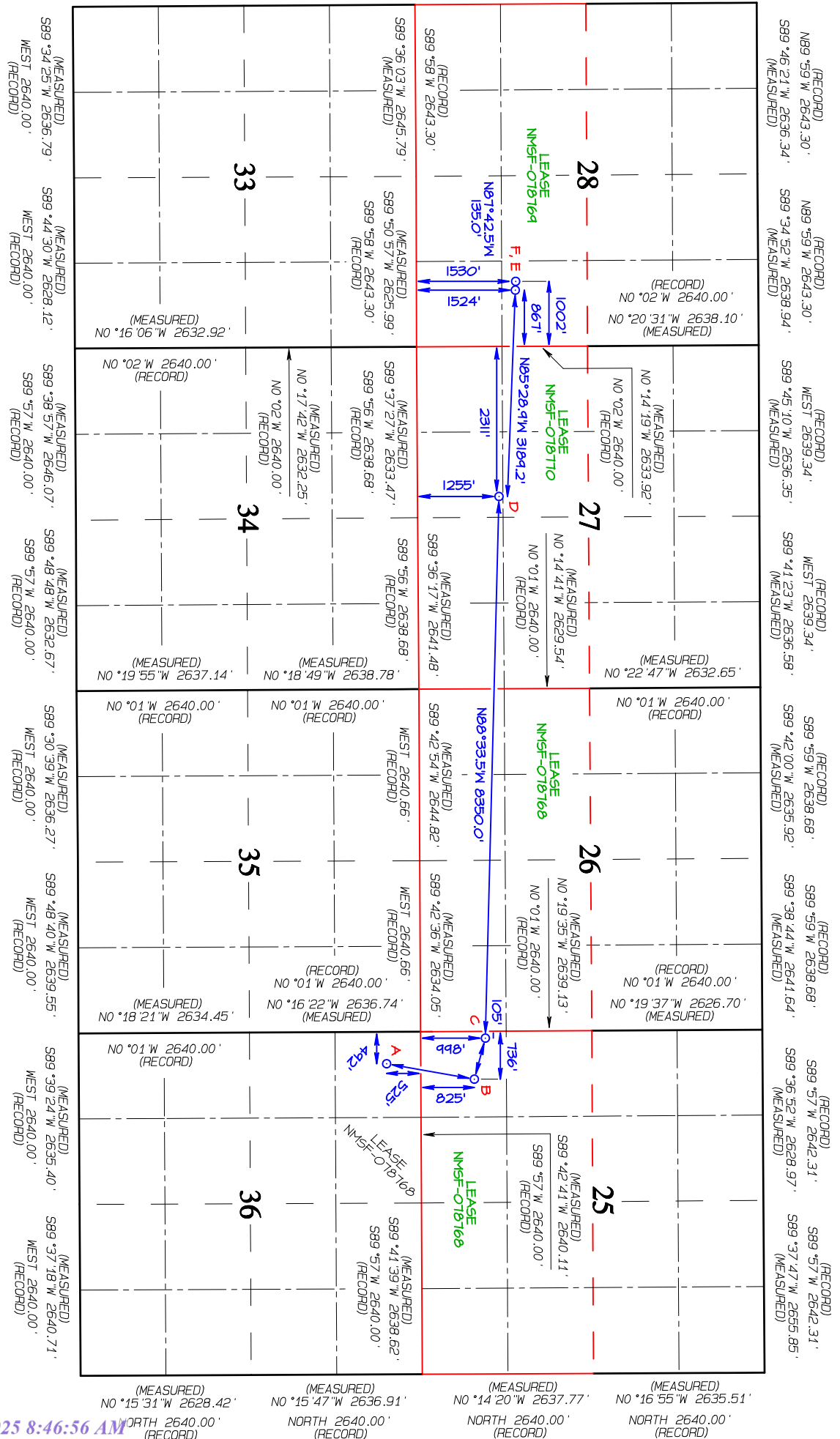
Last Take Point (LTP)

UL I	Section 28	Township 31N	Range 5W	Lot	Feet from N/S Line 1524' SOUTH	Feet from E/W Line 867' EAST	Latitude 36.867538 °N	Longitude -107.361611 °W	County RIO ARRIBA
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Unitized Area or Area of Uniform Interest ROSA UNIT	Spacing Unit Type ☒ Horizontal ☐ Vertical ☐ Directional	Ground Floor Elevation
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OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division. Etta Trujillo Signature 9/17/2025 Date Etta Trujillo Printed Name etrujillo@logosresourcesllc.com E-mail Address	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JASON C. EDWARDS NEW MEXICO 15269 REGISTERED PROFESSIONAL SURVEYOR 9/11/2025 JASON C. EDWARDS Signature and Seal of Professional Surveyor Certificate Number 15269 Date of Survey APRIL 20, 2016
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Rosa Unit #830H



BOTTOM HOLE LOCATION (F)
 1530' FSL 1002' FEL
 SECTION 28, T31N, R5W
 LAT 36.867549° N
 LONG -107.361470° W
 DATUM: NAD1927
 LAT 36.867555° N
 LONG -107.362072° W
 DATUM: NAD1983

LAST TAKE POINT (E)
14524° FSL 867° FEL
SECTION 28, T34N, R5
LAT 36.867532°N
LONG -107.361009°W
DATUM: NAD1927

LAT 36.867538°N
LONG -107.361611°W
DATUM: NAD1983

INFECTION POINT (D)
1255' FSL 231' FWL
SECTION 27, T31N, R5E
LAT 36.866798 °N
LONG -107.350145 °W
DATUM: NAD1927

LAT 36.866805 °N
LONG -107.350746 °W
DATUM: NAD1983

FIRST TAKE POINT (C
 998' FSL 105' FWL
 SECTION 25, T31N, R3
 LAT 36.866101° N
 LONG -107.321614° W
 DATUM: NAD1927
 LAT 36.866108° N
 LONG -107.322215° W
 DATUM: NAD1983

