

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☒ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address LOGOS Operating, LLC 2010 Afton Place Farmington, NM 87401		² OGRID Number 289408	
		³ Reason for Filing Code/ Effective Date New Well	
⁴ API Number 30 – 039-31431	⁵ Pool Name Basin Mancos		⁶ Pool Code 97232
⁷ Property Code 320608	⁸ Property Name Rosa Unit		⁹ Well Number 745H

II. ¹⁰ Surface Location

UL or lot no. C	Section 33	Township 31N	Range 5W	Lot Idn	Feet from the 378	North/South Line North	Feet from the 1686	East/West line West	County Rio Arriba
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¹¹ Bottom Hole Location

UL or lot no. A	Section 35	Township 31N	Range 5W	Lot Idn	Feet from the 1202	North/South line North	Feet from the 70	East/West line East	County Rio Arriba
¹² Lse Code F	¹³ Producing Method Code F		¹⁴ Gas Connection Date		¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date

III. Oil and Gas Transporters

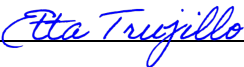
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
373888	Harvest Four Corners, LLC 1755 Arroyo Dr. Bloomfield, NM 87413	G

IV. Well Completion Data

²¹ Spud Date 6/15/2023	²² Ready Date 10/12/2023	²³ TD 21,290' MD / 7,364' TVD	²⁴ PBTD 21,184' MD / 7,364' TVD	²⁵ Perforations 7,803' MD / 21,145' MD 7,360'TVD / 7,361' TVD	²⁶ DHC, MC R-13457	
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set		³⁰ Sacks Cement
26"		20", 94#, J-55		386'		835sx (171bbls, 960cf)
17.5"		13-3/8", 61#, J-55		3618'		2405sx (4165bbls, 742cf)
12.25"		9-5/8", 47#, J-55		6411'		3394sx (1061bbls, 5956cf) DV tool @ 4,832' & 3,680'
8.5"		5-1/2", 20#, HCP-110		21,266'		2934sx (853bbls, 4789cf) TOC @ 1,486'
		2-7/8", 6.5#, J-55		pending		

V. Well Test Data

³¹ Date New Oil n/a	³² Gas Delivery Date 10/16/2023	³³ Test Date 10/17/203	³⁴ Test Length 12hrs	³⁵ Tbg. Pressure n/a	³⁶ Csg. Pressure 2428
³⁷ Choke Size 14/64	³⁸ Oil n/a	³⁹ Water 564bbls	⁴⁰ Gas 929 mcf		⁴¹ Test Method F

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Etta Trujillo		Approved by: PATRICIA MARTINEZ	
Title: Regulatory Specialist		Title: PETROLEUM SPECIALIST	
E-mail Address: etrujillo@logosresourcesllc.com		Approval Date: 3/6/2024	
Date: 3/5/2024	Phone: (505) 324-4154		



Request for Confidential "Tight Hole" Status

LOGOS Operating, LLC
Rosa Unit 745H
API# 30-039-31431
C Section 33 T31N R05W
Rio Arriba County, New Mexico

Per 19.15.7.16 WELL COMPLETION OR RECOMPLETION REPORT AND LOG (Form C-105): LOGOS Operating, LLC.
Request the Division keep Form C-105 and all pertained documentation confidential as of 12/06/2023 for 90 days acceptance of the referenced documents.

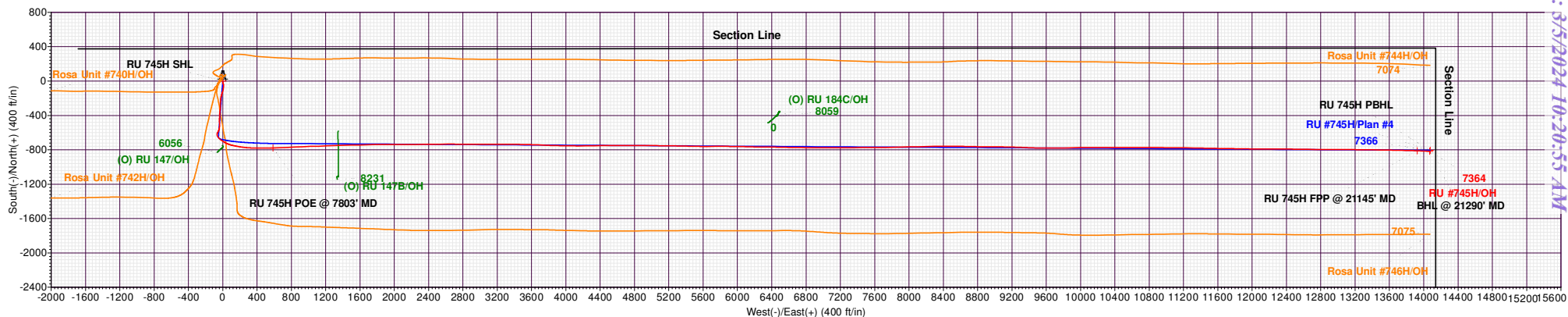
Sincerely,

A handwritten signature in blue ink that reads "Etta Trujillo".

Etta Trujillo
Regulatory Specialist
Email: etrujillo@logosresourcesllc.com
Office: 505-324-4154
Cell: 505-258-2936



County: Rio Arriba, NM NAD83
Site: Rosa Unit 31
Well: Rosa Unit #745H
Depth Reference: GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Rig: H&P 530
Plan: OH
Job #: 15948

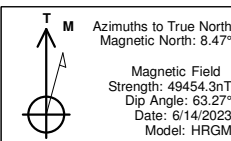


ANNOTATIONS

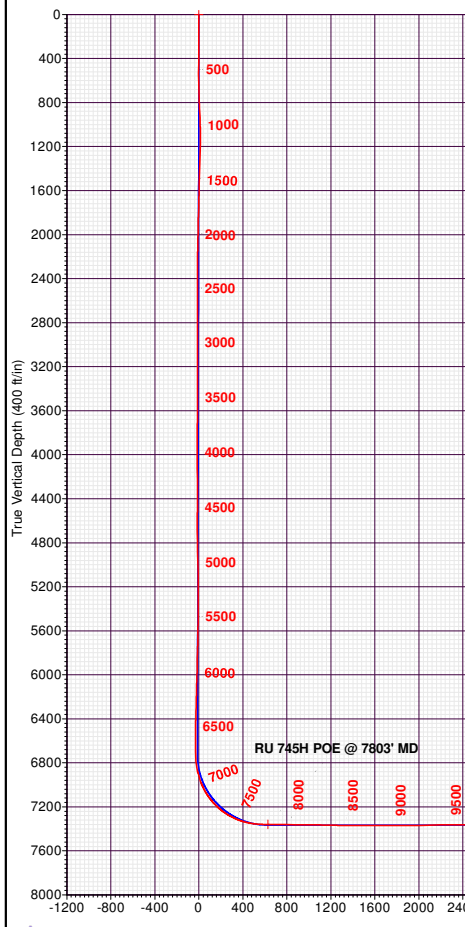
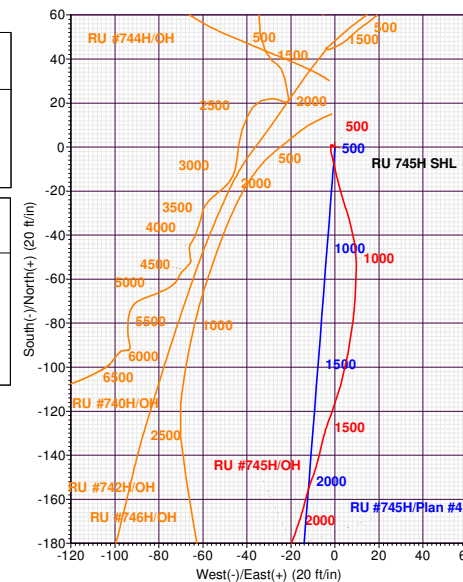
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7803.00	89.88	88.89	7359.57	-777.77	585.09	629.14	1344.24	RU 745H POE @ 7803' MD
21145.00	88.96	91.92	7360.71	-810.80	13924.34	13947.93	14685.71	RU 745H FPP @ 21145' MD
21290.00	88.72	92.11	7363.83	-816.00	14069.21	14092.86	14830.68	BHL @ 21290' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RU 745H SHL	0.00	0.00	0.00	2133535.22	2858367.71	36.8623180	-107.3709060
RU 745H Actual POE	7359.57	-777.77	585.09	2132760.29	2858956.55	36.8601817	-107.3689060
RU 745H Actual FPP	7360.71	-810.80	13924.34	2132791.85	2872295.78	36.8600815	-107.3233095
RU 745H BHL	7363.83	-816.00	14069.21	2132787.36	2872440.68	36.8600670	-107.3228143
RU 745H PBHL	7366.00	-805.43	14075.67	2132797.96	2872447.08	36.8600960	-107.3227922



TOTAL CORRECTION: 8.47°



RU 745H FPP @ 21145' MD
BHL @ 21290' MD
OH
21290
21258
Plan #4
RU 745H PBHL

Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #745H - Slot A5

OH

Design: OH

Standard Survey Report

01 December, 2023

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

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 31				
Site Position:		Northing:	2,133,595.07 usft	Latitude:	36.8624824
From:	Map	Easting:	2,858,361.84 usft	Longitude:	-107.3709251
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Rosa Unit #745H - Slot A5					
Well Position	+N/-S	0.00 ft	Northing:	2,133,535.22 usft	Latitude:	36.8623180
	+E/-W	0.00 ft	Easting:	2,858,367.71 usft	Longitude:	-107.3709060
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,492.00 ft
Grid Convergence:		0.28 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	6/14/2023	8.47	63.27	49,454.32905958

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	93.32	

Survey Program	Date	12/1/2023			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
409.00	21,220.00	Survey #1 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	
21,290.00	21,290.00	Survey #2 (OH)	Project	Projection	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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	
409.00	0.31	311.15	409.00	0.73	-0.83	-0.87	0.08	0.08	0.00	
450.00	0.79	317.65	450.00	1.01	-1.11	-1.16	1.18	1.17	15.85	
538.00	0.88	221.76	537.99	0.95	-1.97	-2.02	1.41	0.10	-108.97	
627.00	3.38	165.51	626.93	-2.10	-1.76	-1.64	3.35	2.81	-63.20	
757.00	7.51	167.36	756.31	-14.10	1.05	1.87	3.18	3.18	1.42	
848.00	9.01	161.82	846.37	-26.68	4.58	6.12	1.86	1.65	-6.09	
939.00	9.10	168.32	936.24	-40.49	8.26	10.59	1.13	0.10	7.14	
1,031.00	9.32	180.28	1,027.06	-55.07	9.70	12.87	2.09	0.24	13.00	

