

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 RT - Test Allowable	
⁴ API Number 30 – 039-31423	⁵ Pool Name Basin Mancos		⁶ Pool Code 97232
⁷ Property Code 32608	⁸ Property Name Rosa Unit		⁹ Well Number 744H

II. ¹⁰ Surface Location

UL or lot no. C	Section 33	Township 31N	Range 5W	Lot Idn	Feet from the 349	North/South Line North	Feet from the 1683	East/West line West	County Rio Arriba
--------------------	---------------	-----------------	-------------	---------	----------------------	---------------------------	-----------------------	------------------------	----------------------

¹¹ Bottom Hole Location

UL or lot no. A	Section 35	Township 31N	Range 5W	Lot Idn	Feet from the 203	North/South line North	Feet from the 65	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

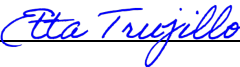
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
373888	Harvest Four Corners, LLC 1755 Arroyo Dr. Bloomfield, NM 87413	G

IV. Well Completion Data

²¹ Spud Date 4/15/2023	²² Ready Date ~10/16/2023	²³ TD 20,807' MD / 7,074' TVD	²⁴ PBDT 20,690' MD / 7,074' TVD	²⁵ Perforations 7,496' MD / 20,647'MD 7,101' TVD / 7,073'TVD	²⁶ DHC, MC R-13457	
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set		³⁰ Sacks Cement
26"		21", 94#, J-55		366'		764sx (156bbbls, 878.6cf)
17.5"		13-3/8", 61#, J-55		3644'		2700sx (847bbbls, 4755cf)
12.25"		9-5/8", 47#, L-80		6384'		2077sx (624bbbls, 3503cf) DV tool @ 4834' TOC @ 2950'
8.5"		5-1/2", 20#, P-110		20,784'		3013sx (877bbbls, 4926cf) TOC @ 2,823'
		2-7/8", 6.5#, J-55		pending		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date ~10/16/2023	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method

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: <i>PATRICIA MARTINEZ</i>	
Title: Regulatory Specialist		Title: <i>PETROLEUM SPECIALIST</i>	
E-mail Address: etrujillo@logosresourcesllc.com		Approval Date: <i>10/16/2023</i>	
Date: 10/13/2023	Phone: (505) 324-4154	<i>RT EXPIRES 1/16/2024</i>	

1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

Energy, Minerals & Natural Resources Department

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505☐ AMENDED REPORT

AS-DRILLED WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31423	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 320608	⁵ Property Name ROSA UNIT	⁶ Well Number 744H
⁷ GRID No. 289408	⁸ Operator Name LOGOS OPERATING, LLC	⁹ Elevation 6492'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	33	31N	5W		349	NORTH	1683	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	35	31N	5W		203	NORTH	65	EAST	RIO ARriba

¹² Dedicated Acres 1920.00	S/2 - Sections 26, 27 & 28 N/2 - Sections 33, 34 & 35	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13457
--	--	-------------------------------	----------------------------------	------------------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Etta Trujillo 10/13/2023
Signature Date

Printed Name
E-mail Address
etrujillo@logosresourcesllc.com

18 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.

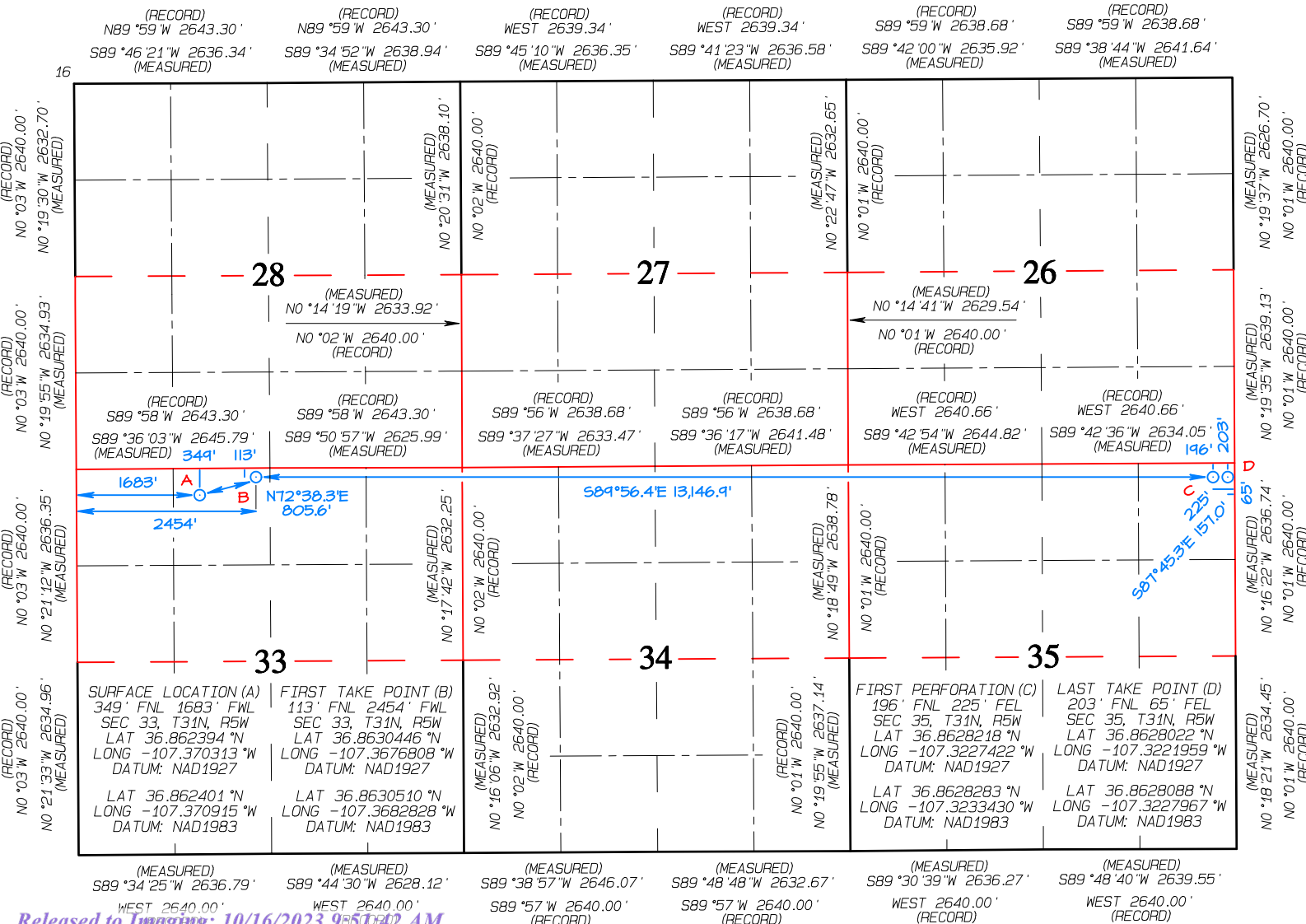
Date Revised: OCTOBER 13, 2023
Date of Survey: APRIL 21, 2016

Signature and Seal of Professional Surveyor



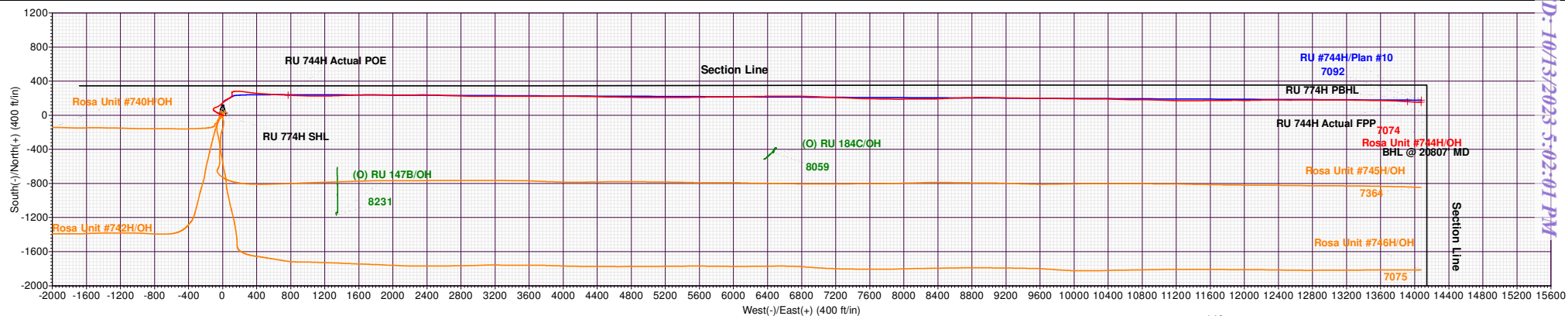
JASON C. EDWARDS
Certificate Number 15269

16



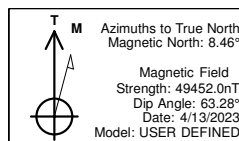


County: Rio Arriba, NM NAD83
 Site: Rosa Unit 31
 Well: Rosa Unit #744H
 Depth Reference: GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
 Rig: H&P 530
 Plan: OH
 Job #: 15947