KICK OFF
825' FS
SECTION
LAT 3
LONG -3
DATUM

KICK OFF POINT (B)
825. FSL 736.FWL
SECTION 25, T31N, R5N
LAT 36.865627°N
LONG -107.319456°W
DATUM: NAD1927

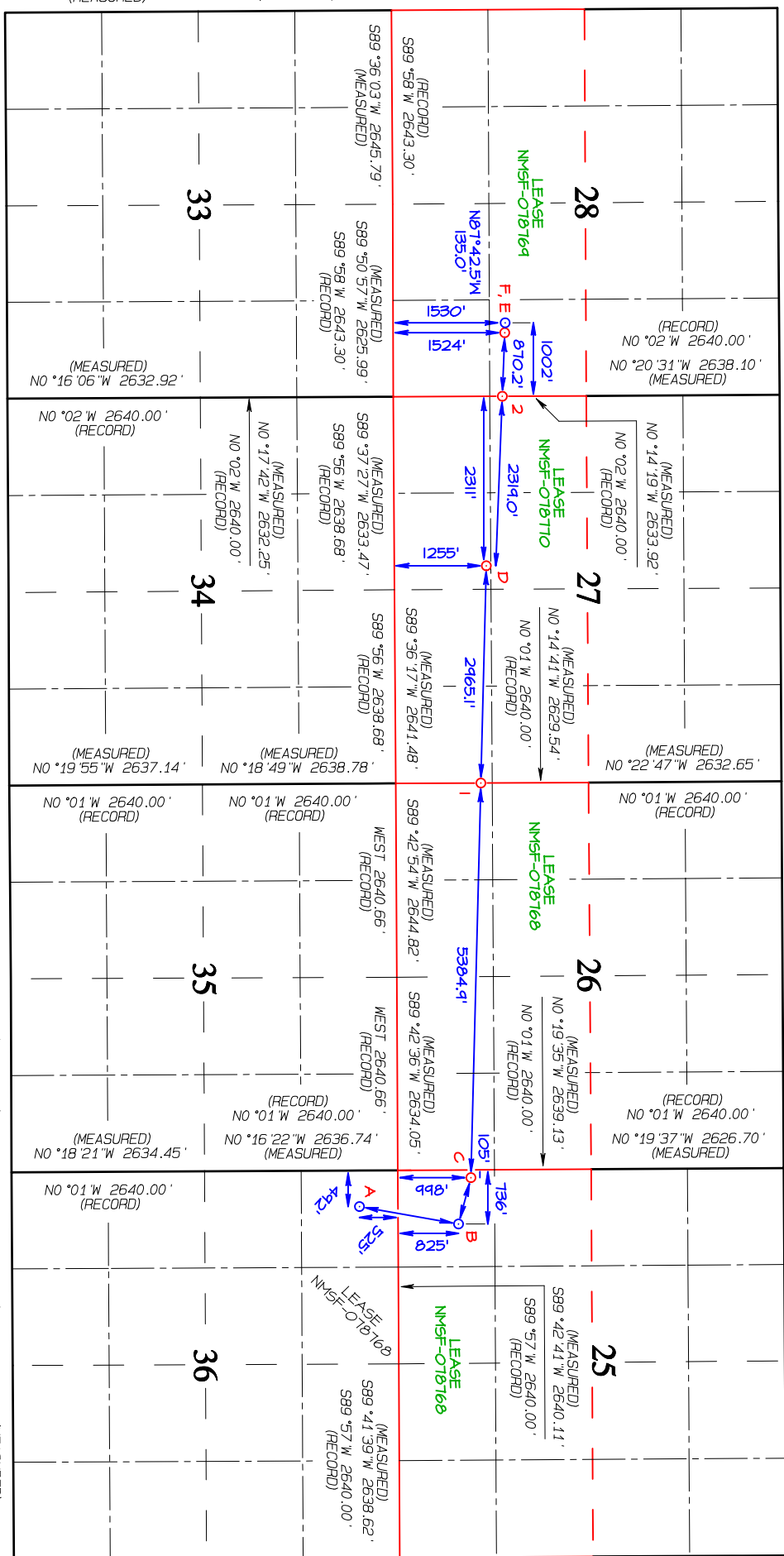
NO. 50.2'E
1372.2'

SURFACE
525' F
SECTION
LAT 3
LONG -
DATUM

SURFACE LOCATION (A)
525' FNL 492' FWL
SECTION 36, T34N, R5E
LAT 36.861949° N
LONG -107.320293° W
DATUM: NAD1927

LAT 36.861925° N
LONG -107.320894° W
DATUM: NAD1983

OTTOM HOLE LOCATION (F)	LAST TAKE POINT (E)	INFLECTION POINT (D)	FIRST TAKE POINT (C)	KICK OFF POINT (B)	SURFACE LOCATION (A)
1530. FSL 1002. FEL	1524. FSL 867. FEL	1255. FSL 2311. FWL	998. FSL 105. FWL	825. FSL 736. FWL	525. FNL 492. FWL
SECTION 28. 131N. R5M	SECTION 28. 131N. R5M	SECTION 27. 131N. R5M	SECTION 25. 131N. R5M	SECTION 25. 131N. R5M	SECTION 36. 131N. R5M
LAT 36.867549 °N	LAT 36.867532 °N	LAT 36.866798 °N	LAT 36.866101 °N	LAT 36.865627 °N	LAT 36.861919 °N
LONG -107.361470 °W	LONG -107.361009 °W	LONG -107.350145 °W	LONG -107.321514 °W	LONG -107.319456 °W	LONG -107.320293 °W
DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927
	N85°28.91W	N86°33.51W	N75°01.11W	N04°56.21E	
	3184.21	8350.01	654.51	1372.21	
LAT 36.867555 °N	LAT 36.867538 °N	LAT 36.866805 °N	LAT 36.866108 °N	LAT 36.865634 °N	LAT 36.861925 °N
LONG -107.362072 °W	LONG -107.361511 °W	LONG -107.350746 °W	LONG -107.322215 °W	LONG -107.320057 °W	LONG -107.320894 °W
DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983



Logos Operating LLC

Rio Arriba, NM (NAD83)

Rosa Unit 42

Rosa Unit 830H

OH

Plan: Plan #5

Standard Planning Report

27 August, 2025

SDT
Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Project	Rio Arriba, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rosa Unit 42				
Site Position:		Northing:	2,133,465.56 usft	Latitude:	36.861919
From:	Lat/Long	Easting:	2,873,174.65 usft	Longitude:	-107.320293
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Rosa Unit 830H					
Well Position	+N/-S	0.00 usft	Northing:	2,133,466.81 usft	Latitude:	36.861925
	+E/-W	0.00 usft	Easting:	2,872,998.82 usft	Longitude:	-107.320894
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,563.00 usft
Grid Convergence:		0.31 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/18/2023	8.46	63.43	49,495.66747824

Design	Plan #5				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	319.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	272.60	

Plan Survey Tool Program	Date	8/27/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	125.00	319.00	Survey #1 (OH)	Standard Keeper 104	
				Standard Wireline Keeper ver 1	
2	319.00	19,389.97	Plan #5 (OH)	MWD+HRGM+MS	
				MWD + HRGM + Multi-Station	

SDT
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Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
319.00	2.31	121.18	318.92	-1.19	5.01	0.00	0.00	0.00	0.00	
469.00	2.31	121.18	468.80	-4.32	10.18	0.00	0.00	0.00	0.00	
1,200.63	13.62	9.26	1,193.80	73.46	36.80	2.00	1.55	-15.30	-120.18	
6,696.21	13.62	9.26	6,534.94	1,350.29	244.91	0.00	0.00	0.00	0.00	
7,715.79	90.00	271.75	7,173.00	1,522.87	-386.43	9.00	7.49	-9.56	-97.30	RU 830 POE
16,065.79	90.00	271.75	7,173.00	1,777.87	-8,732.53	0.00	0.00	0.00	0.00	
16,218.58	90.00	274.81	7,173.00	1,786.60	-8,885.05	2.00	0.00	2.00	90.00	
19,389.97	90.00	274.81	7,173.00	2,052.30	-12,045.30	0.00	0.00	0.00	0.00	RU 830 PBHL

