

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

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 30-039-31383	⁵ Pool Name Basin Mancos		⁶ Pool Code 97232
⁷ Property Code 320608	⁸ Property Name Rosa Unit		⁹ Well Number 656H

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
A	25	31N	6W	1	1068	FNL	289	FEL	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
E	28	31N	5W		1378	FNL	1215	FWL	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 G
373888	Harvest Four Corners, LLC 1755 Arroyo Dr. Bloomfield NM 87413	

IV. Well Completion Data

²¹ Spud Date 4/27/2019	²² Ready Date 9/03/2021	²³ TD 18240' MD / 7008' TVD	²⁴ PBTD 18130' MD / 7007' TVD	²⁵ Perforations 7300' MD / 18088' MD 6974' TVD / 7007' TVD	²⁶ DHC, MC R-13457A
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17-1/2"	13-3/8", 54.5#, J-55	331'	340sx (71bbbs - 401cf)		
12-1/4"	9-5/8", 43.5#, N-80	6358'	1628sx (597bbbs - 3356cf) DV @ 4704' & DV @ 3138'		
8-1/2"	5 1/2", 20#, P-110	18,219'	2802sx (785bbbs - 4409cf), TOC @ 6928'		
	Request to delay tubing installation submitted	Tubing extension			

V. Well Test Data

³¹ Date New Oil n/a	³² Gas Delivery Date 9/03/2021	³³ Test Date 9/03/2021	³⁴ Test Length 12hrs	³⁵ Tbg. Pressure N/A	³⁶ Csg. Pressure 1630
³⁷ Choke Size 14/64	³⁸ Oil 0	³⁹ Water 288bwpd	⁴⁰ Gas 300 mcf/d		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: <i>Etta Trujillo</i> Printed name: Etta Trujillo Title: Regulatory Specialist E-mail Address: etrujillo@logosresourcesllc.com Date: 9/20/2021	Phone: 505-324-4154	OIL CONSERVATION DIVISION	
	Approved by: <i>PATRICIA MARTINEZ</i>		
	Title: <i>NMOCD</i>		
	Approval Date: <i>11/16/2021</i>		

District I
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 C-102
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

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 **08/09/2021**
Signature Date

Etta Trujillo
Printed Name
etrujillo@logosresourcesllc.com
E-mail Address

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31383	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 320608	⁵ Property Name ROSA UNIT	⁶ Well Number 656H
⁷ GRID No. 289408	⁸ Operator Name LOGOS OPERATING, LLC	⁹ Elevation 6372'

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
A	25	31N	6W	1	1068	NORTH	289	EAST	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
E	28	31N	5W		1378	NORTH	1215	WEST	RIO ARriba

¹² Dedicated Acres 1144.85	N/2 - Section 25, T31N, R6W N/2 - Sections 30, 29, 28 T31N, R5W	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13457A
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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: AUGUST 5, 2021
Date of Survey: MARCH 15, 2019

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

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

POINT-OF-ENTRY
1475' FNL 479' FEL
SEC. 25, T31N, R6W
LAT: 36.873802°N
LONG: 107.408820°W
DATUM: NAD1927

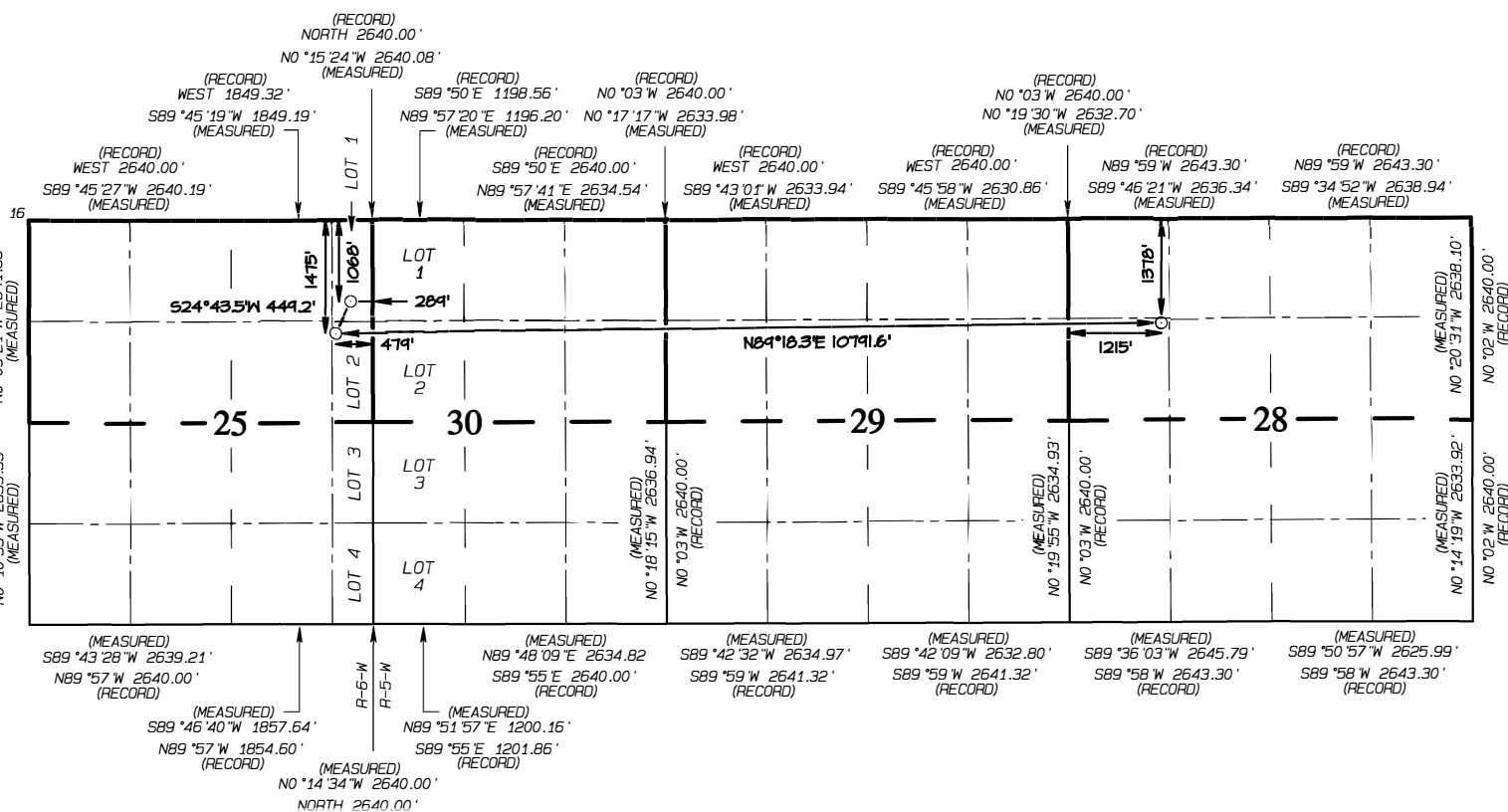
LAT: 36.873808°N
LONG: 107.409423°W
DATUM: NAD1983

