

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMSF078769
6. If Indian, Allottee or Tribe Name**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

LOGOS OPERATING, LLC

3a. Address 2010 AFTON PLACE
FARMINGTON, NM 874013b. Phone No. (include area code)
(505) 278-8720

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SEC 19 T31N R05W NENW (C) 965 FNL 480 FWL

7. If Unit of CA/Agreement, Name and/or No.

NMNM78407E

8. Well Name and No.

ROSA UNIT 649H

9. API Well No.

30-039-31410

10. Field and Pool or Exploratory Area

BASIN MANCOS

11. Country or Parish, State

RIO ARRIBA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

LOGOS Operating request a change in plans for the following:

Original surface location from 958' FNL & 451' FWL to new **surface location 965' FNL & 480' FWL**Original bottom-hole location from 2,579' FSL & 1,916' FWL to new **bottom-hole location 1,384' FNL & 2,262' FWL**Original TD @ 18,233' MD 6,821' TVD to new **TD @ 17,542' MD 6,825' TVD**

Geology tops have been updated per changes.

Original KOP @ 6,587' MD 6,346' TVD to new **KOP @ 6,336' MD 6,325' TVD**Original Landing point @ 7,671' MD 7,028' TVD to new **Landing point @ 7,342' MD 6,957' TVD**Original 7" casing Intermediate @ 6,485' MD to new **Intermediate 9.625" casing @ 6,227' MD**Original 4.5" casing Production Liner @ 18,233' MD to new **Production 5.5" casing @ 17,542' MD**

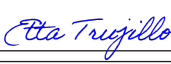
The 9.625" Intermediate & 5.5" production cementing bbls and sacks have been update per casing depth changes.

Attached: New C102, Operation and Directional Drill plans.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Etta Trujillo

Title Regulatory Specialist

Signature 

Date 11/16/2021

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31410	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 320608	⁵ Property Name ROSA UNIT	⁶ Well Number 649H
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	965	NORTH	480	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
F	21	31N	5W		1384	NORTH	2262	WEST	RIO ARriba
¹² Dedicated Acres 872.01	N/2 - Sections 19, 20, 21, T31N, R5W					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.

Signature Etta Trujillo Date **11/12/2021**
Printed Name **Etta Trujillo**
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 12, 2021
Survey Date: JANUARY 2, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

SURFACE LOCATION
965' FNL 480' FWL
SECTION 19, T31N, R5W
LAT: 36.889673°N
LONG: 107.405533°W
DATUM: NAD1927

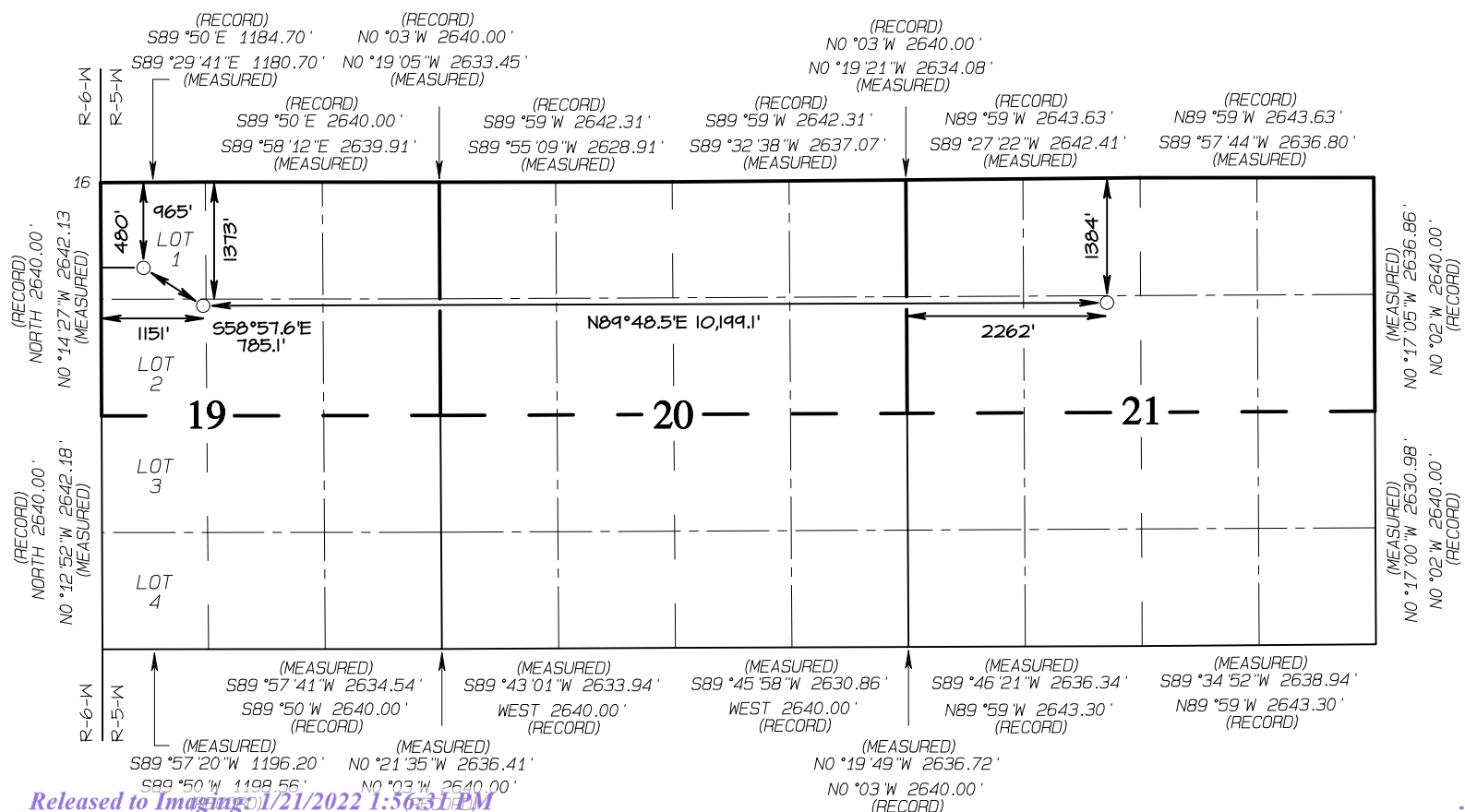
FIRST TAKE POINT
1373' FNL 1151' FWL
SECTION 19, T31N, R5W
LAT: 36.888553°N
LONG: 107.403239°W
DATUM: NAD1927