SDT

Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.00	0.55	44.51	125.00	0.43	0.42	-0.40	0.44	0.44	0.00
225.00	1.66	110.36	224.98	0.27	2.12	-2.10	1.52	1.11	65.85
319.00	2.31	121.18	318.92	-1.19	5.01	-5.06	0.80	0.69	11.51
Start 150.00 hold at 319.00 MD									
400.00	2.31	121.18	399.86	-2.88	7.81	-7.93	0.00	0.00	0.00
469.00	2.31	121.18	468.80	-4.32	10.18	-10.37	0.00	0.00	0.00
Start DLS 2.00 TFO -120.18									
500.00	2.07	106.16	499.78	-4.80	11.26	-11.46	2.00	-0.78	-48.44
600.00	2.47	54.83	599.71	-4.06	14.75	-14.92	2.00	0.40	-51.33
700.00	3.99	30.95	699.55	0.17	18.31	-18.28	2.00	1.52	-23.88
800.00	5.81	21.02	799.18	7.88	21.91	-21.53	2.00	1.82	-9.93
900.00	7.72	15.89	898.48	19.07	25.57	-24.68	2.00	1.91	-5.13
1,000.00	9.66	12.79	997.33	33.72	29.27	-27.71	2.00	1.95	-3.09
1,100.00	11.63	10.74	1,095.61	51.81	33.00	-30.62	2.00	1.96	-2.06
1,200.63	13.62	9.26	1,193.80	73.46	36.80	-33.43	2.00	1.97	-1.47
Start 5495.58 hold at 1200.63 MD									
1,300.00	13.62	9.26	1,290.38	96.55	40.56	-36.14	0.00	0.00	0.00
1,400.00	13.62	9.26	1,387.57	119.78	44.35	-38.87	0.00	0.00	0.00
1,500.00	13.62	9.26	1,484.76	143.02	48.13	-41.60	0.00	0.00	0.00
1,600.00	13.62	9.26	1,581.95	166.25	51.92	-44.33	0.00	0.00	0.00
1,700.00	13.62	9.26	1,679.14	189.49	55.71	-47.06	0.00	0.00	0.00
1,800.00	13.62	9.26	1,776.33	212.72	59.50	-49.79	0.00	0.00	0.00
1,900.00	13.62	9.26	1,873.52	235.95	63.28	-52.51	0.00	0.00	0.00
2,000.00	13.62	9.26	1,970.71	259.19	67.07	-55.24	0.00	0.00	0.00
2,100.00	13.62	9.26	2,067.90	282.42	70.86	-57.97	0.00	0.00	0.00
2,200.00	13.62	9.26	2,165.09	305.65	74.64	-60.70	0.00	0.00	0.00
2,300.00	13.62	9.26	2,262.27	328.89	78.43	-63.43	0.00	0.00	0.00
2,400.00	13.62	9.26	2,359.46	352.12	82.22	-66.16	0.00	0.00	0.00
2,500.00	13.62	9.26	2,456.65	375.36	86.00	-68.89	0.00	0.00	0.00
2,600.00	13.62	9.26	2,553.84	398.59	89.79	-71.62	0.00	0.00	0.00
2,700.00	13.62	9.26	2,651.03	421.82	93.58	-74.35	0.00	0.00	0.00
2,800.00	13.62	9.26	2,748.22	445.06	97.37	-77.08	0.00	0.00	0.00
2,826.52	13.62	9.26	2,774.00	451.22	98.37	-77.80	0.00	0.00	0.00
Ojo Alamo									
2,900.00	13.62	9.26	2,845.41	468.29	101.15	-79.81	0.00	0.00	0.00
2,953.08	13.62	9.26	2,897.00	480.62	103.16	-81.25	0.00	0.00	0.00
Kirtland									
3,000.00	13.62	9.26	2,942.60	491.52	104.94	-82.53	0.00	0.00	0.00
3,100.00	13.62	9.26	3,039.79	514.76	108.73	-85.26	0.00	0.00	0.00
3,200.00	13.62	9.26	3,136.98	537.99	112.51	-87.99	0.00	0.00	0.00
3,300.00	13.62	9.26	3,234.17	561.22	116.30	-90.72	0.00	0.00	0.00
3,337.89	13.62	9.26	3,271.00	570.03	117.74	-91.76	0.00	0.00	0.00
Fruitland									
3,381.11	13.62	9.26	3,313.00	580.07	119.37	-92.94	0.00	0.00	0.00
Top of Coals									
3,400.00	13.62	9.26	3,331.36	584.46	120.09	-93.45	0.00	0.00	0.00
3,470.62	13.62	9.26	3,400.00	600.87	122.76	-95.38	0.00	0.00	0.00
Base of Coals									
3,500.00	13.62	9.26	3,428.55	607.69	123.87	-96.18	0.00	0.00	0.00
3,600.00	13.62	9.26	3,525.74	630.93	127.66	-98.91	0.00	0.00	0.00
3,700.00	13.62	9.26	3,622.93	654.16	131.45	-101.64	0.00	0.00	0.00
3,701.10	13.62	9.26	3,624.00	654.42	131.49	-101.67	0.00	0.00	0.00

