

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

Form C-101
August 1, 2011

Permit 364078

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address LARIO OIL & GAS CO 301 S. Market St. Wichita, KS 67202		2. OGRID Number 13089
		3. API Number 30-025-52809
4. Property Code 335737	5. Property Name CLOSE ENCOUNTERS STATE COM	6. Well No. 102H

7. Surface Location

UL - Lot N	Section 13	Township 18S	Range 34E	Lot Idn N	Feet From 270	N/S Line S	Feet From 1961	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot K	Section 12	Township 18S	Range 34E	Lot Idn K	Feet From 2546	N/S Line S	Feet From 2147	E/W Line W	County Lea
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9. Pool Information

97930	97930
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3977
16. Multiple N	17. Proposed Depth 16032	18. Formation Bone Spring	19. Contractor	20. Spud Date 7/1/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1800	1515	0
Int1	12.25	9.625	40	6300	1080	0
Prod	8.75	5.5	20	16032	2765	0

Casing/Cement Program: Additional Comments

Production casing grade is HCP-110

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	TBD
Double Ram	5000	5000	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by David Thorpe

Title: VP of Land

Email Address: david@lario.net

Date: 4/18/2024

Phone: 720-457-8557

OIL CONSERVATION DIVISION

Approved By: Paul F Kautz

Title: Geologist

Approved Date: 4/18/2024

Expiration Date: 4/18/2026

Conditions of Approval Attached

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

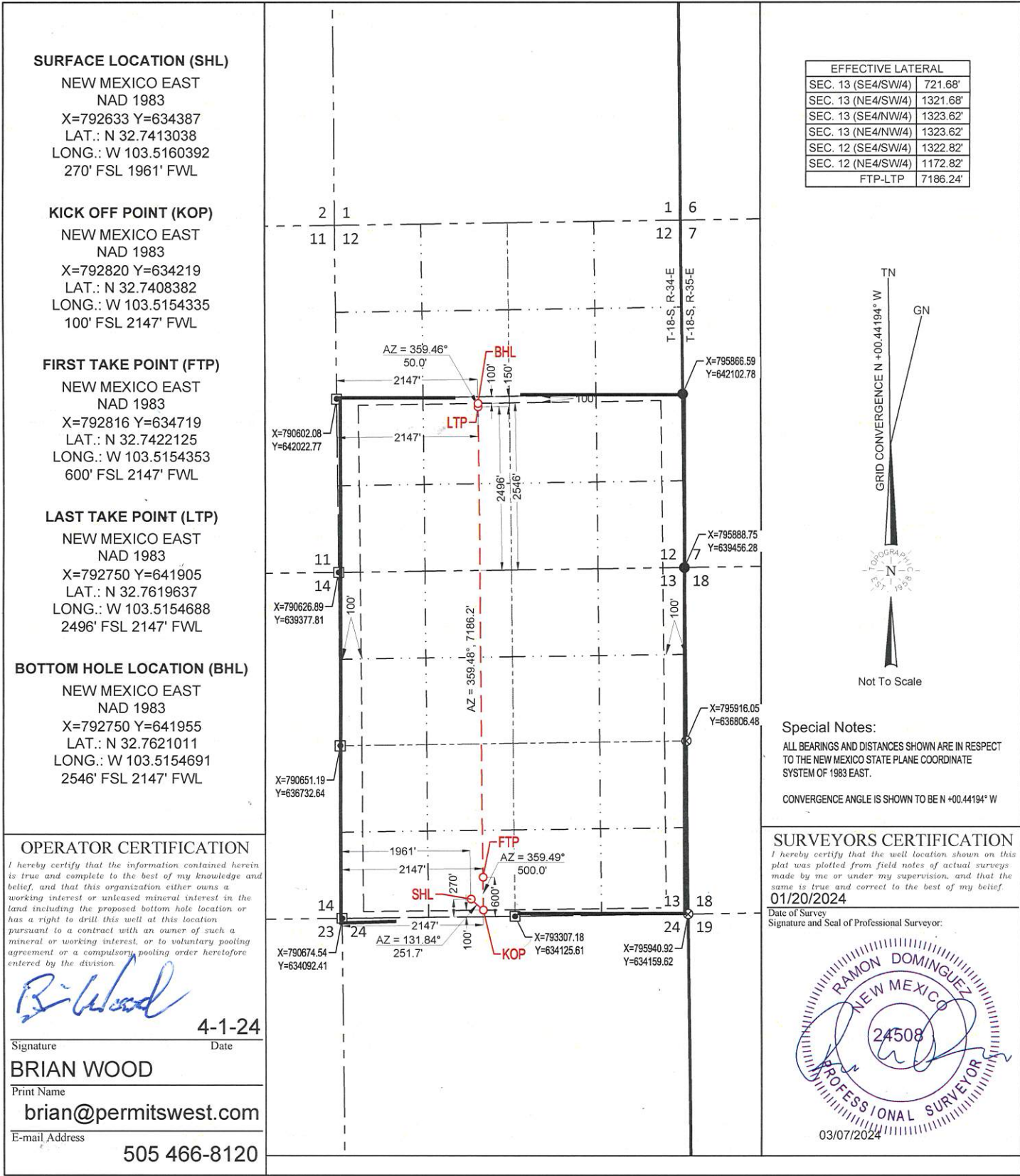
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-	Pool Code 97930	WC-025 G-06 S183518A; BONE SPRING	Pool Name
Property Code	Property Name CLOSE ENCOUNTERS STATE COM		Well Number 102H
OGRID No. 13089	Operator Name LARIO OIL & GAS		Elevation 3977'

