

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 30-039-31415		⁵ Pool Name Basin Mancos			⁶ Pool Code 97232	
⁷ Property Code 320608		⁸ Property Name Rosa Unit			⁹ Well Number 645H	

II. 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	19	31N	5W	1	943	FNL	424	FWL	Rio Arriba

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	31N	5W		44	FNL	863	FEL	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

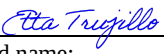
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
373888	Harvest Four Corners, LLC 1755 Arroyo Dr. Bloomfield NM 87413	G

IV. Well Completion Data

²¹ Spud Date 4/08/2022	²² Ready Date 12/05/2022	²³ TD 14415' MD / 6953' TVD	²⁴ PBTD 14327' MD / 6952' TVD	²⁵ Perforations 7518' MD / 14283' MD 6939' TVD / 6951' TVD	²⁶ DHC, MC R-13457
²⁷ Hole Size		²⁸ Casing & Tubing Size	²⁹ Depth Set		³⁰ Sacks Cement
17-1/2"		13-3/8", 54.5#, J-55	325'		395sx (81bbbs - 454cf)
12-1/4"		9-5/8", 47.0#, L-80	6132'		2717sx (900bbbs - 5045cf) DV @ 4540' & 2985'
8-1/2"		5 1/2", 20#, P-110	14,397'		2134sx (622bbbs - 3494cf) TOC ~4920'
		2 7/8", 6.5#, J-55	pending		

V. Well Test Data

³¹ Date New Oil N/A	³² Gas Delivery Date 12/05/2022	³³ Test Date 12/05/2022	³⁴ Test Length 12hrs	³⁵ Tbg. Pressure N/A	³⁶ Csg. Pressure 2748psi
³⁷ Choke Size 18/64	³⁸ Oil N/A	³⁹ Water 468 bbbs	⁴⁰ Gas 330 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: 5/18/2023	
Date: 1/4/2023	Phone: 505-324-4154		



Request for Confidential "Tight Hole" Status

LOGOS Operating, LLC
Rosa Unit # 645H
API# 30-039-31415
C-19-31-05W
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 1/09/2023 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

Received by **OCD: 1/10/2023 7:24:44 AM**
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form **Page 3 of 17**
Revised August 1, 2011

Submit 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 30-039-31415	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 320608	⁵ Property Name ROSA UNIT	⁶ Well Number 645H
⁷ GRID No. 289408	⁸ Operator Name LOGOS OPERATING, LLC	⁹ Elevation 6305'

¹⁰ Surface Location

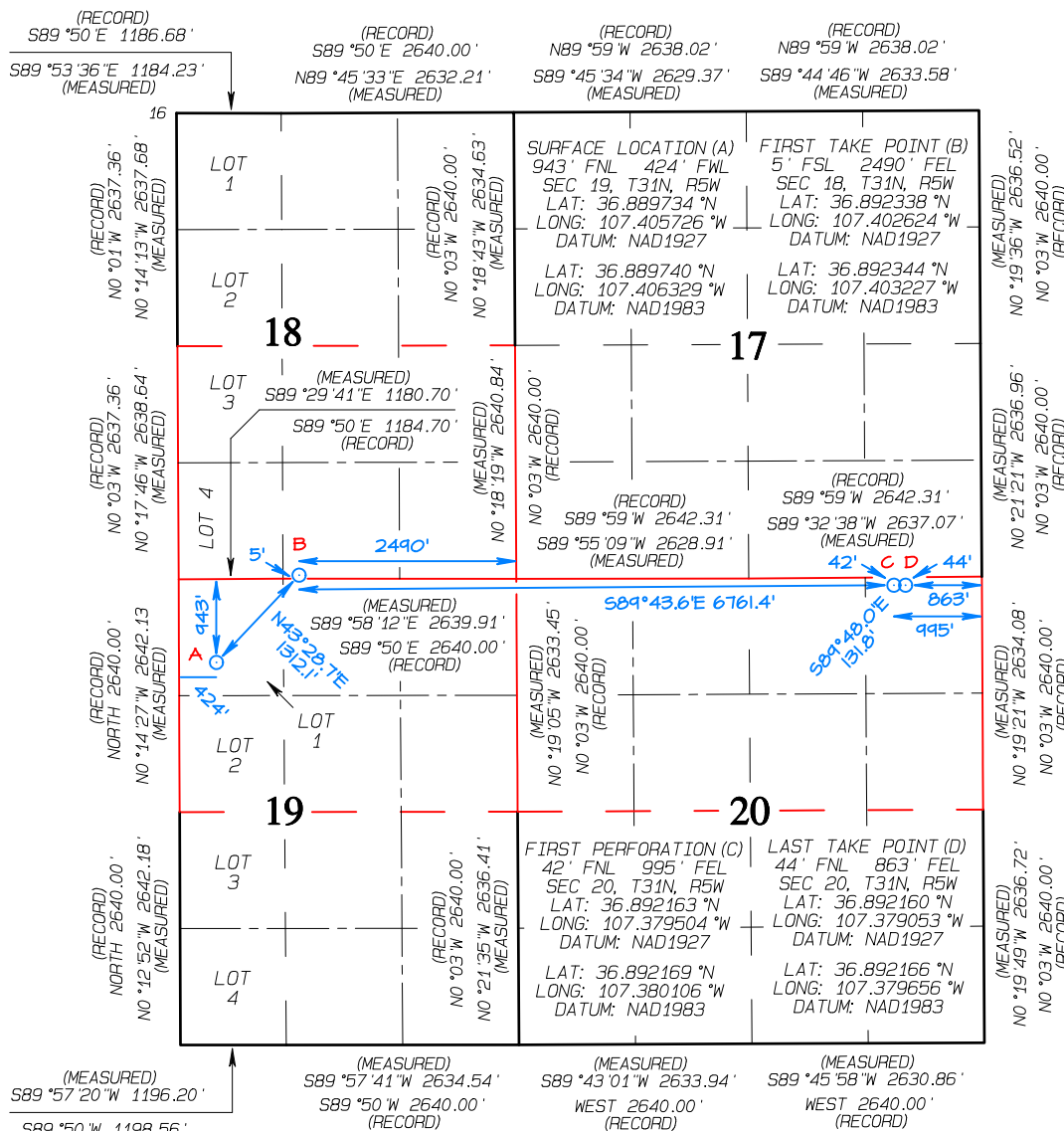
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	19	31N	5W	1	943	NORTH	424	WEST	RIO ARriba