SURFACE LOCATION
1068' FNL 289' FEL
SEC. 25, T31N, R6W
LAT: 36.874920°N
LONG: 107.408172°W
DATUM: NAD1927

LAT: 36.874926°N
LONG: 107.408775°W
DATUM: NAD1983

END-OF-LATERAL
1378' FNL 1215' FWL
SEC. 28, T31N, R5W
LAT: 36.874024°N
LONG: 107.371927°W
DATUM: NAD1927

LAT: 36.874030°N
LONG: 107.372529°W
DATUM: NAD1983





Logos Opersting LLC

Rio Arriba, NM NAD83

Rosa Unit 29

Rosa Unit #656H - Slot B3 (656H)

OH

Design: OH

Standard Survey Report

27 July, 2021



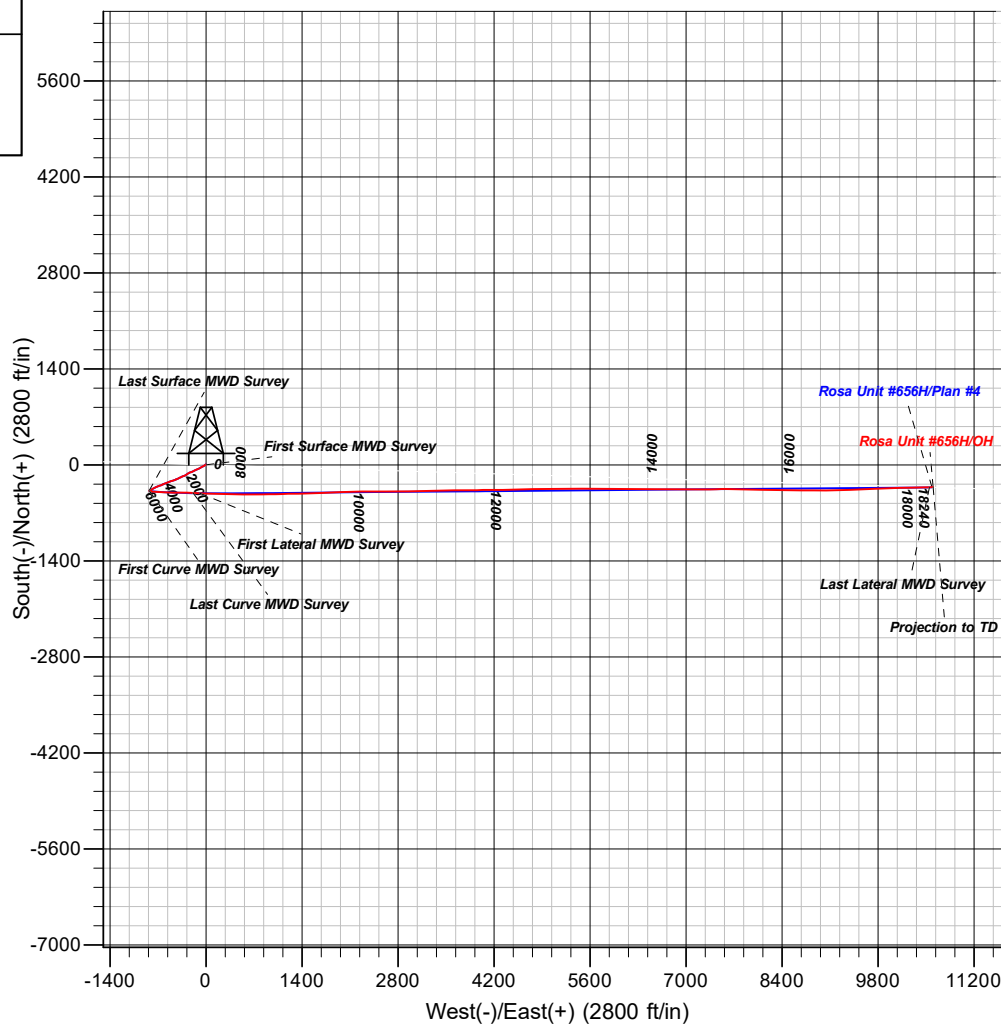
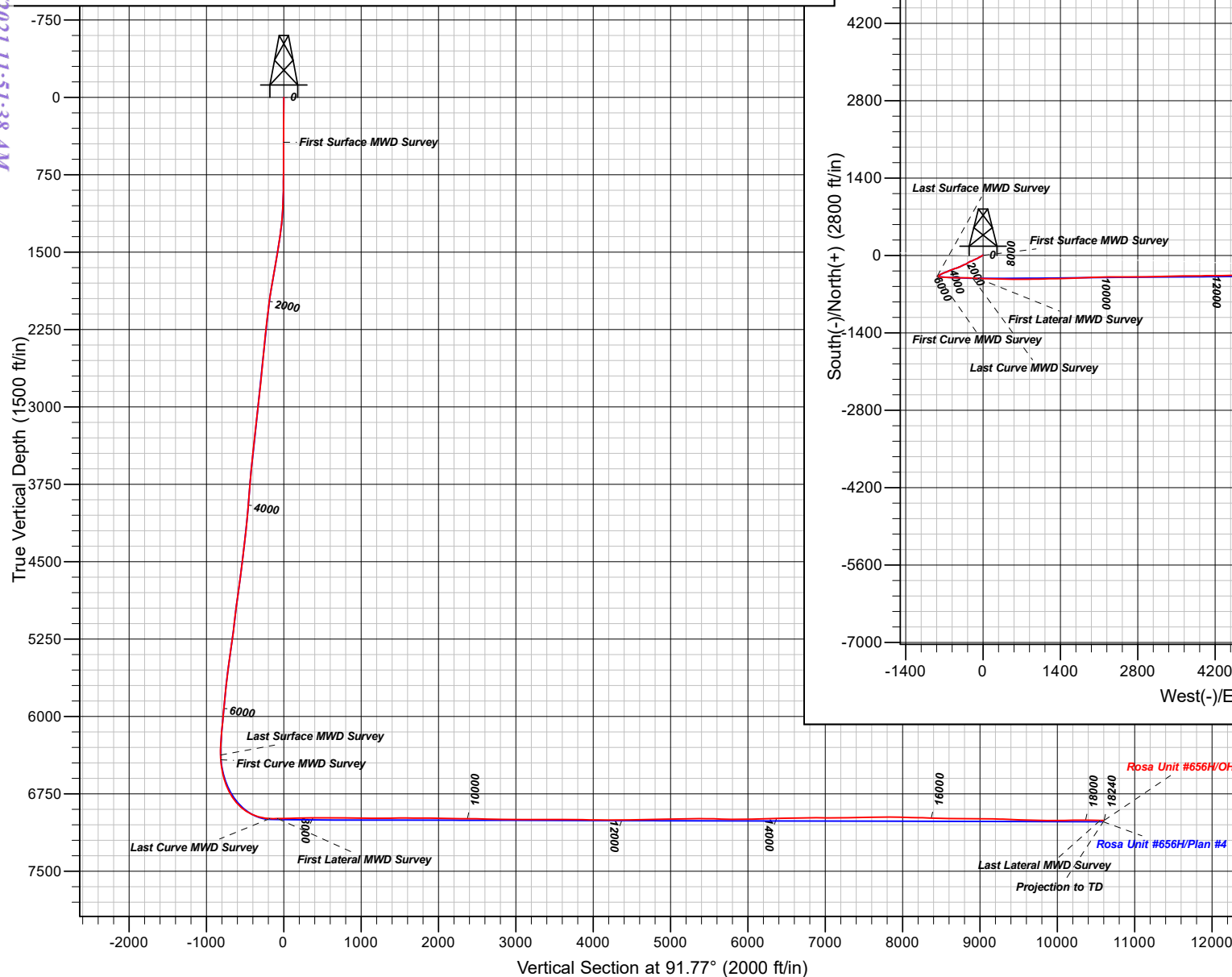


Company Name: Logos Operating LLC
 Project: Rio Arriba, NM NAD83
 Site: Rosa Unit 29
 Well: Rosa Unit #656H
 Wellbore: OH



WELL DETAILS: Rosa Unit #656H

+NESW	North	GL 6372' & RKB 25' @ 6397.00ft	6372.00	Longitude	
0.000.00	2138073.89	Easting	2847269.23	Latitude	36.8749260
					-107.4087750
					B3 (656H)



Design: OH (Rosa Unit #656H/OH)

Created By: Janie Collins Date: 11:41, July 27 2021

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



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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 29			
Site Position:		Northing:	2,138,126.53 usft	Latitude:	36.8750715
From:	Map	Easting:	2,847,195.58 usft	Longitude:	-107.4090261
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	