LAST TAKE POINT
1384' FNL 2262' FWL
SECTION 21, T31N, R5W
LAT: 36.888515°N
LONG: 107.368364°W
DATUM: NAD1927

LAT: 36.889679°N
LONG: 107.406136°W
DATUM: NAD1983

LAT: 36.888559°N
LONG: 107.403842°W
DATUM: NAD1983

LAT: 36.888522°N
LONG: 107.368966°W
DATUM: NAD1983



Released to Imaging: 1/21/2023 4:56:31 PM



Company: Logos Operating LLC
Project: Rio Arriba, NM NAD83
Site: Rosa Unit 27
Well: Rosa Unit 649H
Wellbore: OH
Design: Plan #3

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



WELL DETAILS: Rosa Unit 649H

GL 6305' & RKB 25' @ 6330.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2143448.37	2848017.09	36.8896790	-107.4061360	A4

Plan: Plan #3 (Rosa Unit 649H/OH)

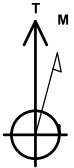
Created By: Janie Collins Date: 14:24, September 28 2021

DESIGN TARGET DETAILS

Well	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
649H POE Rev 1	6957.00	-407.83	670.91	2143043.54	2848689.81	36.8885588	-107.4038418
649H BHL Rev 1	6825.00	-419.24	10870.05	2143077.79	2858888.88	36.8885216	-107.3689658

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00
631.76	3.64	175.92	631.64	-5.75	0.41	2.00	175.92	0.63
6336.25	3.64	175.92	6324.65	-366.52	26.12	0.00	0.00	40.22
7341.56	90.74	90.06	6957.00	-407.83	670.91	9.00	-85.82	686.13
17541.56	90.74	90.06	6825.00	-419.24	10870.05	0.00	0.00	10878.13



Azimuths to True North
Magnetic North: 8.62°

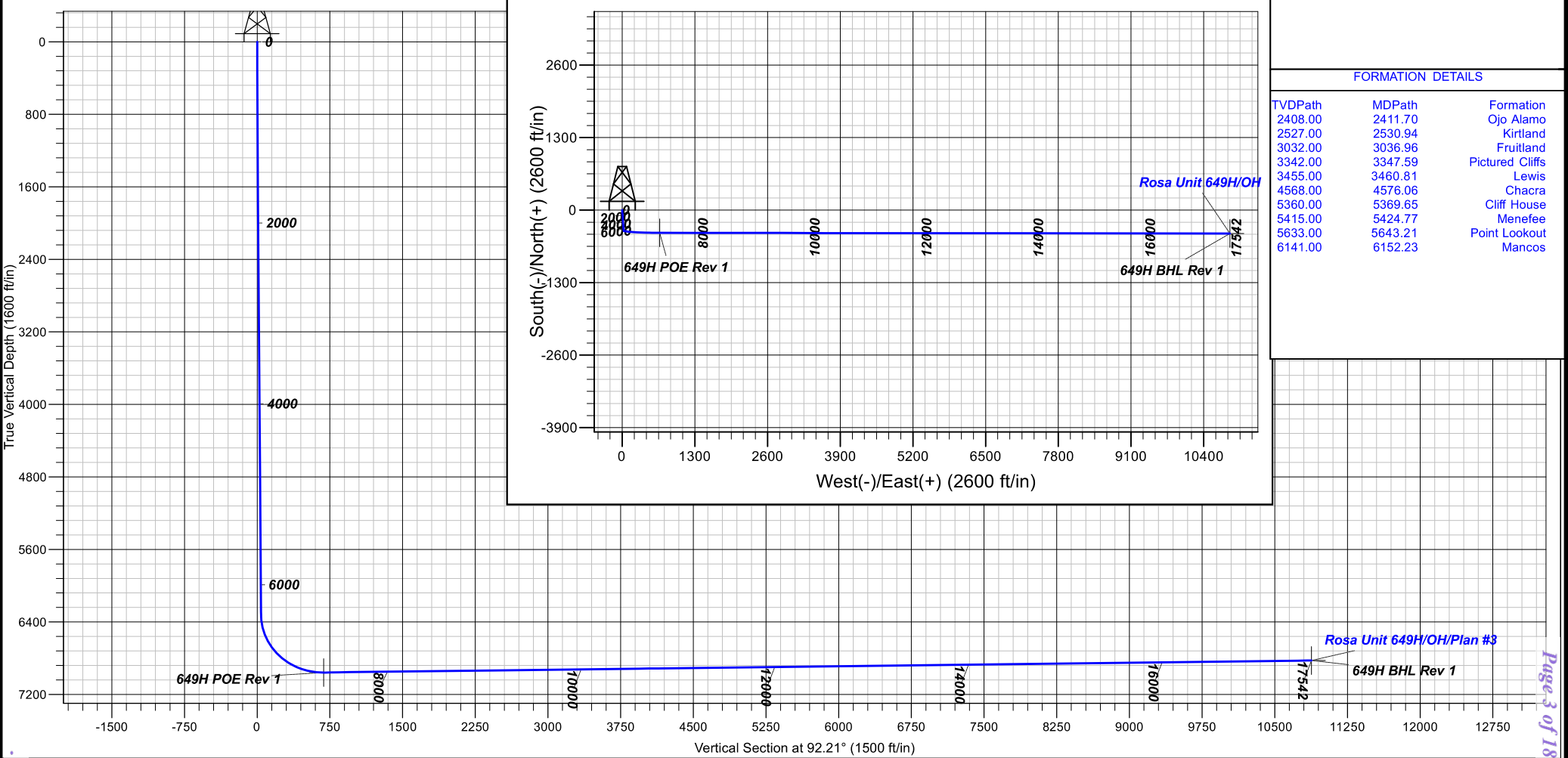
Magnetic Field
Strength: 49683.8 nT
Dip Angle: 63.82°
Date: 6/14/2021
Model: HDGM2021_FIT