SDT

Planning Report

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Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Pictured Cliffs									
3,800.00	13.62	9.26	3,720.12	677.39	135.24	-104.37	0.00	0.00	0.00
3,802.96	13.62	9.26	3,723.00	678.08	135.35	-104.45	0.00	0.00	0.00
Lewis									
3,900.00	13.62	9.26	3,817.31	700.63	139.02	-107.10	0.00	0.00	0.00
4,000.00	13.62	9.26	3,914.50	723.86	142.81	-109.83	0.00	0.00	0.00
4,100.00	13.62	9.26	4,011.69	747.09	146.60	-112.56	0.00	0.00	0.00
4,200.00	13.62	9.26	4,108.88	770.33	150.38	-115.28	0.00	0.00	0.00
4,300.00	13.62	9.26	4,206.07	793.56	154.17	-118.01	0.00	0.00	0.00
4,400.00	13.62	9.26	4,303.26	816.80	157.96	-120.74	0.00	0.00	0.00
4,500.00	13.62	9.26	4,400.45	840.03	161.74	-123.47	0.00	0.00	0.00
4,600.00	13.62	9.26	4,497.64	863.26	165.53	-126.20	0.00	0.00	0.00
4,700.00	13.62	9.26	4,594.83	886.50	169.32	-128.93	0.00	0.00	0.00
4,800.00	13.62	9.26	4,692.02	909.73	173.11	-131.66	0.00	0.00	0.00
4,900.00	13.62	9.26	4,789.21	932.96	176.89	-134.39	0.00	0.00	0.00
4,948.14	13.62	9.26	4,836.00	944.15	178.72	-135.70	0.00	0.00	0.00
Chacra									
5,000.00	13.62	9.26	4,886.40	956.20	180.68	-137.12	0.00	0.00	0.00
5,100.00	13.62	9.26	4,983.59	979.43	184.47	-139.85	0.00	0.00	0.00
5,200.00	13.62	9.26	5,080.78	1,002.67	188.25	-142.58	0.00	0.00	0.00
5,300.00	13.62	9.26	5,177.97	1,025.90	192.04	-145.31	0.00	0.00	0.00
5,400.00	13.62	9.26	5,275.16	1,049.13	195.83	-148.03	0.00	0.00	0.00
5,486.27	13.62	9.26	5,359.00	1,069.18	199.09	-150.39	0.00	0.00	0.00
Upper Cliff House									
5,500.00	13.62	9.26	5,372.35	1,072.37	199.61	-150.76	0.00	0.00	0.00
5,600.00	13.62	9.26	5,469.54	1,095.60	203.40	-153.49	0.00	0.00	0.00
5,700.00	13.62	9.26	5,566.73	1,118.83	207.19	-156.22	0.00	0.00	0.00
5,779.51	13.62	9.26	5,644.00	1,137.31	210.20	-158.39	0.00	0.00	0.00
Cliff House									
5,800.00	13.62	9.26	5,663.92	1,142.07	210.98	-158.95	0.00	0.00	0.00
5,814.49	13.62	9.26	5,678.00	1,145.43	211.52	-159.35	0.00	0.00	0.00
Menefee									
5,900.00	13.62	9.26	5,761.11	1,165.30	214.76	-161.68	0.00	0.00	0.00
6,000.00	13.62	9.26	5,858.30	1,188.53	218.55	-164.41	0.00	0.00	0.00
6,001.75	13.62	9.26	5,860.00	1,188.94	218.62	-164.46	0.00	0.00	0.00
Point Lookout									
6,100.00	13.62	9.26	5,955.49	1,211.77	222.34	-167.14	0.00	0.00	0.00
6,200.00	13.62	9.26	6,052.68	1,235.00	226.12	-169.87	0.00	0.00	0.00
6,300.00	13.62	9.26	6,149.87	1,258.24	229.91	-172.60	0.00	0.00	0.00
6,400.00	13.62	9.26	6,247.06	1,281.47	233.70	-175.33	0.00	0.00	0.00
6,500.00	13.62	9.26	6,344.25	1,304.70	237.48	-178.05	0.00	0.00	0.00
6,561.48	13.62	9.26	6,404.00	1,318.99	239.81	-179.73	0.00	0.00	0.00
Mancos									
6,600.00	13.62	9.26	6,441.44	1,327.94	241.27	-180.78	0.00	0.00	0.00
6,696.21	13.62	9.26	6,534.94	1,350.29	244.91	-183.41	0.00	0.00	0.00
Start DLS 9.00 TFO -97.30									
6,700.00	13.58	7.81	6,538.63	1,351.17	245.05	-183.50	9.00	-1.03	-38.03
6,750.00	13.84	348.78	6,587.23	1,362.86	244.68	-182.61	9.00	0.53	-38.07
6,800.00	15.45	332.07	6,635.62	1,374.62	240.40	-177.79	9.00	3.21	-33.41
6,850.00	18.04	319.25	6,683.51	1,386.37	232.22	-169.09	9.00	5.18	-25.66
6,900.00	21.26	309.86	6,730.61	1,398.05	220.20	-156.55	9.00	6.44	-18.78
6,950.00	24.87	302.96	6,776.61	1,409.59	204.41	-140.26	9.00	7.21	-13.80
7,000.00	28.71	297.75	6,821.24	1,420.90	184.95	-120.30	9.00	7.69	-10.41

SDT

Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,050.00	32.71	293.71	6,864.23	1,431.93	161.94	-96.82	9.00	8.00	-8.09
7,100.00	36.81	290.46	6,905.30	1,442.61	135.52	-69.94	9.00	8.21	-6.49
7,150.00	40.99	287.79	6,944.20	1,452.86	105.86	-39.84	9.00	8.35	-5.34
7,200.00	45.22	285.54	6,980.70	1,462.63	73.13	-6.71	9.00	8.46	-4.51
7,250.00	49.49	283.59	7,014.57	1,471.85	37.54	29.26	9.00	8.53	-3.89
7,255.30	49.94	283.40	7,018.00	1,472.80	33.61	33.24	9.00	8.57	-3.61
Top Black									
7,300.00	53.78	281.88	7,045.60	1,480.48	-0.69	67.85	9.00	8.59	-3.40
7,350.00	58.10	280.35	7,073.60	1,488.45	-41.33	108.80	9.00	8.63	-3.07
7,400.00	62.43	278.95	7,098.39	1,495.71	-84.12	151.88	9.00	8.67	-2.79
7,450.00	66.78	277.66	7,119.83	1,502.22	-128.80	196.82	9.00	8.69	-2.58
7,500.00	71.14	276.46	7,137.78	1,507.95	-175.10	243.33	9.00	8.71	-2.41
7,550.00	75.50	275.31	7,152.13	1,512.85	-222.73	291.13	9.00	8.73	-2.29
7,570.73	77.31	274.85	7,157.00	1,514.64	-242.81	311.26	9.00	8.74	-2.22
Top Target									
7,600.00	79.87	274.21	7,162.79	1,516.90	-271.40	339.94	9.00	8.74	-2.19
7,650.00	84.24	273.14	7,169.70	1,520.07	-320.81	389.43	9.00	8.75	-2.14
7,700.00	88.62	272.08	7,172.81	1,522.34	-370.65	439.32	9.00	8.75	-2.11
7,715.79	90.00	271.75	7,173.00	1,522.87	-386.43	455.11	9.00	8.75	-2.10
Start 8350.00 hold at 7715.79 MD									
7,800.00	90.00	271.75	7,173.00	1,525.44	-470.60	539.31	0.00	0.00	0.00
7,900.00	90.00	271.75	7,173.00	1,528.50	-570.55	639.30	0.00	0.00	0.00
8,000.00	90.00	271.75	7,173.00	1,531.55	-670.51	739.29	0.00	0.00	0.00
8,100.00	90.00	271.75	7,173.00	1,534.60	-770.46	839.28	0.00	0.00	0.00
8,200.00	90.00	271.75	7,173.00	1,537.66	-870.41	939.27	0.00	0.00	0.00
8,300.00	90.00	271.75	7,173.00	1,540.71	-970.37	1,039.26	0.00	0.00	0.00
8,400.00	90.00	271.75	7,173.00	1,543.77	-1,070.32	1,139.25	0.00	0.00	0.00
8,500.00	90.00	271.75	7,173.00	1,546.82	-1,170.27	1,239.24	0.00	0.00	0.00
8,600.00	90.00	271.75	7,173.00	1,549.87	-1,270.23	1,339.22	0.00	0.00	0.00
8,700.00	90.00	271.75	7,173.00	1,552.93	-1,370.18	1,439.21	0.00	0.00	0.00
8,800.00	90.00	271.75	7,173.00	1,555.98	-1,470.13	1,539.20	0.00	0.00	0.00
8,900.00	90.00	271.75	7,173.00	1,559.03	-1,570.09	1,639.19	0.00	0.00	0.00
9,000.00	90.00	271.75	7,173.00	1,562.09	-1,670.04	1,739.18	0.00	0.00	0.00
9,100.00	90.00	271.75	7,173.00	1,565.14	-1,769.99	1,839.17	0.00	0.00	0.00
9,200.00	90.00	271.75	7,173.00	1,568.20	-1,869.95	1,939.16	0.00	0.00	0.00
9,300.00	90.00	271.75	7,173.00	1,571.25	-1,969.90	2,039.15	0.00	0.00	0.00
9,400.00	90.00	271.75	7,173.00	1,574.30	-2,069.85	2,139.14	0.00	0.00	0.00
9,500.00	90.00	271.75	7,173.00	1,577.36	-2,169.81	2,239.13	0.00	0.00	0.00
9,600.00	90.00	271.75	7,173.00	1,580.41	-2,269.76	2,339.11	0.00	0.00	0.00
9,700.00	90.00	271.75	7,173.00	1,583.47	-2,369.71	2,439.10	0.00	0.00	0.00
9,800.00	90.00	271.75	7,173.00	1,586.52	-2,469.67	2,539.09	0.00	0.00	0.00
9,900.00	90.00	271.75	7,173.00	1,589.57	-2,569.62	2,639.08	0.00	0.00	0.00
10,000.00	90.00	271.75	7,173.00	1,592.63	-2,669.57	2,739.07	0.00	0.00	0.00
10,100.00	90.00	271.75	7,173.00	1,595.68	-2,769.53	2,839.06	0.00	0.00	0.00
10,200.00	90.00	271.75	7,173.00	1,598.73	-2,869.48	2,939.05	0.00	0.00	0.00
10,300.00	90.00	271.75	7,173.00	1,601.79	-2,969.43	3,039.04	0.00	0.00	0.00
10,400.00	90.00	271.75	7,173.00	1,604.84	-3,069.39	3,139.03	0.00	0.00	0.00
10,500.00	90.00	271.75	7,173.00	1,607.90	-3,169.34	3,239.02	0.00	0.00	0.00
10,600.00	90.00	271.75	7,173.00	1,610.95	-3,269.29	3,339.00	0.00	0.00	0.00
10,700.00	90.00	271.75	7,173.00	1,614.00	-3,369.25	3,438.99	0.00	0.00	0.00
10,800.00	90.00	271.75	7,173.00	1,617.06	-3,469.20	3,538.98	0.00	0.00	0.00
10,900.00	90.00	271.75	7,173.00	1,620.11	-3,569.15	3,638.97	0.00	0.00	0.00
11,000.00	90.00	271.75	7,173.00	1,623.17	-3,669.11	3,738.96	0.00	0.00	0.00