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	20	31N	5W		44	NORTH	863	EAST	RIO ARriba

¹² Dedicated Acres 783.84	S/2 - Section 18 N/2 - Section 19 N/2 - Section 20	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13457
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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

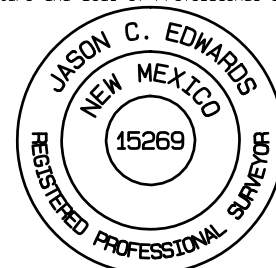
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this 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 11/17/2022
Signature Date
Etta Trujillo
Printed Name
etrujillo@logosresourcesllc.com
E-mail Address

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: NOVEMBER 17, 2022
Date of Survey: JANUARY 2, 2015
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



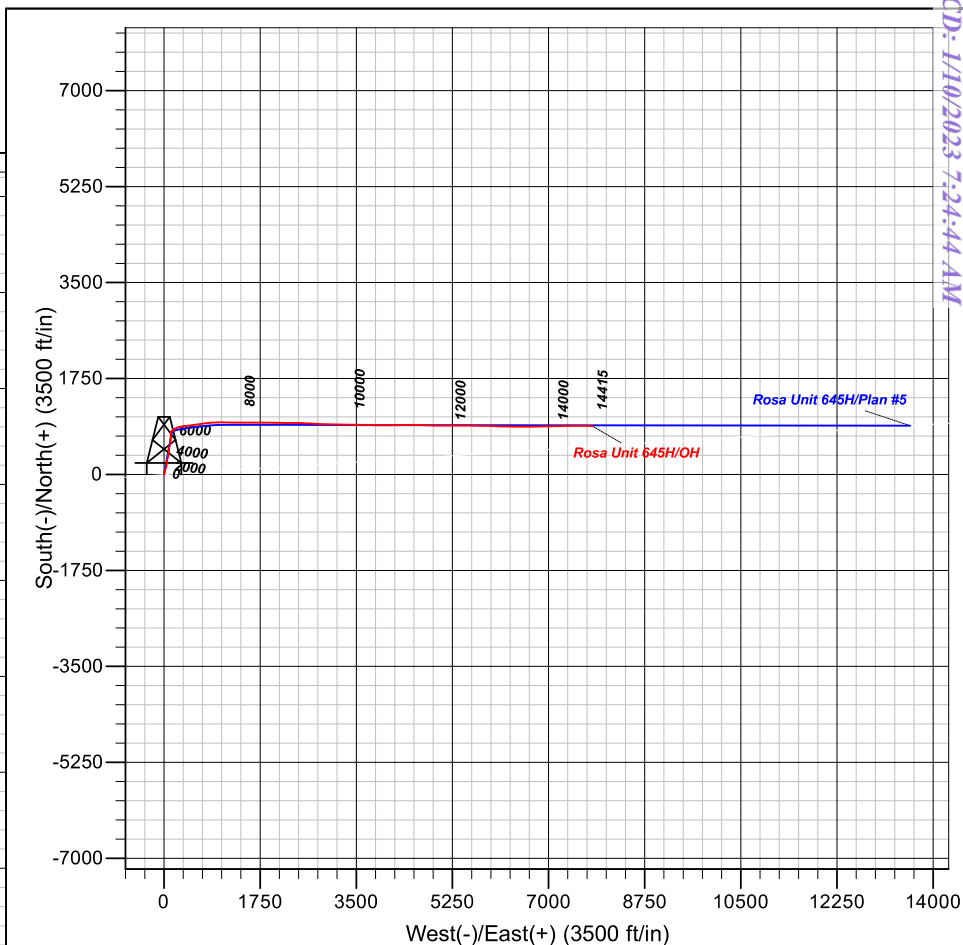
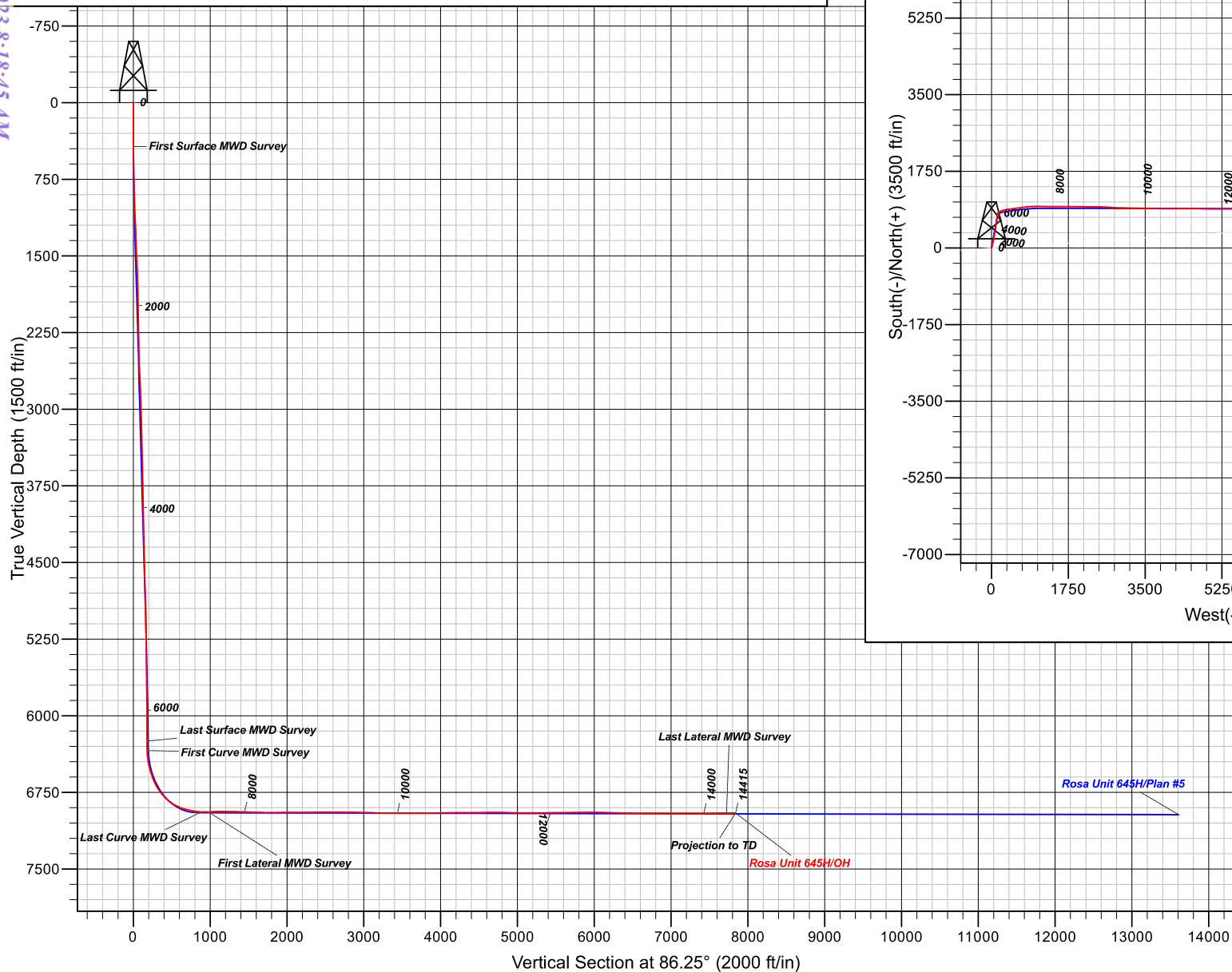
Company Name: Logos Operating LLC
 Project: Rio Arriba, NM NAD83
 Site: Rosa Unit 27
 Well: Rosa Unit 645H
 Wellbore: OH