CASING DETAILS

TVD	MD	Name
-----	----	------

FORMATION DETAILS

TVDPath	MDPath	Formation
2408.00	2411.70	Ojo Alamo
2527.00	2530.94	Kirtland
3032.00	3036.96	Fruitland
3342.00	3347.59	Pictured Cliffs
3455.00	3460.81	Lewis
4568.00	4576.06	Chacra
5360.00	5369.65	Cliff House
5415.00	5424.77	Menefee
5633.00	5643.21	Point Lookout
6141.00	6152.23	Mancos



Received by OCD: 1/21/2023 10:34:24 AM



Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 27

Rosa Unit 649H - Slot A4

OH

Plan: Plan #3

Standard Planning Report

28 September, 2021





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit 649H - Slot A4
Company:	Logos Operating LLC	TVD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Site:	Rosa Unit 27	North Reference:	True
Well:	Rosa Unit 649H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

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:	2,143,451.58 usft	Latitude:	36.889688
From:	Lat/Long	Easting:	2,848,002.44 usft	Longitude:	-107.406186
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.26

Well	Rosa Unit 649H - Slot A4					
Well Position	+N/-S	-3.28 ft	Northing:	2,143,448.37 usft	Latitude:	36.889679
	+E/-W	14.63 ft	Easting:	2,848,017.09 usft	Longitude:	-107.406136
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,305.00

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021_FILE	6/14/2021	8.68	63.37	49,683.80000000

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	92.21

Plan Survey Tool Program	Date	9/28/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,541.56 Plan #3 (OH)	MWD+HDGM	
			OWSG MWD + HDGM	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00	
631.76	3.64	175.92	631.64	-5.75	0.41	2.00	2.00	0.00	175.92	
6,336.25	3.64	175.92	6,324.65	-366.52	26.12	0.00	0.00	0.00	0.00	
7,341.56	90.74	90.06	6,957.00	-407.83	670.91	9.00	8.66	-8.54	-85.82	649H POE Rev 1
17,541.56	90.74	90.06	6,825.00	-419.24	10,870.05	0.00	0.00	0.00	0.00	649H BHL Rev 1