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,122.00	8.79	184.06	1,116.92	-69.37	9.17	13.17	0.88	-0.58	4.15	
1,184.00	8.79	186.87	1,178.20	-78.80	8.27	12.81	0.69	0.00	4.53	
1,279.00	9.49	190.65	1,271.99	-93.70	5.95	11.37	0.97	0.74	3.98	
1,373.00	8.88	194.95	1,364.79	-108.33	2.65	8.91	0.98	-0.65	4.57	
1,468.00	7.51	202.25	1,458.82	-121.16	-1.60	5.42	1.81	-1.44	7.68	
1,562.00	5.71	194.25	1,552.19	-131.38	-5.07	2.54	2.15	-1.91	-8.51	
1,657.00	5.89	192.93	1,646.70	-140.71	-7.33	0.83	0.24	0.19	-1.39	
1,752.00	6.50	200.58	1,741.15	-150.50	-10.31	-1.58	1.08	0.64	8.05	
1,846.00	6.50	194.16	1,834.55	-160.64	-13.48	-4.16	0.77	0.00	-6.83	
1,941.00	5.01	198.47	1,929.07	-169.79	-16.11	-6.25	1.63	-1.57	4.54	
2,036.00	4.70	200.23	2,023.73	-177.37	-18.77	-8.47	0.36	-0.33	1.85	
2,130.00	4.61	190.12	2,117.42	-184.70	-20.77	-10.04	0.88	-0.10	-10.76	
2,224.00	5.49	189.07	2,211.05	-192.86	-22.14	-10.93	0.94	0.94	-1.12	
2,316.00	5.89	183.35	2,302.60	-201.92	-23.11	-11.38	0.75	0.43	-6.22	
2,410.00	6.90	184.19	2,396.01	-212.37	-23.80	-11.47	1.08	1.07	0.89	
2,505.00	6.42	186.87	2,490.37	-223.33	-24.85	-11.88	0.60	-0.51	2.82	
2,599.00	6.68	186.34	2,583.76	-233.98	-26.09	-12.50	0.28	0.28	-0.56	
2,693.00	7.60	183.44	2,677.03	-245.62	-27.06	-12.80	1.05	0.98	-3.09	
2,788.00	7.99	182.73	2,771.15	-258.49	-27.76	-12.74	0.42	0.41	-0.75	
2,883.00	7.91	182.83	2,865.24	-271.61	-28.39	-12.62	0.09	-0.08	0.11	
2,977.00	6.28	182.21	2,958.51	-283.21	-28.91	-12.46	1.74	-1.73	-0.66	
3,071.00	6.42	179.13	3,051.94	-293.60	-29.03	-11.98	0.39	0.15	-3.28	
3,166.00	6.11	179.74	3,146.37	-303.97	-28.92	-11.28	0.33	-0.33	0.64	
3,261.00	6.50	181.51	3,240.80	-314.40	-29.04	-10.79	0.46	0.41	1.86	
3,355.00	6.59	181.68	3,334.18	-325.11	-29.34	-10.47	0.10	0.10	0.18	
3,450.00	6.11	186.17	3,428.60	-335.59	-30.05	-10.56	0.73	-0.51	4.73	
3,544.00	5.80	188.54	3,522.09	-345.26	-31.29	-11.24	0.42	-0.33	2.52	
3,567.00	5.80	188.98	3,544.98	-347.55	-31.64	-11.47	0.19	0.00	1.91	
3,681.00	5.40	190.47	3,658.43	-358.52	-33.52	-12.70	0.37	-0.35	1.31	
3,776.00	5.19	184.85	3,753.03	-367.20	-34.69	-13.37	0.59	-0.22	-5.92	
3,870.00	4.88	184.58	3,846.66	-375.42	-35.37	-13.57	0.33	-0.33	-0.29	
3,965.00	5.32	183.79	3,941.29	-383.84	-35.98	-13.70	0.47	0.46	-0.83	
4,060.00	5.01	180.98	4,035.90	-392.38	-36.35	-13.57	0.42	-0.33	-2.96	
4,154.00	5.80	181.24	4,129.48	-401.24	-36.52	-13.23	0.84	0.84	0.28	
4,249.00	5.71	182.21	4,224.00	-410.76	-36.81	-12.96	0.14	-0.09	1.02	
4,343.00	4.88	181.95	4,317.60	-419.43	-37.12	-12.77	0.88	-0.88	-0.28	
4,437.00	5.32	184.23	4,411.23	-427.77	-37.58	-12.75	0.52	0.47	2.43	
4,532.00	6.59	186.25	4,505.71	-437.58	-38.50	-13.10	1.35	1.34	2.13	
4,627.00	5.41	184.76	4,600.19	-447.46	-39.46	-13.49	1.25	-1.24	-1.57	
4,721.00	5.71	181.42	4,693.75	-456.55	-39.95	-13.44	0.47	0.32	-3.55	
4,816.00	6.68	176.23	4,788.20	-466.79	-39.70	-12.61	1.18	1.02	-5.46	
4,910.00	5.58	173.33	4,881.66	-476.78	-38.81	-11.14	1.22	-1.17	-3.09	
5,005.00	5.71	172.54	4,976.20	-486.06	-37.66	-9.45	0.16	0.14	-0.83	

SDT

Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	6.20	176.76	5,070.68	-495.87	-36.76	-7.98	0.69	0.52	4.44
5,194.00	5.19	179.22	5,164.22	-505.19	-36.41	-7.10	1.11	-1.07	2.62
5,289.00	5.41	181.51	5,258.81	-513.96	-36.47	-6.65	0.32	0.23	2.41
5,384.00	6.68	184.58	5,353.28	-523.94	-37.03	-6.63	1.38	1.34	3.23
5,478.00	6.59	186.43	5,446.65	-534.75	-38.07	-7.04	0.25	-0.10	1.97
5,573.00	6.02	187.92	5,541.08	-545.10	-39.37	-7.74	0.62	-0.60	1.57
5,636.00	5.89	188.63	5,603.74	-551.57	-40.31	-8.30	0.24	-0.21	1.13
5,699.00	5.41	191.88	5,666.43	-557.67	-41.40	-9.04	0.92	-0.76	5.16
5,762.00	5.01	198.65	5,729.17	-563.19	-42.90	-10.21	1.16	-0.63	10.75
5,825.00	4.39	204.27	5,791.96	-567.99	-44.77	-11.80	1.22	-0.98	8.92
5,888.00	4.48	198.65	5,854.77	-572.52	-46.54	-13.32	0.70	0.14	-8.92
5,951.00	4.61	198.82	5,917.57	-577.25	-48.15	-14.64	0.21	0.21	0.27
6,014.00	4.39	204.36	5,980.38	-581.84	-49.96	-16.19	0.77	-0.35	8.79
6,077.00	4.22	209.63	6,043.20	-586.05	-52.10	-18.08	0.68	-0.27	8.37
6,140.00	4.09	206.73	6,106.04	-590.07	-54.26	-20.00	0.39	-0.21	-4.60
6,203.00	3.91	208.05	6,168.88	-593.98	-56.28	-21.79	0.32	-0.29	2.10
6,266.00	3.60	208.31	6,231.75	-597.61	-58.22	-23.52	0.49	-0.49	0.41
6,329.00	3.38	208.31	6,294.63	-600.99	-60.04	-25.14	0.35	-0.35	0.00
6,365.00	3.30	212.97	6,330.57	-602.79	-61.11	-26.11	0.79	-0.22	12.94
6,446.00	2.40	207.86	6,411.47	-606.25	-63.17	-27.96	1.15	-1.11	-6.31
6,541.00	3.81	197.20	6,506.33	-611.02	-65.04	-29.55	1.60	1.48	-11.22
6,636.00	4.88	184.54	6,601.06	-618.07	-66.29	-30.39	1.51	1.13	-13.33
6,730.00	5.69	187.74	6,694.66	-626.67	-67.23	-30.83	0.92	0.86	3.40
6,824.00	11.70	154.19	6,787.59	-639.89	-63.71	-26.55	8.11	6.39	-35.69
6,919.00	17.75	135.79	6,879.47	-658.97	-49.39	-11.15	7.98	6.37	-19.37
7,013.00	24.25	129.79	6,967.19	-681.62	-24.54	14.97	7.27	6.91	-6.38
7,108.00	31.75	121.59	7,051.04	-707.24	11.81	52.74	8.86	7.89	-8.63
7,202.00	39.35	112.22	7,127.52	-731.52	60.57	102.83	9.93	8.09	-9.97
7,297.00	46.54	102.04	7,197.10	-750.15	122.33	165.56	10.50	7.57	-10.72
7,392.00	56.66	99.61	7,256.04	-764.00	195.37	239.28	10.84	10.65	-2.56
7,486.00	64.57	95.02	7,302.15	-774.29	276.53	320.90	9.43	8.41	-4.88
7,581.00	74.39	91.37	7,335.41	-779.15	365.24	409.74	10.94	10.34	-3.84
7,675.00	83.10	89.49	7,353.75	-779.82	457.34	501.72	9.47	9.27	-2.00
7,770.00	89.93	88.83	7,359.52	-778.43	552.09	596.24	7.22	7.19	-0.69
7,803.00	89.88	88.89	7,359.57	-777.77	585.09	629.14	0.23	-0.14	0.18
RU 745H POE @ 7803' MD									
7,865.00	89.80	89.00	7,359.74	-776.63	647.08	690.96	0.23	-0.14	0.18
7,959.00	89.23	86.90	7,360.54	-773.27	741.01	784.54	2.31	-0.61	-2.23
8,054.00	89.19	87.16	7,361.85	-768.35	835.87	878.96	0.28	-0.04	0.27
8,148.00	89.43	87.50	7,362.98	-763.97	929.76	972.44	0.44	0.26	0.36
8,243.00	89.02	88.03	7,364.26	-760.27	1,024.68	1,066.98	0.71	-0.43	0.56
8,337.00	89.23	88.13	7,365.70	-757.12	1,118.62	1,160.58	0.25	0.22	0.11
8,432.00	88.52	88.43	7,367.56	-754.27	1,213.56	1,255.19	0.81	-0.75	0.32
8,526.00	90.20	87.90	7,368.61	-751.26	1,307.50	1,348.80	1.87	1.79	-0.56