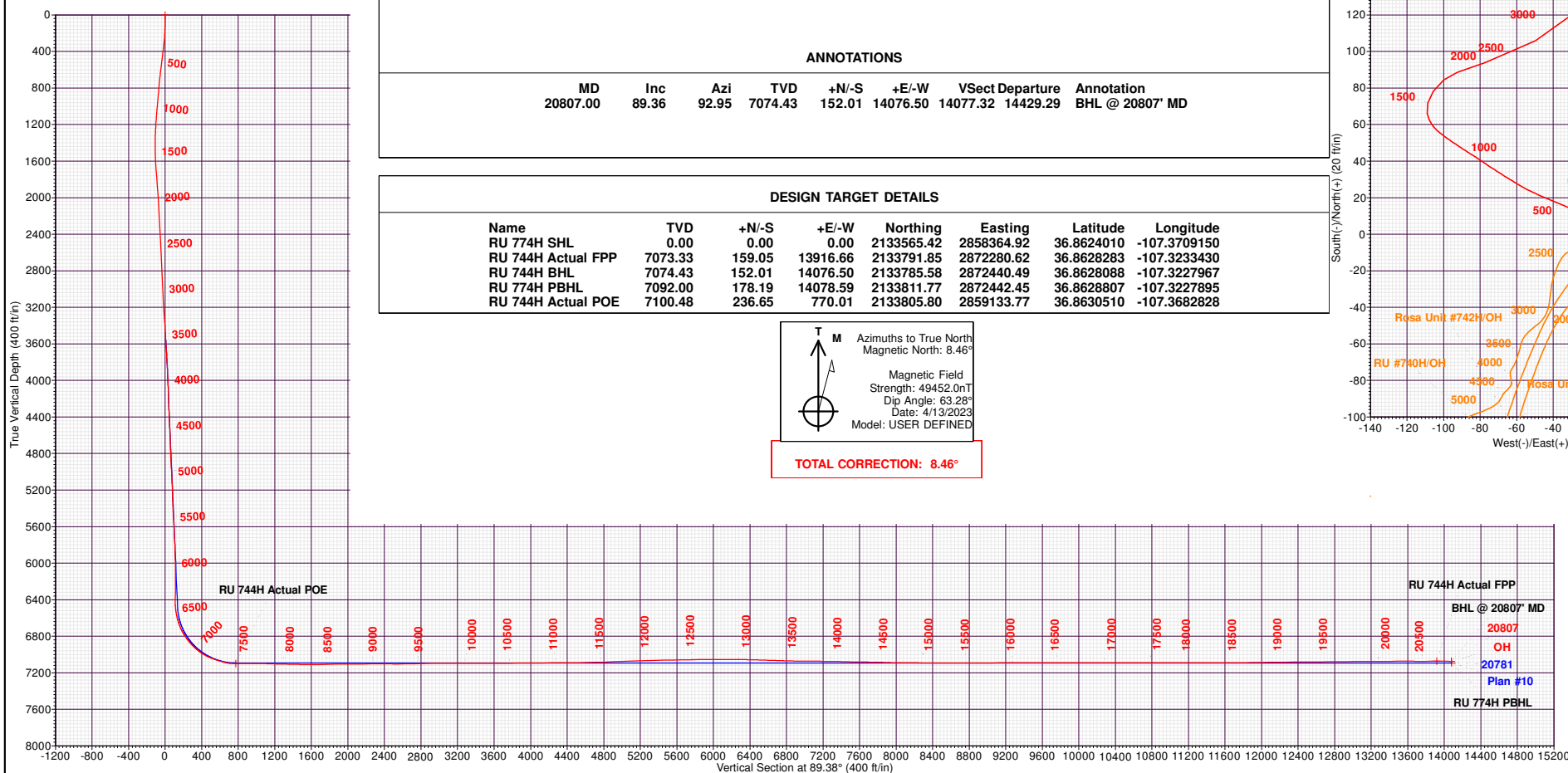
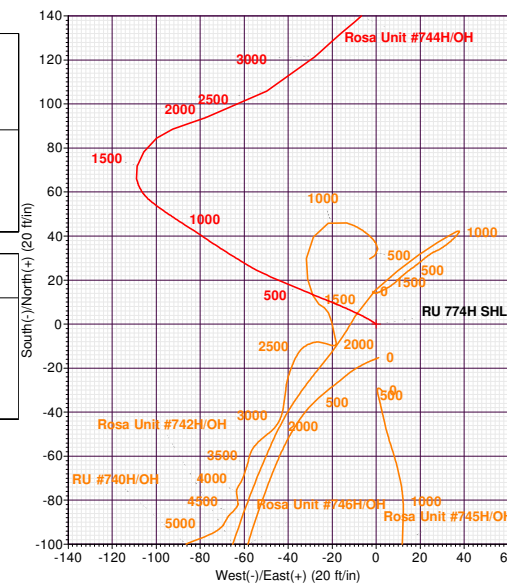


ANNOTATIONS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect Departure	Annotation
20807.00	89.36	92.95	7074.43	152.01	14076.50	14077.32 14429.29	BHL @ 20807' MD

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RU 774H SHL	0.00	0.00	0.00	2133565.42	2858364.92	36.8624010	-107.3709150
RU 744H Actual FPP	7073.33	159.05	13916.66	2133791.85	2872280.62	36.8628283	-107.3233430
RU 744H BHL	7074.43	152.01	14076.50	2133785.58	2872440.49	36.8628088	-107.3227967
RU 774H PBHL	7092.00	178.19	14078.59	2133811.77	2872442.45	36.8628807	-107.3227895
RU 744H Actual POE	7100.48	236.65	770.01	2133805.80	2859133.77	36.8630510	-107.3682828



TOTAL CORRECTION: 8.46°



Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #744H - Slot A3

OH

Design: OH

Standard Survey Report

13 October, 2023

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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 #744H - Slot A3					
Well Position	+N/-S	0.00 ft	Northing:	2,133,565.42 usft	Latitude:	36.8624010
	+E/-W	0.00 ft	Easting:	2,858,364.92 usft	Longitude:	-107.3709150
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)
	User Defined	4/13/2023	8.46	63.28	49,452.00000000

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	89.38	

Survey Program	Date	8/19/2023			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
100.00	3,000.00	Survey #1 (OH)	A020Ga_GYRO-NS	OWSG Gyrocompass Gyro	
3,048.00	20,739.00	Survey #2 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	
20,807.00	20,807.00	Survey #3 (OH)	Project	Projection	

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	1.36	304.29	99.99	0.67	-0.98	-0.97	1.36	1.36	0.00	
200.00	3.24	299.25	199.91	2.72	-4.43	-4.40	1.89	1.88	-5.04	
300.00	5.87	294.45	299.58	6.22	-11.55	-11.48	2.66	2.63	-4.80	
400.00	8.32	291.98	398.81	11.04	-22.91	-22.79	2.47	2.45	-2.47	
500.00	7.57	292.97	497.85	16.32	-35.69	-35.51	0.76	-0.75	0.99	
600.00	7.59	293.03	596.97	21.47	-47.83	-47.60	0.02	0.02	0.06	
700.00	6.98	301.15	696.17	27.20	-59.11	-58.81	1.20	-0.61	8.12	

SDT

Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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)
800.00	5.33	302.29	795.59	32.83	-68.24	-67.88	1.65	-1.65	1.14
900.00	6.24	303.98	895.08	38.34	-76.67	-76.25	0.93	0.91	1.69
1,000.00	6.76	302.76	994.44	44.57	-86.13	-85.64	0.54	0.52	-1.22
1,100.00	5.27	303.60	1,093.88	50.29	-94.90	-94.35	1.49	-1.49	0.84
1,200.00	4.73	308.82	1,193.50	55.42	-101.94	-101.33	0.71	-0.54	5.22
1,300.00	3.58	329.05	1,293.24	60.68	-106.76	-106.10	1.85	-1.15	20.23
1,400.00	3.08	348.31	1,393.08	65.99	-108.91	-108.19	1.22	-0.50	19.26
1,500.00	3.67	14.35	1,492.91	71.72	-108.66	-107.88	1.62	0.59	26.04
1,600.00	4.77	32.88	1,592.64	78.32	-105.61	-104.76	1.74	1.10	18.53
1,700.00	5.09	52.51	1,692.28	84.51	-99.83	-98.91	1.71	0.32	19.63
1,800.00	4.63	70.11	1,791.92	88.58	-92.51	-91.55	1.55	-0.46	17.60
1,900.00	4.44	71.12	1,891.61	91.21	-85.06	-84.07	0.21	-0.19	1.01
2,000.00	4.65	69.63	1,991.30	93.87	-77.59	-76.58	0.24	0.21	-1.49
2,500.00	2.32	61.18	2,490.34	105.80	-49.72	-48.58	0.48	-0.47	-1.69
3,000.00	3.86	50.05	2,989.60	121.49	-27.95	-26.64	0.33	0.31	-2.23
3,048.00	3.87	49.23	3,037.49	123.59	-25.49	-24.15	0.12	0.02	-1.71
3,143.00	3.95	45.96	3,132.27	127.95	-20.71	-19.33	0.25	0.08	-3.44
3,237.00	4.44	51.16	3,226.02	132.49	-15.55	-14.12	0.66	0.52	5.53
3,332.00	5.06	48.85	3,320.69	137.55	-9.53	-8.04	0.68	0.65	-2.43
3,427.00	4.97	47.98	3,415.33	143.06	-3.32	-1.77	0.12	-0.09	-0.92
3,521.00	4.77	45.21	3,508.99	148.54	2.48	4.09	0.33	-0.21	-2.95
3,571.00	5.01	44.76	3,558.81	151.56	5.50	7.13	0.49	0.48	-0.90
3,755.00	4.61	41.42	3,742.16	162.80	16.04	17.80	0.27	-0.22	-1.82
3,850.00	4.09	39.75	3,836.89	168.27	20.74	22.55	0.56	-0.55	-1.76
3,944.00	3.69	46.96	3,930.67	172.91	25.09	26.96	0.67	-0.43	7.67
4,039.00	2.90	69.37	4,025.52	175.85	29.57	31.47	1.57	-0.83	23.59
4,134.00	1.71	75.26	4,120.44	177.06	33.19	35.10	1.28	-1.25	6.20
4,228.00	1.80	77.72	4,214.39	177.73	35.99	37.91	0.12	0.10	2.62
4,323.00	2.59	67.87	4,309.32	178.85	39.44	41.37	0.92	0.83	-10.37
4,417.00	3.30	62.70	4,403.20	180.89	43.81	45.76	0.81	0.76	-5.50
4,512.00	2.59	60.49	4,498.07	183.20	48.11	50.08	0.76	-0.75	-2.33
4,606.00	3.52	46.69	4,591.94	186.23	52.06	54.07	1.25	0.99	-14.68
4,701.00	1.71	54.16	4,686.84	189.06	55.33	57.37	1.93	-1.91	7.86
4,795.00	2.02	59.96	4,780.79	190.71	57.90	59.96	0.39	0.33	6.17
4,890.00	2.90	63.57	4,875.70	192.62	61.50	63.58	0.94	0.93	3.80
4,984.00	3.52	65.50	4,969.55	194.87	66.26	68.36	0.67	0.66	2.05
5,079.00	3.52	64.45	5,064.37	197.34	71.54	73.67	0.07	0.00	-1.11
5,173.00	2.02	65.85	5,158.26	199.26	75.66	77.80	1.60	-1.60	1.49
5,268.00	2.02	64.80	5,253.20	200.66	78.70	80.86	0.04	0.00	-1.11
5,363.00	2.42	59.35	5,348.13	202.40	81.94	84.12	0.48	0.42	-5.74
5,457.00	3.60	59.88	5,442.00	204.89	86.20	88.41	1.26	1.26	0.56
5,647.00	3.38	58.47	5,631.65	210.81	96.13	98.40	0.12	-0.12	-0.74
5,709.00	3.30	54.25	5,693.54	212.81	99.14	101.43	0.42	-0.13	-6.81