Surface Location									
UL or lot no. N	Section 13	Township 18-S	Range 34-E	Lot Idn -	Feet from the 270'	North/South line SOUTH	Feet from the 1961'	East/West line WEST	County LEA

Bottom Hole Location If Different From Surface									
UL or lot no. K	Section 12	Township 18-S	Range 34-E	Lot Idn -	Feet from the 2546'	North/South line SOUTH	Feet from the 2147'	East/West line WEST	County LEA
Dedicated Acres 960.00	Joint or Infill	Consolidated Code C	Order No.						

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.



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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions
Permit 364078

PERMIT CONDITIONS OF APPROVAL

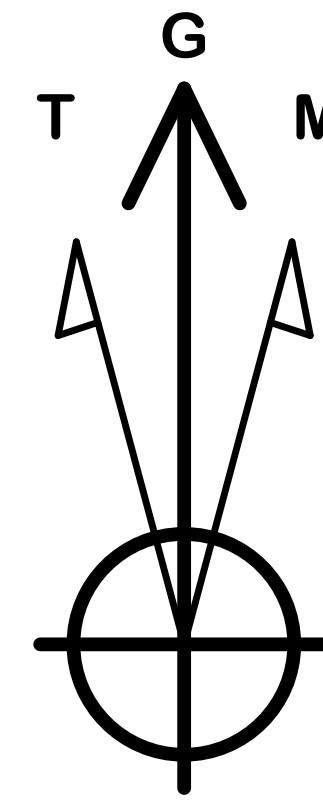
Operator Name and Address: LARIO OIL & GAS CO [13089] 301 S. Market St. Wichita, KS 67202	API Number: 30-025-52809
	Well: CLOSE ENCOUNTERS STATE COM #102H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud



Site: Close Encounters Pad
Well: (03) Close Encounters State Com 102H
Wellbore: 102H
Plan: Plan 2

PROJECT DETAILS: Lea County, NM (N83 - NME)
Well Name: (03) Close Encounters State Com 102H
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid
KB Elevation: 23' RKB @ 4000.00usft
Elevation: 3977.00
To convert a Magnetic Direction to a Grid Direction, Add 5.76°



Azimuths to Grid North
True North: -0.44°
Magnetic North: 5.77°

Magnetic Field
Strength: 47488.8nT
Dip Angle: 60.27°
Date: 6/10/2024
Model: IGRF2020