WELL DETAILS: Rosa Unit 645H

GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223) 6305.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2143470.1710	2847960.5370	36.8897396	-107.4063290	B8



Design: OH (Rosa Unit 645H/OH)

Created By: Janie Collins Date: 18:33, November 01 2022

PROJECT DETAILS: Rio Arriba, NM NAD83

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Western Zone

System Datum: Mean Sea Level
 Local North: True



Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 27

Rosa Unit 645H - Slot B8

OH

Design: OH

Standard Survey Report

01 November, 2022





Lonestar Consulting, LLC

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit 645H - Slot B8
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Site:	Rosa Unit 27	MD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Well:	Rosa Unit 645H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	edm

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 27			
Site Position:		Northing:	2,143,451.5859 usft	Latitude:	36.8896880
From:	Lat/Long	Easting:	2,848,002.4398 usft	Longitude:	-107.4061860
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in		

Well	Rosa Unit 645H - Slot B8					
Well Position	+N/-S	0.00 ft	Northing:	2,143,470.1710 usft	Latitude:	36.8897395
	+E/-W	0.00 ft	Easting:	2,847,960.5370 usft	Longitude:	-107.4063290
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,305.00 ft
Grid Convergence:		0.26 °				

Wellbore	OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	HDGM2022	8/6/2022	8.58	63.33	49,568.50000000	
	HDGM2022	10/9/2022	8.57	63.33	49,551.40000000	

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	86.25	

Survey Program	Date	11/1/2022			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
428.00	6,302.00	Survey #1 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
6,396.00	7,439.00	Survey #2 - Curve MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
7,532.00	14,415.00	Survey #3 - Lateral MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
428.00	0.39	124.34	428.00	-0.82	1.20	1.15	0.09	0.09	0.00	
521.00	1.86	29.31	520.98	0.32	2.20	2.22	2.08	1.58	-102.18	
584.00	3.16	21.59	583.92	2.82	3.34	3.52	2.13	2.06	-12.25	
677.00	4.53	13.30	676.71	8.78	5.13	5.69	1.59	1.47	-8.91	



Lonestar Consulting, LLC

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit 645H - Slot B8
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Site:	Rosa Unit 27	MD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Well:	Rosa Unit 645H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	edm