SDT

Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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)
5,772.00	3.38	46.87	5,756.43	215.14	101.97	104.28	0.69	0.13	-11.71
5,835.00	3.52	39.22	5,819.32	217.91	104.55	106.89	0.76	0.22	-12.14
5,898.00	3.69	36.59	5,882.19	221.03	106.98	109.36	0.38	0.27	-4.17
5,961.00	4.31	19.09	5,945.04	224.90	108.96	111.38	2.16	0.98	-27.78
6,024.00	4.22	10.92	6,007.87	229.41	110.17	112.64	0.97	-0.14	-12.97
6,086.00	4.70	5.65	6,069.68	234.18	110.85	113.38	1.02	0.77	-8.50
6,149.00	5.01	1.43	6,132.46	239.50	111.18	113.76	0.75	0.49	-6.70
6,212.00	5.32	355.89	6,195.20	245.16	111.04	113.68	0.93	0.49	-8.79
6,275.00	5.49	353.08	6,257.92	251.07	110.46	113.17	0.50	0.27	-4.46
6,336.00	5.32	348.60	6,318.65	256.73	109.55	112.32	0.75	-0.28	-7.34
6,427.00	4.73	345.51	6,409.30	264.50	107.78	110.63	0.71	-0.65	-3.40
6,522.00	7.62	57.62	6,503.86	271.68	112.13	115.05	8.03	3.04	75.91
6,616.00	14.05	74.75	6,596.16	278.03	128.42	131.41	7.58	6.84	18.22
6,711.00	20.94	88.38	6,686.74	281.54	156.56	159.59	8.39	7.25	14.35
6,806.00	31.25	91.65	6,771.95	281.31	198.28	201.30	10.95	10.85	3.44
6,900.00	38.68	96.94	6,848.95	277.06	251.89	254.87	8.53	7.90	5.63
6,994.00	46.87	98.62	6,917.89	268.35	315.07	317.95	8.80	8.71	1.79
7,089.00	54.94	94.96	6,977.76	259.78	388.22	391.00	9.00	8.49	-3.85
7,184.00	65.01	95.19	7,025.23	252.50	470.04	472.74	10.60	10.60	0.24
7,278.00	72.30	93.62	7,059.43	245.81	557.28	559.90	7.91	7.76	-1.67
7,373.00	75.05	91.46	7,086.13	241.79	648.34	650.92	3.62	2.89	-2.27
7,468.00	88.29	92.97	7,099.86	238.14	742.06	744.59	14.02	13.94	1.59
7,562.00	91.28	93.49	7,100.22	232.84	835.90	838.36	3.23	3.18	0.55
7,657.00	90.34	91.63	7,098.87	228.60	930.79	933.20	2.19	-0.99	-1.96
7,751.00	89.40	90.16	7,099.09	227.13	1,024.77	1,027.16	1.86	-1.00	-1.56
7,845.00	88.71	90.90	7,100.64	226.26	1,118.75	1,121.13	1.08	-0.73	0.79
7,940.00	88.19	89.12	7,103.21	226.25	1,213.72	1,216.09	1.95	-0.55	-1.87
8,034.00	88.89	88.05	7,105.60	228.57	1,307.65	1,310.05	1.36	0.74	-1.14
8,128.00	88.49	87.91	7,107.75	231.88	1,401.57	1,403.99	0.45	-0.43	-0.15
8,222.00	89.26	87.94	7,109.60	235.28	1,495.49	1,497.94	0.82	0.82	0.03
8,317.00	90.37	88.62	7,109.90	238.13	1,590.44	1,592.92	1.37	1.17	0.72
8,412.00	90.30	89.84	7,109.35	239.41	1,685.43	1,687.92	1.29	-0.07	1.28
8,506.00	91.68	90.29	7,107.72	239.30	1,779.42	1,781.90	1.54	1.47	0.48
8,601.00	90.87	90.32	7,105.61	238.80	1,874.39	1,876.86	0.85	-0.85	0.03
8,695.00	90.54	90.49	7,104.45	238.13	1,968.38	1,970.84	0.39	-0.35	0.18
8,790.00	89.87	89.88	7,104.11	237.83	2,063.38	2,065.83	0.95	-0.71	-0.64
8,884.00	90.81	89.74	7,103.56	238.14	2,157.38	2,159.82	1.01	1.00	-0.15
8,978.00	90.47	89.66	7,102.51	238.63	2,251.37	2,253.81	0.37	-0.36	-0.09
9,073.00	89.90	89.60	7,102.20	239.24	2,346.37	2,348.81	0.60	-0.60	-0.06
9,168.00	89.36	90.75	7,102.81	238.95	2,441.36	2,443.80	1.34	-0.57	1.21
9,262.00	90.00	91.60	7,103.34	237.03	2,535.34	2,537.75	1.13	0.68	0.90
9,356.00	91.04	92.25	7,102.48	233.87	2,629.28	2,631.65	1.30	1.11	0.69
9,450.00	90.37	92.06	7,101.33	230.34	2,723.21	2,725.53	0.74	-0.71	-0.20
9,545.00	91.88	91.80	7,099.46	227.14	2,818.13	2,820.42	1.61	1.59	-0.27