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.000	0.00
3	2124.48	2.49	131.94	2124.44	-1.81	2.01	2.00	131.936	-1.83
4	7786.98	2.49	131.94	7781.60	-166.19	184.99	0.00	0.000	-167.86
5	7911.46	0.00	0.00	7906.04	-168.00	187.00	2.00	180.000	-169.69
6	7911.47	0.00	0.00	7906.04	-168.00	187.00	0.00	0.000	-169.69
7	8811.47	90.00	359.48	8479.00	404.93	181.80	10.00	359.480	403.27
8	9059.04	94.95	359.48	8468.31	652.19	179.57	2.00	0.053	650.53
9	9919.99	94.95	359.48	8394.00	1509.89	171.85	0.00	0.000	1508.27
10	10054.66	97.64	359.48	8379.23	1643.74	170.64	2.00	-0.071	1642.12
11	16032.30	97.64	359.48	7584.00	7568.00	117.00	0.00	0.000	7566.63

WELL DETAILS: (03) Close Encounters State Com 102H

Northing 634387.00 Easting 792633.00 Latitude 32.74130264 Longitude -103.51603902

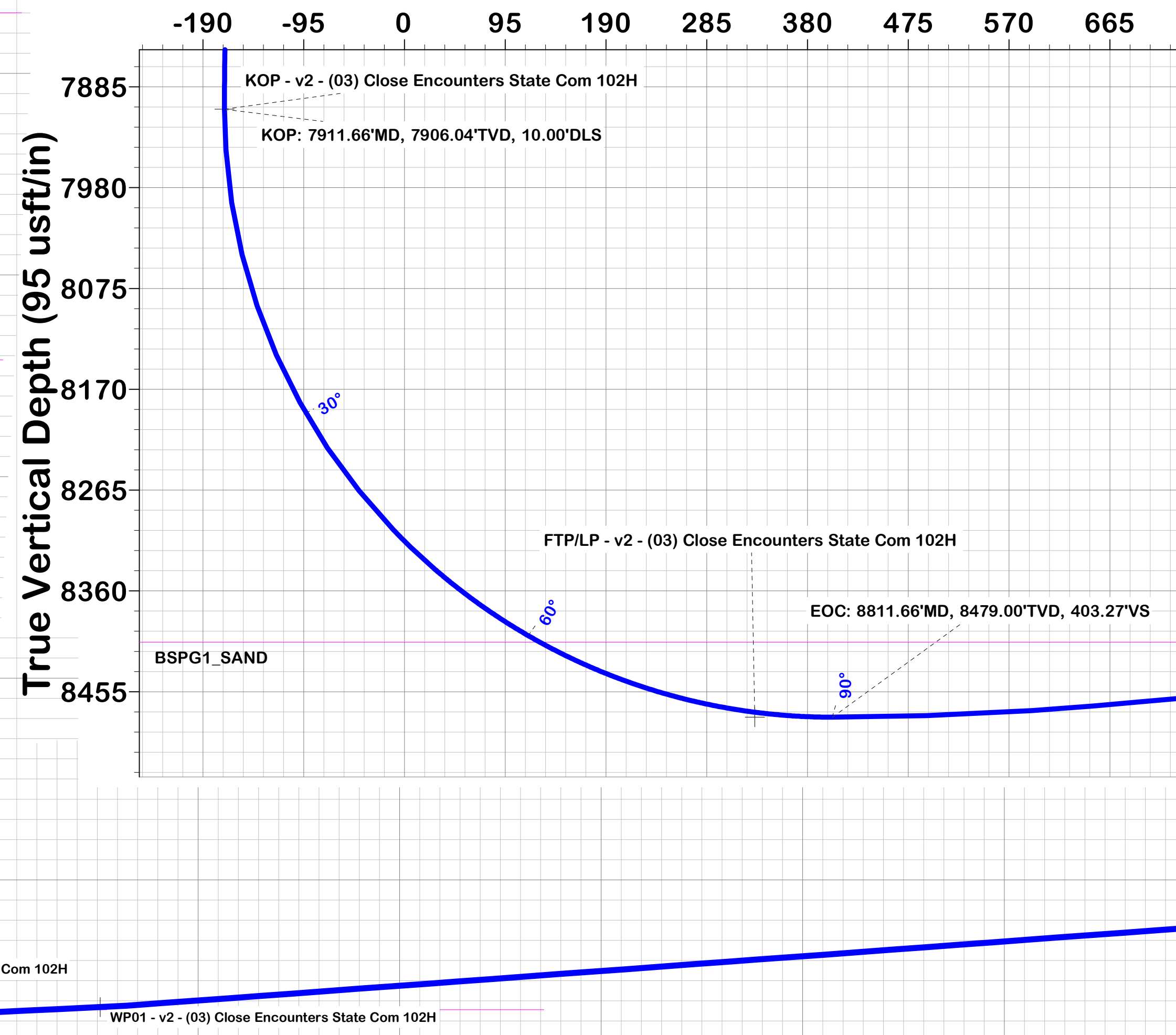
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL - v2 - (03) Close Encounters State Com 102H	7584.00	7568.00	117.00	641955.00	792750.00	32.76210001	-103.51546846
LTP - v2 - (03) Close Encounters State Com 102H	7590.40	7518.00	117.00	641905.00	792750.00	32.76196259	-103.51546971
KOP - v2 - (03) Close Encounters State Com 102H	7906.04	-168.00	187.00	634219.00	792820.00	32.74083564	-103.51543510
WP01 - v2 - (03) Close Encounters State Com 102H	8394.00	1509.89	171.85	635896.89	792804.85	32.74544877	-103.51544224
FTP/LP - v2 - (03) Close Encounters State Com 102H	8479.00	332.00	183.00	6347719.00	792816.00	32.74221123	-103.51543556

