

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.
NMSF078773
6. If Indian, Allottee or Tribe Name**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator
LOGOS OPERATING, LLC3a. Address 2010 AFTON PLACE,
FARMINGTON, NM 874013b. Phone No. (include area code)
(505) 278-87204. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC 33 T31N R05W, NENW (C) 334' FNL 1682 FWL7. If Unit of CA/Agreement, Name and/or No.
NMNM78407E8. Well Name and No.
ROSA UNIT 742H9 API Well No.
30-039-3141910. Field and Pool or Exploratory Area
BASIN MANCOS11. 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 TD @ 17,309' MD 7,067' TVD to **new TD @ 17,247' MD 7,047' TVD.**

Geology tops have been updated per changes.

Original KOP @ 6,723' MD 6,522' TVD to **new KOP @ 6,651' MD 6,493' TVD.**Original Landing point @ 7,683' MD 7,094' TVD to **new Landing point @ 7,616' MD 7,077' TVD.**Original 9.625" casing Intermediate @ 6,531' MD to **new Intermediate @ 6,495' MD 6,341' TVD.****Additional 13.375" casing Intermediate @ 3,663' MD 3,587' TVD**

Original 5.5" casing Production @ 17,309' MD to new Production @ 17,247' MD 7,047' TVD

The 13.375", 9.625" Intermediate casings & 5.5" production cementing bbls and sacks have been update per casing depth changes.

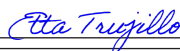
Attached: New C102, Operations plan and Directional Drill plan (based on KB).

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

Etta Trujillo

Title Regulatory Specialist

Signature



Date 3/20/2023

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

Office

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

(Instructions on page 2)

Well Name: ROSA UNIT	Well Location: T31N / R05W / SEC 33 / NENW /	County or Parish/State:
Well Number: 742H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF0078773	Unit or CA Name:	Unit or CA Number: NMNM078407E
US Well Number: 3003931419	Well Status: Approved Application for Permit to Drill	Operator: LOGOS OPERATING LLC

Notice of Intent

Sundry ID: 2721793

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 03/20/2023	Time Sundry Submitted: 03:54
Date proposed operation will begin: 04/01/2023	

Procedure Description: LOGOS Operating request a change in plans for the following: Original TD @ 17,309' MD 7,067' TVD to new TD @ 17,247' MD 7,047' TVD. Geology tops have been updated per changes. Original KOP @ 6,723' MD 6,522' TVD to new KOP @ 6,651' MD 6,493' TVD Original Landing point @ 7,683 MD 7,094' TVD to new Landing point @ 7,616' MD 7,077' TVD Original 9.625" casing Intermediate @ 6,531' MD to new Intermediate @ 6,495' MD 6,341' TVD Additional 13.375" casing Intermediate @ 3,663' MD 3,587' TVD Original 5.5" casing Production @ 17,309' MD to new Production @ 17,247' MD 7,047' TVD The 13.375", 9.625" Intermediate casings & 5.5" production cementing bbls and sacks have been update per casing depth changes. Attached: New C102, Operations plan and Directional Drill plan (based on KB).

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

3160_5_Rosa_Unit_742H_Change_in_Plan_9__20230320_20230320155219.pdf

Well Name: ROSA UNIT		Well Location: T31N / R05W / SEC 33 / NENW /	County or Parish/State:
Well Number: 742H	Type of Well: CONVENTIONAL GAS WELL		Allottee or Tribe Name:
Lease Number: NMSF0078773	Unit or CA Name:	Unit or CA Number: NMNM078407E	
US Well Number: 3003931419	Well Status: Approved Application for Permit to Drill	Operator: LOGOS OPERATING LLC	

Operator

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

Operator Electronic Signature: ETTA TRUJILLO

Signed on: MAR 20, 2023 03:53 PM

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 Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 03/24/2023

Signature: Kenneth Rennick

[X] AMENDED REPORT

JASON C. EDWARDS
Certificate Number 15269

Released to Imaging on 03/23/2023 12:34:39 PM



LOGOS Operating, LLC Operations Plan

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

Date:	March 16, 2023	Pool:	Basin Mancos
Well Name:	Rosa Unit 742H	GL Elevation:	6,492'
Surface Location:	Sec 33, T31N, R5W 334 FNL, 1682 FWL (36.862442° N, 107.370920° W – NAD83)	Measured Depth:	17,247' (MD)
Bottom Hole Location:	Sec 31, T31N, R5W 1675 FNL, 162 FWL (36.858756° N, 107.407234° W – NAD83)	County:	Rio Arriba

Lease Serial #NMSF078773, CA Serial # NMNM78407E

I. GEOLOGY

A. Formation Tops (Based on 30' KB Elevation): Estimated top of important geological markers:
SURFACE FORMATION – NACIMIENTO

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	2711	2661	*POINT LOOKOUT	5926	5787
KIRTLAND	2842	2788	*MANCOS	6420	6268
*FRUITLAND	3318	3251	KICKOFF POINT	6651	6493
*PICTURED CLIFFS	3613	3537	POINT OF ENTRY	7616	7077
LEWIS	3717	3639			
CHACRA	4834	4726			
*CLIFF HOUSE	5351	5228			
MENEFEE	5721	5588	TD	17247	7047

* 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 the Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 26" surface hole, 17-1/2" and 12-1/4" directional / vertical hole. An LSND (WBM) or (OBM) system will be used to drill the 8-1/2" curve and lateral portion of the wellbore. Treat for lost circulation as necessary. Obtain 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 of. 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 742H



- 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 on each tour. BOP equipment will be tested a minimum of 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 but not more than once daily. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of the BOPE. **All tests and inspections will be recorded and logged with time and results.** A full BOP test will be conducted when 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 the first full test.
- C. GeoHazards:** There are no anticipated geohazards
- D. Maximum Anticipated Pressure:** 7077' TVD x 0.43 = 3043 psi
- E. H2S Concerns:** — There is no record of any naturally occurring H2S in any formation in the Rosa Unit. No H2S is anticipated in this formation or this well.

III. MATERIALS

A. CASING EQUIPMENT:

CASING TYPE	OHSIZE (IN)	KB DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	26"	330'	20"	94 LBS	J-55 or equiv	LTC/BTC
INTERMEDIATE	17.5"	3,663'	13.375"	61 LBS	N-80 or equiv	LTC/BTC
INTERMEDIATE	12.25"	6,495'	9.625"	43.5 LBS	N-80 or equiv	LTC/BTC
PRODUCTION	8.5"	17,247'	5.5"	20 LBS	P-110 or equiv	LTC/BTC

NOTE: All casing depths are approximate, based on KB elevation 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:** 13-3/8" 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., 1,000 ft, and 500ft.
- 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 3,600 ft. Run (1) centralizer at 2,500 ft., 2,000ft., 1,500 ft., and 1,000 ft. Optional use of DV Tools will be strategically placed above loss circulation zones anticipated in the Mesaverde. Optional cancelation 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

ROSA UNIT 742H



least (1) one Toe Sleeve (Sliding Sleeve) positioned inside the applicable production area. The 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)

1. **SURFACE:** Casing shall be set at ~ 320' and cemented to surface. TOC at Surface.
573 sks of 15.8 ppg Type Neat G, 1.18 cuft/sk yield or equivalent 486 sks of 14.6 ppg Type III with 1.39 cuft/sk yield, 30% excess.
2. **INTERMEDIATE 1:** Intermediate casing shall be kept fluid-filled while running into the hole to meet BLM minimum collapse requirements. The intermediate casing will be cemented in 1 stage. If losses occur while drilling, an optional DV tool will be run above anticipated loss circulation zones in the Fruitland coal. If a DV tool is run and losses while circulating are not observed, a cancellation plug could be pumped, and the remaining cement will be pumped during stage 1. If cement does not circulate to the DV tool or to the surface, a CBL will be run to determine TOC.