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit 649H - Slot A4
Company:	Logos Operating LLC	TVD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Site:	Rosa Unit 27	North Reference:	True
Well:	Rosa Unit 649H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned 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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.00	175.92	500.00	-0.44	0.03	0.05	2.00	2.00	0.00
600.00	3.00	175.92	599.93	-3.92	0.28	0.43	2.00	2.00	0.00
631.76	3.64	175.92	631.64	-5.75	0.41	0.63	2.00	2.00	0.00
700.00	3.64	175.92	699.74	-10.07	0.72	1.10	0.00	0.00	0.00
800.00	3.64	175.92	799.54	-16.39	1.17	1.80	0.00	0.00	0.00
900.00	3.64	175.92	899.34	-22.71	1.62	2.49	0.00	0.00	0.00
1,000.00	3.64	175.92	999.14	-29.04	2.07	3.19	0.00	0.00	0.00
1,100.00	3.64	175.92	1,098.94	-35.36	2.52	3.88	0.00	0.00	0.00
1,200.00	3.64	175.92	1,198.73	-41.69	2.97	4.57	0.00	0.00	0.00
1,300.00	3.64	175.92	1,298.53	-48.01	3.42	5.27	0.00	0.00	0.00
1,400.00	3.64	175.92	1,398.33	-54.34	3.87	5.96	0.00	0.00	0.00
1,500.00	3.64	175.92	1,498.13	-60.66	4.32	6.66	0.00	0.00	0.00
1,600.00	3.64	175.92	1,597.93	-66.98	4.77	7.35	0.00	0.00	0.00
1,700.00	3.64	175.92	1,697.73	-73.31	5.22	8.05	0.00	0.00	0.00
1,800.00	3.64	175.92	1,797.53	-79.63	5.67	8.74	0.00	0.00	0.00
1,900.00	3.64	175.92	1,897.33	-85.96	6.13	9.43	0.00	0.00	0.00
2,000.00	3.64	175.92	1,997.13	-92.28	6.58	10.13	0.00	0.00	0.00
2,100.00	3.64	175.92	2,096.92	-98.61	7.03	10.82	0.00	0.00	0.00
2,200.00	3.64	175.92	2,196.72	-104.93	7.48	11.52	0.00	0.00	0.00
2,300.00	3.64	175.92	2,296.52	-111.25	7.93	12.21	0.00	0.00	0.00
2,400.00	3.64	175.92	2,396.32	-117.58	8.38	12.90	0.00	0.00	0.00
2,500.00	3.64	175.92	2,496.12	-123.90	8.83	13.60	0.00	0.00	0.00
2,600.00	3.64	175.92	2,595.92	-130.23	9.28	14.29	0.00	0.00	0.00
2,700.00	3.64	175.92	2,695.72	-136.55	9.73	14.99	0.00	0.00	0.00
2,800.00	3.64	175.92	2,795.52	-142.88	10.18	15.68	0.00	0.00	0.00
2,900.00	3.64	175.92	2,895.31	-149.20	10.63	16.37	0.00	0.00	0.00
3,000.00	3.64	175.92	2,995.11	-155.52	11.08	17.07	0.00	0.00	0.00
3,100.00	3.64	175.92	3,094.91	-161.85	11.53	17.76	0.00	0.00	0.00
3,200.00	3.64	175.92	3,194.71	-168.17	11.98	18.46	0.00	0.00	0.00
3,300.00	3.64	175.92	3,294.51	-174.50	12.43	19.15	0.00	0.00	0.00
3,400.00	3.64	175.92	3,394.31	-180.82	12.88	19.84	0.00	0.00	0.00
3,500.00	3.64	175.92	3,494.11	-187.15	13.34	20.54	0.00	0.00	0.00
3,600.00	3.64	175.92	3,593.91	-193.47	13.79	21.23	0.00	0.00	0.00
3,700.00	3.64	175.92	3,693.70	-199.79	14.24	21.93	0.00	0.00	0.00
3,800.00	3.64	175.92	3,793.50	-206.12	14.69	22.62	0.00	0.00	0.00
3,900.00	3.64	175.92	3,893.30	-212.44	15.14	23.31	0.00	0.00	0.00
4,000.00	3.64	175.92	3,993.10	-218.77	15.59	24.01	0.00	0.00	0.00
4,100.00	3.64	175.92	4,092.90	-225.09	16.04	24.70	0.00	0.00	0.00
4,200.00	3.64	175.92	4,192.70	-231.42	16.49	25.40	0.00	0.00	0.00
4,300.00	3.64	175.92	4,292.50	-237.74	16.94	26.09	0.00	0.00	0.00
4,400.00	3.64	175.92	4,392.30	-244.06	17.39	26.78	0.00	0.00	0.00
4,500.00	3.64	175.92	4,492.10	-250.39	17.84	27.48	0.00	0.00	0.00
4,600.00	3.64	175.92	4,591.89	-256.71	18.29	28.17	0.00	0.00	0.00
4,700.00	3.64	175.92	4,691.69	-263.04	18.74	28.87	0.00	0.00	0.00
4,800.00	3.64	175.92	4,791.49	-269.36	19.19	29.56	0.00	0.00	0.00
4,900.00	3.64	175.92	4,891.29	-275.69	19.64	30.25	0.00	0.00	0.00
5,000.00	3.64	175.92	4,991.09	-282.01	20.10	30.95	0.00	0.00	0.00
5,100.00	3.64	175.92	5,090.89	-288.33	20.55	31.64	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit 649H - Slot A4
Company:	Logos Operating LLC	TVD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Site:	Rosa Unit 27	North Reference:	True
Well:	Rosa Unit 649H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned 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)
5,200.00	3.64	175.92	5,190.69	-294.66	21.00	32.34	0.00	0.00	0.00
5,300.00	3.64	175.92	5,290.49	-300.98	21.45	33.03	0.00	0.00	0.00
5,400.00	3.64	175.92	5,390.28	-307.31	21.90	33.73	0.00	0.00	0.00
5,500.00	3.64	175.92	5,490.08	-313.63	22.35	34.42	0.00	0.00	0.00
5,600.00	3.64	175.92	5,589.88	-319.96	22.80	35.11	0.00	0.00	0.00
5,700.00	3.64	175.92	5,689.68	-326.28	23.25	35.81	0.00	0.00	0.00
5,800.00	3.64	175.92	5,789.48	-332.60	23.70	36.50	0.00	0.00	0.00
5,900.00	3.64	175.92	5,889.28	-338.93	24.15	37.20	0.00	0.00	0.00
6,000.00	3.64	175.92	5,989.08	-345.25	24.60	37.89	0.00	0.00	0.00
6,100.00	3.64	175.92	6,088.88	-351.58	25.05	38.58	0.00	0.00	0.00
6,200.00	3.64	175.92	6,188.67	-357.90	25.50	39.28	0.00	0.00	0.00
6,300.00	3.64	175.92	6,288.47	-364.23	25.95	39.97	0.00	0.00	0.00
6,336.25	3.64	175.92	6,324.65	-366.52	26.12	40.22	0.00	0.00	0.00
6,400.00	7.01	121.13	6,388.15	-370.55	29.59	43.85	9.00	5.29	-85.95
6,500.00	15.42	103.39	6,486.18	-376.80	47.79	62.28	9.00	8.42	-17.74
6,600.00	24.26	98.19	6,580.16	-382.81	81.13	95.82	9.00	8.83	-5.19
6,700.00	33.18	95.67	6,667.77	-388.46	128.79	143.67	9.00	8.92	-2.52
6,800.00	42.13	94.13	6,746.86	-393.59	189.60	204.63	9.00	8.95	-1.54
6,900.00	51.10	93.04	6,815.48	-398.08	262.06	277.20	9.00	8.97	-1.09
7,000.00	60.07	92.20	6,871.95	-401.81	344.38	359.61	9.00	8.97	-0.84
7,100.00	69.05	91.50	6,914.87	-404.71	434.54	449.82	9.00	8.98	-0.70
7,200.00	78.03	90.88	6,943.18	-406.69	530.32	545.60	9.00	8.98	-0.62
7,300.00	87.01	90.30	6,956.18	-407.70	629.37	644.61	9.00	8.98	-0.58
7,341.56	90.74	90.06	6,957.00	-407.83	670.91	686.13	9.00	8.98	-0.57
7,400.00	90.74	90.06	6,956.24	-407.90	729.34	744.52	0.00	0.00	0.00
7,500.00	90.74	90.06	6,954.95	-408.01	829.34	844.45	0.00	0.00	0.00
7,600.00	90.74	90.06	6,953.66	-408.12	929.33	944.37	0.00	0.00	0.00
7,700.00	90.74	90.06	6,952.36	-408.23	1,029.32	1,044.29	0.00	0.00	0.00
7,800.00	90.74	90.06	6,951.07	-408.35	1,129.31	1,144.21	0.00	0.00	0.00
7,900.00	90.74	90.06	6,949.77	-408.46	1,229.30	1,244.13	0.00	0.00	0.00
8,000.00	90.74	90.06	6,948.48	-408.57	1,329.29	1,344.05	0.00	0.00	0.00
8,100.00	90.74	90.06	6,947.19	-408.68	1,429.29	1,443.97	0.00	0.00	0.00
8,200.00	90.74	90.06	6,945.89	-408.79	1,529.28	1,543.90	0.00	0.00	0.00
8,300.00	90.74	90.06	6,944.60	-408.90	1,629.27	1,643.82	0.00	0.00	0.00
8,400.00	90.74	90.06	6,943.30	-409.02	1,729.26	1,743.74	0.00	0.00	0.00
8,500.00	90.74	90.06	6,942.01	-409.13	1,829.25	1,843.66	0.00	0.00	0.00
8,600.00	90.74	90.06	6,940.71	-409.24	1,929.24	1,943.58	0.00	0.00	0.00
8,700.00	90.74	90.06	6,939.42	-409.35	2,029.24	2,043.50	0.00	0.00	0.00
8,800.00	90.74	90.06	6,938.13	-409.46	2,129.23	2,143.43	0.00	0.00	0.00
8,900.00	90.74	90.06	6,936.83	-409.57	2,229.22	2,243.35	0.00	0.00	0.00
9,000.00	90.74	90.06	6,935.54	-409.69	2,329.21	2,343.27	0.00	0.00	0.00
9,100.00	90.74	90.06	6,934.24	-409.80	2,429.20	2,443.19	0.00	0.00	0.00
9,200.00	90.74	90.06	6,932.95	-409.91	2,529.19	2,543.11	0.00	0.00	0.00
9,300.00	90.74	90.06	6,931.66	-410.02	2,629.18	2,643.03	0.00	0.00	0.00