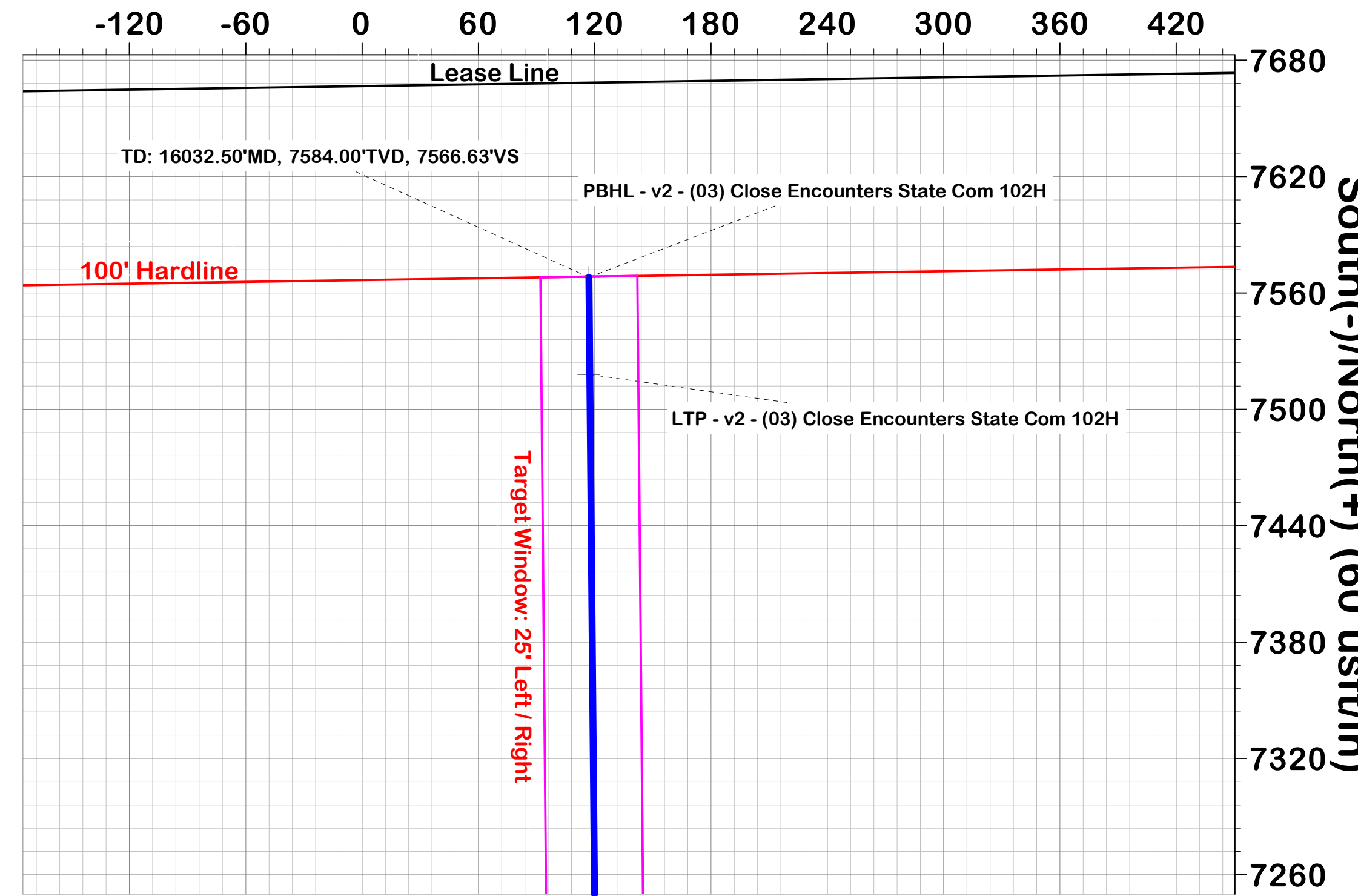
FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1793.29	1793.29	RSLR
2879.71	2880.46	TNSL
2969.85	2970.69	YTES
4862.77	4865.40	GRBG
5460.53	5463.72	CRCN
5526.95	5530.20	BLCN
5992.25	5995.85	BRSC
6774.55	6779.08	AVNS
7282.43	7287.34	BSPG
7694.38	7699.68	BSPG1
8408.33	8523.88	BSPG1_SAND