SDT

Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,621.00	90.10	88.38	7,368.37	-748.17	1,402.45	1,443.41	0.52	-0.11	0.51
8,716.00	90.00	88.43	7,368.28	-745.53	1,497.41	1,538.06	0.12	-0.11	0.05
8,810.00	89.16	88.52	7,368.97	-743.03	1,591.37	1,631.73	0.90	-0.89	0.10
8,904.00	90.44	88.82	7,369.30	-740.84	1,685.35	1,725.41	1.40	1.36	0.32
8,999.00	90.17	89.40	7,368.79	-739.37	1,780.33	1,820.16	0.67	-0.28	0.61
9,094.00	89.87	89.51	7,368.76	-738.47	1,875.33	1,914.94	0.34	-0.32	0.12
9,188.00	91.18	89.76	7,367.90	-737.87	1,969.32	2,008.74	1.42	1.39	0.27
9,283.00	90.94	89.93	7,366.14	-737.61	2,064.30	2,103.55	0.31	-0.25	0.18
9,378.00	90.77	89.67	7,364.72	-737.28	2,159.29	2,198.36	0.33	-0.18	-0.27
9,472.00	90.57	90.15	7,363.62	-737.13	2,253.28	2,292.19	0.55	-0.21	0.51
9,567.00	90.17	89.20	7,363.01	-736.59	2,348.28	2,386.99	1.09	-0.42	-1.00
9,661.00	90.00	89.30	7,362.87	-735.36	2,442.27	2,480.75	0.21	-0.18	0.11
9,755.00	90.27	89.36	7,362.65	-734.26	2,536.26	2,574.52	0.29	0.29	0.06
9,850.00	90.13	89.79	7,362.32	-733.56	2,631.26	2,669.32	0.48	-0.15	0.45
9,944.00	90.10	90.41	7,362.13	-733.72	2,725.26	2,763.17	0.66	-0.03	0.66
10,038.00	90.24	90.63	7,361.85	-734.57	2,819.26	2,857.06	0.28	0.15	0.23
10,132.00	89.76	89.66	7,361.85	-734.81	2,913.25	2,950.91	1.15	-0.51	-1.03
10,227.00	90.24	89.62	7,361.85	-734.22	3,008.25	3,045.72	0.51	0.51	-0.04
10,322.00	89.16	90.05	7,362.35	-733.94	3,103.25	3,140.54	1.22	-1.14	0.45
10,416.00	88.92	90.34	7,363.92	-734.26	3,197.24	3,234.39	0.40	-0.26	0.31
10,511.00	88.75	90.58	7,365.86	-735.02	3,292.21	3,329.25	0.31	-0.18	0.25
10,605.00	88.62	90.51	7,368.01	-735.92	3,386.18	3,423.11	0.16	-0.14	-0.07
10,700.00	89.70	90.97	7,369.41	-737.15	3,481.16	3,518.01	1.24	1.14	0.48
10,794.00	89.93	91.35	7,369.71	-739.05	3,575.14	3,611.94	0.47	0.24	0.40
10,888.00	89.70	92.55	7,370.01	-742.25	3,669.09	3,705.91	1.30	-0.24	1.28
10,983.00	90.91	92.54	7,369.51	-746.46	3,763.99	3,800.90	1.27	1.27	-0.01
11,078.00	90.34	91.48	7,368.47	-749.80	3,858.92	3,895.86	1.27	-0.60	-1.12
11,172.00	90.57	91.79	7,367.72	-752.48	3,952.88	3,989.82	0.41	0.24	0.33
11,266.00	90.50	90.02	7,366.85	-753.96	4,046.86	4,083.73	1.88	-0.07	-1.88
11,360.00	90.54	90.89	7,365.99	-754.71	4,140.86	4,177.61	0.93	0.04	0.93
11,455.00	90.00	88.68	7,365.55	-754.35	4,235.85	4,272.42	2.39	-0.57	-2.33
11,549.00	90.03	89.35	7,365.52	-752.74	4,329.83	4,366.15	0.71	0.03	0.71
11,644.00	90.13	89.14	7,365.39	-751.49	4,424.82	4,460.91	0.24	0.11	-0.22
11,738.00	90.00	89.65	7,365.28	-750.49	4,518.82	4,554.69	0.56	-0.14	0.54
11,832.00	90.10	89.41	7,365.20	-749.72	4,612.82	4,648.49	0.28	0.11	-0.26
11,927.00	90.10	89.81	7,365.03	-749.08	4,707.81	4,743.29	0.42	0.00	0.42
12,021.00	89.66	90.00	7,365.23	-748.92	4,801.81	4,837.12	0.51	-0.47	0.20
12,116.00	89.56	90.82	7,365.88	-749.60	4,896.81	4,931.99	0.87	-0.11	0.86
12,210.00	90.37	90.53	7,365.93	-750.71	4,990.80	5,025.89	0.92	0.86	-0.31
12,305.00	90.03	90.72	7,365.60	-751.74	5,085.79	5,120.79	0.41	-0.36	0.20
12,400.00	89.66	90.55	7,365.86	-752.80	5,180.79	5,215.68	0.43	-0.39	-0.18
12,494.00	89.36	91.13	7,366.66	-754.17	5,274.77	5,309.59	0.69	-0.32	0.62
12,588.00	90.14	90.93	7,367.07	-755.86	5,368.76	5,403.51	0.86	0.83	-0.21

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,682.00	90.61	91.08	7,366.46	-757.51	5,462.74	5,497.44	0.52	0.50	0.16
12,777.00	89.97	92.23	7,365.98	-760.26	5,557.70	5,592.39	1.39	-0.67	1.21
12,871.00	90.07	89.00	7,365.94	-761.26	5,651.68	5,686.28	3.44	0.11	-3.44
12,966.00	90.00	89.84	7,365.89	-760.30	5,746.67	5,781.05	0.89	-0.07	0.88
13,060.00	89.93	90.06	7,365.94	-760.22	5,840.67	5,874.89	0.25	-0.07	0.23
13,155.00	89.46	90.50	7,366.45	-760.68	5,935.67	5,969.76	0.68	-0.49	0.46
13,250.00	89.46	90.83	7,367.35	-761.79	6,030.66	6,064.65	0.35	0.00	0.35
13,344.00	89.22	91.84	7,368.43	-763.98	6,124.63	6,158.59	1.10	-0.26	1.07
13,439.00	90.47	90.75	7,368.69	-766.12	6,219.60	6,253.52	1.75	1.32	-1.15
13,533.00	90.47	90.42	7,367.91	-767.08	6,313.59	6,347.41	0.35	0.00	-0.35
13,628.00	90.51	90.78	7,367.10	-768.08	6,408.58	6,442.30	0.38	0.04	0.38
13,723.00	90.27	91.24	7,366.45	-769.75	6,503.56	6,537.22	0.55	-0.25	0.48
13,817.00	90.47	91.07	7,365.85	-771.65	6,597.54	6,631.15	0.28	0.21	-0.18
13,912.00	90.91	90.77	7,364.70	-773.17	6,692.52	6,726.06	0.56	0.46	-0.32
14,007.00	90.61	90.99	7,363.44	-774.63	6,787.50	6,820.97	0.39	-0.32	0.23
14,101.00	90.00	89.76	7,362.94	-775.25	6,881.50	6,914.84	1.46	-0.65	-1.31
14,195.00	90.00	89.89	7,362.94	-774.96	6,975.50	7,008.67	0.14	0.00	0.14
14,290.00	89.70	90.14	7,363.19	-774.99	7,070.50	7,103.51	0.41	-0.32	0.26
14,384.00	89.39	90.88	7,363.94	-775.82	7,164.49	7,197.39	0.85	-0.33	0.79
14,479.00	89.53	89.16	7,364.83	-775.85	7,259.48	7,292.23	1.82	0.15	-1.81
14,574.00	89.70	89.29	7,365.47	-774.57	7,354.47	7,386.98	0.23	0.18	0.14
14,668.00	89.63	89.76	7,366.02	-773.79	7,448.47	7,480.77	0.51	-0.07	0.50
14,763.00	89.66	89.94	7,366.61	-773.54	7,543.46	7,575.60	0.19	0.03	0.19
14,857.00	89.33	90.13	7,367.44	-773.60	7,637.46	7,669.44	0.41	-0.35	0.20
14,952.00	89.19	89.27	7,368.67	-773.10	7,732.45	7,764.24	0.92	-0.15	-0.91
15,046.00	89.60	88.38	7,369.66	-771.17	7,826.42	7,857.95	1.04	0.44	-0.95
15,141.00	90.87	88.18	7,369.27	-768.32	7,921.38	7,952.58	1.35	1.34	-0.21
15,235.00	91.40	88.24	7,367.41	-765.39	8,015.31	8,046.18	0.57	0.56	0.06
15,330.00	90.57	88.76	7,365.77	-762.90	8,110.27	8,140.83	1.03	-0.87	0.55
15,424.00	90.47	88.37	7,364.92	-760.55	8,204.23	8,234.50	0.43	-0.11	-0.41
15,518.00	90.92	89.50	7,363.78	-758.80	8,298.21	8,328.22	1.29	0.48	1.20
15,613.00	90.51	90.08	7,362.59	-758.45	8,393.20	8,423.03	0.75	-0.43	0.61
15,708.00	90.40	90.43	7,361.84	-758.87	8,488.19	8,517.89	0.39	-0.12	0.37
15,802.00	90.30	90.57	7,361.27	-759.70	8,582.19	8,611.78	0.18	-0.11	0.15
15,897.00	90.00	90.79	7,361.02	-760.82	8,677.18	8,706.68	0.39	-0.32	0.23
15,991.00	89.66	91.22	7,361.30	-762.47	8,771.17	8,800.60	0.58	-0.36	0.46
16,086.00	90.58	90.01	7,361.10	-763.49	8,866.16	8,895.49	1.60	0.97	-1.27
16,180.00	90.70	90.33	7,360.05	-763.77	8,960.15	8,989.34	0.36	0.13	0.34
16,275.00	90.20	90.81	7,359.30	-764.71	9,055.14	9,084.23	0.73	-0.53	0.51
16,369.00	90.17	91.25	7,359.00	-766.40	9,149.13	9,178.15	0.47	-0.03	0.47
16,464.00	90.24	91.74	7,358.66	-768.88	9,244.09	9,273.10	0.52	0.07	0.52
16,559.00	90.13	92.82	7,358.35	-772.66	9,339.02	9,368.09	1.14	-0.12	1.14
16,653.00	90.27	91.84	7,358.02	-776.48	9,432.94	9,462.07	1.05	0.15	-1.04