9,400.00	90.74	90.06	6,930.36	-410.13	2,729.18	2,742.96	0.00	0.00	0.00
9,500.00	90.74	90.06	6,929.07	-410.24	2,829.17	2,842.88	0.00	0.00	0.00
9,600.00	90.74	90.06	6,927.77	-410.36	2,929.16	2,942.80	0.00	0.00	0.00
9,700.00	90.74	90.06	6,926.48	-410.47	3,029.15	3,042.72	0.00	0.00	0.00
9,800.00	90.74	90.06	6,925.19	-410.58	3,129.14	3,142.64	0.00	0.00	0.00
9,900.00	90.74	90.06	6,923.89	-410.69	3,229.13	3,242.56	0.00	0.00	0.00
10,000.00	90.74	90.06	6,922.60	-410.80	3,329.13	3,342.48	0.00	0.00	0.00
10,100.00	90.74	90.06	6,921.30	-410.91	3,429.12	3,442.41	0.00	0.00	0.00
10,200.00	90.74	90.06	6,920.01	-411.03	3,529.11	3,542.33	0.00	0.00	0.00
10,300.00	90.74	90.06	6,918.71	-411.14	3,629.10	3,642.25	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit 649H - Slot A4
Company:	Logos Operating LLC	TVD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Site:	Rosa Unit 27	North Reference:	True
Well:	Rosa Unit 649H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned 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)
10,400.00	90.74	90.06	6,917.42	-411.25	3,729.09	3,742.17	0.00	0.00	0.00
10,500.00	90.74	90.06	6,916.13	-411.36	3,829.08	3,842.09	0.00	0.00	0.00
10,600.00	90.74	90.06	6,914.83	-411.47	3,929.07	3,942.01	0.00	0.00	0.00
10,700.00	90.74	90.06	6,913.54	-411.58	4,029.07	4,041.94	0.00	0.00	0.00
10,800.00	90.74	90.06	6,912.24	-411.69	4,129.06	4,141.86	0.00	0.00	0.00
10,900.00	90.74	90.06	6,910.95	-411.81	4,229.05	4,241.78	0.00	0.00	0.00
11,000.00	90.74	90.06	6,909.66	-411.92	4,329.04	4,341.70	0.00	0.00	0.00
11,100.00	90.74	90.06	6,908.36	-412.03	4,429.03	4,441.62	0.00	0.00	0.00
11,200.00	90.74	90.06	6,907.07	-412.14	4,529.02	4,541.54	0.00	0.00	0.00
11,300.00	90.74	90.06	6,905.77	-412.25	4,629.02	4,641.47	0.00	0.00	0.00
11,400.00	90.74	90.06	6,904.48	-412.36	4,729.01	4,741.39	0.00	0.00	0.00
11,500.00	90.74	90.06	6,903.19	-412.48	4,829.00	4,841.31	0.00	0.00	0.00
11,600.00	90.74	90.06	6,901.89	-412.59	4,928.99	4,941.23	0.00	0.00	0.00
11,700.00	90.74	90.06	6,900.60	-412.70	5,028.98	5,041.15	0.00	0.00	0.00
11,800.00	90.74	90.06	6,899.30	-412.81	5,128.97	5,141.07	0.00	0.00	0.00
11,900.00	90.74	90.06	6,898.01	-412.92	5,228.97	5,240.99	0.00	0.00	0.00
12,000.00	90.74	90.06	6,896.71	-413.03	5,328.96	5,340.92	0.00	0.00	0.00
12,100.00	90.74	90.06	6,895.42	-413.15	5,428.95	5,440.84	0.00	0.00	0.00
12,200.00	90.74	90.06	6,894.13	-413.26	5,528.94	5,540.76	0.00	0.00	0.00
12,300.00	90.74	90.06	6,892.83	-413.37	5,628.93	5,640.68	0.00	0.00	0.00
12,400.00	90.74	90.06	6,891.54	-413.48	5,728.92	5,740.60	0.00	0.00	0.00
12,500.00	90.74	90.06	6,890.24	-413.59	5,828.91	5,840.52	0.00	0.00	0.00
12,600.00	90.74	90.06	6,888.95	-413.70	5,928.91	5,940.45	0.00	0.00	0.00
12,700.00	90.74	90.06	6,887.66	-413.82	6,028.90	6,040.37	0.00	0.00	0.00
12,800.00	90.74	90.06	6,886.36	-413.93	6,128.89	6,140.29	0.00	0.00	0.00
12,900.00	90.74	90.06	6,885.07	-414.04	6,228.88	6,240.21	0.00	0.00	0.00
13,000.00	90.74	90.06	6,883.77	-414.15	6,328.87	6,340.13	0.00	0.00	0.00
13,100.00	90.74	90.06	6,882.48	-414.26	6,428.86	6,440.05	0.00	0.00	0.00
13,200.00	90.74	90.06	6,881.19	-414.37	6,528.86	6,539.98	0.00	0.00	0.00
13,300.00	90.74	90.06	6,879.89	-414.49	6,628.85	6,639.90	0.00	0.00	0.00
13,400.00	90.74	90.06	6,878.60	-414.60	6,728.84	6,739.82	0.00	0.00	0.00
13,500.00	90.74	90.06	6,877.30	-414.71	6,828.83	6,839.74	0.00	0.00	0.00
13,600.00	90.74	90.06	6,876.01	-414.82	6,928.82	6,939.66	0.00	0.00	0.00
13,700.00	90.74	90.06	6,874.71	-414.93	7,028.81	7,039.58	0.00	0.00	0.00
13,800.00	90.74	90.06	6,873.42	-415.04	7,128.81	7,139.50	0.00	0.00	0.00
13,900.00	90.74	90.06	6,872.13	-415.16	7,228.80	7,239.43	0.00	0.00	0.00
14,000.00	90.74	90.06	6,870.83	-415.27	7,328.79	7,339.35	0.00	0.00	0.00
14,100.00	90.74	90.06	6,869.54	-415.38	7,428.78	7,439.27	0.00	0.00	0.00
14,200.00	90.74	90.06	6,868.24	-415.49	7,528.77	7,539.19	0.00	0.00	0.00
14,300.00	90.74	90.06	6,866.95	-415.60	7,628.76	7,639.11	0.00	0.00	0.00
14,400.00	90.74	90.06	6,865.66	-415.71	7,728.75	7,739.03	0.00	0.00	0.00
14,500.00	90.74	90.06	6,864.36	-415.83	7,828.75	7,838.96	0.00	0.00	0.00
14,600.00	90.74	90.06	6,863.07	-415.94	7,928.74	7,938.88	0.00	0.00	0.00
14,700.00	90.74	90.06	6,861.77	-416.05	8,028.73	8,038.80	0.00	0.00	0.00
14,800.00	90.74	90.06	6,860.48	-416.16	8,128.72	8,138.72	0.00	0.00	0.00
14,900.00	90.74	90.06	6,859.19	-416.27	8,228.71	8,238.64	0.00	0.00	0.00
15,000.00	90.74	90.06	6,857.89	-416.38	8,328.70	8,338.56	0.00	0.00	0.00
15,100.00	90.74	90.06	6,856.60	-416.50	8,428.70	8,438.49	0.00	0.00	0.00
15,200.00	90.74	90.06	6,855.30	-416.61	8,528.69	8,538.41	0.00	0.00	0.00
15,300.00	90.74	90.06	6,854.01	-416.72	8,628.68	8,638.33	0.00	0.00	0.00
15,400.00	90.74	90.06	6,852.71	-416.83	8,728.67	8,738.25	0.00	0.00	0.00
15,500.00	90.74	90.06	6,851.42	-416.94	8,828.66	8,838.17	0.00	0.00	0.00
15,600.00	90.74	90.06	6,850.13	-417.05	8,928.65	8,938.09	0.00	0.00	0.00
15,700.00	90.74	90.06	6,848.83	-417.16	9,028.64	9,038.01	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit 649H - Slot A4
Company:	Logos Operating LLC	TVD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6305' & RKB 25' @ 6330.00ft
Site:	Rosa Unit 27	North Reference:	True
Well:	Rosa Unit 649H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned 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)
15,800.00	90.74	90.06	6,847.54	-417.28	9,128.64	9,137.94	0.00	0.00	0.00
15,900.00	90.74	90.06	6,846.24	-417.39	9,228.63	9,237.86	0.00	0.00	0.00
16,000.00	90.74	90.06	6,844.95	-417.50	9,328.62	9,337.78	0.00	0.00	0.00
16,100.00	90.74	90.06	6,843.66	-417.61	9,428.61	9,437.70	0.00	0.00	0.00
16,200.00	90.74	90.06	6,842.36	-417.72	9,528.60	9,537.62	0.00	0.00	0.00
16,300.00	90.74	90.06	6,841.07	-417.83	9,628.59	9,637.54	0.00	0.00	0.00
16,400.00	90.74	90.06	6,839.77	-417.95	9,728.59	9,737.47	0.00	0.00	0.00
16,500.00	90.74	90.06	6,838.48	-418.06	9,828.58	9,837.39	0.00	0.00	0.00
16,600.00	90.74	90.06	6,837.19	-418.17	9,928.57	9,937.31	0.00	0.00	0.00
16,700.00	90.74	90.06	6,835.89	-418.28	10,028.56	10,037.23	0.00	0.00	0.00
16,800.00	90.74	90.06	6,834.60	-418.39	10,128.55	10,137.15	0.00	0.00	0.00
16,900.00	90.74	90.06	6,833.30	-418.50	10,228.54	10,237.07	0.00	0.00	0.00
17,000.00	90.74	90.06	6,832.01	-418.62	10,328.54	10,337.00	0.00	0.00	0.00
17,100.00	90.74	90.06	6,830.71	-418.73	10,428.53	10,436.92	0.00	0.00	0.00
17,200.00	90.74	90.06	6,829.42	-418.84	10,528.52	10,536.84	0.00	0.00	0.00
17,300.00	90.74	90.06	6,828.13	-418.95	10,628.51	10,636.76	0.00	0.00	0.00
17,400.00	90.74	90.06	6,826.83	-419.06	10,728.50	10,736.68	0.00	0.00	0.00
17,500.00	90.74	90.06	6,825.54	-419.17	10,828.49	10,836.60	0.00	0.00	0.00
17,541.56	90.74	90.06	6,825.00	-419.24	10,870.05	10,878.13	0.00	0.00	0.00