SDT

Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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)
9,639.00	90.98	91.20	7,097.12	224.68	2,912.07	2,914.32	1.15	-0.96	-0.64
9,734.00	90.54	90.67	7,095.86	223.13	3,007.05	3,009.28	0.73	-0.46	-0.56
9,828.00	90.13	90.45	7,095.31	222.21	3,101.04	3,103.26	0.49	-0.44	-0.23
9,922.00	89.43	89.63	7,095.67	222.14	3,195.04	3,197.25	1.15	-0.74	-0.87
10,017.00	90.00	89.93	7,096.14	222.51	3,290.04	3,292.25	0.68	0.60	0.32
10,111.00	89.13	89.75	7,096.85	222.77	3,384.03	3,386.24	0.95	-0.93	-0.19
10,206.00	90.81	90.43	7,096.90	222.62	3,479.03	3,481.23	1.91	1.77	0.72
10,300.00	90.00	89.47	7,096.24	222.70	3,573.02	3,575.22	1.34	-0.86	-1.02
10,395.00	90.20	90.04	7,096.07	223.11	3,668.02	3,670.22	0.64	0.21	0.60
10,490.00	91.34	90.18	7,094.80	222.93	3,763.01	3,765.20	1.21	1.20	0.15
10,584.00	90.27	89.88	7,093.48	222.88	3,857.00	3,859.18	1.18	-1.14	-0.32
10,678.00	89.60	89.51	7,093.58	223.38	3,951.00	3,953.18	0.81	-0.71	-0.39
10,772.00	90.47	90.02	7,093.53	223.76	4,045.00	4,047.18	1.07	0.93	0.54
10,867.00	90.07	90.76	7,093.08	223.12	4,139.99	4,142.16	0.89	-0.42	0.78
10,961.00	91.41	91.07	7,091.86	221.62	4,233.97	4,236.12	1.46	1.43	0.33
11,056.00	90.84	91.34	7,090.00	219.62	4,328.93	4,331.05	0.66	-0.60	0.28
11,150.00	90.44	91.37	7,088.95	217.40	4,422.90	4,424.99	0.43	-0.43	0.03
11,245.00	90.03	91.28	7,088.56	215.20	4,517.87	4,519.93	0.44	-0.43	-0.09
11,340.00	91.08	90.73	7,087.64	213.53	4,612.85	4,614.89	1.25	1.11	-0.58
11,434.00	91.01	90.77	7,085.92	212.30	4,706.83	4,708.85	0.09	-0.07	0.04
11,529.00	92.69	90.43	7,082.86	211.31	4,801.77	4,803.77	1.80	1.77	-0.36
11,623.00	91.95	90.29	7,079.05	210.72	4,895.69	4,897.68	0.80	-0.79	-0.15
11,718.00	91.48	90.15	7,076.21	210.35	4,990.65	4,992.63	0.52	-0.49	-0.15
11,813.00	92.72	90.68	7,072.73	209.67	5,085.58	5,087.54	1.42	1.31	0.56
11,907.00	92.12	90.28	7,068.76	208.88	5,179.49	5,181.44	0.77	-0.64	-0.43
12,002.00	91.75	89.71	7,065.55	208.89	5,274.43	5,276.38	0.72	-0.39	-0.60
12,097.00	91.24	89.63	7,063.07	209.43	5,369.40	5,371.35	0.54	-0.54	-0.08
12,191.00	90.97	89.18	7,061.26	210.41	5,463.38	5,465.33	0.56	-0.29	-0.48
12,285.00	90.84	89.48	7,059.78	211.51	5,557.36	5,559.32	0.35	-0.14	0.32
12,380.00	90.07	88.80	7,059.02	212.94	5,652.34	5,654.31	1.08	-0.81	-0.72
12,474.00	91.18	89.91	7,058.00	213.99	5,746.33	5,748.31	1.67	1.18	1.18
12,569.00	90.84	89.47	7,056.32	214.51	5,841.31	5,843.29	0.59	-0.36	-0.46
12,664.00	90.61	89.24	7,055.12	215.58	5,936.30	5,938.28	0.34	-0.24	-0.24
12,758.00	90.24	88.99	7,054.42	217.03	6,030.29	6,032.28	0.48	-0.39	-0.27
12,853.00	89.93	89.29	7,054.28	218.45	6,125.27	6,127.28	0.45	-0.33	0.32
12,947.00	89.66	89.23	7,054.62	219.67	6,219.27	6,221.28	0.29	-0.29	-0.06
13,042.00	89.13	88.97	7,055.62	221.16	6,314.25	6,316.27	0.62	-0.56	-0.27
13,136.00	88.86	89.64	7,057.27	222.30	6,408.23	6,410.25	0.77	-0.29	0.71
13,231.00	88.35	89.38	7,059.58	223.11	6,503.19	6,505.22	0.60	-0.54	-0.27
13,325.00	88.12	89.77	7,062.48	223.81	6,597.15	6,599.18	0.48	-0.24	0.41
13,420.00	87.71	89.78	7,065.93	224.18	6,692.08	6,694.11	0.43	-0.43	0.01
13,514.00	88.69	91.87	7,068.89	222.83	6,786.02	6,788.03	2.45	1.04	2.22
13,608.00	88.25	91.54	7,071.40	220.03	6,879.95	6,881.92	0.59	-0.47	-0.35

SDT Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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)
13,703.00	89.76	92.16	7,073.05	216.97	6,974.88	6,976.81	1.72	1.59	0.65
13,798.00	89.83	92.62	7,073.39	213.01	7,069.79	7,071.68	0.49	0.07	0.48
13,891.00	89.53	91.95	7,073.90	209.30	7,162.72	7,164.56	0.79	-0.32	-0.72
13,986.00	89.29	92.00	7,074.88	206.02	7,257.66	7,259.46	0.26	-0.25	0.05
14,080.00	88.96	91.94	7,076.32	202.79	7,351.59	7,353.35	0.36	-0.35	-0.06
14,175.00	88.05	93.05	7,078.80	198.66	7,446.47	7,448.18	1.51	-0.96	1.17
14,269.00	89.36	91.39	7,080.92	195.02	7,540.37	7,542.03	2.25	1.39	-1.77
14,364.00	89.66	90.45	7,081.73	193.49	7,635.35	7,636.99	1.04	0.32	-0.99
14,458.00	88.79	91.30	7,083.01	192.06	7,729.33	7,730.95	1.29	-0.93	0.90
14,553.00	88.72	90.39	7,085.07	190.66	7,824.29	7,825.90	0.96	-0.07	-0.96
14,648.00	88.15	90.63	7,087.66	189.81	7,919.25	7,920.84	0.65	-0.60	0.25
14,742.00	88.99	88.98	7,090.01	190.13	8,013.22	8,014.81	1.97	0.89	-1.76
14,836.00	89.87	90.29	7,090.95	190.73	8,107.21	8,108.80	1.68	0.94	1.39
14,931.00	89.33	90.37	7,091.61	190.18	8,202.21	8,203.78	0.57	-0.57	0.08
15,026.00	90.07	89.48	7,092.11	190.31	8,297.20	8,298.77	1.22	0.78	-0.94
15,120.00	90.00	87.63	7,092.05	192.68	8,391.17	8,392.76	1.97	-0.07	-1.97
15,215.00	89.83	87.02	7,092.19	197.11	8,486.07	8,487.70	0.67	-0.18	-0.64
15,309.00	89.36	87.28	7,092.85	201.79	8,579.95	8,581.63	0.57	-0.50	0.28
15,404.00	89.56	89.21	7,093.75	204.70	8,674.89	8,676.60	2.04	0.21	2.03
15,498.00	90.84	88.90	7,093.42	206.25	8,768.88	8,770.59	1.40	1.36	-0.33
15,593.00	90.00	89.34	7,092.72	207.70	8,863.86	8,865.59	1.00	-0.88	0.46
15,687.00	90.44	90.99	7,092.36	207.43	8,957.86	8,959.58	1.82	0.47	1.76
15,782.00	89.76	89.82	7,092.20	206.76	9,052.85	9,054.56	1.42	-0.72	-1.23
15,876.00	91.14	90.82	7,091.46	206.24	9,146.85	9,148.54	1.81	1.47	1.06
15,971.00	90.37	91.38	7,090.21	204.41	9,241.82	9,243.49	1.00	-0.81	0.59
16,066.00	89.70	91.24	7,090.15	202.24	9,336.79	9,338.43	0.72	-0.71	-0.15
16,160.00	90.47	90.54	7,090.01	200.78	9,430.78	9,432.40	1.11	0.82	-0.74
16,255.00	90.10	90.08	7,089.54	200.27	9,525.78	9,527.39	0.62	-0.39	-0.48
16,350.00	89.26	91.13	7,090.07	199.27	9,620.77	9,622.36	1.42	-0.88	1.11
16,445.00	90.50	90.86	7,090.27	197.62	9,715.75	9,717.32	1.34	1.31	-0.28
16,539.00	89.97	90.82	7,089.88	196.24	9,809.74	9,811.29	0.57	-0.56	-0.04
16,634.00	89.09	91.05	7,090.66	194.69	9,904.72	9,906.25	0.96	-0.93	0.24
16,728.00	90.87	90.34	7,090.69	193.55	9,998.71	10,000.22	2.04	1.89	-0.76
16,823.00	90.30	90.09	7,089.72	193.19	10,093.71	10,095.20	0.66	-0.60	-0.26
16,917.00	89.63	90.42	7,089.78	192.77	10,187.71	10,189.19	0.79	-0.71	0.35
17,012.00	89.09	90.58	7,090.84	191.94	10,282.70	10,284.17	0.59	-0.57	0.17
17,106.00	90.13	90.40	7,091.48	191.14	10,376.69	10,378.15	1.12	1.11	-0.19
17,201.00	90.94	92.04	7,090.60	189.12	10,471.66	10,473.09	1.93	0.85	1.73
17,295.00	90.71	91.89	7,089.24	185.89	10,565.59	10,566.99	0.29	-0.24	-0.16
17,390.00	90.20	91.08	7,088.49	183.43	10,660.56	10,661.92	1.01	-0.54	-0.85
17,484.00	89.90	90.16	7,088.41	182.42	10,754.55	10,755.89	1.03	-0.32	-0.98
17,579.00	89.46	90.54	7,088.94	181.84	10,849.55	10,850.88	0.61	-0.46	0.40
17,673.00	89.80	92.31	7,089.54	179.50	10,943.51	10,944.81	1.92	0.36	1.88