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,747.00	90.54	91.45	7,357.36	-779.18	9,526.90	9,556.03	0.50	0.29	-0.41
16,842.00	90.13	89.90	7,356.80	-780.30	9,621.88	9,650.92	1.69	-0.43	-1.63
16,937.00	89.87	89.25	7,356.80	-779.60	9,716.88	9,745.72	0.74	-0.27	-0.68
17,031.00	89.36	89.27	7,357.43	-778.38	9,810.87	9,839.48	0.54	-0.54	0.02
17,126.00	89.60	88.65	7,358.30	-776.66	9,905.85	9,934.20	0.70	0.25	-0.65
17,220.00	90.00	88.54	7,358.63	-774.35	9,999.82	10,027.88	0.44	0.43	-0.12
17,315.00	90.54	89.70	7,358.18	-772.89	10,094.81	10,122.62	1.35	0.57	1.22
17,409.00	90.13	89.61	7,357.63	-772.33	10,188.80	10,216.43	0.45	-0.44	-0.10
17,504.00	90.10	90.18	7,357.44	-772.15	10,283.80	10,311.26	0.60	-0.03	0.60
17,598.00	89.56	90.44	7,357.72	-772.66	10,377.80	10,405.13	0.64	-0.57	0.28
17,693.00	90.07	89.84	7,358.02	-772.90	10,472.80	10,499.98	0.83	0.54	-0.63
17,787.00	89.93	89.60	7,358.02	-772.44	10,566.80	10,593.80	0.30	-0.15	-0.26
17,882.00	89.80	89.96	7,358.25	-772.07	10,661.80	10,688.61	0.40	-0.14	0.38
17,977.00	89.50	90.38	7,358.83	-772.35	10,756.80	10,783.47	0.54	-0.32	0.44
18,071.00	89.16	90.41	7,359.93	-773.00	10,850.79	10,877.34	0.36	-0.36	0.03
18,166.00	89.06	90.94	7,361.40	-774.12	10,945.77	10,972.23	0.57	-0.11	0.56
18,261.00	89.93	90.36	7,362.24	-775.20	11,040.76	11,067.12	1.10	0.92	-0.61
18,356.00	91.04	90.53	7,361.44	-775.94	11,135.75	11,161.99	1.18	1.17	0.18
18,450.00	90.81	90.95	7,359.92	-777.15	11,229.73	11,255.89	0.51	-0.24	0.45
18,545.00	90.84	90.98	7,358.55	-778.75	11,324.71	11,350.80	0.04	0.03	0.03
18,639.00	90.71	90.70	7,357.28	-780.13	11,418.69	11,444.70	0.33	-0.14	-0.30
18,734.00	90.10	91.27	7,356.61	-781.76	11,513.67	11,539.62	0.88	-0.64	0.60
18,828.00	89.90	91.10	7,356.61	-783.70	11,607.65	11,633.55	0.28	-0.21	-0.18
18,923.00	89.80	90.84	7,356.86	-785.31	11,702.64	11,728.47	0.29	-0.11	-0.27
19,017.00	90.84	90.57	7,356.33	-786.47	11,796.63	11,822.37	1.14	1.11	-0.29
19,112.00	90.71	90.69	7,355.05	-787.51	11,891.61	11,917.26	0.19	-0.14	0.13
19,206.00	90.64	91.32	7,353.94	-789.16	11,985.59	12,011.17	0.67	-0.07	0.67
19,301.00	90.44	89.88	7,353.04	-790.16	12,080.58	12,106.06	1.53	-0.21	-1.52
19,395.00	90.30	89.74	7,352.44	-789.84	12,174.57	12,199.88	0.21	-0.15	-0.15
19,490.00	89.87	90.24	7,352.29	-789.83	12,269.57	12,294.72	0.69	-0.45	0.53
19,584.00	89.53	90.60	7,352.79	-790.52	12,363.57	12,388.60	0.53	-0.36	0.38
19,679.00	89.23	91.39	7,353.81	-792.17	12,458.55	12,483.52	0.89	-0.32	0.83
19,774.00	89.56	90.51	7,354.82	-793.74	12,553.53	12,578.43	0.99	0.35	-0.93
19,868.00	90.20	90.47	7,355.01	-794.55	12,647.53	12,672.31	0.68	0.68	-0.04
19,963.00	89.93	90.41	7,354.91	-795.28	12,742.52	12,767.19	0.29	-0.28	-0.06
20,058.00	89.46	90.81	7,355.41	-796.29	12,837.52	12,862.08	0.65	-0.49	0.42
20,152.00	90.17	89.74	7,355.72	-796.74	12,931.51	12,955.95	1.37	0.76	-1.14
20,246.00	90.37	90.34	7,355.27	-796.80	13,025.51	13,049.79	0.67	0.21	0.64
20,341.00	90.13	90.17	7,354.86	-797.23	13,120.51	13,144.66	0.31	-0.25	-0.18
20,436.00	89.80	90.43	7,354.92	-797.72	13,215.51	13,239.52	0.44	-0.35	0.27
20,530.00	89.63	90.41	7,355.38	-798.41	13,309.50	13,333.40	0.18	-0.18	-0.02
20,625.00	89.26	90.91	7,356.30	-799.51	13,404.49	13,428.30	0.65	-0.39	0.53
20,719.00	89.83	91.00	7,357.05	-801.07	13,498.48	13,522.21	0.61	0.61	0.10
20,814.00	89.53	91.38	7,357.58	-803.05	13,593.45	13,617.15	0.51	-0.32	0.40

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,909.00	89.53	91.00	7,358.36	-805.02	13,688.43	13,712.08	0.40	0.00	-0.40
21,004.00	89.70	91.17	7,359.00	-806.82	13,783.41	13,807.00	0.25	0.18	0.18
21,098.00	89.16	91.82	7,359.93	-809.27	13,877.37	13,900.95	0.90	-0.57	0.69
21,145.00	88.96	91.92	7,360.71	-810.80	13,924.34	13,947.93	0.48	-0.43	0.21
RU 745H FPP @ 21145' MD									
21,193.00	88.75	92.02	7,361.67	-812.45	13,972.30	13,995.90	0.48	-0.43	0.21
21,220.00	88.72	92.11	7,362.26	-813.43	13,999.28	14,022.89	0.35	-0.11	0.33
21,290.00	88.72	92.11	7,363.83	-816.00	14,069.21	14,092.86	0.00	0.00	0.00
BHL @ 21290' MD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RU 745H SHL - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	2,133,535.22	2,858,367.71	36.8623180	-107.3709060
RU 745H Actual POE - actual wellpath hits target center - Point	0.00	0.00	7,359.57	-777.77	585.09	2,132,760.29	2,858,956.56	36.8601816	-107.3689061
RU 745H Actual FPP - actual wellpath hits target center - Point	0.00	0.00	7,360.71	-810.80	13,924.34	2,132,791.85	2,872,295.79	36.8600814	-107.3233095
RU 745H BHL - actual wellpath hits target center - Point	0.00	0.00	7,363.83	-816.00	14,069.21	2,132,787.36	2,872,440.68	36.8600669	-107.3228143
RU 745H PBHL - actual wellpath misses target center by 12.57ft at 21290.00ft MD (7363.83 TVD, -816.00 N, 14069.21 E) - Point	0.00	0.00	7,366.00	-805.43	14,075.67	2,132,797.96	2,872,447.08	36.8600960	-107.3227922

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,803.00	7,359.57	-777.77	585.09	RU 745H POE @ 7803' MD	
21,145.00	7,360.71	-810.80	13,924.34	RU 745H FPP @ 21145' MD	
21,290.00	7,363.83	-816.00	14,069.21	BHL @ 21290' MD	

Checked By: _____	Approved By: _____	Date: _____
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Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #745H - Slot A5

OH

Design: OH

Survey Report - Geographic

01 December, 2023

SDT
Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

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 31				
Site Position:		Northing:	2,133,595.07 usft	Latitude:	36.8624824
From:	Map	Easting:	2,858,361.84 usft	Longitude:	-107.3709251
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.28 °

Well	Rosa Unit #745H - Slot A5					
Well Position	+N/-S	0.00 ft	Northing:	2,133,535.22 usft	Latitude:	36.8623180
	+E/-W	0.00 ft	Easting:	2,858,367.71 usft	Longitude:	-107.3709060
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,492.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	6/14/2023	8.47	63.27	49,454.32905958

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	93.32	

Survey Program	Date	12/1/2023			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
409.00	21,220.00	Survey #1 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	
21,290.00	21,290.00	Survey #2 (OH)	Project	Projection	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	2,133,535.22	2,858,367.71	36.8623180	-107.3709060	
409.00	0.31	311.15	409.00	0.73	-0.83	2,133,535.95	2,858,366.87	36.8623200	-107.3709089	
450.00	0.79	317.65	450.00	1.01	-1.11	2,133,536.23	2,858,366.60	36.8623208	-107.3709098	
538.00	0.88	221.76	537.99	0.95	-1.97	2,133,536.17	2,858,365.74	36.8623206	-107.3709127	
627.00	3.38	165.51	626.93	-2.10	-1.76	2,133,533.12	2,858,365.96	36.8623122	-107.3709121	
757.00	7.51	167.36	756.31	-14.10	1.05	2,133,521.13	2,858,368.83	36.8622793	-107.3709024	
848.00	9.01	161.82	846.37	-26.68	4.58	2,133,508.57	2,858,372.42	36.8622447	-107.3708904	
939.00	9.10	168.32	936.24	-40.49	8.26	2,133,494.77	2,858,376.16	36.8622068	-107.3708778	
1,031.00	9.32	180.28	1,027.06	-55.07	9.70	2,133,480.20	2,858,377.67	36.8621667	-107.3708729	
1,122.00	8.79	184.06	1,116.92	-69.37	9.17	2,133,465.90	2,858,377.21	36.8621274	-107.3708747	
1,184.00	8.79	186.87	1,178.20	-78.80	8.27	2,133,456.46	2,858,376.36	36.8621015	-107.3708778	