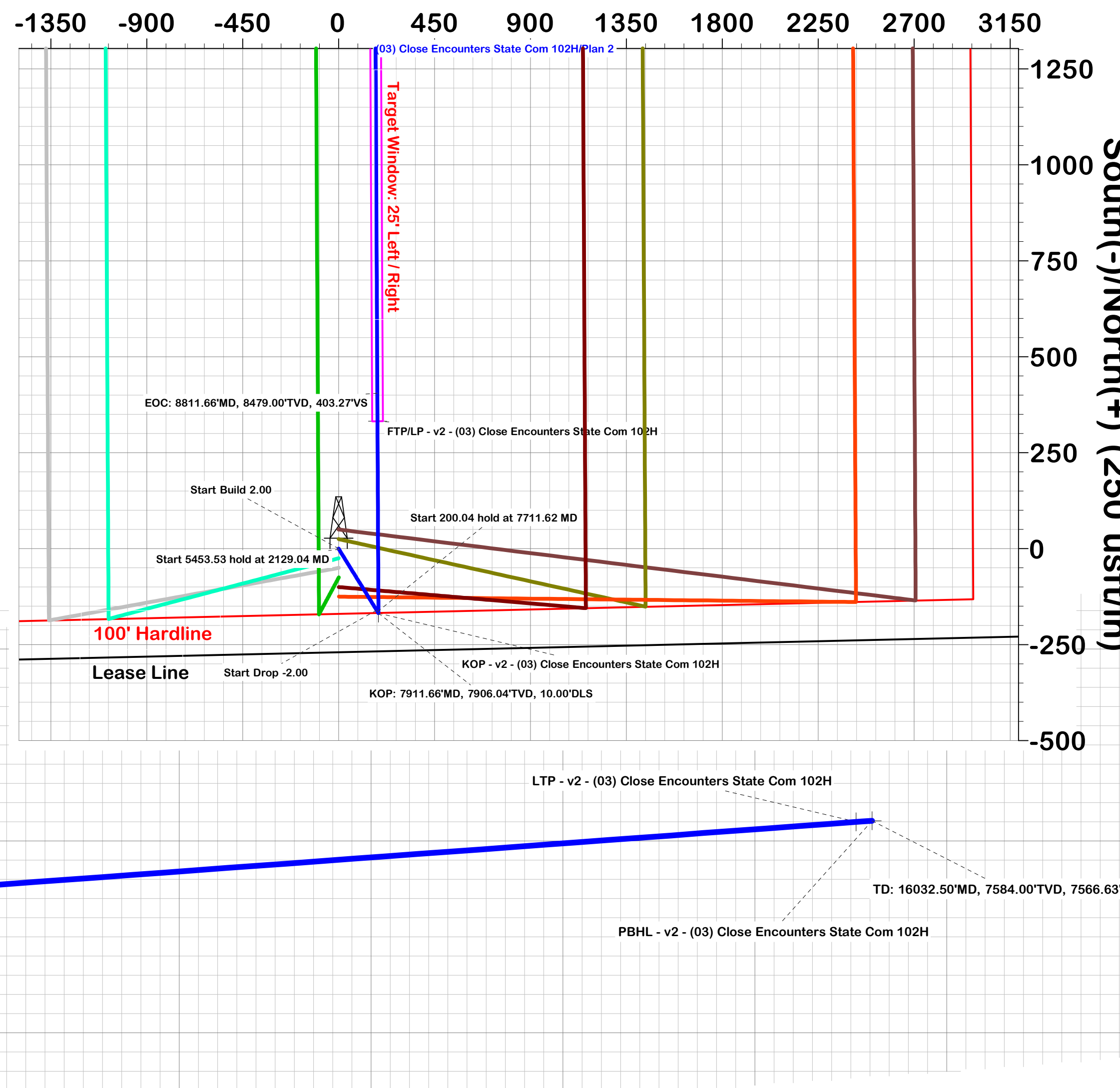
Vertical Section at 359.48° (95 usft/in)