SDT Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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)
17,768.00	89.66	91.83	7,089.99	176.07	11,038.45	11,039.71	0.53	-0.15	-0.51
17,863.00	90.44	91.83	7,089.91	173.03	11,133.40	11,134.62	0.82	0.82	0.00
17,957.00	90.47	90.12	7,089.16	171.43	11,227.38	11,228.58	1.82	0.03	-1.82
18,052.00	90.13	89.89	7,088.66	171.42	11,322.38	11,323.57	0.43	-0.36	-0.24
18,147.00	89.50	90.14	7,088.97	171.40	11,417.38	11,418.56	0.71	-0.66	0.26
18,241.00	89.93	88.57	7,089.44	172.46	11,511.37	11,512.56	1.73	0.46	-1.67
18,304.00	89.60	89.53	7,089.70	173.50	11,574.36	11,575.56	1.61	-0.52	1.52
18,367.00	89.66	90.24	7,090.10	173.63	11,637.36	11,638.55	1.13	0.10	1.13
18,430.00	90.00	89.77	7,090.29	173.62	11,700.35	11,701.55	0.92	0.54	-0.75
18,493.00	90.77	89.02	7,089.87	174.29	11,763.35	11,764.55	1.71	1.22	-1.19
18,556.00	91.58	89.12	7,088.58	175.31	11,826.33	11,827.53	1.30	1.29	0.16
18,619.00	91.04	90.09	7,087.13	175.75	11,889.31	11,890.51	1.76	-0.86	1.54
18,714.00	90.30	90.58	7,086.02	175.19	11,984.30	11,985.49	0.93	-0.78	0.52
18,808.00	90.34	88.78	7,085.50	175.71	12,078.29	12,079.49	1.92	0.04	-1.91
18,903.00	91.28	88.42	7,084.16	178.04	12,173.25	12,174.47	1.06	0.99	-0.38
18,997.00	90.71	89.03	7,082.52	180.13	12,267.21	12,268.44	0.89	-0.61	0.65
19,092.00	90.24	90.72	7,081.74	180.33	12,362.21	12,363.43	1.85	-0.49	1.78
19,186.00	89.70	90.88	7,081.79	179.02	12,456.20	12,457.40	0.60	-0.57	0.17
19,281.00	90.94	89.44	7,081.25	178.76	12,551.19	12,552.39	2.00	1.31	-1.52
19,375.00	90.47	89.06	7,080.10	179.99	12,645.18	12,646.38	0.64	-0.50	-0.40
19,470.00	90.03	89.34	7,079.68	181.31	12,740.17	12,741.38	0.55	-0.46	0.29
19,565.00	90.54	90.70	7,079.21	181.28	12,835.16	12,836.37	1.53	0.54	1.43
19,659.00	91.25	90.48	7,077.74	180.31	12,929.14	12,930.34	0.79	0.76	-0.23
19,753.00	90.77	90.68	7,076.09	179.36	13,023.13	13,024.30	0.55	-0.51	0.21
19,848.00	90.61	89.76	7,074.94	179.00	13,118.12	13,119.28	0.98	-0.17	-0.97
19,942.00	90.24	90.00	7,074.24	179.19	13,212.11	13,213.28	0.47	-0.39	0.26
20,037.00	89.60	91.36	7,074.38	178.07	13,307.10	13,308.25	1.58	-0.67	1.43
20,131.00	90.30	90.93	7,074.46	176.19	13,401.08	13,402.21	0.87	0.74	-0.46
20,226.00	90.37	90.15	7,073.90	175.29	13,496.08	13,497.18	0.82	0.07	-0.82
20,321.00	90.00	90.83	7,073.60	174.48	13,591.07	13,592.16	0.81	-0.39	0.72
20,415.00	89.26	92.73	7,074.20	171.56	13,685.02	13,686.08	2.17	-0.79	2.02
20,510.00	90.77	92.36	7,074.18	167.34	13,779.92	13,780.93	1.64	1.59	-0.39
20,605.00	90.17	94.37	7,073.40	161.77	13,874.75	13,875.69	2.21	-0.63	2.12
20,700.00	89.83	91.40	7,073.40	156.98	13,969.62	13,970.50	3.15	-0.36	-3.13
20,739.00	89.36	92.95	7,073.68	155.50	14,008.59	14,009.45	4.15	-1.21	3.97
20,807.00	89.36	92.95	7,074.44	152.01	14,076.50	14,077.32	0.00	0.00	0.00
BHL @ 20807' MD									

SDT
Survey Report

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

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 774H SHL - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	2,133,565.42	2,858,364.92	36.8624010	-107.3709150
RU 744H Actual FPP - actual wellpath hits target center - Point	0.00	0.00	7,073.33	159.05	13,916.66	2,133,791.85	2,872,280.62	36.8628283	-107.3233431
RU 744H BHL - actual wellpath hits target center - Point	0.00	0.00	7,074.44	152.01	14,076.50	2,133,785.58	2,872,440.49	36.8628088	-107.3227967
RU 774H PBHL - actual wellpath misses target center by 31.60ft at 20807.00ft MD (7074.43 TVD, 152.01 N, 14076.50 E) - Point	0.00	0.00	7,092.00	178.19	14,078.59	2,133,811.77	2,872,442.45	36.8628807	-107.3227895
RU 744H Actual POE - actual wellpath hits target center - Point	0.00	0.00	7,100.48	236.65	770.01	2,133,805.80	2,859,133.78	36.8630510	-107.3682829

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
20,807.00	7,074.44	152.01	14,076.50	BHL @ 20807' MD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #744H - Slot A3

OH

Design: OH

Survey Report - Geographic

13 October, 2023

SDT
Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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 #744H - Slot A3			
Well Position	+N/-S	0.00 ft	Northing:	2,133,565.42 usft
	+E/-W	0.00 ft	Easting:	2,858,364.92 usft
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)
	User Defined	4/13/2023	8.46	63.28	49,452.00000000

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	89.38

Survey Program	Date	8/19/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	3,000.00	Survey #1 (OH)	A020Ga_GYRO-NS	OWSG Gyrocompass Gyro
3,048.00	20,739.00	Survey #2 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM
20,807.00	20,807.00	Survey #3 (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	2,133,565.42	2,858,364.92	36.8624010	-107.3709150
100.00	1.36	304.29	99.99	0.67	-0.98	2,133,566.08	2,858,363.94	36.8624028	-107.3709184
200.00	3.24	299.25	199.91	2.72	-4.43	2,133,568.12	2,858,360.48	36.8624084	-107.3709302
300.00	5.87	294.45	299.58	6.22	-11.55	2,133,571.58	2,858,353.34	36.8624180	-107.3709545
400.00	8.32	291.98	398.81	11.04	-22.91	2,133,576.35	2,858,341.96	36.8624313	-107.3709934
500.00	7.57	292.97	497.85	16.32	-35.69	2,133,581.57	2,858,329.16	36.8624458	-107.3710370
600.00	7.59	293.03	596.97	21.47	-47.83	2,133,586.66	2,858,316.99	36.8624600	-107.3710785
700.00	6.98	301.15	696.17	27.20	-59.11	2,133,592.33	2,858,305.68	36.8624757	-107.3711171
800.00	5.33	302.29	795.59	32.83	-68.24	2,133,597.91	2,858,296.53	36.8624911	-107.3711483
900.00	6.24	303.98	895.08	38.34	-76.67	2,133,603.39	2,858,288.07	36.8625063	-107.3711771