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Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,279.00	9.49	190.65	1,271.99	-93.70	5.95	2,133,441.55	2,858,374.11	36.8620606	-107.3708857
1,373.00	8.88	194.95	1,364.79	-108.33	2.65	2,133,426.91	2,858,370.88	36.8620204	-107.3708970
1,468.00	7.51	202.25	1,458.82	-121.16	-1.60	2,133,414.06	2,858,366.70	36.8619852	-107.3709115
1,562.00	5.71	194.25	1,552.19	-131.38	-5.07	2,133,403.82	2,858,363.27	36.8619571	-107.3709234
1,657.00	5.89	192.93	1,646.70	-140.71	-7.33	2,133,394.48	2,858,361.06	36.8619315	-107.3709311
1,752.00	6.50	200.58	1,741.15	-150.50	-10.31	2,133,384.68	2,858,358.13	36.8619046	-107.3709413
1,846.00	6.50	194.16	1,834.55	-160.64	-13.48	2,133,374.52	2,858,355.01	36.8618768	-107.3709521
1,941.00	5.01	198.47	1,929.07	-169.79	-16.11	2,133,365.36	2,858,352.42	36.8618516	-107.3709611
2,036.00	4.70	200.23	2,023.73	-177.37	-18.77	2,133,357.76	2,858,349.80	36.8618308	-107.3709702
2,130.00	4.61	190.12	2,117.42	-184.70	-20.77	2,133,350.42	2,858,347.84	36.8618107	-107.3709770
2,224.00	5.49	189.07	2,211.05	-192.86	-22.14	2,133,342.25	2,858,346.51	36.8617882	-107.3709817
2,316.00	5.89	183.35	2,302.60	-201.92	-23.11	2,133,333.19	2,858,345.58	36.8617634	-107.3709850
2,410.00	6.90	184.19	2,396.01	-212.37	-23.80	2,133,322.74	2,858,344.94	36.8617347	-107.3709874
2,505.00	6.42	186.87	2,490.37	-223.33	-24.85	2,133,311.77	2,858,343.94	36.8617046	-107.3709910
2,599.00	6.68	186.34	2,583.76	-233.98	-26.09	2,133,301.12	2,858,342.76	36.8616753	-107.3709952
2,693.00	7.60	183.44	2,677.03	-245.62	-27.06	2,133,289.47	2,858,341.84	36.8616433	-107.3709985
2,788.00	7.99	182.73	2,771.15	-258.49	-27.76	2,133,276.60	2,858,341.21	36.8616080	-107.3710009
2,883.00	7.91	182.83	2,865.24	-271.61	-28.39	2,133,263.48	2,858,340.63	36.8615719	-107.3710031
2,977.00	6.28	182.21	2,958.51	-283.21	-28.91	2,133,251.88	2,858,340.17	36.8615401	-107.3710048
3,071.00	6.42	179.13	3,051.94	-293.60	-29.03	2,133,241.48	2,858,340.10	36.8615115	-107.3710052
3,166.00	6.11	179.74	3,146.37	-303.97	-28.92	2,133,231.12	2,858,340.26	36.8614831	-107.3710049
3,261.00	6.50	181.51	3,240.80	-314.40	-29.04	2,133,220.69	2,858,340.19	36.8614544	-107.3710053
3,355.00	6.59	181.68	3,334.18	-325.11	-29.34	2,133,209.97	2,858,339.94	36.8614250	-107.3710063
3,450.00	6.11	186.17	3,428.60	-335.59	-30.05	2,133,199.49	2,858,339.29	36.8613962	-107.3710087
3,544.00	5.80	188.54	3,522.09	-345.26	-31.29	2,133,189.82	2,858,338.09	36.8613697	-107.3710130
3,567.00	5.80	188.98	3,544.98	-347.55	-31.64	2,133,187.52	2,858,337.75	36.8613634	-107.3710142
3,681.00	5.40	190.47	3,658.43	-358.52	-33.52	2,133,176.55	2,858,335.93	36.8613332	-107.3710206
3,776.00	5.19	184.85	3,753.03	-367.20	-34.69	2,133,167.86	2,858,334.80	36.8613094	-107.3710246
3,870.00	4.88	184.58	3,846.66	-375.42	-35.37	2,133,159.64	2,858,334.16	36.8612868	-107.3710269
3,965.00	5.32	183.79	3,941.29	-383.84	-35.98	2,133,151.21	2,858,333.58	36.8612637	-107.3710290
4,060.00	5.01	180.98	4,035.90	-392.38	-36.35	2,133,142.67	2,858,333.26	36.8612402	-107.3710303
4,154.00	5.80	181.24	4,129.48	-401.24	-36.52	2,133,133.82	2,858,333.13	36.8612159	-107.3710309
4,249.00	5.71	182.21	4,224.00	-410.76	-36.81	2,133,124.29	2,858,332.89	36.8611898	-107.3710318
4,343.00	4.88	181.95	4,317.60	-419.43	-37.12	2,133,115.62	2,858,332.62	36.8611659	-107.3710329
4,437.00	5.32	184.23	4,411.23	-427.77	-37.58	2,133,107.28	2,858,332.20	36.8611430	-107.3710345
4,532.00	6.59	186.25	4,505.71	-437.58	-38.50	2,133,097.46	2,858,331.33	36.8611161	-107.3710376
4,627.00	5.41	184.76	4,600.19	-447.46	-39.46	2,133,087.58	2,858,330.41	36.8610889	-107.3710409
4,721.00	5.71	181.42	4,693.75	-456.55	-39.95	2,133,078.48	2,858,329.97	36.8610640	-107.3710426
4,816.00	6.68	176.23	4,788.20	-466.79	-39.70	2,133,068.25	2,858,330.27	36.8610358	-107.3710417
4,910.00	5.58	173.33	4,881.66	-476.78	-38.81	2,133,058.26	2,858,331.21	36.8610084	-107.3710387
5,005.00	5.71	172.54	4,976.20	-486.06	-37.66	2,133,048.99	2,858,332.40	36.8609829	-107.3710348
5,100.00	6.20	176.76	5,070.68	-495.87	-36.76	2,133,039.19	2,858,333.35	36.8609560	-107.3710317
5,194.00	5.19	179.22	5,164.22	-505.19	-36.41	2,133,029.87	2,858,333.74	36.8609304	-107.3710305
5,289.00	5.41	181.51	5,258.81	-513.96	-36.47	2,133,021.09	2,858,333.73	36.8609063	-107.3710307
5,384.00	6.68	184.58	5,353.28	-523.94	-37.03	2,133,011.11	2,858,333.22	36.8608789	-107.3710326
5,478.00	6.59	186.43	5,446.65	-534.75	-38.07	2,133,000.29	2,858,332.23	36.8608492	-107.3710362
5,573.00	6.02	187.92	5,541.08	-545.10	-39.37	2,132,989.94	2,858,330.98	36.8608207	-107.3710406
5,636.00	5.89	188.63	5,603.74	-551.57	-40.31	2,132,983.46	2,858,330.07	36.8608030	-107.3710438
5,699.00	5.41	191.88	5,666.43	-557.67	-41.40	2,132,977.36	2,858,329.01	36.8607862	-107.3710476
5,762.00	5.01	198.65	5,729.17	-563.19	-42.90	2,132,971.84	2,858,327.54	36.8607711	-107.3710526
5,825.00	4.39	204.27	5,791.96	-567.99	-44.77	2,132,967.02	2,858,325.69	36.8607579	-107.3710590
5,888.00	4.48	198.65	5,854.77	-572.52	-46.54	2,132,962.48	2,858,323.94	36.8607454	-107.3710651
5,951.00	4.61	198.82	5,917.57	-577.25	-48.15	2,132,957.75	2,858,322.36	36.8607324	-107.3710706
6,014.00	4.39	204.36	5,980.38	-581.84	-49.96	2,132,953.15	2,858,320.57	36.8607198	-107.3710768
6,077.00	4.22	209.63	6,043.20	-586.05	-52.10	2,132,948.92	2,858,318.45	36.8607083	-107.3710841

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey										
Measured			Vertical			Map				
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Map	Map			
(ft)	(°)	(°)	(ft)	(ft)	(ft)	Northing	Easting	Latitude	Longitude	
						(usft)	(usft)			
6,140.00	4.09	206.73	6,106.04	-590.07	-54.26	2,132,944.89	2,858,316.31	36.8606972	-107.3710915	
6,203.00	3.91	208.05	6,168.88	-593.98	-56.28	2,132,940.98	2,858,314.31	36.8606865	-107.3710984	
6,266.00	3.60	208.31	6,231.75	-597.61	-58.22	2,132,937.33	2,858,312.38	36.8606765	-107.3711050	
6,329.00	3.38	208.31	6,294.63	-600.99	-60.04	2,132,933.95	2,858,310.58	36.8606672	-107.3711113	
6,365.00	3.30	212.97	6,330.57	-602.79	-61.11	2,132,932.14	2,858,309.52	36.8606623	-107.3711149	
6,446.00	2.40	207.86	6,411.47	-606.25	-63.17	2,132,928.68	2,858,307.47	36.8606528	-107.3711220	
6,541.00	3.81	197.20	6,506.33	-611.02	-65.04	2,132,923.89	2,858,305.63	36.8606397	-107.3711283	
6,636.00	4.88	184.54	6,601.06	-618.07	-66.29	2,132,916.84	2,858,304.41	36.8606203	-107.3711326	
6,730.00	5.69	187.74	6,694.66	-626.67	-67.23	2,132,908.24	2,858,303.51	36.8605967	-107.3711358	
6,824.00	11.70	154.19	6,787.59	-639.89	-63.71	2,132,895.04	2,858,307.10	36.8605604	-107.3711238	
6,919.00	17.75	135.79	6,879.47	-658.97	-49.39	2,132,876.03	2,858,321.51	36.8605080	-107.3710749	
7,013.00	24.25	129.79	6,967.19	-681.62	-24.54	2,132,853.50	2,858,346.47	36.8604458	-107.3709899	
7,108.00	31.75	121.59	7,051.04	-707.24	11.81	2,132,828.05	2,858,382.94	36.8603754	-107.3708657	
7,202.00	39.35	112.22	7,127.52	-731.52	60.57	2,132,804.00	2,858,431.82	36.8603087	-107.3706990	
7,297.00	46.54	102.04	7,197.10	-750.15	122.33	2,132,785.68	2,858,493.67	36.8602575	-107.3704879	
7,392.00	56.66	99.61	7,256.04	-764.00	195.37	2,132,772.18	2,858,566.78	36.8602195	-107.3702382	
7,486.00	64.57	95.02	7,302.15	-774.29	276.53	2,132,762.28	2,858,647.98	36.8601912	-107.3699608	
7,581.00	74.39	91.37	7,335.41	-779.15	365.24	2,132,757.85	2,858,736.72	36.8601779	-107.3696575	
7,675.00	83.10	89.49	7,353.75	-779.82	457.34	2,132,757.63	2,858,828.82	36.8601760	-107.3693427	
7,770.00	89.93	88.83	7,359.52	-778.43	552.09	2,132,759.48	2,858,923.57	36.8601798	-107.3690188	
7,803.00	89.88	88.89	7,359.57	-777.77	585.09	2,132,760.29	2,858,956.56	36.8601816	-107.3689061	
RU 745H POE @ 7803' MD										
7,865.00	89.80	89.00	7,359.74	-776.63	647.08	2,132,761.73	2,859,018.54	36.8601848	-107.3686942	
7,959.00	89.23	86.90	7,360.54	-773.27	741.01	2,132,765.55	2,859,112.45	36.8601940	-107.3683731	
8,054.00	89.19	87.16	7,361.85	-768.35	835.87	2,132,770.93	2,859,207.29	36.8602075	-107.3680488	
8,148.00	89.43	87.50	7,362.98	-763.97	929.76	2,132,775.76	2,859,301.16	36.8602195	-107.3677279	
8,243.00	89.02	88.03	7,364.26	-760.27	1,024.68	2,132,779.93	2,859,396.06	36.8602297	-107.3674034	
8,337.00	89.23	88.13	7,365.70	-757.12	1,118.62	2,132,783.53	2,859,489.98	36.8602383	-107.3670823	
8,432.00	88.52	88.43	7,367.56	-754.27	1,213.56	2,132,786.84	2,859,584.90	36.8602462	-107.3667578	
8,526.00	90.20	87.90	7,368.61	-751.26	1,307.50	2,132,790.31	2,859,678.83	36.8602544	-107.3664367	
8,621.00	90.10	88.38	7,368.37	-748.17	1,402.45	2,132,793.85	2,859,773.76	36.8602629	-107.3661121	
8,716.00	90.00	88.43	7,368.28	-745.53	1,497.41	2,132,796.96	2,859,868.71	36.8602701	-107.3657875	
8,810.00	89.16	88.52	7,368.97	-743.03	1,591.37	2,132,799.91	2,859,962.66	36.8602770	-107.3654663	
8,904.00	90.44	88.82	7,369.30	-740.84	1,685.35	2,132,802.55	2,860,056.62	36.8602829	-107.3651451	
8,999.00	90.17	89.40	7,368.79	-739.37	1,780.33	2,132,804.48	2,860,151.60	36.8602870	-107.3648204	
9,094.00	89.87	89.51	7,368.76	-738.47	1,875.33	2,132,805.85	2,860,246.59	36.8602895	-107.3644957	
9,188.00	91.18	89.76	7,367.90	-737.87	1,969.32	2,132,806.90	2,860,340.57	36.8602911	-107.3641744	
9,283.00	90.94	89.93	7,366.14	-737.61	2,064.30	2,132,807.62	2,860,435.56	36.8602918	-107.3638497	
9,378.00	90.77	89.67	7,364.72	-737.28	2,159.29	2,132,808.41	2,860,530.54	36.8602927	-107.3635250	
9,472.00	90.57	90.15	7,363.62	-737.13	2,253.28	2,132,809.01	2,860,624.53	36.8602930	-107.3632038	
9,567.00	90.17	89.20	7,363.01	-736.59	2,348.28	2,132,810.01	2,860,719.52	36.8602945	-107.3628790	
9,661.00	90.00	89.30	7,362.87	-735.36	2,442.27	2,132,811.70	2,860,813.51	36.8602979	-107.3625578	
9,755.00	90.27	89.36	7,362.65	-734.26	2,536.26	2,132,813.25	2,860,907.49	36.8603009	-107.3622365	
9,850.00	90.13	89.79	7,362.32	-733.56	2,631.26	2,132,814.42	2,861,002.49	36.8603028	-107.3619117	
9,944.00	90.10	90.41	7,362.13	-733.72	2,725.26	2,132,814.71	2,861,096.49	36.8603023	-107.3615904	
10,038.00	90.24	90.63	7,361.85	-734.57	2,819.26	2,132,814.31	2,861,190.48	36.8602999	-107.3612691	
10,132.00	89.76	89.66	7,361.85	-734.81	2,913.25	2,132,814.53	2,861,284.48	36.8602992	-107.3609478	
10,227.00	90.24	89.62	7,361.85	-734.22	3,008.25	2,132,815.58	2,861,379.48	36.8603009	-107.3606231	
10,322.00	89.16	90.05	7,362.35	-733.94	3,103.25	2,132,816.32	2,861,474.47	36.8603016	-107.3602984	
10,416.00	88.92	90.34	7,363.92	-734.26	3,197.24	2,132,816.45	2,861,568.46	36.8603007	-107.3599771	
10,511.00	88.75	90.58	7,365.86	-735.02	3,292.21	2,132,816.15	2,861,663.44	36.8602985	-107.3596525	
10,605.00	88.62	90.51	7,368.01	-735.92	3,386.18	2,132,815.71	2,861,757.41	36.8602961	-107.3593312	
10,700.00	89.70	90.97	7,369.41	-737.15	3,481.16	2,132,814.94	2,861,852.39	36.8602927	-107.3590066	
10,794.00	89.93	91.35	7,369.71	-739.05	3,575.14	2,132,813.50	2,861,946.38	36.8602874	-107.3586853	
10,888.00	89.70	92.55	7,370.01	-742.25	3,669.09	2,132,810.75	2,862,040.34	36.8602786	-107.3583642	