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
649H BHL Rev 1 - plan hits target center - Point	0.00	0.00	6,825.00	-419.24	10,870.05	2,143,077.79	2,858,888.88	36.8885216	-107.3689658
649H POE Rev 1 - plan hits target center - Point	0.00	0.00	6,957.00	-407.83	670.91	2,143,043.54	2,848,689.81	36.8885587	-107.4038418

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,411.70	2,408.00	Ojo Alamo		0.00	0.00
2,530.94	2,527.00	Kirtland		0.00	0.00
3,036.96	3,032.00	Fruitland		0.00	0.00
3,347.59	3,342.00	Pictured Cliffs		0.00	0.00
3,460.81	3,455.00	Lewis		0.00	0.00
4,576.06	4,568.00	Chacra		0.00	0.00
5,369.65	5,360.00	Cliff House		0.00	0.00
5,424.77	5,415.00	Menefee		0.00	0.00
5,643.21	5,633.00	Point Lookout		0.00	0.00
6,152.23	6,141.00	Mancos		0.00	0.00



LOGOS Operating, LLC Operations Plan

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

Date:	November 11, 2021	Pool:	Basin Mancos
Well Name:	Rosa Unit 649H	GL Elevation:	6,305'
Surface Location:	Sec 19, T31N, R5W 965 FNL, 480 FWL (36.889679° N, 107.406136° W – NAD83)	Measured Depth:	17,542' (KB)
Bottom Hole Location:	Sec 21, T31N, R5W 1384 FNL, 2262 FWL (36.888522° N, 107.368966° W – NAD83)	County:	Rio Arriba

Lease Serial # NMSF078769 , CA Serial # NMNM78407E

I. GEOLOGY

A. Formation Tops (Based on 25' KB Elevation): Estimated top of important geological markers:
SURFACE FORMATION – NACIMIENTO