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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
1,000.00	6.76	302.76	994.44	44.57	-86.13	2,133,609.57	2,858,278.58	36.8625234	-107.3712095
1,100.00	5.27	303.60	1,093.88	50.29	-94.90	2,133,615.25	2,858,269.78	36.8625391	-107.3712394
1,200.00	4.73	308.82	1,193.50	55.42	-101.94	2,133,620.34	2,858,262.72	36.8625532	-107.3712635
1,300.00	3.58	329.05	1,293.24	60.68	-106.76	2,133,625.58	2,858,257.87	36.8625676	-107.3712800
1,400.00	3.08	348.31	1,393.08	65.99	-108.91	2,133,630.88	2,858,255.70	36.8625822	-107.3712873
1,500.00	3.67	14.35	1,492.91	71.72	-108.66	2,133,636.61	2,858,255.92	36.8625980	-107.3712865
1,600.00	4.77	32.88	1,592.64	78.32	-105.61	2,133,643.22	2,858,258.94	36.8626161	-107.3712760
1,700.00	5.09	52.51	1,692.28	84.51	-99.83	2,133,649.44	2,858,264.69	36.8626331	-107.3712563
1,800.00	4.63	70.11	1,791.92	88.58	-92.51	2,133,653.55	2,858,271.98	36.8626443	-107.3712313
1,900.00	4.44	71.12	1,891.61	91.21	-85.06	2,133,656.21	2,858,279.43	36.8626515	-107.3712058
2,000.00	4.65	69.63	1,991.30	93.87	-77.59	2,133,658.91	2,858,286.88	36.8626588	-107.3711803
2,500.00	2.32	61.18	2,490.34	105.80	-49.72	2,133,670.98	2,858,314.69	36.8626916	-107.3710850
3,000.00	3.86	50.05	2,989.60	121.49	-27.95	2,133,686.77	2,858,336.38	36.8627347	-107.3710106
3,048.00	3.87	49.23	3,037.49	123.59	-25.49	2,133,688.88	2,858,338.84	36.8627404	-107.3710022
3,143.00	3.95	45.96	3,132.27	127.95	-20.71	2,133,693.27	2,858,343.60	36.8627524	-107.3709858
3,237.00	4.44	51.16	3,226.02	132.49	-15.55	2,133,697.83	2,858,348.74	36.8627649	-107.3709682
3,332.00	5.06	48.85	3,320.69	137.55	-9.53	2,133,702.92	2,858,354.73	36.8627788	-107.3709476
3,427.00	4.97	47.98	3,415.33	143.06	-3.32	2,133,708.46	2,858,360.91	36.8627939	-107.3709264
3,521.00	4.77	45.21	3,508.99	148.54	2.48	2,133,713.97	2,858,366.69	36.8628090	-107.3709066
3,571.00	5.01	44.76	3,558.81	151.56	5.50	2,133,717.00	2,858,369.68	36.8628173	-107.3708963
3,755.00	4.61	41.42	3,742.16	162.80	16.04	2,133,728.30	2,858,380.18	36.8628482	-107.3708602
3,850.00	4.09	39.75	3,836.89	168.27	20.74	2,133,733.79	2,858,384.84	36.8628632	-107.3708442
3,944.00	3.69	46.96	3,930.67	172.91	25.09	2,133,738.45	2,858,389.18	36.8628759	-107.3708293
4,039.00	2.90	69.37	4,025.52	175.85	29.57	2,133,741.41	2,858,393.65	36.8628840	-107.3708139
4,134.00	1.71	75.26	4,120.44	177.06	33.19	2,133,742.63	2,858,397.26	36.8628873	-107.3708016
4,228.00	1.80	77.72	4,214.39	177.73	35.99	2,133,743.32	2,858,400.06	36.8628891	-107.3707920
4,323.00	2.59	67.87	4,309.32	178.85	39.44	2,133,744.46	2,858,403.50	36.8628922	-107.3707802
4,417.00	3.30	62.70	4,403.20	180.89	43.81	2,133,746.52	2,858,407.86	36.8628978	-107.3707653
4,512.00	2.59	60.49	4,498.07	183.20	48.11	2,133,748.85	2,858,412.14	36.8629042	-107.3707506
4,606.00	3.52	46.69	4,591.94	186.23	52.06	2,133,751.90	2,858,416.08	36.8629125	-107.3707371
4,701.00	1.71	54.16	4,686.84	189.06	55.33	2,133,754.75	2,858,419.34	36.8629203	-107.3707259
4,795.00	2.02	59.96	4,780.79	190.71	57.90	2,133,756.41	2,858,421.90	36.8629248	-107.3707171
4,890.00	2.90	63.57	4,875.70	192.62	61.50	2,133,758.33	2,858,425.49	36.8629300	-107.3707048
4,984.00	3.52	65.50	4,969.55	194.87	66.26	2,133,760.61	2,858,430.24	36.8629362	-107.3706886
5,079.00	3.52	64.45	5,064.37	197.34	71.54	2,133,763.10	2,858,435.51	36.8629430	-107.3706705
5,173.00	2.02	65.85	5,158.26	199.26	75.66	2,133,765.05	2,858,439.61	36.8629483	-107.3706564
5,268.00	2.02	64.80	5,253.20	200.66	78.70	2,133,766.46	2,858,442.65	36.8629521	-107.3706460
5,363.00	2.42	59.35	5,348.13	202.40	81.94	2,133,768.21	2,858,445.88	36.8629569	-107.3706349
5,457.00	3.60	59.88	5,442.00	204.89	86.20	2,133,770.72	2,858,450.13	36.8629637	-107.3706204
5,647.00	3.38	58.47	5,631.65	210.81	96.13	2,133,776.69	2,858,460.04	36.8629800	-107.3705864
5,709.00	3.30	54.25	5,693.54	212.81	99.14	2,133,778.71	2,858,463.03	36.8629855	-107.3705761
5,772.00	3.38	46.87	5,756.43	215.14	101.97	2,133,781.05	2,858,465.85	36.8629919	-107.3705665
5,835.00	3.52	39.22	5,819.32	217.91	104.55	2,133,783.83	2,858,468.41	36.8629995	-107.3705577
5,898.00	3.69	36.59	5,882.19	221.03	106.98	2,133,786.97	2,858,470.83	36.8630081	-107.3705494
5,961.00	4.31	19.09	5,945.04	224.90	108.96	2,133,790.84	2,858,472.79	36.8630187	-107.3705426
6,024.00	4.22	10.92	6,007.87	229.41	110.17	2,133,795.36	2,858,473.98	36.8630311	-107.3705384
6,086.00	4.70	5.65	6,069.68	234.18	110.85	2,133,800.13	2,858,474.64	36.8630442	-107.3705361
6,149.00	5.01	1.43	6,132.46	239.50	111.18	2,133,805.45	2,858,474.94	36.8630588	-107.3705350
6,212.00	5.32	355.89	6,195.20	245.16	111.04	2,133,811.11	2,858,474.77	36.8630744	-107.3705355
6,275.00	5.49	353.08	6,257.92	251.07	110.46	2,133,817.02	2,858,474.17	36.8630906	-107.3705374
6,336.00	5.32	348.60	6,318.65	256.73	109.55	2,133,822.68	2,858,473.23	36.8631062	-107.3705405
6,427.00	4.73	345.51	6,409.30	264.50	107.78	2,133,830.44	2,858,471.42	36.8631275	-107.3705466
6,522.00	7.62	57.62	6,503.86	271.68	112.13	2,133,837.64	2,858,475.73	36.8631472	-107.3705318
6,616.00	14.05	74.75	6,596.16	278.03	128.42	2,133,844.06	2,858,491.99	36.8631646	-107.3704761
6,711.00	20.94	88.38	6,686.74	281.54	156.56	2,133,847.72	2,858,520.12	36.8631743	-107.3703799

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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
6,806.00	31.25	91.65	6,771.95	281.31	198.28	2,133,847.69	2,858,561.83	36.8631737	-107.3702373
6,900.00	38.68	96.94	6,848.95	277.06	251.89	2,133,843.69	2,858,615.47	36.8631620	-107.3700540
6,994.00	46.87	98.62	6,917.89	268.35	315.07	2,133,835.29	2,858,678.69	36.8631381	-107.3698380
7,089.00	54.94	94.96	6,977.76	259.78	388.22	2,133,827.07	2,858,751.88	36.8631145	-107.3695880
7,184.00	65.01	95.19	7,025.23	252.50	470.04	2,133,820.19	2,858,833.74	36.8630945	-107.3693083
7,278.00	72.30	93.62	7,059.43	245.81	557.28	2,133,813.93	2,858,921.00	36.8630761	-107.3690101
7,373.00	75.05	91.46	7,086.13	241.79	648.34	2,133,810.34	2,859,012.09	36.8630651	-107.3686988
7,468.00	88.29	92.97	7,099.86	238.14	742.06	2,133,807.15	2,859,105.82	36.8630550	-107.3683784
7,562.00	91.28	93.49	7,100.22	232.84	835.90	2,133,802.31	2,859,199.68	36.8630405	-107.3680576
7,657.00	90.34	91.63	7,098.87	228.60	930.79	2,133,798.52	2,859,294.59	36.8630288	-107.3677333
7,751.00	89.40	90.16	7,099.09	227.13	1,024.77	2,133,797.51	2,859,388.58	36.8630248	-107.3674120
7,845.00	88.71	90.90	7,100.64	226.26	1,118.75	2,133,797.10	2,859,482.57	36.8630224	-107.3670907
7,940.00	88.19	89.12	7,103.21	226.25	1,213.72	2,133,797.54	2,859,577.53	36.8630223	-107.3667661
8,034.00	88.89	88.05	7,105.60	228.57	1,307.65	2,133,800.32	2,859,671.45	36.8630287	-107.3664450
8,128.00	88.49	87.91	7,107.75	231.88	1,401.57	2,133,804.08	2,859,765.35	36.8630378	-107.3661240
8,222.00	89.26	87.94	7,109.60	235.28	1,495.49	2,133,807.94	2,859,859.25	36.8630471	-107.3658029
8,317.00	90.37	88.62	7,109.90	238.13	1,590.44	2,133,811.25	2,859,954.19	36.8630549	-107.3654783
8,412.00	90.30	89.84	7,109.35	239.41	1,685.43	2,133,812.99	2,860,049.17	36.8630584	-107.3651536
8,506.00	91.68	90.29	7,107.72	239.30	1,779.42	2,133,813.34	2,860,143.16	36.8630581	-107.3648324
8,601.00	90.87	90.32	7,105.61	238.80	1,874.39	2,133,813.29	2,860,238.13	36.8630567	-107.3645077
8,695.00	90.54	90.49	7,104.45	238.13	1,968.38	2,133,813.08	2,860,332.12	36.8630549	-107.3641864
8,790.00	89.87	89.88	7,104.11	237.83	2,063.38	2,133,813.23	2,860,427.12	36.8630540	-107.3638617
8,884.00	90.81	89.74	7,103.56	238.14	2,157.38	2,133,814.00	2,860,521.12	36.8630548	-107.3635404
8,978.00	90.47	89.66	7,102.51	238.63	2,251.37	2,133,814.95	2,860,615.11	36.8630562	-107.3632191
9,073.00	89.90	89.60	7,102.20	239.24	2,346.37	2,133,816.02	2,860,710.10	36.8630578	-107.3628943
9,168.00	89.36	90.75	7,102.81	238.95	2,441.36	2,133,816.19	2,860,805.09	36.8630570	-107.3625696
9,262.00	90.00	91.60	7,103.34	237.03	2,535.34	2,133,814.72	2,860,899.08	36.8630517	-107.3622483
9,356.00	91.04	92.25	7,102.48	233.87	2,629.28	2,133,812.02	2,860,993.03	36.8630430	-107.3619272
9,450.00	90.37	92.06	7,101.33	230.34	2,723.21	2,133,808.94	2,861,086.98	36.8630333	-107.3616061
9,545.00	91.88	91.80	7,099.46	227.14	2,818.13	2,133,806.20	2,861,181.92	36.8630245	-107.3612817
9,639.00	90.98	91.20	7,097.12	224.68	2,912.07	2,133,804.19	2,861,275.86	36.8630177	-107.3609606
9,734.00	90.54	90.67	7,095.86	223.13	3,007.05	2,133,803.10	2,861,370.85	36.8630134	-107.3606359
9,828.00	90.13	90.45	7,095.31	222.21	3,101.04	2,133,802.64	2,861,464.84	36.8630108	-107.3603146
9,922.00	89.43	89.63	7,095.67	222.14	3,195.04	2,133,803.03	2,861,558.84	36.8630106	-107.3599933
10,017.00	90.00	89.93	7,096.14	222.51	3,290.04	2,133,803.85	2,861,653.84	36.8630116	-107.3596685
10,111.00	89.13	89.75	7,096.85	222.77	3,384.03	2,133,804.57	2,861,747.83	36.8630123	-107.3593472
10,206.00	90.81	90.43	7,096.90	222.62	3,479.03	2,133,804.88	2,861,842.82	36.8630119	-107.3590225
10,300.00	90.00	89.47	7,096.24	222.70	3,573.02	2,133,805.42	2,861,936.82	36.8630120	-107.3587012
10,395.00	90.20	90.04	7,096.07	223.11	3,668.02	2,133,806.29	2,862,031.81	36.8630131	-107.3583764
10,490.00	91.34	90.18	7,094.80	222.93	3,763.01	2,133,806.56	2,862,126.80	36.8630126	-107.3580517
10,584.00	90.27	89.88	7,093.48	222.88	3,857.00	2,133,806.97	2,862,220.79	36.8630124	-107.3577304
10,678.00	89.60	89.51	7,093.58	223.38	3,951.00	2,133,807.92	2,862,314.79	36.8630138	-107.3574091
10,772.00	90.47	90.02	7,093.53	223.76	4,045.00	2,133,808.77	2,862,408.78	36.8630148	-107.3570878
10,867.00	90.07	90.76	7,093.08	223.12	4,139.99	2,133,808.58	2,862,503.78	36.8630130	-107.3567631
10,961.00	91.41	91.07	7,091.86	221.62	4,233.97	2,133,807.53	2,862,597.76	36.8630088	-107.3564418
11,056.00	90.84	91.34	7,090.00	219.62	4,328.93	2,133,806.00	2,862,692.73	36.8630033	-107.3561172
11,150.00	90.44	91.37	7,088.95	217.40	4,422.90	2,133,804.23	2,862,786.71	36.8629971	-107.3557960
11,245.00	90.03	91.28	7,088.56	215.20	4,517.87	2,133,802.49	2,862,881.69	36.8629911	-107.3554713
11,340.00	91.08	90.73	7,087.64	213.53	4,612.85	2,133,801.28	2,862,976.68	36.8629864	-107.3551467
11,434.00	91.01	90.77	7,085.92	212.30	4,706.83	2,133,800.51	2,863,070.66	36.8629830	-107.3548254
11,529.00	92.69	90.43	7,082.86	211.31	4,801.77	2,133,799.97	2,863,165.60	36.8629802	-107.3545009
11,623.00	91.95	90.29	7,079.05	210.72	4,895.69	2,133,799.84	2,863,259.53	36.8629786	-107.3541798
11,718.00	91.48	90.15	7,076.21	210.35	4,990.65	2,133,799.93	2,863,354.48	36.8629775	-107.3538552
11,813.00	92.72	90.68	7,072.73	209.67	5,085.58	2,133,799.71	2,863,449.42	36.8629756	-107.3535307
11,907.00	92.12	90.28	7,068.76	208.88	5,179.49	2,133,799.37	2,863,543.33	36.8629734	-107.3532097