Intermediate 1 -13-3/8"	Top	Footage	Cement (ft3/ft) Annular Capacity	Excess (30%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Stage 1 Tail	2,923	740	0.6947	1.3	702	125	1.15	610	15.8
Stage 1 Lead - OH	320	2,603	0.6947	1.3	2,351	419	1.97	1193	12.4
Stage 2 Lead - Cased	-	320	1.019	1	326	58	1.97	166	12.4
					3,379	602		1969	

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

3. **INTERMEDIATE 2:** Intermediate casing shall be kept fluid-filled while running into the hole to meet BLM minimum collapse requirements. The intermediate casing will be cemented in 1 or 2 stages using a DV/STAGE tool to reduce cement losses and maximize cement coverage. The operator proposes optional DV tools above anticipated loss circulation zones in the Mesaverde. If losses are not observed, a cancellation plug will be pumped and the remaining cement will be pumped during stage 1. If cement does not circulate to the DV tool or to the surface, a CBL will be run to determine TOC.

Intermediate 2 -9-5/8"	Top	Footage	Cement (ft3/ft) Annular Capacity	Excess (30%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Stage 1 Tail	5,795	700	0.3132	1.3	301	54	1.15	262	15.8
Stage 1 Lead	4,909	886	0.3132	1.3	361	64	1.97	183	12.4
					662	118		445	
Stage 2 Tail	4,309	600	0.3132	1.3	244	44	1.65	148	13.2
Stage 2 Lead	3,663	646	0.3132	1.3	263	47	1.97	134	12.4
Stage 2 Lead - Cased	3,563	100	0.3627	1	36	6	1.97	18	12.4
Stage 2 Totals					544	97		300	

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

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



	Top	ft	Cement (ft3/ft) Annular Capacity	Excess (15%)	Total (ft3)	Total (bbl)	Slurry Yield (ft3/sk)	Sacks Cement	Density (PPG)
Cased Lead	6,395	100	0.2531	1	25	5	1.56	16	13.2
Open Hole Lead	6,495	10,752	0.2291	1.15	2,838	505	1.56	1,819	13.2
					2,863	510		1,835	

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

Cement calculations are used for volume estimation. Well conditions will dictate the 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 the service provider selected. Cement yields may change depending on the 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 the cement top if cement is not circulated.

B. PRESSURE TEST

C. Pressure test 5-1/2" casing to 1557 psi (0.22 psi/ft * 7,077' TVD) for 30 minutes. Increase pressure to Open Toe sleeves.

D. STIMULATION

Stimulate with sand and water. Isolate stages with flow-through or dissolvable frac plugs. Drill out frac plugs as required and flow back lateral.

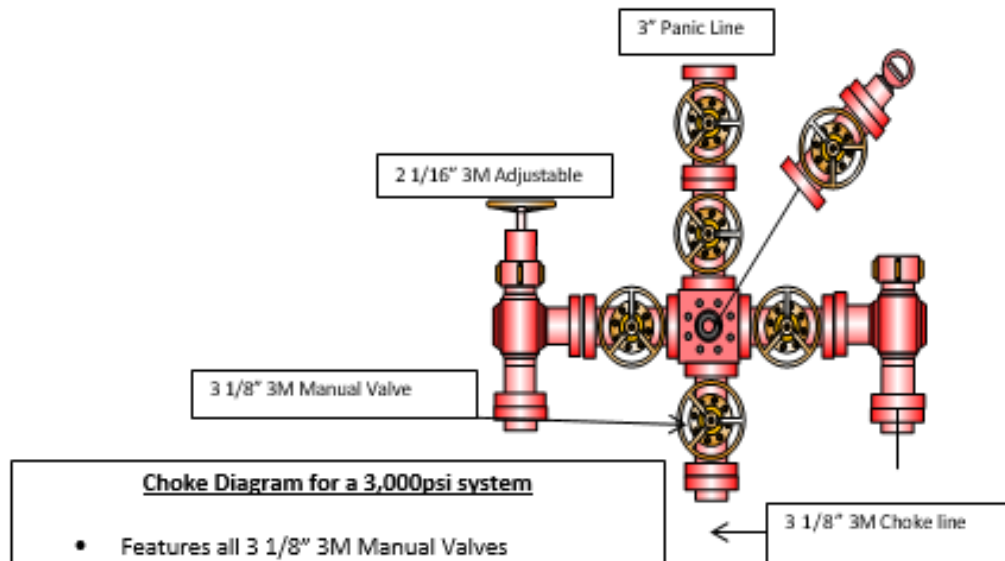
E. PRODUCTION TUBING

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.