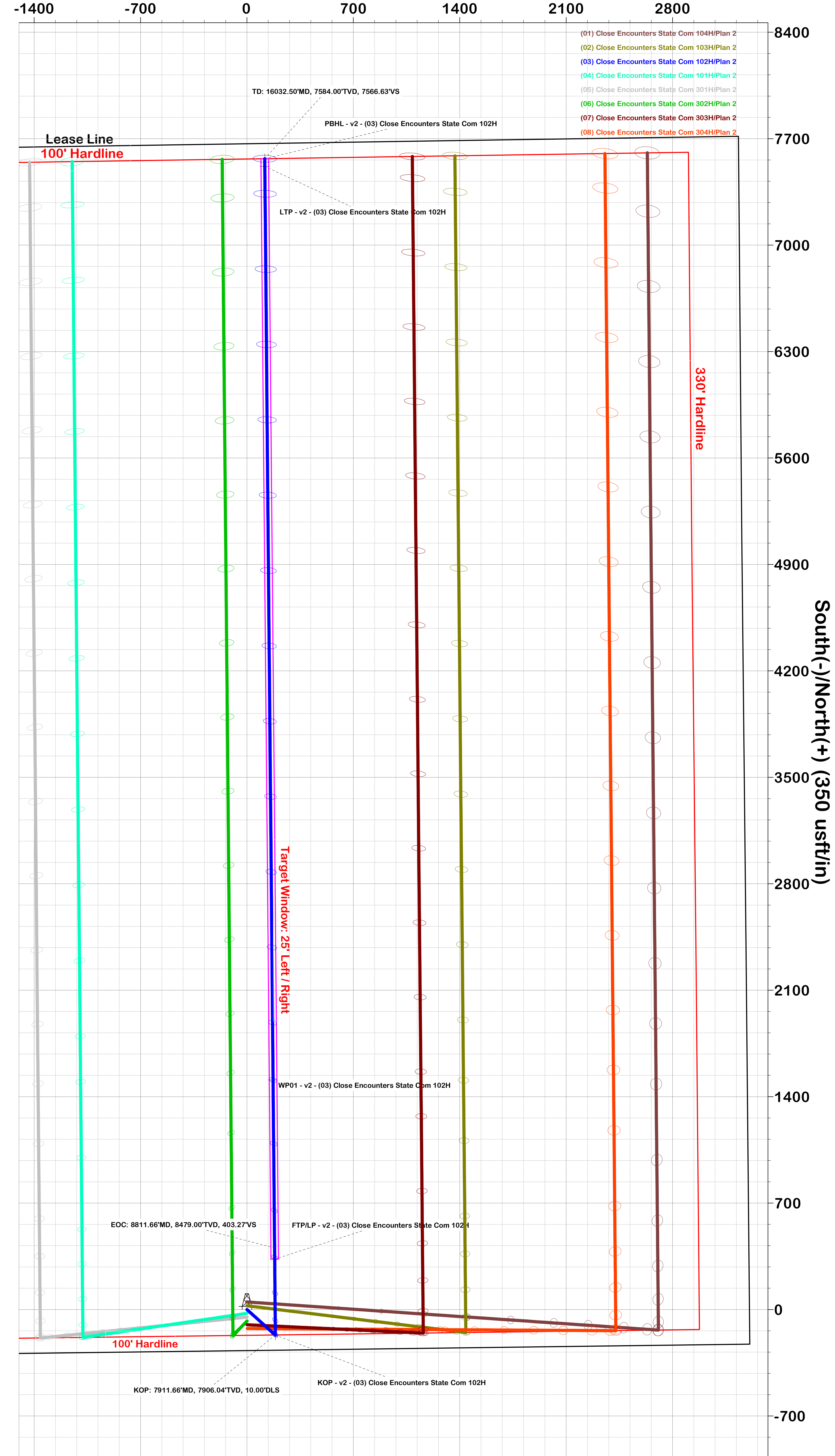
West(-)/East(+) (60 usft/in)