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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	
12,002.00	91.75	89.71	7,065.55	208.89	5,274.43	2,133,799.84	2,863,638.27	36.8629734	-107.3528851	
12,097.00	91.24	89.63	7,063.07	209.43	5,369.40	2,133,800.85	2,863,733.24	36.8629748	-107.3525605	
12,191.00	90.97	89.18	7,061.26	210.41	5,463.38	2,133,802.28	2,863,827.21	36.8629774	-107.3522393	
12,285.00	90.84	89.48	7,059.78	211.51	5,557.36	2,133,803.83	2,863,921.18	36.8629804	-107.3519180	
12,380.00	90.07	88.80	7,059.02	212.94	5,652.34	2,133,805.72	2,864,016.16	36.8629843	-107.3515933	
12,474.00	91.18	89.91	7,058.00	213.99	5,746.33	2,133,807.23	2,864,110.14	36.8629871	-107.3512720	
12,569.00	90.84	89.47	7,056.32	214.51	5,841.31	2,133,808.21	2,864,205.12	36.8629885	-107.3509474	
12,664.00	90.61	89.24	7,055.12	215.58	5,936.30	2,133,809.74	2,864,300.10	36.8629914	-107.3506227	
12,758.00	90.24	88.99	7,054.42	217.03	6,030.29	2,133,811.64	2,864,394.08	36.8629953	-107.3503014	
12,853.00	89.93	89.29	7,054.28	218.45	6,125.27	2,133,813.53	2,864,489.06	36.8629992	-107.3499767	
12,947.00	89.66	89.23	7,054.62	219.67	6,219.27	2,133,815.20	2,864,583.04	36.8630024	-107.3496554	
13,042.00	89.13	88.97	7,055.62	221.16	6,314.25	2,133,817.15	2,864,678.01	36.8630065	-107.3493307	
13,136.00	88.86	89.64	7,057.27	222.30	6,408.23	2,133,818.75	2,864,771.99	36.8630096	-107.3490094	
13,231.00	88.35	89.38	7,059.58	223.11	6,503.19	2,133,820.02	2,864,866.95	36.8630117	-107.3486848	
13,325.00	88.12	89.77	7,062.48	223.81	6,597.15	2,133,821.17	2,864,960.90	36.8630136	-107.3483636	
13,420.00	87.71	89.78	7,065.93	224.18	6,692.08	2,133,822.00	2,865,055.83	36.8630145	-107.3480391	
13,514.00	88.69	91.87	7,068.89	222.83	6,786.02	2,133,821.10	2,865,149.77	36.8630108	-107.3477180	
13,608.00	88.25	91.54	7,071.40	220.03	6,879.95	2,133,818.76	2,865,243.71	36.8630030	-107.3473969	
13,703.00	89.76	92.16	7,073.05	216.97	6,974.88	2,133,816.16	2,865,338.66	36.8629945	-107.3470724	
13,798.00	89.83	92.62	7,073.39	213.01	7,069.79	2,133,812.65	2,865,433.59	36.8629836	-107.3467480	
13,891.00	89.53	91.95	7,073.90	209.30	7,162.72	2,133,809.40	2,865,526.53	36.8629733	-107.3464303	
13,986.00	89.29	92.00	7,074.88	206.02	7,257.66	2,133,806.58	2,865,621.48	36.8629643	-107.3461058	
14,080.00	88.96	91.94	7,076.32	202.79	7,351.59	2,133,803.81	2,865,715.43	36.8629553	-107.3457847	
14,175.00	88.05	93.05	7,078.80	198.66	7,446.47	2,133,800.13	2,865,810.33	36.8629439	-107.3454604	
14,269.00	89.36	91.39	7,080.92	195.02	7,540.37	2,133,796.95	2,865,904.24	36.8629338	-107.3451394	
14,364.00	89.66	90.45	7,081.73	193.49	7,635.35	2,133,795.88	2,865,999.23	36.8629296	-107.3448147	
14,458.00	88.79	91.30	7,083.01	192.06	7,729.33	2,133,794.90	2,866,093.22	36.8629256	-107.3444935	
14,553.00	88.72	90.39	7,085.07	190.66	7,824.29	2,133,793.96	2,866,188.19	36.8629217	-107.3441688	
14,648.00	88.15	90.63	7,087.66	189.81	7,919.25	2,133,793.57	2,866,283.15	36.8629193	-107.3438442	
14,742.00	88.99	88.98	7,090.01	190.13	8,013.22	2,133,794.35	2,866,377.11	36.8629201	-107.3435230	
14,836.00	89.87	90.29	7,090.95	190.73	8,107.21	2,133,795.40	2,866,471.10	36.8629216	-107.3432017	
14,931.00	89.33	90.37	7,091.61	190.18	8,202.21	2,133,795.32	2,866,566.10	36.8629201	-107.3428770	
15,026.00	90.07	89.48	7,092.11	190.31	8,297.20	2,133,795.90	2,866,661.09	36.8629203	-107.3425523	
15,120.00	90.00	87.63	7,092.05	192.68	8,391.17	2,133,798.73	2,866,755.04	36.8629268	-107.3422311	
15,215.00	89.83	87.02	7,092.19	197.11	8,486.07	2,133,803.62	2,866,849.92	36.8629389	-107.3419067	
15,309.00	89.36	87.28	7,092.85	201.79	8,579.95	2,133,808.75	2,866,943.78	36.8629516	-107.3415858	
15,404.00	89.56	89.21	7,093.75	204.70	8,674.89	2,133,812.12	2,867,038.71	36.8629595	-107.3412612	
15,498.00	90.84	88.90	7,093.42	206.25	8,768.88	2,133,814.12	2,867,132.68	36.8629637	-107.3409399	
15,593.00	90.00	89.34	7,092.72	207.70	8,863.86	2,133,816.04	2,867,227.66	36.8629676	-107.3406152	
15,687.00	90.44	90.99	7,092.36	207.43	8,957.86	2,133,816.22	2,867,321.65	36.8629668	-107.3402939	
15,782.00	89.76	89.82	7,092.20	206.76	9,052.85	2,133,816.01	2,867,416.65	36.8629649	-107.3399692	
15,876.00	91.14	90.82	7,091.46	206.24	9,146.85	2,133,815.94	2,867,510.65	36.8629633	-107.3396479	
15,971.00	90.37	91.38	7,090.21	204.41	9,241.82	2,133,814.58	2,867,605.63	36.8629582	-107.3393232	
16,066.00	89.70	91.24	7,090.15	202.24	9,336.79	2,133,812.87	2,867,700.61	36.8629522	-107.3389986	
16,160.00	90.47	90.54	7,090.01	200.78	9,430.78	2,133,811.86	2,867,794.60	36.8629481	-107.3386773	
16,255.00	90.10	90.08	7,089.54	200.27	9,525.78	2,133,811.81	2,867,889.60	36.8629466	-107.3383526	
16,350.00	89.26	91.13	7,090.07	199.27	9,620.77	2,133,811.27	2,867,984.60	36.8629438	-107.3380279	
16,445.00	90.50	90.86	7,090.27	197.62	9,715.75	2,133,810.08	2,868,079.59	36.8629391	-107.3377032	
16,539.00	89.97	90.82	7,089.88	196.24	9,809.74	2,133,809.15	2,868,173.58	36.8629353	-107.3373819	
16,634.00	89.09	91.05	7,090.66	194.69	9,904.72	2,133,808.06	2,868,268.57	36.8629309	-107.3370572	
16,728.00	90.87	90.34	7,090.69	193.55	9,998.71	2,133,807.38	2,868,362.56	36.8629277	-107.3367359	
16,823.00	90.30	90.09	7,089.72	193.19	10,093.71	2,133,807.48	2,868,457.56	36.8629266	-107.3364112	
16,917.00	89.63	90.42	7,089.78	192.77	10,187.71	2,133,807.52	2,868,551.56	36.8629254	-107.3360899	
17,012.00	89.09	90.58	7,090.84	191.94	10,282.70	2,133,807.15	2,868,646.55	36.8629230	-107.3357652	
17,106.00	90.13	90.40	7,091.48	191.14	10,376.69	2,133,806.80	2,868,740.54	36.8629207	-107.3354439	