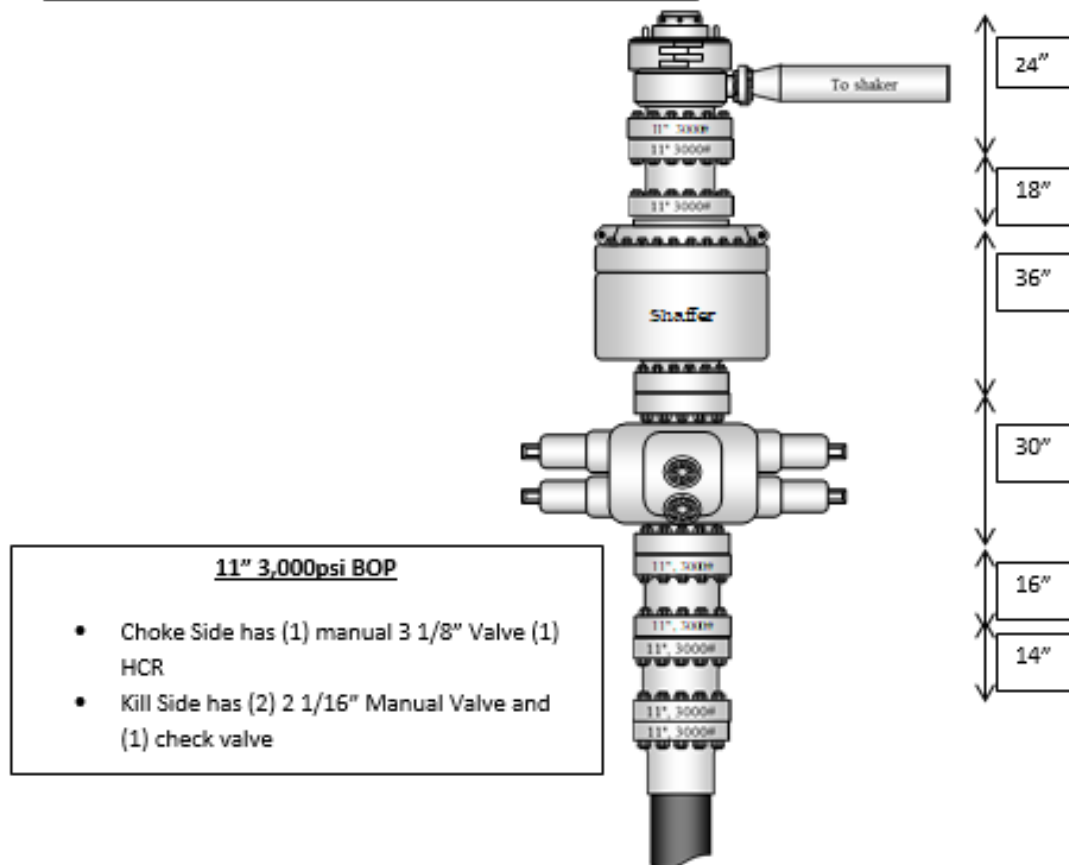


3M 11" B.O.P.E Diagram



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 742H



Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #742H

OH

Plan #9

Anticollision Summary Report

10 March, 2023





Lonestar Consulting, LLC

Anticollision Summary Report



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Project:	Rio Arriba, NM NAD83	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Reference Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	Grand Junction
Reference Design:	Plan #9	Offset TVD Reference:	Offset Datum

Reference	Plan #9		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 15,000.00ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	3/10/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,247.08	Plan #9 (OH)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Rosa Unit 31						
Rosa Unit #740H - OH - Plan #9	450.00	450.00	14.81	11.80	4.918	CC, ES
Rosa Unit #740H - OH - Plan #9	17,247.08	17,348.30	1,304.10	675.83	2.076	SF
Rosa Unit #744H - OH - Plan #8	614.95	614.97	7.72	3.57	1.859	CC, ES, SF
Rosa Unit #745H - OH - Plan #4	1,249.61	1,242.50	29.09	20.22	3.279	CC, ES
Rosa Unit #745H - OH - Plan #4	1,300.00	1,292.44	29.84	20.54	3.210	SF
Rosa Unit #746H - OH - Plan #8	779.38	776.55	26.94	21.71	5.148	CC
Rosa Unit #746H - OH - Plan #8	800.00	796.96	26.97	21.59	5.019	ES
Rosa Unit #746H - OH - Plan #8	1,000.00	994.85	30.95	24.14	4.547	SF
Rosa Unit #746H - OH - Plan #9	787.21	784.32	26.87	21.58	5.083	CC
Rosa Unit #746H - OH - Plan #9	800.00	796.98	26.88	21.51	5.003	ES
Rosa Unit #746H - OH - Plan #9	1,000.00	994.92	30.39	23.59	4.466	SF
RU 147 - OH - OH	4,251.51	4,121.05	209.47	187.62	9.586	CC
RU 147 - OH - OH	4,300.00	4,168.88	209.68	187.60	9.498	ES
RU 147 - OH - OH	4,500.00	4,364.92	215.27	192.29	9.368	SF
RU 24A - OH - OH	12,410.16	7,051.45	19.78	-359.81	0.052	Level 1, CC, ES, SF
RU 268A - OH - OH	3,800.00	3,512.00	1,464.13	1,343.72	12.160	SF
RU 268A - OH - OH	3,875.28	3,512.00	1,462.19	1,342.42	12.208	CC, ES
RU 26B - OH - OH	10,818.16	7,087.13	301.13	177.20	2.430	CC, ES, SF
RU 52 - OH - OH	4,716.40	4,588.38	546.92	522.10	22.037	CC
RU 52 - OH - OH	4,800.00	4,667.63	547.36	522.05	21.624	ES
RU 52 - OH - OH	7,450.00	7,053.34	636.56	601.13	17.968	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Lonestar Consulting, LLC

Anticollision Summary Report

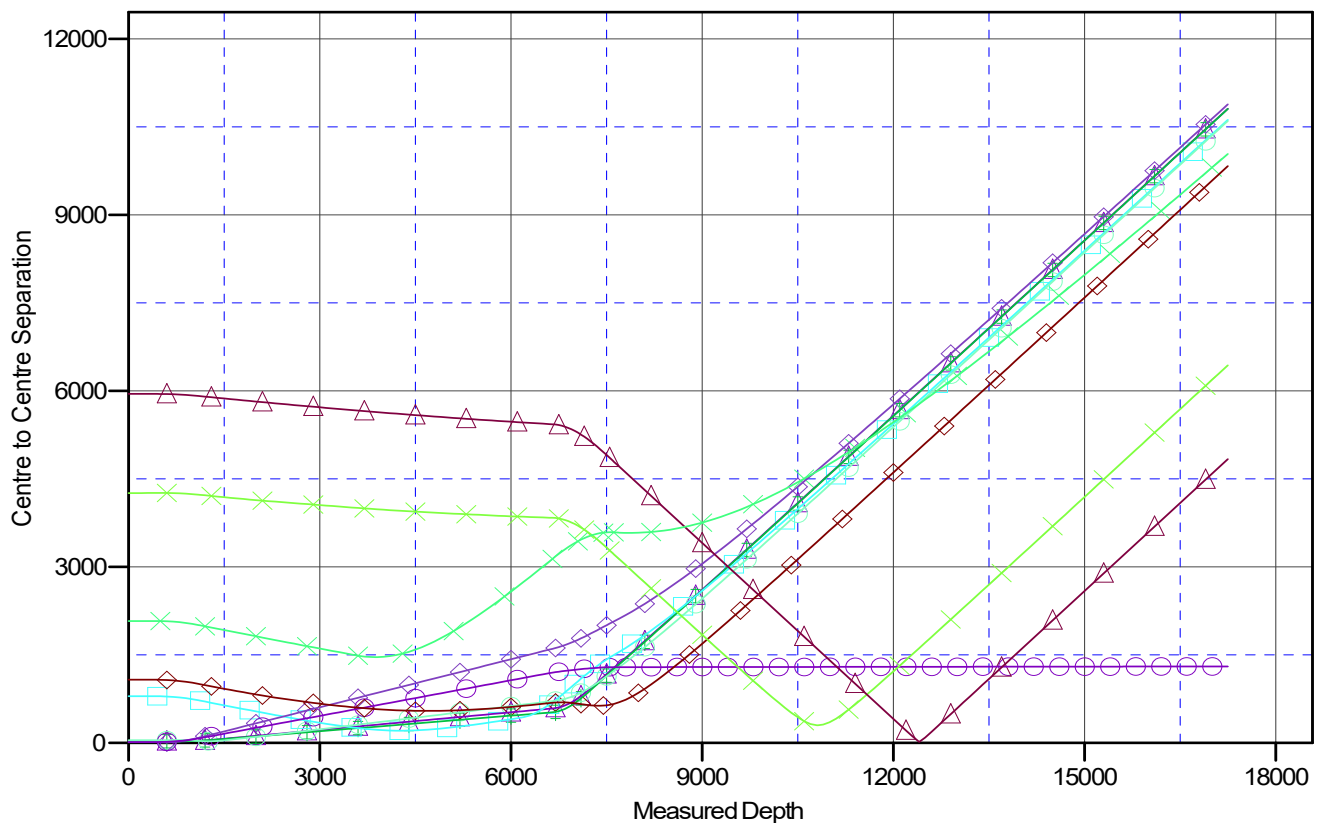


Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
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Reference Site:	Rosa Unit 31	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
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Reference Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	Grand Junction
Reference Design:	Plan #9	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333334