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,983.00	90.91	92.54	7,369.51	-746.46	3,763.99	2,132,806.99	2,862,135.26	36.8602670	-107.3580398
11,078.00	90.34	91.48	7,368.47	-749.80	3,858.92	2,132,804.12	2,862,230.21	36.8602578	-107.3577153
11,172.00	90.57	91.79	7,367.72	-752.48	3,952.88	2,132,801.89	2,862,324.18	36.8602504	-107.3573941
11,266.00	90.50	90.02	7,366.85	-753.96	4,046.86	2,132,800.86	2,862,418.17	36.8602463	-107.3570729
11,360.00	90.54	90.89	7,365.99	-754.71	4,140.86	2,132,800.57	2,862,512.16	36.8602442	-107.3567516
11,455.00	90.00	88.68	7,365.55	-754.35	4,235.85	2,132,801.39	2,862,607.15	36.8602451	-107.3564269
11,549.00	90.03	89.35	7,365.52	-752.74	4,329.83	2,132,803.46	2,862,701.13	36.8602495	-107.3561056
11,644.00	90.13	89.14	7,365.39	-751.49	4,424.82	2,132,805.17	2,862,796.11	36.8602529	-107.3557809
11,738.00	90.00	89.65	7,365.28	-750.49	4,518.82	2,132,806.62	2,862,890.10	36.8602556	-107.3554596
11,832.00	90.10	89.41	7,365.20	-749.72	4,612.82	2,132,807.85	2,862,984.09	36.8602577	-107.3551383
11,927.00	90.10	89.81	7,365.03	-749.08	4,707.81	2,132,808.95	2,863,079.09	36.8602594	-107.3548136
12,021.00	89.66	90.00	7,365.23	-748.92	4,801.81	2,132,809.56	2,863,173.08	36.8602598	-107.3544923
12,116.00	89.56	90.82	7,365.88	-749.60	4,896.81	2,132,809.34	2,863,268.08	36.8602579	-107.3541676
12,210.00	90.37	90.53	7,365.93	-750.71	4,990.80	2,132,808.69	2,863,362.08	36.8602548	-107.3538463
12,305.00	90.03	90.72	7,365.60	-751.74	5,085.79	2,132,808.12	2,863,457.07	36.8602519	-107.3535216
12,400.00	89.66	90.55	7,365.86	-752.80	5,180.79	2,132,807.52	2,863,552.07	36.8602489	-107.3531969
12,494.00	89.36	91.13	7,366.66	-754.17	5,274.77	2,132,806.60	2,863,646.06	36.8602451	-107.3528756
12,588.00	90.14	90.93	7,367.07	-755.86	5,368.76	2,132,805.37	2,863,740.05	36.8602404	-107.3525544
12,682.00	90.61	91.08	7,366.46	-757.51	5,462.74	2,132,804.17	2,863,834.04	36.8602358	-107.3522331
12,777.00	89.97	92.23	7,365.98	-760.26	5,557.70	2,132,801.89	2,863,929.01	36.8602283	-107.3519085
12,871.00	90.07	89.00	7,365.94	-761.26	5,651.68	2,132,801.33	2,864,023.00	36.8602254	-107.3515873
12,966.00	90.00	89.84	7,365.89	-760.30	5,746.67	2,132,802.76	2,864,117.98	36.8602280	-107.3512625
13,060.00	89.93	90.06	7,365.94	-760.22	5,840.67	2,132,803.29	2,864,211.98	36.8602282	-107.3509412
13,155.00	89.46	90.50	7,366.45	-760.68	5,935.67	2,132,803.29	2,864,306.98	36.8602269	-107.3506165
13,250.00	89.46	90.83	7,367.35	-761.79	6,030.66	2,132,802.65	2,864,401.97	36.8602238	-107.3502918
13,344.00	89.22	91.84	7,368.43	-763.98	6,124.63	2,132,800.91	2,864,495.95	36.8602177	-107.3499706
13,439.00	90.47	90.75	7,368.69	-766.12	6,219.60	2,132,799.22	2,864,590.93	36.8602118	-107.3496460
13,533.00	90.47	90.42	7,367.91	-767.08	6,313.59	2,132,798.72	2,864,684.93	36.8602091	-107.3493247
13,628.00	90.51	90.78	7,367.10	-768.08	6,408.58	2,132,798.18	2,864,779.92	36.8602063	-107.3490000
13,723.00	90.27	91.24	7,366.45	-769.75	6,503.56	2,132,796.97	2,864,874.91	36.8602016	-107.3486753
13,817.00	90.47	91.07	7,365.85	-771.65	6,597.54	2,132,795.53	2,864,968.90	36.8601963	-107.3483541
13,912.00	90.91	90.77	7,364.70	-773.17	6,692.52	2,132,794.47	2,865,063.88	36.8601921	-107.3480294
14,007.00	90.61	90.99	7,363.44	-774.63	6,787.50	2,132,793.47	2,865,158.87	36.8601880	-107.3477048
14,101.00	90.00	89.76	7,362.94	-775.25	6,881.50	2,132,793.31	2,865,252.87	36.8601863	-107.3473835
14,195.00	90.00	89.89	7,362.94	-774.96	6,975.50	2,132,794.05	2,865,346.86	36.8601870	-107.3470622
14,290.00	89.70	90.14	7,363.19	-774.99	7,070.50	2,132,794.48	2,865,441.86	36.8601869	-107.3467374
14,384.00	89.39	90.88	7,363.94	-775.82	7,164.49	2,132,794.10	2,865,535.86	36.8601845	-107.3464161
14,479.00	89.53	89.16	7,364.83	-775.85	7,259.48	2,132,794.53	2,865,630.85	36.8601843	-107.3460914
14,574.00	89.70	89.29	7,365.47	-774.57	7,354.47	2,132,796.27	2,865,725.83	36.8601878	-107.3457667
14,668.00	89.63	89.76	7,366.02	-773.79	7,448.47	2,132,797.51	2,865,819.82	36.8601899	-107.3454454
14,763.00	89.66	89.94	7,366.61	-773.54	7,543.46	2,132,798.22	2,865,914.81	36.8601905	-107.3451207
14,857.00	89.33	90.13	7,367.44	-773.60	7,637.46	2,132,798.61	2,866,008.81	36.8601903	-107.3447994
14,952.00	89.19	89.27	7,368.67	-773.10	7,732.45	2,132,799.57	2,866,103.80	36.8601916	-107.3444747
15,046.00	89.60	88.38	7,369.66	-771.17	7,826.42	2,132,801.95	2,866,197.76	36.8601968	-107.3441535
15,141.00	90.87	88.18	7,369.27	-768.32	7,921.38	2,132,805.27	2,866,292.70	36.8602045	-107.3438289
15,235.00	91.40	88.24	7,367.41	-765.39	8,015.31	2,132,808.66	2,866,386.62	36.8602125	-107.3435078
15,330.00	90.57	88.76	7,365.77	-762.90	8,110.27	2,132,811.60	2,866,481.56	36.8602193	-107.3431832
15,424.00	90.47	88.37	7,364.92	-760.55	8,204.23	2,132,814.41	2,866,575.51	36.8602257	-107.3428620
15,518.00	90.92	89.50	7,363.78	-758.80	8,298.21	2,132,816.61	2,866,669.48	36.8602304	-107.3425408
15,613.00	90.51	90.08	7,362.59	-758.45	8,393.20	2,132,817.42	2,866,764.46	36.8602313	-107.3422161
15,708.00	90.40	90.43	7,361.84	-758.87	8,488.19	2,132,817.46	2,866,859.46	36.8602300	-107.3418914
15,802.00	90.30	90.57	7,361.27	-759.70	8,582.19	2,132,817.09	2,866,953.46	36.8602277	-107.3415701
15,897.00	90.00	90.79	7,361.02	-760.82	8,677.18	2,132,816.43	2,867,048.46	36.8602245	-107.3412454
15,991.00	89.66	91.22	7,361.30	-762.47	8,771.17	2,132,815.23	2,867,142.45	36.8602199	-107.3409241
16,086.00	90.58	90.01	7,361.10	-763.49	8,866.16	2,132,814.67	2,867,237.44	36.8602170	-107.3405994