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
766.00	5.64	9.94	765.36	16.51	6.69	7.76	1.29	1.25	-3.78
857.00	7.15	12.52	855.79	26.44	8.69	10.40	1.69	1.66	2.84
947.00	9.42	13.42	944.84	39.08	11.62	14.15	2.53	2.52	1.00
1,037.00	9.81	13.85	1,033.58	53.68	15.16	18.64	0.44	0.43	0.48
1,127.00	9.64	13.23	1,122.28	68.46	18.72	23.16	0.22	-0.19	-0.69
1,222.00	9.53	13.53	1,215.96	83.85	22.38	27.82	0.13	-0.12	0.32
1,317.00	9.82	12.72	1,309.61	99.40	26.01	32.45	0.34	0.31	-0.85
1,413.00	9.75	15.12	1,404.21	115.23	29.93	37.40	0.43	-0.07	2.50
1,508.00	9.82	16.50	1,497.83	130.77	34.33	42.81	0.26	0.07	1.45
1,603.00	9.42	18.43	1,591.49	145.91	39.09	48.55	0.54	-0.42	2.03
1,699.00	9.39	12.30	1,686.21	161.02	43.24	53.68	1.04	-0.03	-6.39
1,794.00	9.22	5.82	1,779.96	176.16	45.66	57.09	1.12	-0.18	-6.82
1,889.00	8.83	6.62	1,873.78	190.97	47.27	59.66	0.43	-0.41	0.84
1,984.00	8.54	5.94	1,967.69	205.23	48.85	62.16	0.32	-0.31	-0.72
2,079.00	7.80	7.39	2,061.73	218.64	50.40	64.60	0.81	-0.78	1.53
2,175.00	7.55	8.13	2,156.87	231.35	52.13	67.15	0.28	-0.26	0.77
2,269.00	7.06	5.24	2,250.10	243.21	53.54	69.33	0.65	-0.52	-3.07
2,364.00	6.92	5.26	2,344.40	254.72	54.59	71.14	0.15	-0.15	0.02
2,459.00	7.26	8.57	2,438.67	266.36	56.01	73.31	0.56	0.36	3.48
2,555.00	8.19	14.66	2,533.80	278.97	58.65	76.77	1.29	0.97	6.34
2,649.00	9.08	15.59	2,626.73	292.60	62.33	81.34	0.96	0.95	0.99
2,744.00	9.34	16.45	2,720.51	307.21	66.53	86.48	0.31	0.27	0.91
2,840.00	9.29	15.11	2,815.24	322.16	70.76	91.68	0.23	-0.05	-1.40
2,935.00	9.18	11.17	2,909.01	337.00	74.22	96.11	0.68	-0.12	-4.15
3,030.00	8.49	11.42	3,002.89	351.31	77.08	99.89	0.73	-0.73	0.26
3,126.00	7.55	11.89	3,097.95	364.43	79.78	103.45	0.98	-0.98	0.49
3,221.00	8.38	9.71	3,192.03	377.36	82.24	106.74	0.93	0.87	-2.29
3,317.00	9.03	8.38	3,286.92	391.70	84.52	109.95	0.71	0.68	-1.39
3,411.00	9.64	6.76	3,379.68	406.82	86.52	112.94	0.71	0.65	-1.72
3,507.00	9.14	7.04	3,474.39	422.37	88.40	115.83	0.52	-0.52	0.29
3,602.00	8.85	6.96	3,568.22	437.11	90.21	118.60	0.31	-0.31	-0.08
3,697.00	7.75	4.03	3,662.23	450.75	91.54	120.83	1.24	-1.16	-3.08
3,793.00	7.89	3.45	3,757.33	463.79	92.40	122.53	0.17	0.15	-0.60
3,888.00	7.37	3.98	3,851.49	476.38	93.21	124.17	0.55	-0.55	0.56
3,983.00	7.18	6.10	3,945.73	488.36	94.26	126.00	0.35	-0.20	2.23
4,078.00	7.45	9.36	4,039.95	500.34	95.90	128.41	0.52	0.28	3.43
4,174.00	7.91	14.76	4,135.09	512.87	98.59	131.92	0.89	0.48	5.63
4,269.00	8.40	12.90	4,229.13	525.95	101.81	135.99	0.59	0.52	-1.96
4,364.00	8.90	10.52	4,323.05	539.94	104.70	139.79	0.65	0.53	-2.51
4,459.00	7.94	8.35	4,417.03	553.66	106.99	142.97	1.06	-1.01	-2.28
4,554.00	6.96	4.68	4,511.23	565.89	108.41	145.19	1.15	-1.03	-3.86
4,649.00	5.54	7.35	4,605.66	576.17	109.47	146.92	1.53	-1.49	2.81



Lonestar Consulting, LLC

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit 645H - Slot B8
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Site:	Rosa Unit 27	MD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Well:	Rosa Unit 645H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	edm