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	2412	2408	*POINT LOOKOUT	5643	5633
KIRTLAND	2531	2527	*MANCOS	6152	6141
*FRUITLAND	3037	3032	KICKOFF POINT	6336	6325
*PICTURED CLIFFS	3348	3342	LANDING POINT	7342	6957
LEWIS	3461	3455			
CHACRA	4576	4568			
*CLIFF HOUSE	5370	5360			
MENEFEE	5425	5415	TD	17,542	6825

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

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

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

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

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 17-1/2" surface hole as well as the 12-1/4" directional vertical hole. A LSND (WBM) or (OBM) will be used to drill the 8-3/4" curve and lateral portion of the wellbore. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

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

ROSA UNIT 649H



- B. BOP TESTING:** The BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. BOP equipment will be tested every 30 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe and blind rams shall be activated each trip or but not more than once a day. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE. **All tests and inspections will be recorded and logged with time and results.** A full BOP test will be conducted when initially installed for the first well on the pad or if seals subject to test pressure are broken, following related repairs and at a minimum of 30 day intervals. A BOPE Shell Test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken or repaired and fall within the 30 day interval of first full test.

III. MATERIALS

A. CASING EQUIPMENT:

CASING TYPE	OHSIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	17.5"	320' or greater	13.375"	54.5 LBS	J-55 or equiv	LTC/BTC
INTERMEDIATE	12.25"	6,227'	9.625"	43.5 LBS	N-80 or equiv	LTC/BTC
PRODUCTION	8.5"	17,542'	5.5"	20 LBS	P-110 or equiv	LTC/BTC

NOTE: All casing depths are approximate, based on KB elevation (25') and will be based on drilling conditions +/- 50'. Weights, grades and connections will be based on availability and may vary but will be equivalent or greater.

B. FLOAT EQUIPMENT:

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

C. CEMENTING:

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

- SURFACE:** Casing shall be set at ~ 320' and cemented to surface. TOC at Surface. 263 sks of 15.8 ppg Type Neat G, 1.18 cuft/sk yield or equivalent 223 sks of 14.6 ppg Type III with 1.39 cuft/sk yield, 30% excess.



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

	Top (ft)	Footage (ft)	Cement (ft3/ft) Annular Capacity	Excess (30%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Stage 1 Tail	5,743	484	0.31318	1.3	215	38	1.15	187	15.8
Stage 1 Lead	4,625	1,118	0.31318	1.3	455	81	2.30	198	12.3
					670	119		385	
Stage 2 Tail	3,548	1,077	0.31318	1.3	438	78	1.50	292	13.5
Stage 2 Lead	3,087	461	0.31318	1.3	188	33	2.30	82	12.3
					626	112		374	
Stage 3 Tail	2,337	750	0.31318	1.3	305	54	1.99	153	12.8
Stage 3 Lead	320	2,017	0.31318	1.3	821	146	2.53	325	12
Stage 3 Lead	-	320	0.36268	1	116	21	2.53	46	12
					1,243	221		524	
All Stage Totals					2,539	452		1,282	

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

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

	Top (ft)	Footage (ft)	Cement (ft3/ft) Annular Capacity	Excess (15%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Cased Lead	6,127	100	0.2531	1	25	5	1.56	16	13
Open Hole Lead	6,227	11,315	0.2291	1.15	2,992	533	1.56	1,918	13
					3,017	537		1,934	

Calculations based on 15% excess for open hole and 100' overlap into intermediate casing. Actual volumes will vary.

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

IV. COMPLETION

A. CBL

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

B. PRESSURE TEST

ROSA UNIT 649H



- C. Pressure test 5-1/2" casing to 1550 psi (0.22 psi/ft * 6,957' TVD) for 30 minutes. Increase pressure to Open toe sleeve(s).

D. STIMULATION

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

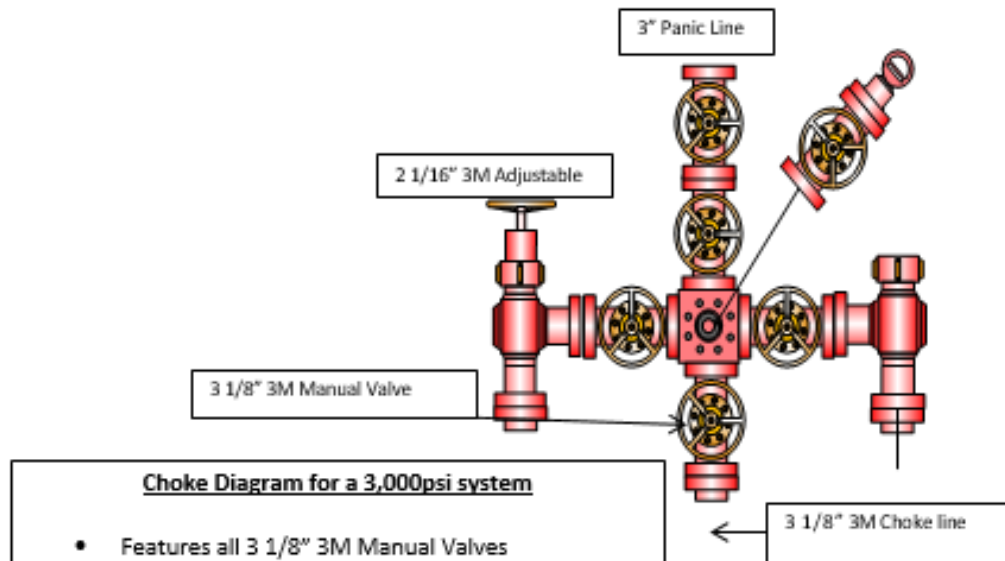
E. PRODUCTION TUBING

2-7/8", 6.5#, J-55 or L-80, EUE tubing will be run once volumes and pressures dictate. Due to the extremely high initial flow rates and pressures seen in offset wells, tubing will be installed once it is safe to do so, typically 12-18 months after completion.