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Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,180.00	90.70	90.33	7,360.05	-763.77	8,960.15	2,132,814.85	2,867,331.44	36.8602162	-107.3402781
16,275.00	90.20	90.81	7,359.30	-764.71	9,055.14	2,132,814.36	2,867,426.43	36.8602135	-107.3399534
16,369.00	90.17	91.25	7,359.00	-766.40	9,149.13	2,132,813.13	2,867,520.42	36.8602088	-107.3396322
16,464.00	90.24	91.74	7,358.66	-768.88	9,244.09	2,132,811.11	2,867,615.40	36.8602019	-107.3393076
16,559.00	90.13	92.82	7,358.35	-772.66	9,339.02	2,132,807.79	2,867,710.34	36.8601914	-107.3389831
16,653.00	90.27	91.84	7,358.02	-776.48	9,432.94	2,132,804.42	2,867,804.28	36.8601808	-107.3386621
16,747.00	90.54	91.45	7,357.36	-779.18	9,526.90	2,132,802.18	2,867,898.25	36.8601733	-107.3383409
16,842.00	90.13	89.90	7,356.80	-780.30	9,621.88	2,132,801.52	2,867,993.24	36.8601702	-107.3380162
16,937.00	89.87	89.25	7,356.80	-779.60	9,716.88	2,132,802.69	2,868,088.23	36.8601720	-107.3376915
17,031.00	89.36	89.27	7,357.43	-778.38	9,810.87	2,132,804.36	2,868,182.22	36.8601753	-107.3373702
17,126.00	89.60	88.65	7,358.30	-776.66	9,905.85	2,132,806.54	2,868,277.19	36.8601799	-107.3370455
17,220.00	90.00	88.54	7,358.63	-774.35	9,999.82	2,132,809.30	2,868,371.14	36.8601861	-107.3367243
17,315.00	90.54	89.70	7,358.18	-772.89	10,094.81	2,132,811.22	2,868,466.12	36.8601901	-107.3363996
17,409.00	90.13	89.61	7,357.63	-772.33	10,188.80	2,132,812.24	2,868,560.11	36.8601915	-107.3360783
17,504.00	90.10	90.18	7,357.44	-772.15	10,283.80	2,132,812.87	2,868,655.11	36.8601919	-107.3357536
17,598.00	89.56	90.44	7,357.72	-772.66	10,377.80	2,132,812.82	2,868,749.11	36.8601904	-107.3354323
17,693.00	90.07	89.84	7,358.02	-772.90	10,472.80	2,132,813.05	2,868,844.11	36.8601897	-107.3351076
17,787.00	89.93	89.60	7,358.02	-772.44	10,566.80	2,132,813.96	2,868,938.10	36.8601908	-107.3347863
17,882.00	89.80	89.96	7,358.25	-772.07	10,661.80	2,132,814.79	2,869,033.10	36.8601917	-107.3344615
17,977.00	89.50	90.38	7,358.83	-772.35	10,756.80	2,132,814.96	2,869,128.10	36.8601909	-107.3341368
18,071.00	89.16	90.41	7,359.93	-773.00	10,850.79	2,132,814.77	2,869,222.09	36.8601890	-107.3338155
18,166.00	89.06	90.94	7,361.40	-774.12	10,945.77	2,132,814.11	2,869,317.08	36.8601858	-107.3334909
18,261.00	89.93	90.36	7,362.24	-775.20	11,040.76	2,132,813.50	2,869,412.07	36.8601828	-107.3331662
18,356.00	91.04	90.53	7,361.44	-775.94	11,135.75	2,132,813.22	2,869,507.06	36.8601806	-107.3328415
18,450.00	90.81	90.95	7,359.92	-777.15	11,229.73	2,132,812.46	2,869,601.05	36.8601772	-107.3325202
18,545.00	90.84	90.98	7,358.55	-778.75	11,324.71	2,132,811.32	2,869,696.03	36.8601727	-107.3321956
18,639.00	90.71	90.70	7,357.28	-780.13	11,418.69	2,132,810.40	2,869,790.02	36.8601688	-107.3318743
18,734.00	90.10	91.27	7,356.61	-781.76	11,513.67	2,132,809.22	2,869,885.01	36.8601642	-107.3315497
18,828.00	89.90	91.10	7,356.61	-783.70	11,607.65	2,132,807.73	2,869,978.99	36.8601588	-107.3312284
18,923.00	89.80	90.84	7,356.86	-785.31	11,702.64	2,132,806.59	2,870,073.99	36.8601542	-107.3309038
19,017.00	90.84	90.57	7,356.33	-786.47	11,796.63	2,132,805.88	2,870,167.98	36.8601509	-107.3305825
19,112.00	90.71	90.69	7,355.05	-787.51	11,891.61	2,132,805.30	2,870,262.97	36.8601480	-107.3302578
19,206.00	90.64	91.32	7,353.94	-789.16	11,985.59	2,132,804.11	2,870,356.96	36.8601433	-107.3299366
19,301.00	90.44	89.88	7,353.04	-790.16	12,080.58	2,132,803.57	2,870,451.95	36.8601405	-107.3296119
19,395.00	90.30	89.74	7,352.44	-789.84	12,174.57	2,132,804.34	2,870,545.94	36.8601412	-107.3292906
19,490.00	89.87	90.24	7,352.29	-789.83	12,269.57	2,132,804.81	2,870,640.94	36.8601412	-107.3289658
19,584.00	89.53	90.60	7,352.79	-790.52	12,363.57	2,132,804.58	2,870,734.94	36.8601392	-107.3286445
19,679.00	89.23	91.39	7,353.81	-792.17	12,458.55	2,132,803.39	2,870,829.92	36.8601345	-107.3283199
19,774.00	89.56	90.51	7,354.82	-793.74	12,553.53	2,132,802.28	2,870,924.91	36.8601301	-107.3279952
19,868.00	90.20	90.47	7,355.01	-794.55	12,647.53	2,132,801.93	2,871,018.91	36.8601277	-107.3276739
19,963.00	89.93	90.41	7,354.91	-795.28	12,742.52	2,132,801.66	2,871,113.91	36.8601256	-107.3273492
20,058.00	89.46	90.81	7,355.41	-796.29	12,837.52	2,132,801.11	2,871,208.90	36.8601227	-107.3270245
20,152.00	90.17	89.74	7,355.72	-796.74	12,931.51	2,132,801.11	2,871,302.90	36.8601214	-107.3267032
20,246.00	90.37	90.34	7,355.27	-796.80	13,025.51	2,132,801.50	2,871,396.90	36.8601211	-107.3263819
20,341.00	90.13	90.17	7,354.86	-797.23	13,120.51	2,132,801.54	2,871,491.90	36.8601198	-107.3260572
20,436.00	89.80	90.43	7,354.92	-797.72	13,215.51	2,132,801.50	2,871,586.90	36.8601183	-107.3257324
20,530.00	89.63	90.41	7,355.38	-798.41	13,309.50	2,132,801.27	2,871,680.90	36.8601163	-107.3254111
20,625.00	89.26	90.91	7,356.30	-799.51	13,404.49	2,132,800.63	2,871,775.89	36.8601131	-107.3250865
20,719.00	89.83	91.00	7,357.05	-801.07	13,498.48	2,132,799.52	2,871,869.88	36.8601087	-107.3247652
20,814.00	89.53	91.38	7,357.58	-803.05	13,593.45	2,132,798.01	2,871,964.86	36.8601032	-107.3244405
20,909.00	89.53	91.00	7,358.36	-805.02	13,688.43	2,132,796.49	2,872,059.85	36.8600976	-107.3241159
21,004.00	89.70	91.17	7,359.00	-806.82	13,783.41	2,132,795.16	2,872,154.84	36.8600926	-107.3237912
21,098.00	89.16	91.82	7,359.93	-809.27	13,877.37	2,132,793.16	2,872,248.81	36.8600857	-107.3234701
21,145.00	88.96	91.92	7,360.71	-810.80	13,924.34	2,132,791.85	2,872,295.79	36.8600814	-107.3233095
RU 745H FPP @ 21145' MD									

SDT
Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #745H - Slot A5
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Well:	Rosa Unit #745H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
21,193.00	88.75	92.02	7,361.67	-812.45	13,972.30	2,132,790.44	2,872,343.75	36.8600768	-107.3231456
21,220.00	88.72	92.11	7,362.26	-813.43	13,999.28	2,132,789.59	2,872,370.74	36.8600741	-107.3230534
21,290.00	88.72	92.11	7,363.83	-816.00	14,069.21	2,132,787.36	2,872,440.68	36.8600669	-107.3228143
BHL @ 21290' MD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RU 745H SHL - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	2,133,535.22	2,858,367.71	36.8623180	-107.3709060
RU 745H Actual POE - actual wellpath hits target center - Point	0.00	0.00	7,359.57	-777.77	585.09	2,132,760.29	2,858,956.56	36.8601816	-107.3689061
RU 745H Actual FPP - actual wellpath hits target center - Point	0.00	0.00	7,360.71	-810.80	13,924.34	2,132,791.85	2,872,295.79	36.8600814	-107.3233095
RU 745H BHL - actual wellpath hits target center - Point	0.00	0.00	7,363.83	-816.00	14,069.21	2,132,787.36	2,872,440.68	36.8600669	-107.3228143
RU 745H PBHL - actual wellpath misses target center by 12.57ft at 21290.00ft MD (7363.83 TVD, -816.00 N, 14069.21 E) - Point	0.00	0.00	7,366.00	-805.43	14,075.67	2,132,797.96	2,872,447.08	36.8600960	-107.3227922

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,803.00	7,359.57	-777.77	585.09	RU 745H POE @ 7803' MD	
21,145.00	7,360.71	-810.80	13,924.34	RU 745H FPP @ 21145' MD	
21,290.00	7,363.83	-816.00	14,069.21	BHL @ 21290' MD	

Checked By: _____

Approved By: _____

Date: _____

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: December 31, 2024
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. NMSF078773
		6. If Indian, Allottee or Tribe Name

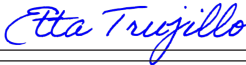
SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		8. Well Name and No. ROSA UNIT 745H
2. Name of Operator LOGOS OPERATING, LLC		9. API Well No. 30-039-31431
3a. Address 2010 AFTON PLACE FARMINGTON, NM 87401	3b. Phone No. (include area code) (505) 278-8720	10. Field and Pool or Exploratory Area BLANCO MANCOS
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 33 T31N R05W NENW (C) 378 FNL 1686'FWL		11. Country or Parish, State RIO ARriba COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☒ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Completions
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

1413. 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.)