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,745.00	5.59	16.73	4,701.21	585.25	111.41	149.45	0.95	0.05	9.77	
4,840.00	7.07	14.87	4,795.63	595.33	114.24	152.93	1.57	1.56	-1.96	
4,935.00	9.13	12.25	4,889.67	608.35	117.34	156.88	2.20	2.17	-2.76	
5,002.00	9.92	11.25	4,955.75	619.20	119.60	159.84	1.20	1.18	-1.49	
5,097.00	9.05	5.48	5,049.45	634.66	121.91	163.15	1.36	-0.92	-6.07	
5,193.00	9.56	2.23	5,144.19	650.15	122.94	165.20	0.76	0.53	-3.39	
5,288.00	9.07	2.31	5,237.94	665.51	123.55	166.81	0.52	-0.52	0.08	
5,382.00	8.44	2.12	5,330.84	679.81	124.10	168.30	0.67	-0.67	-0.20	
5,477.00	7.90	2.61	5,424.88	693.30	124.65	169.73	0.57	-0.57	0.52	
5,572.00	7.14	2.75	5,519.06	705.72	125.24	171.12	0.80	-0.80	0.15	
5,635.00	6.58	2.88	5,581.61	713.23	125.60	171.98	0.89	-0.89	0.21	
5,762.00	5.76	6.51	5,707.87	726.83	126.69	173.96	0.71	-0.65	2.86	
5,826.00	4.88	8.69	5,771.60	732.71	127.47	175.12	1.41	-1.38	3.41	
5,889.00	3.66	6.34	5,834.42	737.36	128.10	176.05	1.96	-1.94	-3.73	
5,952.00	3.50	1.16	5,897.30	741.28	128.36	176.56	0.57	-0.25	-8.22	
6,016.00	3.77	359.96	5,961.17	745.34	128.39	176.87	0.44	0.42	-1.88	
6,080.00	4.54	359.73	6,025.00	749.98	128.38	177.16	1.20	1.20	-0.36	
6,143.00	4.28	358.38	6,087.81	754.82	128.30	177.40	0.44	-0.41	-2.14	
6,206.00	3.96	357.53	6,150.65	759.34	128.14	177.53	0.52	-0.51	-1.35	
6,233.00	3.82	354.48	6,177.59	761.17	128.02	177.52	0.93	-0.52	-11.30	
6,302.00	3.80	354.70	6,246.43	765.73	127.58	177.39	0.04	-0.03	0.32	
6,396.00	6.85	18.60	6,340.03	774.15	129.08	179.44	3.95	3.24	25.43	
6,492.00	16.24	39.09	6,434.01	790.04	139.40	190.77	10.53	9.78	21.34	
6,586.00	23.19	50.46	6,522.48	812.06	162.00	214.76	8.41	7.39	12.10	
6,682.00	29.84	61.54	6,608.39	835.51	197.63	251.86	8.61	6.93	11.54	
6,776.00	37.00	71.57	6,686.86	855.64	245.13	300.56	9.60	7.62	10.67	
6,870.00	46.70	79.62	6,756.84	870.79	305.80	362.09	11.78	10.32	8.56	
6,966.00	55.70	82.01	6,816.94	882.62	379.58	436.50	9.57	9.38	2.49	
7,061.00	65.59	82.87	6,863.45	893.47	461.57	519.01	10.44	10.41	0.91	
7,155.00	73.15	82.36	6,896.55	904.78	548.74	606.74	8.06	8.04	-0.54	
7,248.00	79.98	82.01	6,918.14	917.08	638.30	696.92	7.35	7.34	-0.38	
7,345.00	82.53	81.73	6,932.89	930.64	733.21	792.50	2.64	2.63	-0.29	
7,439.00	88.66	84.52	6,940.11	941.84	826.20	886.03	7.16	6.52	2.97	
7,532.00	91.88	86.87	6,939.67	948.82	918.92	979.01	4.29	3.46	2.53	
7,627.00	91.14	89.32	6,937.17	951.98	1,013.83	1,073.92	2.69	-0.78	2.58	
7,722.00	90.13	91.33	6,936.11	951.44	1,108.81	1,168.67	2.37	-1.06	2.12	
7,815.00	88.79	91.25	6,936.99	949.34	1,201.78	1,261.30	1.44	-1.44	-0.09	
7,909.00	88.73	90.79	6,939.02	947.67	1,295.75	1,354.95	0.49	-0.06	-0.49	
8,003.00	88.69	90.32	6,941.14	946.76	1,389.72	1,448.66	0.50	-0.04	-0.50	
8,097.00	88.32	89.83	6,943.59	946.64	1,483.68	1,542.42	0.65	-0.39	-0.52	
8,225.00	89.09	90.42	6,946.49	946.36	1,611.65	1,670.09	0.76	0.60	0.46	
8,320.00	90.13	90.61	6,947.13	945.50	1,706.64	1,764.83	1.11	1.09	0.20	



Lonestar Consulting, LLC

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit 645H - Slot B8
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Site:	Rosa Unit 27	MD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Well:	Rosa Unit 645H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	edm