Well	Rosa Unit #656H - Slot B3 (656H)					
Well Position	+N/-S	0.00 ft	Northing:	2,138,073.89 usft	Latitude:	36.8749260
	+E/-W	0.00 ft	Easting:	2,847,269.24 usft	Longitude:	-107.4087750
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	6,372.00 ft
Grid Convergence:		0.25 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/6/2019	8.88	63.43	49,854.20000000

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	91.77	

Survey Program	Date	7/27/2021			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
435.00	6,454.00	Survey #1 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
6,501.00	7,445.00	Survey #2 - Intermediate MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
7,540.00	18,240.00	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	
435.00	0.79	338.12	434.99	2.78	-1.12	-1.20	0.18	0.18	0.00	
530.00	0.62	339.08	529.98	3.87	-1.55	-1.66	0.18	-0.18	1.01	
626.00	0.70	358.86	625.97	4.94	-1.74	-1.89	0.25	0.08	20.60	
721.00	1.14	347.79	720.96	6.45	-1.95	-2.15	0.50	0.46	-11.65	
817.00	0.44	330.65	816.95	7.70	-2.34	-2.57	0.76	-0.73	-17.85	
912.00	2.07	234.76	911.93	7.03	-3.92	-4.13	2.27	1.72	-100.94	
1,007.00	4.22	223.33	1,006.78	3.50	-7.72	-7.82	2.35	2.26	-12.03	



Lonestar Consulting

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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)
1,102.00	6.02	231.51	1,101.40	-2.15	-14.02	-13.94	2.04	1.89	8.61
1,198.00	8.88	237.92	1,196.58	-9.22	-24.24	-23.94	3.10	2.98	6.68
1,293.00	11.07	243.20	1,290.14	-17.23	-38.59	-38.04	2.50	2.31	5.56
1,388.00	12.44	243.46	1,383.15	-25.91	-55.89	-55.06	1.44	1.44	0.27
1,483.00	14.37	238.98	1,475.56	-36.56	-75.15	-73.98	2.31	2.03	-4.72
1,578.00	14.94	241.35	1,567.47	-48.51	-96.00	-94.45	0.87	0.60	2.49
1,673.00	14.99	246.98	1,659.25	-59.18	-118.05	-116.17	1.53	0.05	5.93
1,769.00	14.72	244.78	1,752.04	-69.23	-140.51	-138.31	0.65	-0.28	-2.29
1,864.00	14.02	244.95	1,844.07	-79.25	-161.86	-159.33	0.74	-0.74	0.18
1,959.00	12.35	241.88	1,936.56	-88.91	-181.24	-178.41	1.91	-1.76	-3.23
2,054.00	10.55	243.11	2,029.67	-97.63	-197.96	-194.85	1.91	-1.89	1.29
2,150.00	8.88	252.07	2,124.29	-103.89	-212.85	-209.54	2.34	-1.74	9.33
2,244.00	9.84	253.92	2,217.04	-108.35	-227.47	-224.02	1.07	1.02	1.97
2,339.00	9.98	245.66	2,310.63	-113.99	-242.77	-239.14	1.50	0.15	-8.69
2,435.00	7.95	236.78	2,405.46	-121.06	-255.91	-252.05	2.55	-2.11	-9.25
2,531.00	7.73	233.79	2,500.56	-128.51	-266.67	-262.58	0.48	-0.23	-3.11
2,626.00	9.27	233.79	2,594.51	-136.80	-278.00	-273.64	1.62	1.62	0.00
2,721.00	9.71	240.38	2,688.21	-145.28	-291.14	-286.51	1.23	0.46	6.94
2,812.00	8.79	247.77	2,778.03	-151.71	-304.25	-299.42	1.65	-1.01	8.12
2,911.00	8.61	249.79	2,875.89	-157.13	-318.20	-313.20	0.36	-0.18	2.04
3,007.00	10.20	245.92	2,970.60	-163.08	-332.71	-327.51	1.78	1.66	-4.03
3,102.00	10.02	244.25	3,064.13	-170.10	-347.83	-342.41	0.36	-0.19	-1.76
3,197.00	9.05	245.48	3,157.81	-176.79	-362.07	-356.44	1.04	-1.02	1.29
3,293.00	8.88	244.60	3,252.64	-183.10	-375.64	-369.80	0.23	-0.18	-0.92
3,387.00	9.45	244.87	3,345.44	-189.49	-389.18	-383.14	0.61	0.61	0.29
3,483.00	8.79	246.71	3,440.23	-195.74	-403.05	-396.81	0.75	-0.69	1.92
3,578.00	8.79	246.36	3,534.11	-201.52	-416.37	-409.94	0.06	0.00	-0.37
3,674.00	7.87	245.13	3,629.10	-207.23	-429.05	-422.44	0.98	-0.96	-1.28
3,769.00	6.42	243.20	3,723.36	-212.36	-439.69	-432.92	1.55	-1.53	-2.03
3,865.00	6.46	246.62	3,818.75	-216.92	-449.44	-442.53	0.40	0.04	3.56
3,960.00	6.90	249.70	3,913.11	-221.02	-459.70	-452.65	0.60	0.46	3.24
4,054.00	7.21	253.83	4,006.40	-224.62	-470.66	-463.50	0.63	0.33	4.39
4,149.00	7.82	254.53	4,100.58	-228.01	-482.61	-475.34	0.65	0.64	0.74
4,244.00	8.79	252.51	4,194.58	-231.91	-495.77	-488.37	1.07	1.02	-2.13
4,338.00	9.27	250.93	4,287.42	-236.54	-509.77	-502.22	0.57	0.51	-1.68
4,432.00	9.93	251.63	4,380.10	-241.57	-524.62	-516.91	0.71	0.70	0.74
4,526.00	10.15	248.56	4,472.66	-247.15	-540.02	-532.13	0.62	0.23	-3.27
4,620.00	9.40	247.33	4,565.30	-253.14	-554.81	-546.73	0.83	-0.80	-1.31
4,715.00	10.59	247.15	4,658.85	-259.52	-570.02	-561.73	1.25	1.25	-0.19
4,809.00	11.29	248.73	4,751.14	-266.21	-586.55	-578.05	0.81	0.74	1.68
4,903.00	11.73	248.73	4,843.25	-273.02	-604.03	-595.31	0.47	0.47	0.00
4,997.00	11.78	247.33	4,935.28	-280.18	-621.79	-612.84	0.31	0.05	-1.49
5,091.00	9.67	243.90	5,027.64	-287.35	-637.73	-628.55	2.34	-2.24	-3.65