8/4/2023 - MIRU WL. Run CBL (TOC @ 1,486'). RDMO
8/11 - 9/10/2023 - MIRU. Open toe sleeves @ 21,142' - 21,145' & 21,100' - 21,103' (48perfs). RU Frac. Frac'd stage 1 w/229,460 lbs Proppant, 100 mesh, 40/70 sand, 9,373bbl slickwater. Set DFP @ 21,085'. PU fire gun. Perf intervals @ 21,069' - 7,803' w/5 & 6 SPF, .38" Dia, 60 phasing, Total of 3,192 perfs.. Frac'd w/29,505,552 lbs Proppant, 100mesh & 40/70 sand, 781,116bbls slickwater. RIH set kill plug @ 7778'. PT to 6500psi. POOH. Well secured.
10/10 - 10/12/2023 - MIRU CTU. DO kill plug @ 7,778'. Circulate, CO & DO composite frac plugs. POOH w/2-3/8" CT and drill out BHA. Well secured. RDMO CTU & all equipment.

Per the approved operations plan, the 2-7/8", 6.5#, J-55, EUE tubing will be run once volumes and pressures decline and could be close to a year after the well is brought online.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Etta Trujillo	Title Regulatory Specialist
Signature 	Date 12/05/2023

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	

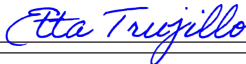
Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: December 31, 2024
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No. NMSF078773
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No. NMNM78407E
1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		8. Well Name and No. ROSA UNIT 745H
2. Name of Operator LOGOS OPERATING, LLC		9. API Well No. 30-039-31431
3a. Address 2010 AFTON PLACE FARMINGTON, NM 87401	3b. Phone No. (include area code) (505) 278-8720	10. Field and Pool or Exploratory Area BASIN MANCOS
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 33 T31N R05W NENW (C) 378' FNL 1686' FWL		11. Country or Parish, State RIO ARRIBA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☒ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

113. 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 recompleate 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 perfonned 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 detennined that the site is ready for final inspection.)

First delivery date: 10/16/2023
TP: 0 CP: 2458
Initial MCF: 1212 MCF

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Etta Trujillo	Title Regulatory Specialist
Signature 	Date 10/30/2023

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

(Instructions on page 2)

From: blm-afmss-notifications@blm.gov
To: [Etta Trujillo](#)
Subject: Well Name: ROSA UNIT, Well Number: 745H, Notification of Well Completion Acceptance
Date: Wednesday, December 6, 2023 2:08:07 PM

The Bureau of Land Management

Notice of Acceptance for Well Completion Report

- Operator Name: **LOGOS OPERATING LLC**
- Well Name: **ROSA UNIT**
- Well Number: **745H**
- US Well Number: **3003931431**
- Well Completion Report Id: **WCR2023120690393**

This notification is automatically generated. Please do not reply to this message as this account is not monitored.

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 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				Form C-105 Revised April 3, 2017				
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)						5. Lease Name or Unit Agreement Name ROSA UNIT 6. Well Number: 745H				
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER										
8. Name of Operator LOGOS OPERATING, LLC						9. OGRID 289408				
10. Address of Operator 2010 AFTON PLACE, FARMINGTON, NM 87401						11. Pool name or Wildcat BASIN MANCOS				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	C	33	31N	R05W		378'	FNL	1686'	FWL	RIO ARRIBA
BH:	A	35	31N	R05W		1202'	FNL	70'	FEL	RIO ARRIBA
13. Date Spudded 6/15/2023	14. Date T.D. Reached 7/16/2023		15. Date Rig Released 6/9/2023		16. Date Completed (Ready to Produce) 10/12/2023		17. Elevations (DF and RKB, RT, GR, etc.) 6492'			
18. Total Measured Depth of Well 21,290' MD / 7,364' TVD			19. Plug Back Measured Depth 21,184' MD / 7,364' TVD		20. Was Directional Survey Made? Y		21. Type Electric and Other Logs Run CBL			
22. Producing Interval(s), of this completion - Top, Bottom, Name BASIN MANCOS (7360' – 7361') TVD										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
20"		94.0#		386' (GL)		26"		835 sks		Circ 46bbls to surface
13-3/8"		61.0#		3618'		17.5"		2405 sks		Circ 40bbls to surface
9-5/8"		47.0#		6411'		12.25"		3394 sks		40bbls (DV tool @ 4832' & 3680')
5-1/2"		20.0#		21,266'		8.5"		2934 sks		TOC @ 1486' (CBL)
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		SIZE	DEPTH SET		PACKER SET	
						Pending				
26. Perforation record (interval, size, and number) 21,145' MD to 7,803' MD, 0.38" , 5 & 6SPF, 3240 total holes						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						21,145' MD - 7,803' MD		Frac'd 68 stages of 29,735,012lbs Proppant, 790,489bbls of Slickwater and 40/70 sand/100# mesh		
28. PRODUCTION										
Date First Production 10/16/2023		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) <i>Flowing</i>				Well Status (<i>Prod. or Shut-in</i>) <i>Producing</i>				
Date of Test 10/17/2023	Hours Tested 12hrs	Choke Size 14/64	Prod'n For Test Period	Oil - Bbl n/a	Gas - MCF 929 mcf	Water - Bbl. 564 bbls	Gas - Oil Ratio n/a			
Flow Tubing Press. n/a	Casing Pressure 2428	Calculated 24-Hour Rate	Oil - Bbl. n/a	Gas - MCF 1,524 mcf	Water - Bbl. 806 bbls	Oil Gravity - API - (<i>Corr.</i>) n/a				
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) <i>SOLD</i>								30. Test Witnessed By		
31. List Attachments										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.								33. Rig Release Date:		
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude _____ Longitude _____ NAD83										
<i>I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief</i>										
Signature <i>Etta Trujillo</i>			Name Etta Trujillo			Title Regulatory Specialist			Date 12/6/2023	
E-mail Address etrujillo@logosresourcesllc.com										

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo 2692'	T. Penn A"
T. Salt	T. Strawn	T. Kirtland 2815'	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland 3172'	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs 3570'	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House 5604'	T. Leadville
T. Queen	T. Silurian	T. Menefee 5639'	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout 5938'	T. Elbert
T. San Andres	T. Simpson	T. Mancos 6321'	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T. Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T. Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs	T. Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

No. 1, from.....to.....

No. 2, from.....to.....

No. 3, from.....to.....

No. 4, from.....to.....

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

From	To	Thickness In Feet	Lithology

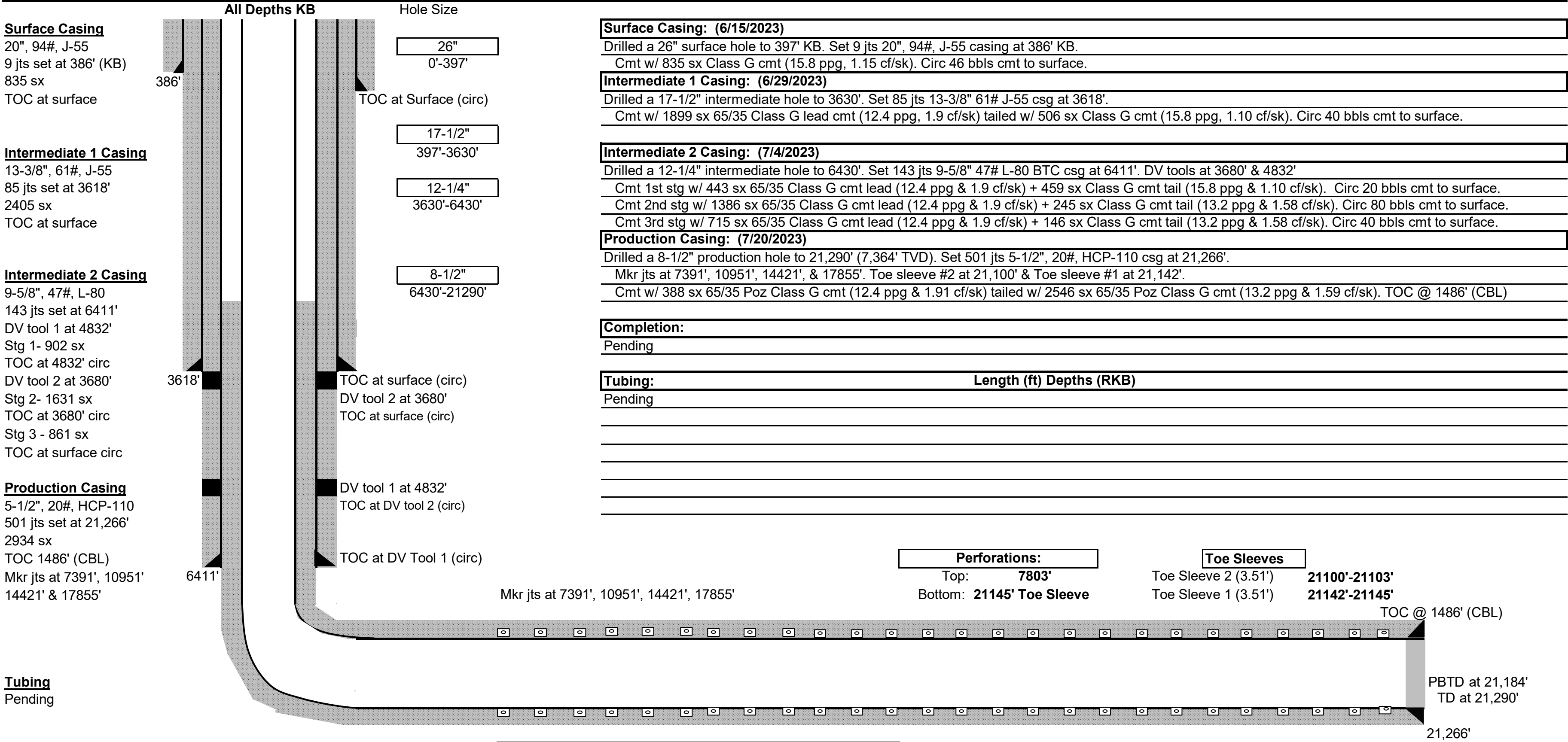


Wellbore Schematic

Well Name: Rosa Unit 745H
Location: C - Sec 33, T31N, R05W, 378' FNL, 1686' FW
County: Rio Arriba, NM
API #: 30-039-31431
Co-ordinates: 36.862318, -107.370906 NAD83
Operator: LOGOS Operating, LLC

Ground Elevation: 6492'
KB Elevation: 6522'
TD (TVD): 7364'
TD (MD): 21,290'
PBDT (MD): 21,184'

Prepared By: 7/25/2023 Moss
Reviewed By: 8/8/2023 chr
Last Updated: 9/15/2023 Gomez
Spud Date: 6/15/2023
Completion Date:
Last Workover Date:



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

ACKNOWLEDGMENTS

Action 320241

ACKNOWLEDGMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 320241
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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 320241

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 320241
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report within 10 days to NMOCD after BLM approval.	3/6/2024