West(-)/East(+) (450 usft/in)



West(-)/East(+) (350 usft/in)



Plan 2 (03) Close Encounters State Com 102H

Created By: Keith Noack Date: 13:14, February 02 2024



Dixon Planning Report

DIXON

Database:	dixon-compass	Local Co-ordinate Reference:	Well (03) Close Encounters State Com 102H
Company:	Lario Oil & Gas Company	TVD Reference:	23' RKB @ 4000.00usft
Project:	Lea County, NM (N83 - NME)	MD Reference:	23' RKB @ 4000.00usft
Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Project	Lea County, NM (N83 - NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Close Encounters Pad			
Site Position:		Northing:	634,437.00 usft	Latitude:	32.74144008
From:	Map	Easting:	792,632.00 usft	Longitude:	-103.51604101
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	

Well	(03) Close Encounters State Com 102H					
Well Position	+N/-S	0.00 usft	Northing:	634,387.00 usft	Latitude:	32.74130264
	+E/-W	0.00 usft	Easting:	792,633.00 usft	Longitude:	-103.51603902
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,977.00 usft
Grid Convergence:	0.442 °					

Wellbore	102H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/10/2024	6.209	60.274	47,488.81514312

Design	Plan 2				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.48	

Plan Survey Tool Program	Date	2/2/2024			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,032.30 Plan 2 (102H)	MWD+IFR1		
			OWSG MWD + IFR1		



Dixon
Planning Report



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Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,124.48	2.49	131.94	2,124.44	-1.81	2.01	2.00	2.00	0.00	131.936	
7,786.98	2.49	131.94	7,781.60	-166.19	184.99	0.00	0.00	0.00	0.000	
7,911.46	0.00	0.01	7,906.04	-168.00	187.00	2.00	-2.00	0.00	180.000	KOP - v2 - (03) Close
7,911.47	0.00	0.01	7,906.04	-168.00	187.00	0.00	0.00	0.00	0.000	
8,811.47	90.00	359.48	8,479.00	404.93	181.80	10.00	10.00	-0.06	359.480	FTP/LP - v2 - (03) Clc
9,059.04	94.95	359.48	8,468.31	652.19	179.57	2.00	2.00	0.00	0.053	
9,919.99	94.95	359.48	8,394.00	1,509.89	171.85	0.00	0.00	0.00	0.000	WP01 - v2 - (03) Clos
10,054.66	97.64	359.48	8,379.23	1,643.74	170.64	2.00	2.00	0.00	-0.071	
16,032.30	97.64	359.48	7,584.00	7,568.00	117.00	0.00	0.00	0.00	0.000	PBHL - v2 - (03) Clos