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,413.00	90.13	90.45	6,946.92	944.64	1,799.64	1,857.57	0.17	0.00	-0.17	
8,508.00	90.17	89.57	6,946.67	944.63	1,894.64	1,952.36	0.93	0.04	-0.93	
8,602.00	90.30	91.13	6,946.29	944.05	1,988.63	2,046.12	1.67	0.14	1.66	
8,698.00	90.27	91.30	6,945.81	942.02	2,084.61	2,141.76	0.18	-0.03	0.18	
8,791.00	90.34	90.55	6,945.31	940.52	2,177.59	2,234.44	0.81	0.08	-0.81	
8,886.00	90.10	90.32	6,944.95	939.80	2,272.59	2,329.19	0.35	-0.25	-0.24	
8,981.00	90.27	89.87	6,944.64	939.64	2,367.59	2,423.98	0.51	0.18	-0.47	
9,075.00	90.67	91.40	6,943.87	938.60	2,461.58	2,517.69	1.68	0.43	1.63	
9,169.00	90.13	92.63	6,943.22	935.29	2,555.52	2,611.21	1.43	-0.57	1.31	
9,263.00	90.30	92.35	6,942.86	931.21	2,649.43	2,704.66	0.35	0.18	-0.30	
9,359.00	89.06	92.76	6,943.40	926.93	2,745.33	2,800.07	1.36	-1.29	0.43	
9,453.00	89.09	92.28	6,944.92	922.80	2,839.22	2,893.50	0.51	0.03	-0.51	
9,547.00	88.83	92.40	6,946.62	918.96	2,933.13	2,986.95	0.30	-0.28	0.13	
9,642.00	88.89	91.82	6,948.51	915.46	3,028.05	3,081.44	0.61	0.06	-0.61	
9,737.00	88.69	91.68	6,950.52	912.56	3,122.98	3,175.98	0.26	-0.21	-0.15	
9,833.00	89.73	90.93	6,951.84	910.37	3,218.94	3,271.59	1.34	1.08	-0.78	
9,928.00	89.80	90.74	6,952.23	908.99	3,313.93	3,366.29	0.21	0.07	-0.20	
10,024.00	89.40	90.51	6,952.90	907.94	3,409.93	3,462.01	0.48	-0.42	-0.24	
10,119.00	89.46	91.03	6,953.85	906.67	3,504.91	3,556.71	0.55	0.06	0.55	
10,215.00	90.50	91.08	6,953.88	904.90	3,600.89	3,652.37	1.08	1.08	0.05	
10,308.00	90.50	91.30	6,953.07	902.97	3,693.87	3,745.02	0.24	0.00	0.24	
10,404.00	90.50	90.93	6,952.23	901.10	3,789.85	3,840.67	0.39	0.00	-0.39	
10,501.00	90.90	90.34	6,951.05	900.02	3,886.83	3,937.38	0.73	0.41	-0.61	
10,597.00	90.67	90.32	6,949.73	899.47	3,982.82	4,033.12	0.24	-0.24	-0.02	
10,692.00	90.40	89.78	6,948.84	899.39	4,077.82	4,127.91	0.64	-0.28	-0.57	
10,786.00	90.34	89.31	6,948.24	900.14	4,171.81	4,221.75	0.50	-0.06	-0.50	
10,881.00	90.44	88.44	6,947.59	902.00	4,266.79	4,316.65	0.92	0.11	-0.92	
10,973.00	89.83	89.28	6,947.37	903.83	4,358.77	4,408.55	1.13	-0.66	0.91	
11,067.00	90.47	89.64	6,947.13	904.72	4,452.77	4,502.41	0.78	0.68	0.38	
11,161.00	90.84	90.89	6,946.05	904.28	4,546.76	4,596.17	1.39	0.39	1.33	
11,256.00	89.56	91.94	6,945.72	901.94	4,641.73	4,690.78	1.74	-1.35	1.11	
11,350.00	89.56	91.81	6,946.44	898.86	4,735.67	4,784.32	0.14	0.00	-0.14	
11,446.00	89.60	91.37	6,947.15	896.20	4,831.63	4,879.90	0.46	0.04	-0.46	
11,541.00	89.30	90.86	6,948.06	894.35	4,926.61	4,974.55	0.62	-0.32	-0.54	
11,636.00	89.43	90.49	6,949.11	893.23	5,021.60	5,069.27	0.41	0.14	-0.39	
11,730.00	89.73	90.07	6,949.80	892.77	5,115.59	5,163.03	0.55	0.32	-0.45	
11,825.00	89.60	89.45	6,950.36	893.17	5,210.59	5,257.85	0.67	-0.14	-0.65	
11,921.00	90.27	90.05	6,950.47	893.59	5,306.59	5,353.67	0.94	0.70	0.63	
12,015.00	90.67	89.67	6,949.69	893.82	5,400.58	5,447.48	0.59	0.43	-0.40	
12,110.00	90.54	90.86	6,948.69	893.38	5,495.58	5,542.24	1.26	-0.14	1.25	
12,207.00	90.67	90.67	6,947.67	892.08	5,592.56	5,638.93	0.24	0.13	-0.20	
12,303.00	90.97	89.95	6,946.29	891.56	5,688.55	5,734.68	0.81	0.31	-0.75	



Lonestar Consulting, LLC Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit 645H - Slot B8
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Site:	Rosa Unit 27	MD Reference:	GL 6305' & RKB 24.5' @ 6329.50ft (Ensign T223)
Well:	Rosa Unit 645H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	edm

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,398.00	90.37	91.12	6,945.18	890.68	5,783.54	5,829.41	1.38	-0.63	1.23	
12,493.00	89.93	92.26	6,944.93	887.87	5,878.49	5,923.98	1.29	-0.46	1.20	
12,588.00	89.97	91.96	6,945.02	884.38	5,973.43	6,018.48	0.32	0.04	-0.32	
12,683.00	88.62	92.20	6,946.19	880.93	6,068.36	6,112.98	1.44	-1.42	0.25	
12,777.00	88.89	91.76	6,948.23	877.68	6,162.28	6,206.49	0.55	0.29	-0.47	
12,873.00	89.03	91.47	6,949.97	874.98	6,258.23	6,302.05	0.34	0.15	-0.30	
12,968.00	89.30	91.10	6,951.35	872.85	6,353.19	6,396.68	0.48	0.28	-0.39	
13,062.00	89.46	90.58	6,952.37	871.47	6,447.17	6,490.37	0.58	0.17	-0.55	
13,156.00	89.70	89.91	6,953.06	871.07	6,541.17	6,584.14	0.76	0.26	-0.71	
13,251.00	90.00	89.18	6,953.31	871.82	6,636.17	6,678.98	0.83	0.32	-0.77	
13,346.00	89.87	88.68	6,953.42	873.60	6,731.15	6,773.87	0.54	-0.14	-0.53	
13,441.00	89.77	88.93	6,953.72	875.58	6,826.13	6,868.78	0.28	-0.11	0.26	
13,537.00	90.00	88.17	6,953.91	878.01	6,922.10	6,964.70	0.83	0.24	-0.79	
13,631.00	90.13	89.08	6,953.80	880.26	7,016.07	7,058.62	0.98	0.14	0.97	
13,726.00	90.20	88.78	6,953.53	882.04	7,111.05	7,153.51	0.32	0.07	-0.32	
13,821.00	90.10	88.98	6,953.28	883.89	7,206.03	7,248.41	0.24	-0.11	0.21	
13,915.00	89.73	89.40	6,953.42	885.22	7,300.02	7,342.29	0.60	-0.39	0.45	
14,013.00	89.70	89.16	6,953.91	886.45	7,398.01	7,440.15	0.25	-0.03	-0.24	
14,107.00	90.54	89.92	6,953.71	887.21	7,492.01	7,533.99	1.21	0.89	0.81	
14,202.00	90.94	90.23	6,952.48	887.08	7,587.00	7,628.77	0.53	0.42	0.33	
14,297.00	89.73	90.80	6,951.93	886.23	7,681.99	7,723.51	1.41	-1.27	0.60	
14,415.00	89.73	90.80	6,952.48	884.58	7,799.98	7,841.13	0.00	0.00	0.00	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
428.00	428.00	-0.82	1.20	First Surface MWD Survey	
6,302.00	6,246.43	765.73	127.58	Last Surface MWD Survey	
6,396.00	6,340.03	774.15	129.08	First Curve MWD Survey	
7,439.00	6,940.11	941.84	826.20	Last Curve MWD Survey	
7,532.00	6,939.67	948.82	918.92	First Lateral MWD Survey	
14,297.00	6,951.93	886.23	7,681.99	Last Lateral MWD Survey	
14,415.00	6,952.48	884.58	7,799.98	Projection to TD	