SDT
Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,100.00	90.00	271.75	7,173.00	1,626.22	-3,769.06	3,838.95	0.00	0.00	0.00
11,200.00	90.00	271.75	7,173.00	1,629.27	-3,869.01	3,938.94	0.00	0.00	0.00
11,300.00	90.00	271.75	7,173.00	1,632.33	-3,968.97	4,038.93	0.00	0.00	0.00
11,400.00	90.00	271.75	7,173.00	1,635.38	-4,068.92	4,138.92	0.00	0.00	0.00
11,500.00	90.00	271.75	7,173.00	1,638.43	-4,168.87	4,238.91	0.00	0.00	0.00
11,600.00	90.00	271.75	7,173.00	1,641.49	-4,268.83	4,338.89	0.00	0.00	0.00
11,700.00	90.00	271.75	7,173.00	1,644.54	-4,368.78	4,438.88	0.00	0.00	0.00
11,800.00	90.00	271.75	7,173.00	1,647.60	-4,468.73	4,538.87	0.00	0.00	0.00
11,900.00	90.00	271.75	7,173.00	1,650.65	-4,568.69	4,638.86	0.00	0.00	0.00
12,000.00	90.00	271.75	7,173.00	1,653.70	-4,668.64	4,738.85	0.00	0.00	0.00
12,100.00	90.00	271.75	7,173.00	1,656.76	-4,768.59	4,838.84	0.00	0.00	0.00
12,200.00	90.00	271.75	7,173.00	1,659.81	-4,868.55	4,938.83	0.00	0.00	0.00
12,300.00	90.00	271.75	7,173.00	1,662.87	-4,968.50	5,038.82	0.00	0.00	0.00
12,400.00	90.00	271.75	7,173.00	1,665.92	-5,068.45	5,138.81	0.00	0.00	0.00
12,500.00	90.00	271.75	7,173.00	1,668.97	-5,168.41	5,238.80	0.00	0.00	0.00
12,600.00	90.00	271.75	7,173.00	1,672.03	-5,268.36	5,338.78	0.00	0.00	0.00
12,700.00	90.00	271.75	7,173.00	1,675.08	-5,368.31	5,438.77	0.00	0.00	0.00
12,800.00	90.00	271.75	7,173.00	1,678.13	-5,468.27	5,538.76	0.00	0.00	0.00
12,900.00	90.00	271.75	7,173.00	1,681.19	-5,568.22	5,638.75	0.00	0.00	0.00
13,000.00	90.00	271.75	7,173.00	1,684.24	-5,668.17	5,738.74	0.00	0.00	0.00
13,100.00	90.00	271.75	7,173.00	1,687.30	-5,768.13	5,838.73	0.00	0.00	0.00
13,200.00	90.00	271.75	7,173.00	1,690.35	-5,868.08	5,938.72	0.00	0.00	0.00
13,300.00	90.00	271.75	7,173.00	1,693.40	-5,968.03	6,038.71	0.00	0.00	0.00
13,400.00	90.00	271.75	7,173.00	1,696.46	-6,067.99	6,138.70	0.00	0.00	0.00
13,500.00	90.00	271.75	7,173.00	1,699.51	-6,167.94	6,238.69	0.00	0.00	0.00
13,600.00	90.00	271.75	7,173.00	1,702.57	-6,267.89	6,338.67	0.00	0.00	0.00
13,700.00	90.00	271.75	7,173.00	1,705.62	-6,367.85	6,438.66	0.00	0.00	0.00
13,800.00	90.00	271.75	7,173.00	1,708.67	-6,467.80	6,538.65	0.00	0.00	0.00
13,900.00	90.00	271.75	7,173.00	1,711.73	-6,567.75	6,638.64	0.00	0.00	0.00
14,000.00	90.00	271.75	7,173.00	1,714.78	-6,667.71	6,738.63	0.00	0.00	0.00
14,100.00	90.00	271.75	7,173.00	1,717.83	-6,767.66	6,838.62	0.00	0.00	0.00
14,200.00	90.00	271.75	7,173.00	1,720.89	-6,867.61	6,938.61	0.00	0.00	0.00
14,300.00	90.00	271.75	7,173.00	1,723.94	-6,967.57	7,038.60	0.00	0.00	0.00
14,400.00	90.00	271.75	7,173.00	1,727.00	-7,067.52	7,138.59	0.00	0.00	0.00
14,500.00	90.00	271.75	7,173.00	1,730.05	-7,167.47	7,238.58	0.00	0.00	0.00
14,600.00	90.00	271.75	7,173.00	1,733.10	-7,267.43	7,338.56	0.00	0.00	0.00
14,700.00	90.00	271.75	7,173.00	1,736.16	-7,367.38	7,438.55	0.00	0.00	0.00
14,800.00	90.00	271.75	7,173.00	1,739.21	-7,467.33	7,538.54	0.00	0.00	0.00
14,900.00	90.00	271.75	7,173.00	1,742.27	-7,567.29	7,638.53	0.00	0.00	0.00
15,000.00	90.00	271.75	7,173.00	1,745.32	-7,667.24	7,738.52	0.00	0.00	0.00
15,100.00	90.00	271.75	7,173.00	1,748.37	-7,767.19	7,838.51	0.00	0.00	0.00
15,200.00	90.00	271.75	7,173.00	1,751.43	-7,867.15	7,938.50	0.00	0.00	0.00
15,300.00	90.00	271.75	7,173.00	1,754.48	-7,967.10	8,038.49	0.00	0.00	0.00
15,400.00	90.00	271.75	7,173.00	1,757.53	-8,067.05	8,138.48	0.00	0.00	0.00
15,500.00	90.00	271.75	7,173.00	1,760.59	-8,167.01	8,238.47	0.00	0.00	0.00
15,600.00	90.00	271.75	7,173.00	1,763.64	-8,266.96	8,338.45	0.00	0.00	0.00
15,700.00	90.00	271.75	7,173.00	1,766.70	-8,366.91	8,438.44	0.00	0.00	0.00
15,800.00	90.00	271.75	7,173.00	1,769.75	-8,466.87	8,538.43	0.00	0.00	0.00
15,900.00	90.00	271.75	7,173.00	1,772.80	-8,566.82	8,638.42	0.00	0.00	0.00
16,000.00	90.00	271.75	7,173.00	1,775.86	-8,666.77	8,738.41	0.00	0.00	0.00
16,065.79	90.00	271.75	7,173.00	1,777.87	-8,732.53	8,804.19	0.00	0.00	0.00
Start DLS 2.00 TFO 90.00									
16,100.00	90.00	272.43	7,173.00	1,779.12	-8,766.72	8,838.40	2.00	0.00	2.00