Lonestar Consulting

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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)	
5,186.00	9.14	246.98	5,121.36	-293.81	-651.84	-642.46	0.77	-0.56	3.24	
5,280.00	10.55	253.66	5,213.98	-299.16	-666.97	-657.42	1.93	1.50	7.11	
5,375.00	12.13	250.23	5,307.12	-304.98	-684.71	-674.97	1.81	1.66	-3.61	
5,469.00	11.73	248.56	5,399.09	-311.81	-702.90	-692.94	0.56	-0.43	-1.78	
5,564.00	11.51	245.83	5,492.14	-319.22	-720.54	-710.33	0.62	-0.23	-2.87	
5,659.00	10.68	242.84	5,585.37	-327.12	-737.02	-726.56	1.06	-0.87	-3.15	
5,753.00	9.27	240.38	5,677.94	-334.84	-751.35	-740.65	1.57	-1.50	-2.62	
5,848.00	8.96	244.25	5,771.74	-341.84	-764.67	-753.74	0.72	-0.33	4.07	
5,942.00	8.70	241.09	5,864.63	-348.45	-777.48	-766.35	0.59	-0.28	-3.36	
6,036.00	8.35	243.11	5,957.59	-354.98	-789.79	-778.45	0.49	-0.37	2.15	
6,130.00	7.73	240.91	6,050.67	-361.14	-801.40	-789.87	0.74	-0.66	-2.34	
6,225.00	7.21	243.72	6,144.86	-366.88	-812.33	-800.61	0.67	-0.55	2.96	
6,305.00	5.89	241.35	6,224.34	-371.07	-820.44	-808.58	1.68	-1.65	-2.96	
6,378.00	4.70	241.35	6,297.03	-374.30	-826.35	-814.39	1.63	-1.63	0.00	
6,407.00	4.68	237.56	6,325.93	-375.51	-828.39	-816.40	1.07	-0.07	-13.07	
6,454.00	2.86	153.29	6,372.85	-377.59	-829.48	-817.42	11.14	-3.87	-179.30	
6,501.00	7.08	115.81	6,419.68	-379.90	-826.35	-814.22	10.88	8.98	-79.74	
6,548.00	9.94	110.54	6,466.15	-382.58	-819.94	-807.73	6.30	6.09	-11.21	
6,596.00	12.08	110.18	6,513.27	-385.77	-811.34	-799.04	4.46	4.46	-0.75	
6,643.00	16.97	102.27	6,558.76	-388.92	-800.02	-787.62	11.20	10.40	-16.83	
6,690.00	20.82	94.17	6,603.22	-390.99	-784.98	-772.52	9.89	8.19	-17.23	
6,737.00	25.85	93.13	6,646.37	-392.16	-766.40	-753.92	10.74	10.70	-2.21	
6,783.00	31.25	91.31	6,686.76	-392.98	-744.44	-731.95	11.89	11.74	-3.96	
6,832.00	35.35	90.14	6,727.70	-393.30	-717.55	-705.06	8.47	8.37	-2.39	
6,877.00	38.42	93.11	6,763.70	-394.10	-690.56	-678.06	7.89	6.82	6.60	
6,925.00	43.26	93.66	6,800.00	-395.96	-659.24	-646.69	10.11	10.08	1.15	
6,971.00	48.36	93.57	6,832.05	-398.03	-626.33	-613.74	11.09	11.09	-0.20	
7,018.00	53.38	93.13	6,861.70	-400.16	-589.95	-577.30	10.71	10.68	-0.94	
7,067.00	58.21	92.17	6,889.24	-402.02	-549.48	-536.80	9.99	9.86	-1.96	
7,114.00	62.85	91.86	6,912.36	-403.46	-508.59	-495.89	9.89	9.87	-0.66	
7,163.00	66.74	91.02	6,933.22	-404.57	-464.28	-451.56	8.09	7.94	-1.71	
7,209.00	70.31	90.66	6,950.06	-405.19	-421.49	-408.77	7.79	7.76	-0.78	
7,257.00	75.27	90.14	6,964.26	-405.51	-375.65	-362.95	10.38	10.33	-1.08	
7,304.00	80.11	89.87	6,974.27	-405.51	-329.75	-317.06	10.31	10.30	-0.57	
7,351.00	82.86	90.21	6,981.23	-405.54	-283.27	-270.61	5.89	5.85	0.72	
7,445.00	88.11	91.73	6,988.63	-407.14	-189.61	-176.94	5.81	5.59	1.62	
7,540.00	91.21	92.63	6,989.19	-410.75	-94.69	-81.96	3.40	3.26	0.95	
7,606.00	90.77	93.42	6,988.05	-414.23	-28.79	-15.99	1.37	-0.67	1.20	
7,699.00	90.70	93.35	6,986.86	-419.72	64.04	76.97	0.11	-0.08	-0.08	
7,794.00	90.74	90.97	6,985.67	-423.30	158.95	171.95	2.51	0.04	-2.51	
7,888.00	90.81	90.95	6,984.39	-424.88	252.93	265.93	0.08	0.07	-0.02	
7,982.00	91.11	90.79	6,982.82	-426.30	346.91	359.91	0.36	0.32	-0.17	
8,076.00	89.66	90.78	6,982.19	-427.59	440.89	453.89	1.54	-1.54	-0.01	
8,170.00	90.10	90.75	6,982.38	-428.85	534.89	547.88	0.47	0.47	-0.03	