Coordinates are relative to: Rosa Unit #742H - Slot A2
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.28°

Ladder Plot



LEGEND

Rosa Unit#746H OH Plan #9 V0	Rosa Unit#744H OH Plan #6 V0	RJ24A OH OHV0
Rosa Unit#746H OH Plan #8 V0	Rosa Unit#740H OH Plan #9 V0	RJ268A OH OHV0
RJ147 OH OHV0	RJ52 OH OHV0	
Rosa Unit#745H OH Plan #4 V0	RJ26B OH OHV0	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Lonestar Consulting, LLC

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Offset Depths are relative to Offset Datum

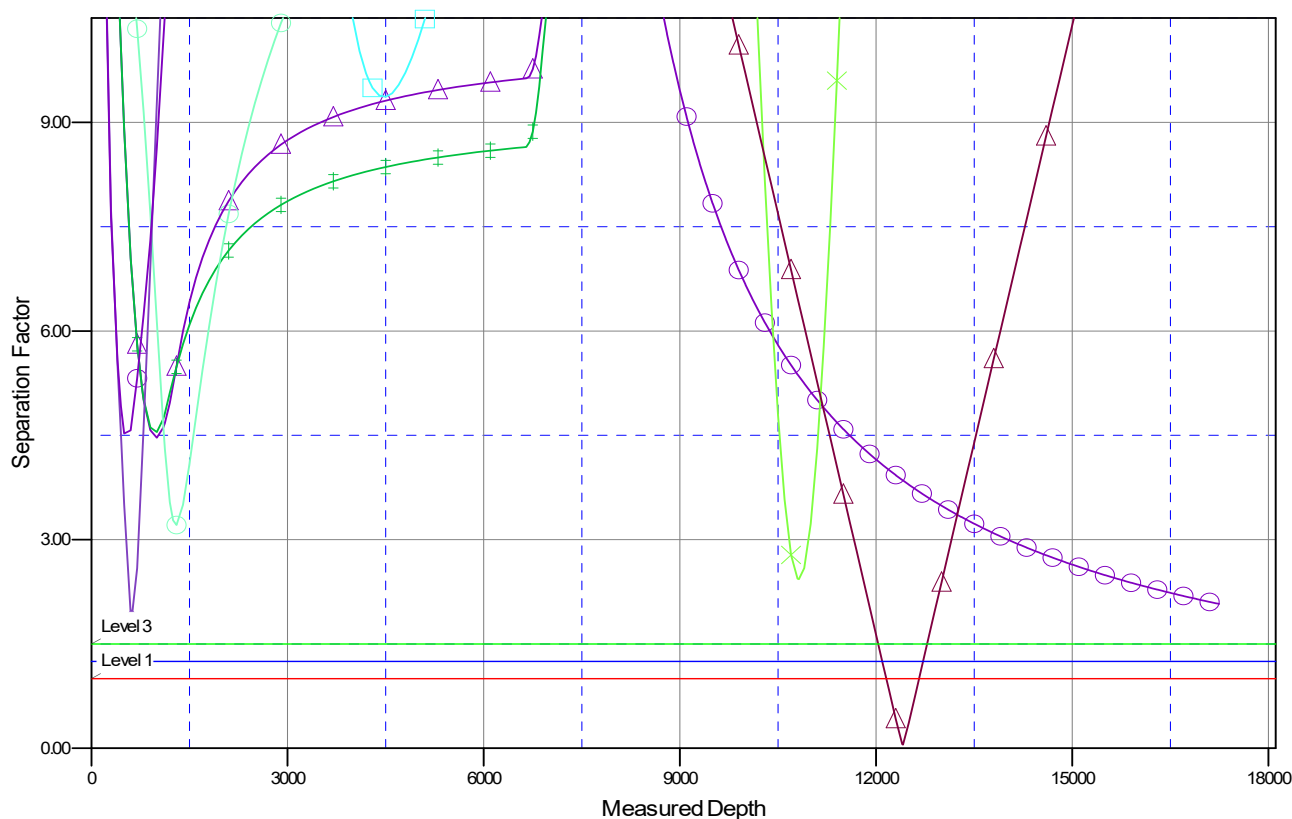
Central Meridian is -107.8333334

Coordinates are relative to: Rosa Unit #742H - Slot A2

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: 0.28°

Separation Factor Plot



LEGEND

Rosa Unit#746H OH Plan#9 V0	Rosa Unit#744H OH Plan#6 V0	RU24A OH OHV0
Rosa Unit#746H OH Plan#8 V0	Rosa Unit#740H OH Plan#9 V0	RU268A OH OHV0
RU147 OH OHV0	RU52 OH OHV0	
Rosa Unit#745H OH Plan#4 V0	RU268 OH OHV0	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Released to Imaging: 4/3/2023 12:04:39 PM



Company: Logos Operating LLC
Project: Rio Arriba, NM NAD83
Site: Rosa Unit 31
Well: Rosa Unit #742H
Wellbore: OH
Design: Plan #9

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 #742H

GL 6492' & RKB 30' @ 6522.00ft (H&P 530)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2133580.3412	2858363.3844	36.8624420	-107.3709200	A2

Plan: Plan #9 (Rosa Unit #742H/OH)

Created By: Janie Collins Date: 9:30, March 15 2023

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
742H POE Rev 2	7077.00	-1449.34	-993.90	2132126.2101	2857376.5172	36.8584610	-107.3743173
742H BHL Rev 4	7047.00	-1340.08	-10623.91	2132188.8446	2847746.1097	36.8587556	-107.4072344
742H FPerf	7047.00	-1341.81	-10455.87	2132187.9200	2847914.1577	36.8587510	-107.4066600

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
1124.00	13.48	195.04	1117.80	-76.22	-20.48	2.00	195.04	29.86
6651.38	13.48	195.04	6492.91	-1320.53	-354.91	0.00	0.00	517.38
7616.40	90.18	270.65	7077.00	-1449.34	-993.90	9.00	75.95	1167.46
17247.08	90.18	270.65	7047.00	-1340.08	-10623.91	0.00	0.00	10708.09