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

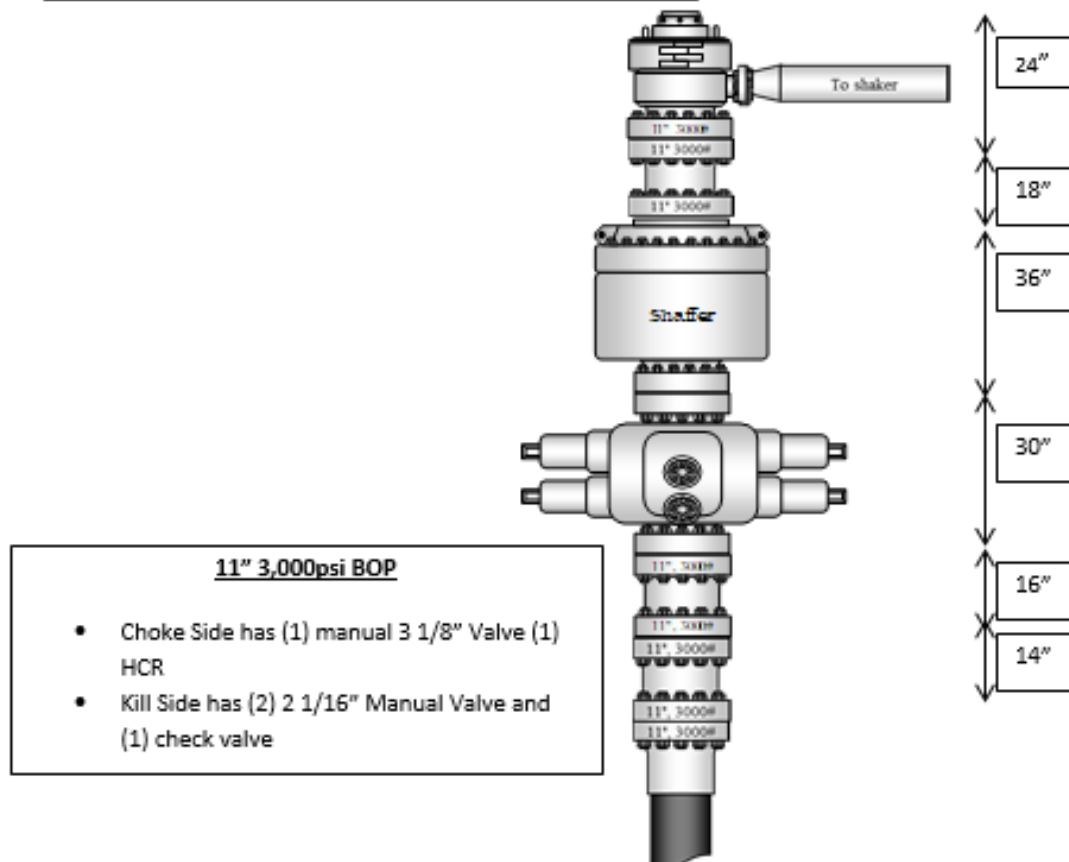


3M 11" B.O.P.E Diagram



Choke Diagram for a 3,000psi system

- Features all 3 1/8" 3M Manual Valves
- Two 2 1/16" Manual Adjustable Choke Valves
- 3" Panic Line and 2" Vent lines
- (2) 3 1/8" 3M Coflex Hose f/Choke to BOP



ROSA UNIT 649H

Well Name: ROSA UNIT	Well Location: T31N / R5W / SEC 19 / NENW /	County or Parish/State: RIO ARriba / NM
Well Number: 649H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078769	Unit or CA Name: ROSA UNIT-MANCOS PA	Unit or CA Number: NMNM78407E
US Well Number: 300393141000X1	Well Status: Temporarily Abandoned	Operator: LOGOS OPERATING LLC

Notice of Intent

Sundry ID: 2645071

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 11/18/2021

Time Sundry Submitted: 11:43

Date proposed operation will begin: 11/18/2021

Procedure Description: LOGOS Operating request a change in plans for the following: Operating request a change in plans for the following: Original surface location from 958' FNL & 451' FWL to new surface location 965' FNL & 480' FWL Original bottom-hole location from 2,579' FSL & 1,916' FWL to new bottom-hole location 1,384' FNL & 2,262' FWL Original TD @ 18,233' MD 6,821' TVD to new TD @ 17,542' MD 6,825' TVD Geology tops have been updated per changes. Original KOP @ 6,587' MD 6,346' TVD to new KOP @ 6,336' MD 6,325' TVD Original Landing point @ 7,671' MD 7,028' TVD to new Landing point @ 7,342' MD 6,957' TVD TVD Original 7" casing Intermediate @ 6,485' MD to new Intermediate 9.625" casing @ 6,227' MD Original 4.5" casing Production Liner @ 18,233' MD to new Production 5.5" casing @ 17,542' MD The 9.625" Intermediate & 5.5" production cementing bbls and sacks have been update per casing depth changes. Attached: New C102, Operation and Directional Drill plans.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

3160_5_Rosa_Unit_649H_Change_in_Plans_20211112_20211118114235.pdf

Well Name: ROSA UNIT

Well Location: T31N / R5W / SEC 19 /
NENW /County or Parish/State: RIO
ARRIBA / NM

Well Number: 649H

Type of Well: CONVENTIONAL GAS
WELL

Allottee or Tribe Name:

Lease Number: NMSF078769

Unit or CA Name: ROSA UNIT-
MANCOS PAUnit or CA Number:
NMNM78407E

US Well Number: 300393141000X1

Well Status: Temporarily Abandoned

Operator: LOGOS OPERATING
LLC**Operator Certification**

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: ETTA TRUJILLO

Signed on: NOV 18, 2021 11:42 AM

Name: LOGOS OPERATING LLC

Title: Regulatory Specialist

Street Address: 2010 AFTON PLACE

City: Farmington

State: NM

Phone: (505) 324-4154

Email address: ETRUJILLO@LOGOSRESOURCESLLC.COM

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: DAVE J MANKIEWICZ

BLM POC Title: AFM-Minerals

BLM POC Phone: 5055647761

BLM POC Email Address: DMANKIEW@BLM.GOV

Disposition: Approved

Disposition Date: 12/22/2021

Signature: Dave Mankiewicz

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

COMMENTS

Action 69105

COMMENTS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 69105
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 1/3/2022	1/3/2022

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 69105

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 69105
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	1/3/2022