Lonestar Consulting

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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)
8,265.00	90.44	90.60	6,981.94	-429.97	629.88	642.86	0.39	0.36	-0.16
8,369.00	88.89	89.40	6,982.55	-429.97	733.87	746.80	1.88	-1.49	-1.15
8,454.00	89.26	89.24	6,983.92	-428.96	818.85	831.71	0.47	0.44	-0.19
8,548.00	89.36	89.28	6,985.05	-427.74	912.84	925.61	0.11	0.11	0.04
8,643.00	89.34	88.74	6,986.13	-426.10	1,007.82	1,020.50	0.57	-0.02	-0.57
8,737.00	89.87	88.83	6,986.78	-424.11	1,101.79	1,114.37	0.57	0.56	0.10
8,831.00	90.66	88.65	6,986.34	-422.04	1,195.77	1,208.23	0.86	0.84	-0.19
8,926.00	90.03	89.21	6,985.77	-420.27	1,290.75	1,303.12	0.89	-0.66	0.59
9,020.00	90.34	88.93	6,985.47	-418.74	1,384.74	1,397.01	0.44	0.33	-0.30
9,115.00	90.77	88.65	6,984.54	-416.74	1,479.71	1,491.88	0.54	0.45	-0.29
9,209.00	89.25	87.77	6,984.53	-413.80	1,573.66	1,585.69	1.87	-1.62	-0.94
9,303.00	89.83	87.36	6,985.28	-409.81	1,667.57	1,679.44	0.76	0.62	-0.44
9,397.00	90.64	87.07	6,984.90	-405.24	1,761.46	1,773.14	0.92	0.86	-0.31
9,492.00	89.00	87.66	6,985.20	-400.87	1,856.36	1,867.85	1.83	-1.73	0.62
9,587.00	89.43	87.83	6,986.50	-397.13	1,951.27	1,962.61	0.49	0.45	0.18
9,684.00	90.00	88.08	6,986.98	-393.67	2,048.21	2,059.39	0.64	0.59	0.26
9,780.00	88.56	89.04	6,988.19	-391.26	2,144.17	2,155.23	1.80	-1.50	1.00
9,876.00	89.06	89.24	6,990.18	-389.82	2,240.14	2,251.11	0.56	0.52	0.21
9,972.00	89.53	89.41	6,991.36	-388.69	2,336.12	2,347.01	0.52	0.49	0.18
10,068.00	90.00	89.64	6,991.75	-387.89	2,432.12	2,442.94	0.55	0.49	0.24
10,164.00	88.96	90.07	6,992.63	-387.65	2,528.11	2,538.88	1.17	-1.08	0.45
10,260.00	88.73	89.83	6,994.56	-387.57	2,624.09	2,634.81	0.35	-0.24	-0.25
10,356.00	88.96	89.81	6,996.50	-387.26	2,720.07	2,730.74	0.24	0.24	-0.02
10,451.00	89.53	89.59	6,997.75	-386.77	2,815.06	2,825.67	0.64	0.60	-0.23
10,546.00	89.66	89.17	6,998.42	-385.74	2,910.05	2,920.58	0.46	0.14	-0.44
10,640.00	89.70	89.05	6,998.94	-384.28	3,004.04	3,014.48	0.13	0.04	-0.13
10,735.00	89.90	88.92	6,999.28	-382.60	3,099.03	3,109.36	0.25	0.21	-0.14
10,829.00	90.07	88.47	6,999.30	-380.46	3,193.00	3,203.23	0.51	0.18	-0.48
10,924.00	90.33	87.99	6,998.97	-377.52	3,287.95	3,298.05	0.57	0.27	-0.51
11,018.00	89.90	89.44	6,998.78	-375.41	3,381.93	3,391.91	1.61	-0.46	1.54
11,112.00	89.83	88.93	6,999.00	-374.08	3,475.92	3,485.81	0.55	-0.07	-0.54
11,207.00	90.10	88.25	6,999.06	-371.74	3,570.89	3,580.67	0.77	0.28	-0.72
11,302.00	89.43	89.53	6,999.45	-369.90	3,665.87	3,675.54	1.52	-0.71	1.35
11,396.00	89.43	89.59	7,000.38	-369.18	3,759.86	3,769.47	0.06	0.00	0.06
11,490.00	89.73	89.19	7,001.07	-368.18	3,853.85	3,863.39	0.53	0.32	-0.43
11,584.00	89.97	89.12	7,001.32	-366.79	3,947.84	3,957.29	0.27	0.26	-0.07
11,679.00	89.87	88.91	7,001.45	-365.16	4,042.83	4,052.18	0.24	-0.11	-0.22
11,773.00	89.60	90.15	7,001.89	-364.39	4,136.82	4,146.10	1.35	-0.29	1.32
11,867.00	89.26	89.83	7,002.82	-364.37	4,230.82	4,240.05	0.50	-0.36	-0.34
11,962.00	89.87	89.97	7,003.54	-364.20	4,325.81	4,335.00	0.66	0.64	0.15
12,057.00	90.90	89.14	7,002.91	-363.47	4,420.81	4,429.92	1.39	1.08	-0.87
12,151.00	90.94	88.65	7,001.40	-361.65	4,514.78	4,523.79	0.52	0.04	-0.52
12,245.00	91.04	88.04	6,999.77	-358.94	4,608.72	4,617.61	0.66	0.11	-0.65