Azimuths to True North
Magnetic North: 8

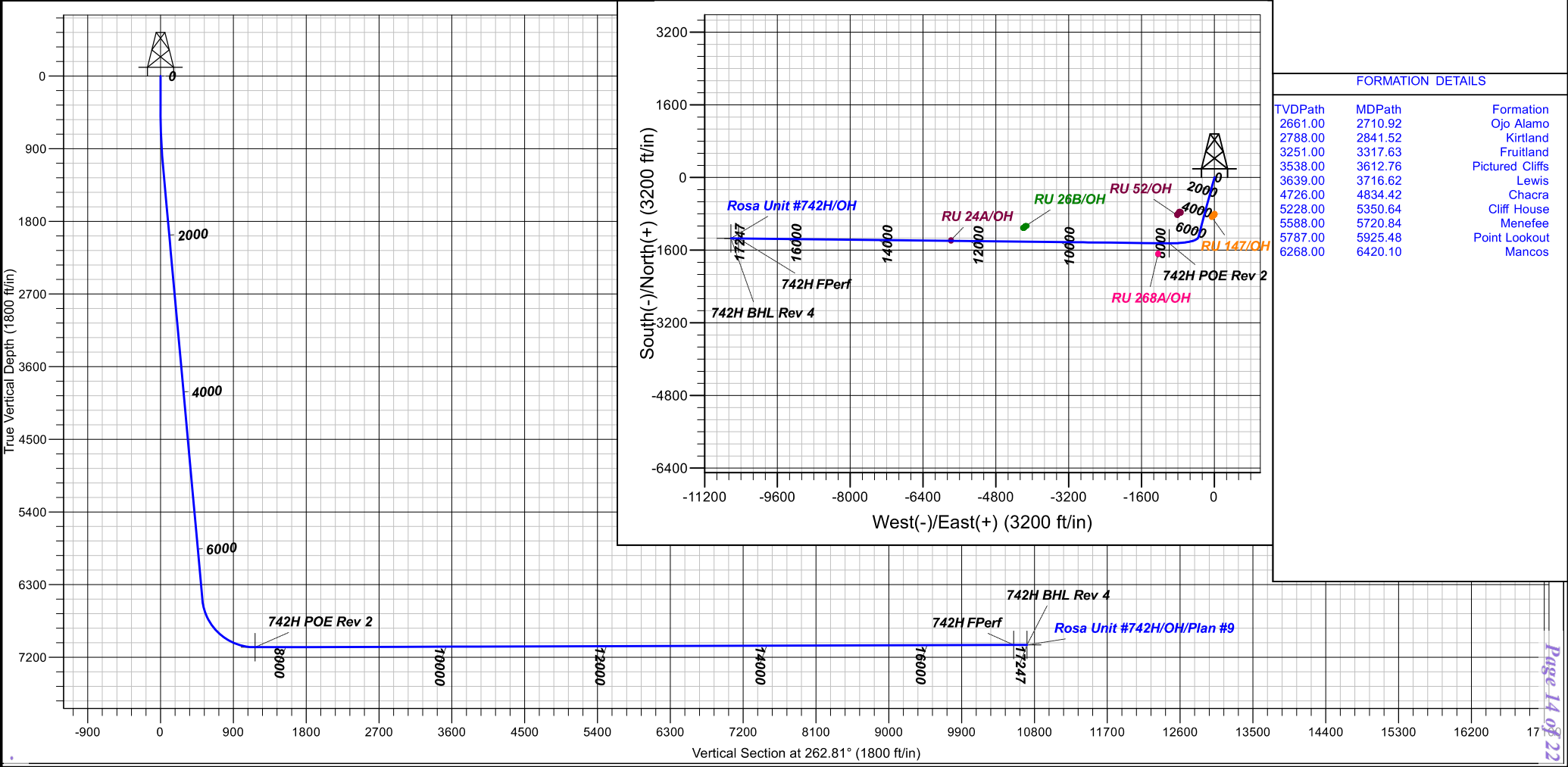
Magnetic Field
Strength: 49534.11
Dip Angle: 63.83°
Date: 10/19/2022
Model: HDGM2022

CASING DETAILS

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

FORMATION DETAILS

TVDPath	MDPath	Formation
2661.00	2710.92	Ojo Alamo
2788.00	2841.52	Kirtland
3251.00	3317.63	Fruitland
3538.00	3612.76	Pictured Cliffs
3639.00	3716.62	Lewis
4726.00	4834.42	Chacara
5228.00	5350.64	Cliff House
5588.00	5720.84	Menefee
5787.00	5925.48	Point Lookout
6268.00	6420.10	Mancos



Received by OCB: 3/24/2023 10:16:45 AM



Logos Operating LLC

Rio Arriba, NM NAD83

Rosa Unit 31

Rosa Unit #742H - Slot A2

OH

Plan: Plan #9

Standard Planning Report

15 March, 2023





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

Project	Rio Arriba, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rosa Unit 31			
Site Position:		Northing:	2,133,595.0680 usft	Latitude: 36.8624824
From:	Map	Easting:	2,858,361.8390 usft	Longitude: -107.3709251
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	

Well	Rosa Unit #742H - Slot A2			
Well Position	+N/-S	0.00 ft	Northing:	2,133,580.3412 usft
	+E/-W	0.00 ft	Easting:	2,858,363.3844 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
Grid Convergence:		0.28 °	Ground Level:	6,492.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	10/19/2022	8.53	63.30	49,534.10000000

Design	Plan #9			
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	262.81

Plan Survey Tool Program	Date	3/15/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,247.08 Plan #9 (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	
1,124.00	13.48	195.04	1,117.80	-76.22	-20.48	2.00	2.00	0.00	195.04	
6,651.38	13.48	195.04	6,492.91	-1,320.53	-354.91	0.00	0.00	0.00	0.00	
7,616.40	90.18	270.65	7,077.00	-1,449.34	-993.90	9.00	7.95	7.83	75.95	742H POE Rev 2
17,247.08	90.18	270.65	7,047.00	-1,340.08	-10,623.91	0.00	0.00	0.00	0.00	742H BHL Rev 4