Submit a Copy To Appropriate District Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

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

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-039-31415
1. Type of Well: Oil Well ☐ Gas Well ☒ Other		5. Indicate Type of Lease STATE ☐ FEE ☐
2. Name of Operator LOGOS OPERATING, LLC		6. State Oil & Gas Lease No. NMSF078764
3. Address of Operator 2010 AFTON PLACE FARMINGTON, NM 87401		7. Lease Name or Unit Agreement Name ROSA UNIT
4. Well Location Unit Letter C : 943 feet from the NORTH line and 424 feet from the WEST line Section 19 Township 31N Range 05W NMPM County RIO ARRIBA		8. Well Number 645H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6305'		9. OGRID Number 289408
		10. Pool name or Wildcat BASIN MANCOS

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

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK ☐	REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐	ALTERING CASING ☐
PULL OR ALTER CASING ☐	COMMENCE DRILLING OPNS. ☐
DOWNHOLE COMMINGLE ☐	P AND A ☐
CLOSED-LOOP SYSTEM ☐	CASING/CEMENT JOB ☐
OTHER: ☐	OTHER: Completion ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

11/3 - 6/2022 - Run CBL (Est TOC @ 4920'). RU frac stack. Pressure test 5-1/2" prod csg to 1600psi/30mins. Test good. Waiting on frac & wireline operations.
 11/8/2022 - NU frac. Frac thru open toe sleeves @ 14,281' - 14,283' & 14,234' - 14,237'. Set CFP @ 14,219'. Perf @ 14,203' to 14,042' w/6 SPF, 0.38" Dia, 48 total. Run CCL. Wait on frac.
 11/13 - 24/2022 - Perf @ 14,011' - 7,518', w/6 SPF, 0.38" Dia, total perfs 1,728. Frac'd 36 stages w/16,265klbs 100 mesh & 40/70 sand, 430,340bbl slickwater. Set kill plug @ 7,490'. SIW. RD.
 12/3 - 4/2022 - MIRU CTU. NU BOP. Good test. RIH w/2-3/8" CT and drillout BHA. DO kill plug @ 7,490'. Circulate, CO & continue to DO composite frac plugs. POOH. Lay down BHA. RD CTU.

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.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Etta Trujillo TITLE REGULATORY SPECIALIST DATE 1/4/2023

Type or print name ETTA TRUJILLO E-mail address: etrujillo@logosresourcesllc.com PHONE: (505) 324-4154

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

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		
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER _____								6. Well Number: 645H		
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	19	31N	05W	1	943'	North	424'	West	Rio Arriba
BH:	A	20	31N	05W		44'	North	863'	East	Rio Arriba
13. Date Spudded 4/8/2022	14. Date T.D. Reached 10/25/2022		15. Date Rig Released 11/03/2022			16. Date Completed (Ready to Produce) 12/05/2022		17. Elevations (DF and RKB, RT, GR, etc.) 6305'		
18. Total Measured Depth of Well 14,415' MD / 6,952' TVD			19. Plug Back Measured Depth 14,327' MD / 6,952' 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 6939' - 6951' VD										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13-3/8"		54.5#		325'		17-1/2"		395sks		21bbls
9-5/8"		47.0#		6132'		12-1/4"		2717 sks		8 bbls (DV@4540', 2985')
5-1/2"		20.0#		14,397'		8-1/2"		2134sks		TOC @ 4920' per 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) 14,283' MD to 7,518' MD, 0.38" , 6SPF, 1728 total holes						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						14,283' MD - 7,518' MD		Frac'd 36 stages of 16,265 klbs sand/100# Mesh & 40/70 sand 430,340bbls of slickwater.		
28. PRODUCTION										
Date First Production 12/05/2022		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing				
Date of Test 12/05/2022	Hours Tested 12hrs	Choke Size 18/64	Prod'n For Test Period	Oil - Bbl 0	Gas - MCF 330	Water - Bbl. 468	Gas - Oil Ratio n/a			
Flow Tubing Press. n/a	Casing Pressure 2748	Calculated 24-Hour Rate	Oil - Bbl. 0	Gas - MCF 2261	Water - Bbl. 854 bwpd	Oil Gravity - API - (Corr.) n/a				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) sold								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 hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature <i>Etta Trujillo</i>				Printed Name Etta Trujillo		Title Regulatory Specialist			Date 1/04/23	
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 2443'	T. Penn A "
T. Salt	T. Strawn	T. Kirtland 2559'	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland 3044'	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs 3384'	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House 5427'	T. Leadville
T. Queen	T. Silurian	T. Menefee 5471'	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout 5691'	T. Elbert
T. San Andres	T. Simpson	T. Mancos 6203'	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