Lonestar Consulting

Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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)	
12,340.00	91.24	87.81	6,997.88	-355.50	4,703.64	4,712.38	0.32	0.21	-0.24	
12,434.00	90.31	89.27	6,996.61	-353.11	4,797.60	4,806.22	1.84	-0.99	1.55	
12,528.00	90.17	88.98	6,996.22	-351.67	4,891.59	4,900.11	0.34	-0.15	-0.31	
12,622.00	90.60	90.07	6,995.59	-350.89	4,985.58	4,994.04	1.25	0.46	1.16	
12,716.00	90.81	89.72	6,994.43	-350.72	5,079.57	5,087.98	0.43	0.22	-0.37	
12,811.00	91.01	89.27	6,992.92	-349.88	5,174.56	5,182.89	0.52	0.21	-0.47	
12,905.00	91.14	89.14	6,991.16	-348.58	5,268.53	5,276.78	0.20	0.14	-0.14	
12,999.00	89.66	89.12	6,990.50	-347.15	5,362.51	5,370.68	1.57	-1.57	-0.02	
13,094.00	89.90	88.91	6,990.86	-345.52	5,457.50	5,465.57	0.34	0.25	-0.22	
13,189.00	88.79	90.05	6,991.95	-344.65	5,552.49	5,560.48	1.67	-1.17	1.20	
13,285.00	89.00	89.99	6,993.80	-344.69	5,648.47	5,656.42	0.23	0.22	-0.06	
13,380.00	89.30	89.85	6,995.21	-344.56	5,743.46	5,751.36	0.35	0.32	-0.15	
13,475.00	89.83	89.76	6,995.93	-344.23	5,838.45	5,846.30	0.57	0.56	-0.09	
13,570.00	89.73	91.32	6,996.30	-345.13	5,933.45	5,941.28	1.65	-0.11	1.64	
13,665.00	90.70	91.21	6,995.94	-347.22	6,028.42	6,036.27	1.03	1.02	-0.12	
13,759.00	91.45	91.20	6,994.18	-349.20	6,122.38	6,130.25	0.80	0.80	-0.01	
13,853.00	91.24	91.11	6,991.97	-351.10	6,216.34	6,224.22	0.24	-0.22	-0.10	
13,948.00	91.67	90.93	6,989.56	-352.79	6,311.29	6,319.18	0.49	0.45	-0.19	
14,043.00	90.97	90.32	6,987.37	-353.82	6,406.26	6,414.13	0.98	-0.74	-0.64	
14,138.00	91.24	90.17	6,985.54	-354.23	6,501.24	6,509.08	0.33	0.28	-0.16	
14,232.00	90.17	90.64	6,984.38	-354.89	6,595.23	6,603.05	1.24	-1.14	0.50	
14,326.00	90.40	90.41	6,983.91	-355.75	6,689.23	6,697.02	0.35	0.24	-0.24	
14,421.00	90.70	90.07	6,983.00	-356.15	6,784.22	6,791.98	0.48	0.32	-0.36	
14,515.00	91.11	89.92	6,981.52	-356.14	6,878.21	6,885.93	0.46	0.44	-0.16	
14,610.00	89.43	90.65	6,981.07	-356.62	6,973.20	6,980.89	1.93	-1.77	0.77	
14,705.00	89.70	90.32	6,981.79	-357.42	7,068.20	7,075.86	0.45	0.28	-0.35	
14,799.00	89.93	90.10	6,982.09	-357.76	7,162.19	7,169.83	0.34	0.24	-0.23	
14,893.00	90.13	89.65	6,982.05	-357.56	7,256.19	7,263.78	0.52	0.21	-0.48	
14,988.00	90.77	88.52	6,981.30	-356.04	7,351.18	7,358.67	1.37	0.67	-1.19	
15,082.00	91.47	88.41	6,979.46	-353.53	7,445.12	7,452.49	0.75	0.74	-0.12	
15,176.00	91.28	89.59	6,977.21	-351.89	7,539.08	7,546.35	1.27	-0.20	1.26	
15,271.00	90.34	90.67	6,975.86	-352.10	7,634.07	7,641.30	1.51	-0.99	1.14	
15,365.00	90.30	91.44	6,975.34	-353.83	7,728.05	7,735.29	0.82	-0.04	0.82	
15,459.00	89.40	91.38	6,975.58	-356.14	7,822.02	7,829.29	0.96	-0.96	-0.06	
15,554.00	89.87	91.08	6,976.19	-358.18	7,917.00	7,924.28	0.59	0.49	-0.32	
15,648.00	88.59	91.37	6,977.45	-360.19	8,010.97	8,018.27	1.40	-1.36	0.31	
15,743.00	88.86	91.19	6,979.57	-362.31	8,105.92	8,113.24	0.34	0.28	-0.19	
15,837.00	89.50	90.59	6,980.91	-363.77	8,199.90	8,207.22	0.93	0.68	-0.64	
15,931.00	88.02	91.07	6,982.95	-365.14	8,293.86	8,301.18	1.66	-1.57	0.51	
16,026.00	88.73	91.10	6,985.64	-366.93	8,388.81	8,396.14	0.75	0.75	0.03	
16,122.00	89.78	91.02	6,986.89	-368.71	8,484.78	8,492.12	1.10	1.09	-0.08	
16,218.00	88.90	90.58	6,987.99	-370.05	8,580.76	8,588.10	1.02	-0.92	-0.46	
16,313.00	89.20	90.55	6,989.57	-370.99	8,675.74	8,683.06	0.32	0.32	-0.03	