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

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	195.04	500.00	-0.42	-0.11	0.17	2.00	2.00	0.00
600.00	3.00	195.04	599.93	-3.79	-1.02	1.49	2.00	2.00	0.00
700.00	5.00	195.04	699.68	-10.53	-2.83	4.12	2.00	2.00	0.00
800.00	7.00	195.04	799.13	-20.62	-5.54	8.08	2.00	2.00	0.00
900.00	9.00	195.04	898.15	-34.06	-9.15	13.35	2.00	2.00	0.00
1,000.00	11.00	195.04	996.63	-50.83	-13.66	19.92	2.00	2.00	0.00
1,100.00	13.00	195.04	1,094.44	-70.91	-19.06	27.78	2.00	2.00	0.00
1,124.00	13.48	195.04	1,117.80	-76.22	-20.48	29.86	2.00	2.00	0.00
1,200.00	13.48	195.04	1,191.71	-93.33	-25.08	36.56	0.00	0.00	0.00
1,300.00	13.48	195.04	1,288.95	-115.84	-31.13	45.38	0.00	0.00	0.00
1,400.00	13.48	195.04	1,386.20	-138.35	-37.18	54.21	0.00	0.00	0.00
1,500.00	13.48	195.04	1,483.44	-160.86	-43.23	63.03	0.00	0.00	0.00
1,600.00	13.48	195.04	1,580.69	-183.37	-49.28	71.85	0.00	0.00	0.00
1,700.00	13.48	195.04	1,677.93	-205.88	-55.33	80.67	0.00	0.00	0.00
1,800.00	13.48	195.04	1,775.18	-228.40	-61.39	89.49	0.00	0.00	0.00
1,900.00	13.48	195.04	1,872.42	-250.91	-67.44	98.31	0.00	0.00	0.00
2,000.00	13.48	195.04	1,969.67	-273.42	-73.49	107.13	0.00	0.00	0.00
2,100.00	13.48	195.04	2,066.91	-295.93	-79.54	115.95	0.00	0.00	0.00
2,200.00	13.48	195.04	2,164.16	-318.44	-85.59	124.77	0.00	0.00	0.00
2,300.00	13.48	195.04	2,261.40	-340.95	-91.64	133.59	0.00	0.00	0.00
2,400.00	13.48	195.04	2,358.65	-363.47	-97.69	142.41	0.00	0.00	0.00
2,500.00	13.48	195.04	2,455.89	-385.98	-103.74	151.23	0.00	0.00	0.00
2,600.00	13.48	195.04	2,553.14	-408.49	-109.79	160.05	0.00	0.00	0.00
2,700.00	13.48	195.04	2,650.38	-431.00	-115.84	168.87	0.00	0.00	0.00
2,800.00	13.48	195.04	2,747.63	-453.51	-121.89	177.69	0.00	0.00	0.00
2,900.00	13.48	195.04	2,844.87	-476.02	-127.94	186.51	0.00	0.00	0.00
3,000.00	13.48	195.04	2,942.12	-498.54	-133.99	195.33	0.00	0.00	0.00
3,100.00	13.48	195.04	3,039.36	-521.05	-140.04	204.15	0.00	0.00	0.00
3,200.00	13.48	195.04	3,136.61	-543.56	-146.09	212.97	0.00	0.00	0.00
3,300.00	13.48	195.04	3,233.85	-566.07	-152.14	221.79	0.00	0.00	0.00
3,400.00	13.48	195.04	3,331.10	-588.58	-158.19	230.61	0.00	0.00	0.00
3,500.00	13.48	195.04	3,428.34	-611.10	-164.24	239.43	0.00	0.00	0.00
3,600.00	13.48	195.04	3,525.59	-633.61	-170.29	248.25	0.00	0.00	0.00
3,700.00	13.48	195.04	3,622.83	-656.12	-176.34	257.07	0.00	0.00	0.00
3,800.00	13.48	195.04	3,720.08	-678.63	-182.39	265.89	0.00	0.00	0.00
3,900.00	13.48	195.04	3,817.32	-701.14	-188.44	274.71	0.00	0.00	0.00
4,000.00	13.48	195.04	3,914.57	-723.65	-194.49	283.53	0.00	0.00	0.00
4,100.00	13.48	195.04	4,011.81	-746.17	-200.54	292.35	0.00	0.00	0.00
4,200.00	13.48	195.04	4,109.06	-768.68	-206.60	301.17	0.00	0.00	0.00
4,300.00	13.48	195.04	4,206.30	-791.19	-212.65	309.99	0.00	0.00	0.00
4,400.00	13.48	195.04	4,303.55	-813.70	-218.70	318.81	0.00	0.00	0.00
4,500.00	13.48	195.04	4,400.79	-836.21	-224.75	327.63	0.00	0.00	0.00
4,600.00	13.48	195.04	4,498.04	-858.72	-230.80	336.45	0.00	0.00	0.00
4,700.00	13.48	195.04	4,595.28	-881.24	-236.85	345.27	0.00	0.00	0.00
4,800.00	13.48	195.04	4,692.53	-903.75	-242.90	354.09	0.00	0.00	0.00
4,900.00	13.48	195.04	4,789.78	-926.26	-248.95	362.91	0.00	0.00	0.00
5,000.00	13.48	195.04	4,887.02	-948.77	-255.00	371.73	0.00	0.00	0.00
5,100.00	13.48	195.04	4,984.27	-971.28	-261.05	380.55	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

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	13.48	195.04	5,081.51	-993.79	-267.10	389.37	0.00	0.00	0.00
5,300.00	13.48	195.04	5,178.76	-1,016.31	-273.15	398.19	0.00	0.00	0.00
5,400.00	13.48	195.04	5,276.00	-1,038.82	-279.20	407.01	0.00	0.00	0.00
5,500.00	13.48	195.04	5,373.25	-1,061.33	-285.25	415.83	0.00	0.00	0.00
5,600.00	13.48	195.04	5,470.49	-1,083.84	-291.30	424.65	0.00	0.00	0.00
5,700.00	13.48	195.04	5,567.74	-1,106.35	-297.35	433.47	0.00	0.00	0.00
5,800.00	13.48	195.04	5,664.98	-1,128.87	-303.40	442.29	0.00	0.00	0.00
5,900.00	13.48	195.04	5,762.23	-1,151.38	-309.45	451.11	0.00	0.00	0.00
6,000.00	13.48	195.04	5,859.47	-1,173.89	-315.50	459.93	0.00	0.00	0.00
6,100.00	13.48	195.04	5,956.72	-1,196.40	-321.55	468.75	0.00	0.00	0.00
6,200.00	13.48	195.04	6,053.96	-1,218.91	-327.60	477.57	0.00	0.00	0.00
6,300.00	13.48	195.04	6,151.21	-1,241.42	-333.65	486.39	0.00	0.00	0.00
6,400.00	13.48	195.04	6,248.45	-1,263.94	-339.70	495.21	0.00	0.00	0.00
6,500.00	13.48	195.04	6,345.70	-1,286.45	-345.75	504.03	0.00	0.00	0.00
6,600.00	13.48	195.04	6,442.94	-1,308.96	-351.81	512.85	0.00	0.00	0.00
6,651.38	13.48	195.04	6,492.91	-1,320.53	-354.91	517.38	0.00	0.00	0.00
6,700.00	15.14	211.51	6,540.04	-1,331.42	-359.70	523.50	9.00	3.41	33.86
6,800.00	21.10	233.61	6,635.15	-1,353.27	-381.06	547.42	9.00	5.96	22.11
6,900.00	28.64	245.45	6,725.87	-1,373.94	-417.42	586.08	9.00	7.54	11.83
7,000.00	36.80	252.53	6,809.96	-1,392.93	-467.88	638.53	9.00	8.16	7.08
7,100.00	45.24	257.30	6,885.36	-1,409.76	-531.21	703.46	9.00	8.44	4.77
7,200.00	53.83	260.84	6,950.22	-1,424.03	-605.85	779.30	9.00	8.59	3.54
7,300.00	62.50	263.67	7,002.92	-1,435.37	-689.95	864.16	9.00	8.67	2.83
7,400.00	71.23	266.08	7,042.18	-1,443.51	-781.45	955.96	9.00	8.72	2.41
7,500.00	79.98	268.26	7,067.02	-1,448.25	-878.09	1,052.43	9.00	8.75	2.17
7,600.00	88.74	270.32	7,076.85	-1,449.48	-977.50	1,151.21	9.00	8.76	2.06
7,616.40	90.18	270.65	7,077.00	-1,449.34	-993.90	1,167.46	9.00	8.77	2.04
7,700.00	90.18	270.65	7,076.74	-1,448.39	-1,077.49	1,250.28	0.00	0.00	0.00
7,800.00	90.18	270.65	7,076.43	-1,447.26	-1,177.48	1,349.34	0.00	0.00	0.00
7,900.00	90.18	270.65	7,076.12	-1,446.12	-1,277.48	1,448.41	0.00	0.00	0.00
8,000.00	90.18	270.65	7,075.81	-1,444.99	-1,377.47	1,547.47	0.00	0.00	0.00
8,100.00	90.18	270.65	7,075.49	-1,443.85	-1,477.46	1,646.54	0.00	0.00	0.00
8,200.00	90.18	270.65	7,075.18	-1,442.72	-1,577.45	1,745.60	0.00	0.00	0.00
8,300.00	90.18	270.65	7,074.87	-1,441.58	-1,677.45	1,844.67	0.00	0.00	0.00
8,400.00	90.18	270.65	7,074.56	-1,440.45	-1,777.44	1,943.73	0.00	0.00	0.00
8,500.00	90.18	270.65	7,074.25	-1,439.31	-1,877.43	2,042.80	0.00	0.00	0.00
8,600.00	90.18	270.65	7,073.94	-1,438.18	-1,977.43	2,141.86	0.00	0.00	0.00
8,700.00	90.18	270.65	7,073.62	-1,437.04	-2,077.42	2,240.93	0.00	0.00	0.00
8,800.00	90.18	270.65	7,073.31	-1,435.91	-2,177.41	2,339.99	0.00	0.00	0.00
8,900.00	90.18	270.65	7,073.00	-1,434.78	-2,277.41	2,439.06	0.00	0.00	0.00
9,000.00	90.18	270.65	7,072.69	-1,433.64	-2,377.40	2,538.12	0.00	0.00	0.00
9,100.00	90.18	270.65	7,072.38	-1,432.51	-2,477.39	2,637.19	0.00	0.00	0.00
9,200.00	90.18	270.65	7,072.07	-1,431.37	-2,577.39	2,736.25	0.00	0.00	0.00
9,300.00	90.18	270.65	7,071.76	-1,430.24	-2,677.38	2,835.32	0.00	0.00	0.00
9,400.00	90.18	270.65	7,071.44	-1,429.10	-2,777.37	2,934.38	0.00	0.00	0.00
9,500.00	90.18	270.65	7,071.13	-1,427.97	-2,877.36	3,033.45	0.00	0.00	0.00
9,600.00	90.18	270.65	7,070.82	-1,426.83	-2,977.36	3,132.51	0.00	0.00	0.00
9,700.00	90.18	270.65	7,070.51	-1,425.70	-3,077.35	3,231.58	0.00	0.00	0.00
9,800.00	90.18	270.65	7,070.20	-1,424.56	-3,177.34	3,330.64	0.00	0.00	0.00
9,900.00	90.18	270.65	7,069.89	-1,423.43	-3,277.34	3,429.71	0.00	0.00	0.00
10,000.00	90.18	270.65	7,069.58	-1,422.30	-3,377.33	3,528.77	0.00	0.00	0.00
10,100.00	90.18	270.65	7,069.26	-1,421.16	-3,477.32	3,627.84	0.00	0.00	0.00
10,200.00	90.18	270.65	7,068.95	-1,420.03	-3,577.32	3,726.90	0.00	0.00	0.00
10,300.00	90.18	270.65	7,068.64	-1,418.89	-3,677.31	3,825.97	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