SDT
Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,200.00	90.00	274.43	7,173.00	1,785.11	-8,866.54	8,938.39	2.00	0.00	2.00
16,218.58	90.00	274.81	7,173.00	1,786.60	-8,885.05	8,956.95	2.00	0.00	2.00
Start 3171.39 hold at 16218.58 MD									
16,300.00	90.00	274.81	7,173.00	1,793.42	-8,966.19	9,038.31	0.00	0.00	0.00
16,400.00	90.00	274.81	7,173.00	1,801.80	-9,065.84	9,138.24	0.00	0.00	0.00
16,500.00	90.00	274.81	7,173.00	1,810.18	-9,165.49	9,238.17	0.00	0.00	0.00
16,600.00	90.00	274.81	7,173.00	1,818.56	-9,265.13	9,338.09	0.00	0.00	0.00
16,700.00	90.00	274.81	7,173.00	1,826.93	-9,364.78	9,438.02	0.00	0.00	0.00
16,800.00	90.00	274.81	7,173.00	1,835.31	-9,464.43	9,537.94	0.00	0.00	0.00
16,900.00	90.00	274.81	7,173.00	1,843.69	-9,564.08	9,637.87	0.00	0.00	0.00
17,000.00	90.00	274.81	7,173.00	1,852.07	-9,663.73	9,737.80	0.00	0.00	0.00
17,100.00	90.00	274.81	7,173.00	1,860.45	-9,763.38	9,837.72	0.00	0.00	0.00
17,200.00	90.00	274.81	7,173.00	1,868.82	-9,863.02	9,937.65	0.00	0.00	0.00
17,300.00	90.00	274.81	7,173.00	1,877.20	-9,962.67	10,037.57	0.00	0.00	0.00
17,400.00	90.00	274.81	7,173.00	1,885.58	-10,062.32	10,137.50	0.00	0.00	0.00
17,500.00	90.00	274.81	7,173.00	1,893.96	-10,161.97	10,237.42	0.00	0.00	0.00
17,600.00	90.00	274.81	7,173.00	1,902.34	-10,261.62	10,337.35	0.00	0.00	0.00
17,700.00	90.00	274.81	7,173.00	1,910.71	-10,361.27	10,437.28	0.00	0.00	0.00
17,800.00	90.00	274.81	7,173.00	1,919.09	-10,460.92	10,537.20	0.00	0.00	0.00
17,900.00	90.00	274.81	7,173.00	1,927.47	-10,560.56	10,637.13	0.00	0.00	0.00
18,000.00	90.00	274.81	7,173.00	1,935.85	-10,660.21	10,737.05	0.00	0.00	0.00
18,100.00	90.00	274.81	7,173.00	1,944.22	-10,759.86	10,836.98	0.00	0.00	0.00
18,200.00	90.00	274.81	7,173.00	1,952.60	-10,859.51	10,936.91	0.00	0.00	0.00
18,300.00	90.00	274.81	7,173.00	1,960.98	-10,959.16	11,036.83	0.00	0.00	0.00
18,400.00	90.00	274.81	7,173.00	1,969.36	-11,058.81	11,136.76	0.00	0.00	0.00
18,500.00	90.00	274.81	7,173.00	1,977.74	-11,158.45	11,236.68	0.00	0.00	0.00
18,600.00	90.00	274.81	7,173.00	1,986.11	-11,258.10	11,336.61	0.00	0.00	0.00
18,700.00	90.00	274.81	7,173.00	1,994.49	-11,357.75	11,436.54	0.00	0.00	0.00
18,800.00	90.00	274.81	7,173.00	2,002.87	-11,457.40	11,536.46	0.00	0.00	0.00
18,900.00	90.00	274.81	7,173.00	2,011.25	-11,557.05	11,636.39	0.00	0.00	0.00
19,000.00	90.00	274.81	7,173.00	2,019.63	-11,656.70	11,736.31	0.00	0.00	0.00
19,100.00	90.00	274.81	7,173.00	2,028.00	-11,756.35	11,836.24	0.00	0.00	0.00
19,200.00	90.00	274.81	7,173.00	2,036.38	-11,855.99	11,936.17	0.00	0.00	0.00
19,300.00	90.00	274.81	7,173.00	2,044.76	-11,955.64	12,036.09	0.00	0.00	0.00
19,389.97	90.00	274.81	7,173.00	2,052.30	-12,045.30	12,126.00	0.00	0.00	0.00
TD at 19389.97									

SDT Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
RU 830 SHL - plan hits target center - Point	0.00	0.31	0.00	0.00	0.00	2,133,466.81	2,872,998.82	36.861925	-107.320894
RU 830 KOP - plan hits target center - Point	0.00	0.00	6,534.94	1,350.29	244.91	2,134,818.39	2,873,236.49	36.865634	-107.320057
RU 830 POE - plan hits target center - Point	0.00	0.31	7,173.00	1,522.87	-386.43	2,134,987.58	2,872,604.23	36.866108	-107.322215
RU 830 IP - plan hits target center - Point	0.00	0.00	7,173.00	1,777.87	-8,732.53	2,135,197.79	2,864,256.87	36.866805	-107.350747
RU 830 FPP - plan misses target center by 5.20usft at 19255.07usft MD (7173.00 TVD, 2040.99 N, -11910.87 E) - Point	0.00	0.00	7,173.00	2,046.17	-11,910.44	2,135,449.04	2,861,077.57	36.867538	-107.361611
RU 830 PBHL - plan hits target center - Point	0.00	0.00	7,173.00	2,052.30	-12,045.30	2,135,454.44	2,860,942.68	36.867555	-107.362072