From	To	Thickness In Feet	Lithology

From: blm-afmss-notifications@blm.gov
To: [Etta Trujillo](#)
Subject: Well Name: ROSA UNIT, Well Number: 645H, Notification of Well Completion Acceptance
Date: Monday, January 9, 2023 11:05:35 AM

The Bureau of Land Management

Notice of Acceptance for Well Completion Report

- Operator Name: **LOGOS OPERATING LLC**
- Well Name: **ROSA UNIT**
- Well Number: **645H**
- US Well Number: **3003931415**
- Well Completion Report Id: **WCR2023010986996**

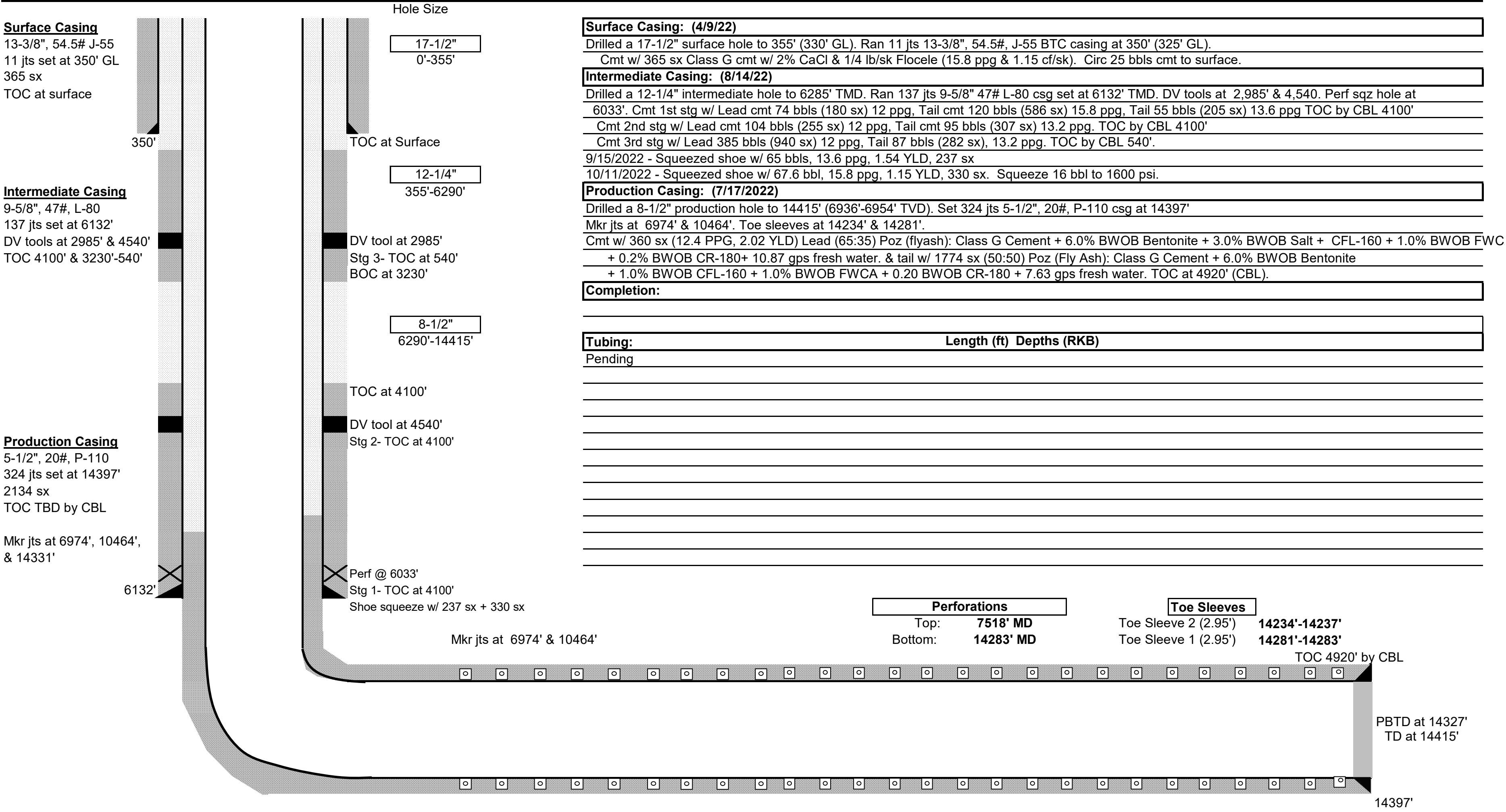
This notification is automatically generated. Please do not reply to this message as this account is not monitored.



Well Name: Rosa Unit 645H
Location: C - 19 - 31N - 05W, 943' FNL & 424' FWL
County: Rio Arriba
API #: 30-039-31415
Co-ordinates: 36.889688,-107.405476 NAD83
Operator: LOGOS Operating, LLC

Wellbore Schematic
Ground Elevation: 6305'
KB Elevation: 6330'
TD (TVD): 6936'-6954'
TD (MD): 14415'
PBTD: 14327'

Prepared By: 11/2/2022 CHR
Reviewed By:
Last Updated: 12/30/2022 CHR
Spud Date: 4/8/2022
Completion Date:
Last Workover Date:



Formation Tops: (MD)			
Nacimiento	Surface	Chacra	4619'
Ojo Alamo	2443'	Cliff House	5427'
Kirtland	2559'	Menefee	5471'
Fruitland	3044'	Point Lookout	5691'
Pictured Cliffs	3384'	Mancos	6203'
Lewis	3494'		

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 174375

ACKNOWLEDGMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 174375
	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.

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CONDITIONS

Action 174375

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Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 174375
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-5 Completion Sundry within 10 days to NMOCD after BLM approval.	5/18/2023