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	90.18	270.65	7,068.33	-1,417.76	-3,777.30	3,925.03	0.00	0.00	0.00	
10,500.00	90.18	270.65	7,068.02	-1,416.62	-3,877.30	4,024.10	0.00	0.00	0.00	
10,600.00	90.18	270.65	7,067.71	-1,415.49	-3,977.29	4,123.16	0.00	0.00	0.00	
10,700.00	90.18	270.65	7,067.39	-1,414.35	-4,077.28	4,222.23	0.00	0.00	0.00	
10,800.00	90.18	270.65	7,067.08	-1,413.22	-4,177.27	4,321.29	0.00	0.00	0.00	
10,900.00	90.18	270.65	7,066.77	-1,412.09	-4,277.27	4,420.36	0.00	0.00	0.00	
11,000.00	90.18	270.65	7,066.46	-1,410.95	-4,377.26	4,519.42	0.00	0.00	0.00	
11,100.00	90.18	270.65	7,066.15	-1,409.82	-4,477.25	4,618.49	0.00	0.00	0.00	
11,200.00	90.18	270.65	7,065.84	-1,408.68	-4,577.25	4,717.55	0.00	0.00	0.00	
11,300.00	90.18	270.65	7,065.53	-1,407.55	-4,677.24	4,816.62	0.00	0.00	0.00	
11,400.00	90.18	270.65	7,065.21	-1,406.41	-4,777.23	4,915.68	0.00	0.00	0.00	
11,500.00	90.18	270.65	7,064.90	-1,405.28	-4,877.23	5,014.75	0.00	0.00	0.00	
11,600.00	90.18	270.65	7,064.59	-1,404.14	-4,977.22	5,113.81	0.00	0.00	0.00	
11,700.00	90.18	270.65	7,064.28	-1,403.01	-5,077.21	5,212.88	0.00	0.00	0.00	
11,800.00	90.18	270.65	7,063.97	-1,401.87	-5,177.21	5,311.94	0.00	0.00	0.00	
11,900.00	90.18	270.65	7,063.66	-1,400.74	-5,277.20	5,411.01	0.00	0.00	0.00	
12,000.00	90.18	270.65	7,063.35	-1,399.61	-5,377.19	5,510.07	0.00	0.00	0.00	
12,100.00	90.18	270.65	7,063.03	-1,398.47	-5,477.18	5,609.14	0.00	0.00	0.00	
12,200.00	90.18	270.65	7,062.72	-1,397.34	-5,577.18	5,708.20	0.00	0.00	0.00	
12,300.00	90.18	270.65	7,062.41	-1,396.20	-5,677.17	5,807.27	0.00	0.00	0.00	
12,400.00	90.18	270.65	7,062.10	-1,395.07	-5,777.16	5,906.33	0.00	0.00	0.00	
12,500.00	90.18	270.65	7,061.79	-1,393.93	-5,877.16	6,005.40	0.00	0.00	0.00	
12,600.00	90.18	270.65	7,061.48	-1,392.80	-5,977.15	6,104.46	0.00	0.00	0.00	
12,700.00	90.18	270.65	7,061.16	-1,391.66	-6,077.14	6,203.53	0.00	0.00	0.00	
12,800.00	90.18	270.65	7,060.85	-1,390.53	-6,177.14	6,302.59	0.00	0.00	0.00	
12,900.00	90.18	270.65	7,060.54	-1,389.39	-6,277.13	6,401.66	0.00	0.00	0.00	
13,000.00	90.18	270.65	7,060.23	-1,388.26	-6,377.12	6,500.72	0.00	0.00	0.00	
13,100.00	90.18	270.65	7,059.92	-1,387.13	-6,477.12	6,599.79	0.00	0.00	0.00	
13,200.00	90.18	270.65	7,059.61	-1,385.99	-6,577.11	6,698.85	0.00	0.00	0.00	
13,300.00	90.18	270.65	7,059.30	-1,384.86	-6,677.10	6,797.92	0.00	0.00	0.00	
13,400.00	90.18	270.65	7,058.98	-1,383.72	-6,777.09	6,896.98	0.00	0.00	0.00	
13,500.00	90.18	270.65	7,058.67	-1,382.59	-6,877.09	6,996.05	0.00	0.00	0.00	
13,600.00	90.18	270.65	7,058.36	-1,381.45	-6,977.08	7,095.11	0.00	0.00	0.00	
13,700.00	90.18	270.65	7,058.05	-1,380.32	-7,077.07	7,194.18	0.00	0.00	0.00	
13,800.00	90.18	270.65	7,057.74	-1,379.18	-7,177.07	7,293.24	0.00	0.00	0.00	
13,900.00	90.18	270.65	7,057.43	-1,378.05	-7,277.06	7,392.31	0.00	0.00	0.00	
14,000.00	90.18	270.65	7,057.11	-1,376.91	-7,377.05	7,491.37	0.00	0.00	0.00	
14,100.00	90.18	270.65	7,056.80	-1,375.78	-7,477.05	7,590.44	0.00	0.00	0.00	
14,200.00	90.18	270.65	7,056.49	-1,374.65	-7,577.04	7,689.50	0.00	0.00	0.00	
14,300.00	90.18	270.65	7,056.18	-1,373.51	-7,677.03	7,788.57	0.00	0.00	0.00	
14,400.00	90.18	270.65	7,055.87	-1,372.38	-7,777.03	7,887.63	0.00	0.00	0.00	
14,500.00	90.18	270.65	7,055.56	-1,371.24	-7,877.02	7,986.70	0.00	0.00	0.00	
14,600.00	90.18	270.65	7,055.25	-1,370.11	-7,977.01	8,085.76	0.00	0.00	0.00	
14,700.00	90.18	270.65	7,054.93	-1,368.97	-8,077.00	8,184.83	0.00	0.00	0.00	
14,800.00	90.18	270.65	7,054.62	-1,367.84	-8,177.00	8,283.89	0.00	0.00	0.00	
14,900.00	90.18	270.65	7,054.31	-1,366.70	-8,276.99	8,382.96	0.00	0.00	0.00	
15,000.00	90.18	270.65	7,054.00	-1,365.57	-8,376.98	8,482.02	0.00	0.00	0.00	
15,100.00	90.18	270.65	7,053.69	-1,364.43	-8,476.98	8,581.09	0.00	0.00	0.00	
15,200.00	90.18	270.65	7,053.38	-1,363.30	-8,576.97	8,680.15	0.00	0.00	0.00	
15,300.00	90.18	270.65	7,053.07	-1,362.17	-8,676.96	8,779.22	0.00	0.00	0.00	
15,400.00	90.18	270.65	7,052.75	-1,361.03	-8,776.96	8,878.28	0.00	0.00	0.00	
15,500.00	90.18	270.65	7,052.44	-1,359.90	-8,876.95	8,977.35	0.00	0.00	0.00	
15,600.00	90.18	270.65	7,052.13	-1,358.76	-8,976.94	9,076.41	0.00	0.00	0.00	
15,700.00	90.18	270.65	7,051.82	-1,357.63	-9,076.94	9,175.48	0.00	0.00	0.00	