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,826.52	2,774.00	Ojo Alamo				
2,953.08	2,897.00	Kirtland				
3,337.89	3,271.00	Fruitland		0.00		
3,381.11	3,313.00	Top of Coals		0.00		
3,470.62	3,400.00	Base of Coals		0.00		
3,701.10	3,624.00	Pictured Cliffs				
3,802.96	3,723.00	Lewis		0.00		
4,948.14	4,836.00	Chacra		0.00		
5,486.27	5,359.00	Upper Cliff House		0.00		
5,779.51	5,644.00	Cliff House				
5,814.49	5,678.00	Menefee				
6,001.75	5,860.00	Point Lookout				
6,561.48	6,404.00	Mancos				
7,255.30	7,018.00	Top Black				
7,570.73	7,157.00	Top Target				

SDT
Planning Report

Database:	EDM 5000 Multi User Db	Local Co-ordinate Reference:	Well Rosa Unit 830H
Company:	Logos Operating LLC	TVD Reference:	6563+30 @ 6593.00usft (H&P 530)
Project:	Rio Arriba, NM (NAD83)	MD Reference:	6563+30 @ 6593.00usft (H&P 530)
Site:	Rosa Unit 42	North Reference:	True
Well:	Rosa Unit 830H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
319.00	318.92	-1.19	5.01	Start 150.00 hold at 319.00 MD
469.00	468.80	-4.32	10.18	Start DLS 2.00 TFO -120.18
1,200.63	1,193.80	73.46	36.80	Start 5495.58 hold at 1200.63 MD
6,696.21	6,534.94	1,350.29	244.91	Start DLS 9.00 TFO -97.30
7,715.79	7,173.00	1,522.87	-386.43	Start 8350.00 hold at 7715.79 MD
16,065.79	7,173.00	1,777.87	-8,732.53	Start DLS 2.00 TFO 90.00
16,218.58	7,173.00	1,786.60	-8,885.05	Start 3171.39 hold at 16218.58 MD
19,389.97	7,173.00	2,052.30	-12,045.30	TD at 19389.97



LOGOS Operating, LLC Operations Plan

Note: This procedure will be adjusted onsite based upon actual conditions

Date:	9/3/2025	Pool:	Basin Mancos
Well Name:	Rosa Unit 830H	GL Elevation:	6,563'
Surface Location:	Sec 36, T31N, R5W 525' FNL, 492' FWL (36.861925° N, -107.320894° W – NAD83)	KB:	30'
Bottom Hole Location:	Sec 28, T31N, R5W 1530' FSL, 1002' FEL (36.867555° N, -107.362072° W – NAD83)	Measured Depth:	19,390'(KB)
Lease Serial CA Serial	# NMSF078769 # NMNM78407E	County:	Rio Arriba

I. GEOLOGY

A. Formation Tops (Based on KB Elevation): Estimated top of important geological markers:
SURFACE FORMATION – NACIMIENTO

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	2,827'	2,774'	*POINT LOOKOUT	6,002'	5,860'
KIRTLAND	2,953'	2,897'	*MANCOS	6,561'	6,404'
*FRUITLAND	3,338'	3,271'	KICKOFF POINT	6,696'	6,535'
*PICTURED CLIFFS	3,701'	3,624'	LANDING POINT	7,716'	7,173'
LEWIS	3,803'	3,723'	TD	19,390'	7,173'
CHACRA	4,948'	4,836'			
*CLIFF HOUSE	5,780'	5,644'			
MENEFEE	5,814'	5,678'			

* indicates depth at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered.

B. MUD LOGGING PROGRAM: Mudlogger on location from KOP to TD.

C. LOGGING PROGRAM: LWD GR from surface casing to TD.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 17-1/2" surface hole and 12-1/4" intermediate hole. A LSND (WBM) or (OBM) will be used to drill the 8-1/2" curve and lateral portion of the wellbore. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

Above ground steel pits will be used for fluid and cuttings while drilling. In the unlikely event that a tank develops a leak, upon immediate visual discovery, the fluid would be transferred to another tank and contaminated soil would be removed and disposed. Any leaks, spills or other undesirable events will be reported in accordance with BLM NTL 3A. Rig crews will monitor the tanks at all times.



- B. **BOP TESTING:** The BOPE will be tested to **250 psi (Low) for 5 minutes** and **3000 psi (High) for 10 minutes**. Pressure test surface casing to **1500 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. BOP equipment will be tested every 30 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe and blind rams shall be activated each trip or but not more than once a day. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE. **All tests and inspections will be recorded and logged with time and results.** A full BOP test will be conducted when initially installed for the first well on the pad or if seals subject to test pressure are broken, following related repairs and at a minimum of 30 day intervals. A BOPE Shell Test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken or repaired and fall within the 30 day interval of first full test.
- C. **GeoHazards:** There are no Geohazards
- D. **Maximum Anticipated Pressure:** $7,173' \text{ TVD} \times 0.43 = 3,085 \text{ psi}$
- E. **H2S Concerns:** There is no record of any naturally occurring H2S in any formation in the Rosa Unit. No H2S is anticipated in this formation or this well.

III. **MATERIALS**

A. **CASING EQUIPMENT:**

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE (Pre-Set)	17.5"	333' (GL)	13-3/8"	54.5 LBS	J-55	BTC
INTERMEDIATE	12.25"	6,671'	9.625"	43.5 LBS	N-80 or equiv	LTC/BTC
PRODUCTION	8.5"	19,390'	5.5"	20 LBS	P-110 or equiv	LTC/BTC

NOTE: All casing depths are approximate, based on KB elevation and will be based on drilling conditions +/- 50'. Weights, grades and connections will be based on availability and may vary but will be equivalent or greater.

B. **FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 13-3/8" cement nose guide shoe. Place float shoe 1 joint above shoe. Run (1) standard centralizer on each of the bottom (3) joints of Surface Casing.
2. **INTERMEDIATE CASING:** 9-5/8" cement float shoe. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. Optional use of DV Tools (2) will be strategically placed above loss circulation zones anticipated in the Mesaverde and Fruitland Coal. Optional use of cancellation plugs for DV tools may be used if losses while cementing are not encountered. Optional use of an ICP may be used in conjunction with DV Tools.
3. **PRODUCTION CASING:** Run 5-1/2" casing with cement nose guide Float Shoe, 5-1/2" full or pup joints as necessary, Landing Collar, 5-1/2" full or pup joints as necessary, at least (1) one Toe Sleeve (Sliding Sleeve) positioned inside the applicable production area. Centralizer program will be determined by wellbore conditions. Production casing to be pressure tested during completion operations with frac stack installed.

**C. CEMENTING:**

(Note: Cement type and volumes may be adjusted onsite due to actual conditions and availability)

1. SURFACE:

Surface - 13-3/8", 54.5# csg	Top	Footage	Cement (ft3/ft) Annular Capacity	Excess (30%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Type G	-	320	0.6946	1.3	339	60	1.15	295	15.8
or Type III		320	0.6946	1.3	339	60	1.39	244	14.6

Set Depth, ft RKB 320

2. **INTERMEDIATE** : Intermediate casing shall be kept fluid filled while running in to the hole to meet BLM minimum collapse requirements. The intermediate casing will be cemented in 2 or 3 stages using DV/STAGE tools in order to reduce cement losses and maximize cement coverage. Operator proposes optional DV tools and optional ICP's above anticipated loss circulation zones in the Mesaverde and in the Fruitland coal. If losses are not observed during the second stage a cancelation plug will be pumped and the remaining cement will be pumped during stage 2. If cement does not circulate to the DV tool(s) or to surface, a CBL will be run to determine TOC.