Lonestar Consulting Survey Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #656H - Slot B3 (656H)
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Site:	Rosa Unit 29	MD Reference:	GL 6372' & RKB 25' @ 6397.00ft
Well:	Rosa Unit #656H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM_16.0

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)
16,408.00	89.36	90.30	6,990.76	-371.69	8,770.73	8,778.03	0.31	0.17	-0.26
16,502.00	89.69	89.79	6,991.54	-371.76	8,864.73	8,871.98	0.65	0.35	-0.54
16,607.00	90.10	89.35	6,991.73	-370.98	8,969.73	8,976.91	0.57	0.39	-0.42
16,799.00	88.96	89.22	6,993.31	-368.58	9,161.70	9,168.72	0.60	-0.59	-0.07
16,890.00	89.60	88.83	6,994.45	-367.03	9,252.68	9,259.60	0.82	0.70	-0.43
17,002.00	87.41	88.20	6,997.37	-364.13	9,364.60	9,371.38	2.03	-1.96	-0.56
17,079.00	87.82	88.01	7,000.58	-361.59	9,441.49	9,448.15	0.59	0.53	-0.25
17,174.00	88.52	87.50	7,003.61	-357.87	9,536.37	9,542.87	0.91	0.74	-0.54
17,268.00	89.16	87.19	7,005.52	-353.51	9,630.25	9,636.57	0.76	0.68	-0.33
17,362.00	89.93	86.87	7,006.26	-348.64	9,724.12	9,730.25	0.89	0.82	-0.34
17,468.00	88.59	88.26	7,007.63	-344.14	9,830.01	9,835.95	1.82	-1.26	1.31
17,551.00	89.53	88.17	7,008.99	-341.56	9,912.95	9,918.77	1.14	1.13	-0.11
17,645.00	90.67	88.07	7,008.83	-338.47	10,006.90	10,012.58	1.22	1.21	-0.11
17,740.00	91.80	87.95	7,006.78	-335.17	10,101.82	10,107.35	1.20	1.19	-0.13
17,843.00	89.77	88.83	7,005.37	-332.28	10,204.76	10,210.16	2.15	-1.97	0.85
17,928.00	90.75	88.65	7,004.98	-330.41	10,289.74	10,295.04	1.17	1.15	-0.21
18,023.00	89.08	88.91	7,005.13	-328.39	10,384.72	10,389.91	1.78	-1.76	0.27
18,117.00	89.08	88.74	7,006.63	-326.46	10,478.69	10,483.77	0.18	0.00	-0.18
18,188.00	89.78	89.00	7,007.34	-325.06	10,549.67	10,554.67	1.05	0.99	0.37
18,240.00	89.78	89.00	7,007.54	-324.15	10,601.66	10,606.61	0.00	0.00	0.00

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
435.00	434.99	2.78	-1.12	First Surface MWD Survey
6,454.00	6,372.85	-377.59	-829.48	Last Surface MWD Survey
6,501.00	6,419.68	-379.90	-826.35	First Curve MWD Survey
7,445.00	6,988.63	-407.14	-189.61	Last Curve MWD Survey
7,540.00	6,989.19	-410.75	-94.69	First Lateral MWD Survey
18,188.00	7,007.34	-325.06	10,549.67	Last Lateral MWD Survey
18,240.00	7,007.54	-324.15	10,601.66	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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Ground Elevation:	6372'
KB Elevation:	6397'
TD (TVD):	7007'
TD (MD)	18,240'
PBTD:	18,130'

[illegible]

Released to Imaging: 11/16/2021 11:51:38 AM

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 61487

ACKNOWLEDGMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 61487
	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
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District III
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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 61487

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 61487
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	11/16/2021