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

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	90.18	270.65	7,051.51	-1,356.49	-9,176.93	9,274.54	0.00	0.00	0.00	
15,900.00	90.18	270.65	7,051.20	-1,355.36	-9,276.92	9,373.61	0.00	0.00	0.00	
16,000.00	90.18	270.65	7,050.88	-1,354.22	-9,376.91	9,472.67	0.00	0.00	0.00	
16,100.00	90.18	270.65	7,050.57	-1,353.09	-9,476.91	9,571.74	0.00	0.00	0.00	
16,200.00	90.18	270.65	7,050.26	-1,351.95	-9,576.90	9,670.80	0.00	0.00	0.00	
16,300.00	90.18	270.65	7,049.95	-1,350.82	-9,676.89	9,769.87	0.00	0.00	0.00	
16,400.00	90.18	270.65	7,049.64	-1,349.69	-9,776.89	9,868.93	0.00	0.00	0.00	
16,500.00	90.18	270.65	7,049.33	-1,348.55	-9,876.88	9,968.00	0.00	0.00	0.00	
16,600.00	90.18	270.65	7,049.02	-1,347.42	-9,976.87	10,067.06	0.00	0.00	0.00	
16,700.00	90.18	270.65	7,048.70	-1,346.28	-10,076.87	10,166.13	0.00	0.00	0.00	
16,800.00	90.18	270.65	7,048.39	-1,345.15	-10,176.86	10,265.19	0.00	0.00	0.00	
16,900.00	90.18	270.65	7,048.08	-1,344.01	-10,276.85	10,364.26	0.00	0.00	0.00	
17,000.00	90.18	270.65	7,047.77	-1,342.88	-10,376.85	10,463.32	0.00	0.00	0.00	
17,100.00	90.18	270.65	7,047.46	-1,341.74	-10,476.84	10,562.39	0.00	0.00	0.00	
17,200.00	90.18	270.65	7,047.15	-1,340.61	-10,576.83	10,661.45	0.00	0.00	0.00	
17,247.08	90.18	270.65	7,047.00	-1,340.08	-10,623.91	10,708.09	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
742H BHL Rev 4	0.00	0.00	7,047.00	-1,340.08	-10,623.91	2,132,188.8446	2,847,746.1097	36.8587556	-107.4072344	
- hit/miss target										
- Shape										
- Point										
742H FPerf	0.00	0.00	7,047.00	-1,341.81	-10,455.87	2,132,187.9200	2,847,914.1577	36.8587510	-107.4066600	
- plan misses target center by 0.55ft at 17079.03ft MD (7047.52 TVD, -1341.98 N, -10455.87 E)										
- Point										
742H POE Rev 2	0.00	0.00	7,077.00	-1,449.34	-993.90	2,132,126.2101	2,857,376.5171	36.8584610	-107.3743173	
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,710.92	2,661.00	Ojo Alamo		0.00	0.00	
2,841.52	2,788.00	Kirtland		0.00	0.00	
3,317.63	3,251.00	Fruitland		0.00	0.00	
3,612.76	3,538.00	Pictured Cliffs		0.00	0.00	
3,716.62	3,639.00	Lewis		0.00	0.00	
4,834.42	4,726.00	Chacra		0.00	0.00	
5,350.64	5,228.00	Cliff House		0.00	0.00	
5,720.84	5,588.00	Menefee		0.00	0.00	
5,925.48	5,787.00	Point Lookout		0.00	0.00	
6,420.10	6,268.00	Mancos		0.00	0.00	



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Rosa Unit #742H - Slot A2
Company:	Logos Operating LLC	TVD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Project:	Rio Arriba, NM NAD83	MD Reference:	GL 6492' & RKB 30' @ 6522.00ft (H&P 530)
Site:	Rosa Unit 31	North Reference:	True
Well:	Rosa Unit #742H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #9		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
450.00	450.00	0.00	0.00	Start Build 2.00	
1,124.00	1,117.80	-76.22	-20.48	Start 5527.38 hold at 1124.00 MD	
6,651.38	6,492.91	-1,320.53	-354.91	Start DLS 9.00 TFO 75.95	
7,616.40	7,077.00	-1,449.34	-993.89	36.8584610 / -107.3743173	
7,616.40	7,077.00	-1,449.34	-993.90	POE @ 7616' MD	
17,079.03	7,047.52	-1,341.98	-10,455.87	36.8587505 / -107.4066600	
17,079.03	7,047.52	-1,341.98	-10,455.87	First Perf @ 17,079' MD	
17,247.08	7,047.00	-1,340.08	-10,623.91	TD at 17247.08	

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 200584

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 200584
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
john.harrison	Please adhere to previous conditions of approval.	4/3/2023