Intermediate - 9-5/8", 43.5# csg	Top	Footage	Cement (ft3/ft) Annular Capacity	Excess (30%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Stage 1 Tail	6,171	500	0.3132	1.3	221	39	1.15	192	15.8
Stage 1 Lead	5,023	1,148	0.3132	1.3	467	83	2.66	176	11.8
					689	123		368	
Stage 2 Tail	4,423	600	0.3132	1.3	244	44	1.76	139	13.5
Stage 2 Lead	3,776	647	0.3132	1.3	263	47	2.66	99	11.8
					508	90		238	
Stage 3 Tail	3,126	650	0.3132	1.3	265	47	1.76	150	13.5
Stage 3 Lead	364	2,762	0.3132	1.3	1,125	200	2.66	423	11.8
Stage 3 Lead	-	364	0.3627	1	132	23	2.66	50	11.8
					1,521	271		623	
					2,718	484		1,229	

Set Depth, ft RKB 6671

Calculations based on 30% excess for open hole and cement to surface. Actual excess pumped will be determined by well conditions.

3. **PRODUCTION**: Production casing will be cemented in 1 stage with 100' of cement overlap above intermediate shoe. A CBL, or alternatively, a Temperature Survey will be used to determine TOC.

Production - 5-1/2", 20# csg	Top	ft	Cement (ft3/ft) Annular Capacity	Excess (15%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Cased hole Tail	6,571	100	0.2531	1	25	5	2.03	12	13.2
Open Hole Tail	6,671	12,719	0.2291	1.15	3,361	599	2.03	1,656	13.2
					3,387	603		1,668	

Set Depth, ft RKB 19390



Cement calculations are used for volume estimation. Well conditions will dictate final cement job design. Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected. All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

IV. COMPLETION

A. CBL

CBLs and/or Temperature Surveys will be performed as needed or required to determine cement top if cement is not circulated.

B. PRESSURE TEST

- C. Pressure test 5-1/2" casing to 0.22 psi/ft * 7,173' TVD = 1578 psi for 30 minutes. Increase pressure to Open RSI sleeves.

D. STIMULATION

Stimulate with sand and water. Isolate stages with flow through or dissolvable frac plugs. Drill out frac plugs and flowback lateral.

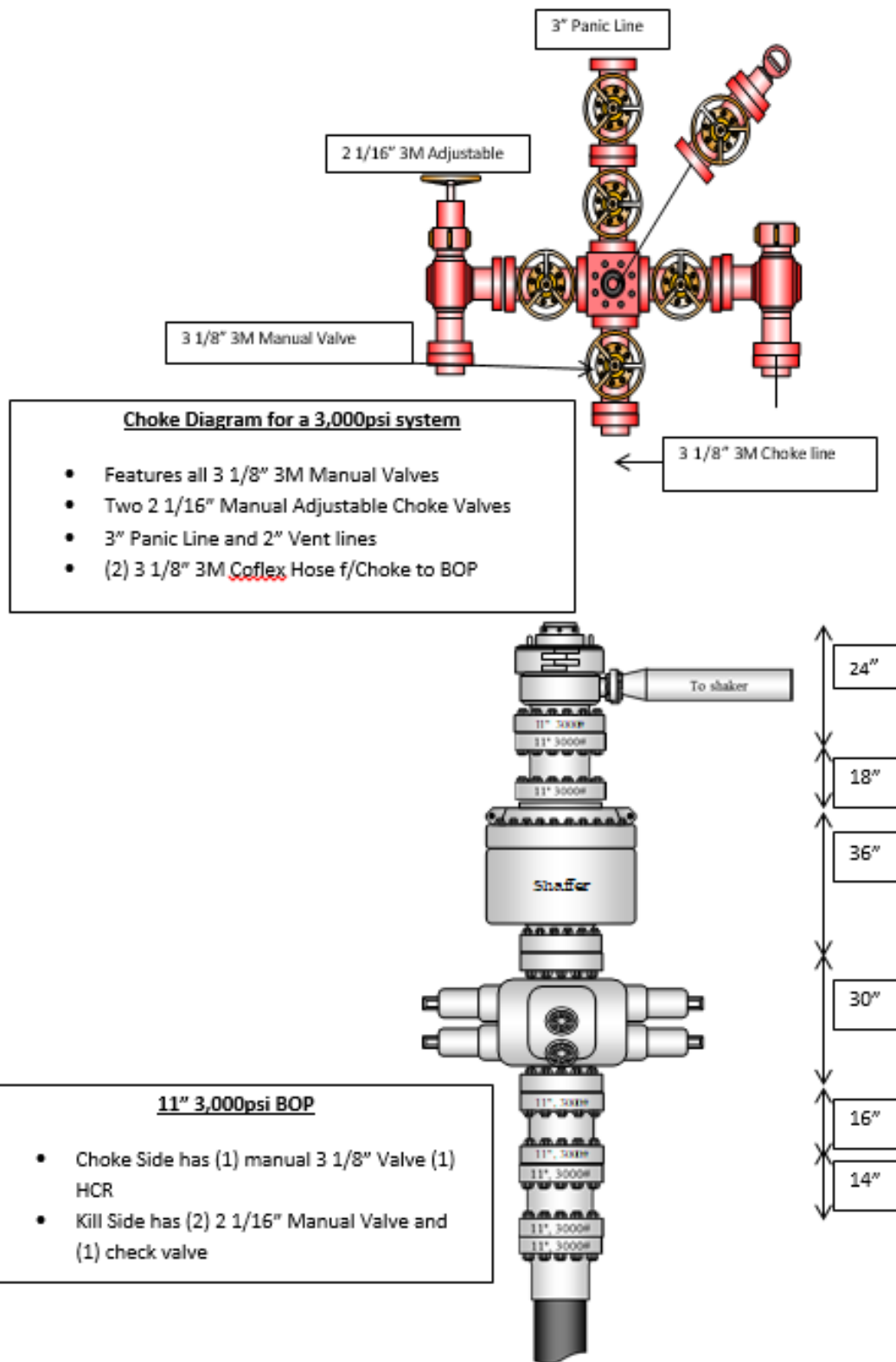
E. PRODUCTION TUBING

2-7/8", 6.5#, J-55 or L-80, EUE tubing will be run once volumes and pressures dictate. Due to the extremely high initial flow rates and pressures seen in offset wells, tubing will be installed once it is safe to do so, typically 12-36 months after completion.

*NOTE: Although this horizontal well may be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 8(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 8(2) NMAC, 19.15.16.15 8(2)NMAC, and 19.15.16.15. 8(4) NMAC.



3M 11" B.O.P.E Diagram



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 506830

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 506830
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	10/3/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	10/3/2025