SDT

Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	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
17,201.00	90.94	92.04	7,090.60	189.12	10,471.66	2,133,805.24	2,868,835.52	36.8629150	-107.3351192
17,295.00	90.71	91.89	7,089.24	185.89	10,565.59	2,133,802.47	2,868,929.47	36.8629061	-107.3347981
17,390.00	90.20	91.08	7,088.49	183.43	10,660.56	2,133,800.47	2,869,024.45	36.8628992	-107.3344735
17,484.00	89.90	90.16	7,088.41	182.42	10,754.55	2,133,799.91	2,869,118.44	36.8628963	-107.3341522
17,579.00	89.46	90.54	7,088.94	181.84	10,849.55	2,133,799.78	2,869,213.44	36.8628946	-107.3338275
17,673.00	89.80	92.31	7,089.54	179.50	10,943.51	2,133,797.90	2,869,307.42	36.8628881	-107.3335063
17,768.00	89.66	91.83	7,089.99	176.07	11,038.45	2,133,794.93	2,869,402.37	36.8628786	-107.3331818
17,863.00	90.44	91.83	7,089.91	173.03	11,133.40	2,133,792.36	2,869,497.33	36.8628702	-107.3328572
17,957.00	90.47	90.12	7,089.16	171.43	11,227.38	2,133,791.21	2,869,591.32	36.8628657	-107.3325359
18,052.00	90.13	89.89	7,088.66	171.42	11,322.38	2,133,791.66	2,869,686.32	36.8628655	-107.3322112
18,147.00	89.50	90.14	7,088.97	171.40	11,417.38	2,133,792.10	2,869,781.31	36.8628654	-107.3318865
18,241.00	89.93	88.57	7,089.44	172.46	11,511.37	2,133,793.61	2,869,875.30	36.8628682	-107.3315652
18,304.00	89.60	89.53	7,089.70	173.50	11,574.36	2,133,794.96	2,869,938.28	36.8628710	-107.3313499
18,367.00	89.66	90.24	7,090.10	173.63	11,637.36	2,133,795.39	2,870,001.28	36.8628712	-107.3311345
18,430.00	90.00	89.77	7,090.29	173.62	11,700.35	2,133,795.69	2,870,064.28	36.8628711	-107.3309192
18,493.00	90.77	89.02	7,089.87	174.29	11,763.35	2,133,796.66	2,870,127.27	36.8628729	-107.3307038
18,556.00	91.58	89.12	7,088.58	175.31	11,826.33	2,133,797.99	2,870,190.24	36.8628756	-107.3304885
18,619.00	91.04	90.09	7,087.13	175.75	11,889.31	2,133,798.73	2,870,253.22	36.8628768	-107.3302732
18,714.00	90.30	90.58	7,086.02	175.19	11,984.30	2,133,798.63	2,870,348.21	36.8628751	-107.3299485
18,808.00	90.34	88.78	7,085.50	175.71	12,078.29	2,133,799.61	2,870,442.20	36.8628764	-107.3296272
18,903.00	91.28	88.42	7,084.16	178.04	12,173.25	2,133,802.39	2,870,537.15	36.8628827	-107.3293026
18,997.00	90.71	89.03	7,082.52	180.13	12,267.21	2,133,804.94	2,870,631.10	36.8628883	-107.3289814
19,092.00	90.24	90.72	7,081.74	180.33	12,362.21	2,133,805.61	2,870,726.09	36.8628888	-107.3286567
19,186.00	89.70	90.88	7,081.79	179.02	12,456.20	2,133,804.75	2,870,820.08	36.8628851	-107.3283354
19,281.00	90.94	89.44	7,081.25	178.76	12,551.19	2,133,804.95	2,870,915.08	36.8628842	-107.3280107
19,375.00	90.47	89.06	7,080.10	179.99	12,645.18	2,133,806.63	2,871,009.05	36.8628875	-107.3276894
19,470.00	90.03	89.34	7,079.68	181.31	12,740.17	2,133,808.42	2,871,104.04	36.8628910	-107.3273647
19,565.00	90.54	90.70	7,079.21	181.28	12,835.16	2,133,808.84	2,871,199.03	36.8628908	-107.3270400
19,659.00	91.25	90.48	7,077.74	180.31	12,929.14	2,133,808.33	2,871,293.02	36.8628880	-107.3267187
19,753.00	90.77	90.68	7,076.09	179.36	13,023.13	2,133,807.83	2,871,387.00	36.8628853	-107.3263975
19,848.00	90.61	89.76	7,074.94	179.00	13,118.12	2,133,807.93	2,871,481.99	36.8628842	-107.3260728
19,942.00	90.24	90.00	7,074.24	179.19	13,212.11	2,133,808.58	2,871,575.99	36.8628846	-107.3257514
20,037.00	89.60	91.36	7,074.38	178.07	13,307.10	2,133,807.91	2,871,670.98	36.8628814	-107.3254267
20,131.00	90.30	90.93	7,074.46	176.19	13,401.08	2,133,806.49	2,871,764.97	36.8628761	-107.3251055
20,226.00	90.37	90.15	7,073.90	175.29	13,496.08	2,133,806.06	2,871,859.97	36.8628735	-107.3247808
20,321.00	90.00	90.83	7,073.60	174.48	13,591.07	2,133,805.70	2,871,954.96	36.8628711	-107.3244560
20,415.00	89.26	92.73	7,074.20	171.56	13,685.02	2,133,803.24	2,872,048.93	36.8628630	-107.3241349
20,510.00	90.77	92.36	7,074.18	167.34	13,779.92	2,133,799.48	2,872,143.85	36.8628513	-107.3238105
20,605.00	90.17	94.37	7,073.40	161.77	13,874.75	2,133,794.36	2,872,238.70	36.8628358	-107.3234863
20,700.00	89.83	91.40	7,073.40	156.98	13,969.62	2,133,790.04	2,872,333.59	36.8628226	-107.3231621
20,739.00	89.36	92.95	7,073.68	155.50	14,008.59	2,133,788.75	2,872,372.57	36.8628185	-107.3230289
20,807.00	89.36	92.95	7,074.44	152.01	14,076.50	2,133,785.58	2,872,440.49	36.8628088	-107.3227967
BHL @ 20807' MD									

SDT
Survey Report - Geographic

Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #744H - Slot A3
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 #744H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 Multi User Db

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 774H SHL - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	2,133,565.42	2,858,364.92	36.8624010	-107.3709150
RU 744H Actual FPP - actual wellpath hits target center - Point	0.00	0.00	7,073.33	159.05	13,916.66	2,133,791.85	2,872,280.62	36.8628283	-107.3233431
RU 744H BHL - actual wellpath hits target center - Point	0.00	0.00	7,074.44	152.01	14,076.50	2,133,785.58	2,872,440.49	36.8628088	-107.3227967
RU 774H PBHL - actual wellpath misses target center by 31.60ft at 20807.00ft MD (7074.43 TVD, 152.01 N, 14076.50 E) - Point	0.00	0.00	7,092.00	178.19	14,078.59	2,133,811.77	2,872,442.45	36.8628807	-107.3227895
RU 744H Actual POE - actual wellpath hits target center - Point	0.00	0.00	7,100.48	236.65	770.01	2,133,805.80	2,859,133.78	36.8630510	-107.3682829

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
20,807.00	7,074.44	152.01	14,076.50	BHL @ 20807' MD

Checked By: _____	Approved By: _____	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 275584

ACKNOWLEDGMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 275584
	Action Type: [C-104] Completion Packet (C-104C)

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 275584

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 275584
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	RT EXPIRES 1/16/2024.	10/16/2023