Dixon Planning Report



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Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,100.00	2.00	131.94	2,099.98	-1.17	1.30	-1.18	2.00	2.00	0.00
2,124.48	2.49	131.94	2,124.44	-1.81	2.01	-1.83	2.00	2.00	0.00
2,129.04	2.49	131.94	2,129.00	-1.94	2.16	-1.96	0.00	0.00	0.00
Start 5453.53 hold at 2129.04 MD									
2,200.00	2.49	131.94	2,199.89	-4.00	4.45	-4.04	0.00	0.00	0.00
2,300.00	2.49	131.94	2,299.80	-6.90	7.68	-6.97	0.00	0.00	0.00
2,400.00	2.49	131.94	2,399.70	-9.81	10.91	-9.90	0.00	0.00	0.00
2,500.00	2.49	131.94	2,499.61	-12.71	14.15	-12.84	0.00	0.00	0.00
2,600.00	2.49	131.94	2,599.51	-15.61	17.38	-15.77	0.00	0.00	0.00
2,700.00	2.49	131.94	2,699.42	-18.51	20.61	-18.70	0.00	0.00	0.00
2,800.00	2.49	131.94	2,799.32	-21.42	23.84	-21.63	0.00	0.00	0.00
2,900.00	2.49	131.94	2,899.23	-24.32	27.07	-24.57	0.00	0.00	0.00
3,000.00	2.49	131.94	2,999.13	-27.22	30.30	-27.50	0.00	0.00	0.00
3,100.00	2.49	131.94	3,099.04	-30.13	33.53	-30.43	0.00	0.00	0.00
3,200.00	2.49	131.94	3,198.95	-33.03	36.77	-33.36	0.00	0.00	0.00
3,300.00	2.49	131.94	3,298.85	-35.93	40.00	-36.29	0.00	0.00	0.00
3,400.00	2.49	131.94	3,398.76	-38.84	43.23	-39.23	0.00	0.00	0.00
3,500.00	2.49	131.94	3,498.66	-41.74	46.46	-42.16	0.00	0.00	0.00
3,600.00	2.49	131.94	3,598.57	-44.64	49.69	-45.09	0.00	0.00	0.00
3,700.00	2.49	131.94	3,698.47	-47.55	52.92	-48.02	0.00	0.00	0.00
3,800.00	2.49	131.94	3,798.38	-50.45	56.15	-50.96	0.00	0.00	0.00
3,900.00	2.49	131.94	3,898.28	-53.35	59.39	-53.89	0.00	0.00	0.00
4,000.00	2.49	131.94	3,998.19	-56.25	62.62	-56.82	0.00	0.00	0.00
4,100.00	2.49	131.94	4,098.10	-59.16	65.85	-59.75	0.00	0.00	0.00
4,200.00	2.49	131.94	4,198.00	-62.06	69.08	-62.69	0.00	0.00	0.00
4,300.00	2.49	131.94	4,297.91	-64.96	72.31	-65.62	0.00	0.00	0.00
4,400.00	2.49	131.94	4,397.81	-67.87	75.54	-68.55	0.00	0.00	0.00
4,500.00	2.49	131.94	4,497.72	-70.77	78.77	-71.48	0.00	0.00	0.00
4,600.00	2.49	131.94	4,597.62	-73.67	82.00	-74.41	0.00	0.00	0.00
4,700.00	2.49	131.94	4,697.53	-76.58	85.24	-77.35	0.00	0.00	0.00
4,800.00	2.49	131.94	4,797.44	-79.48	88.47	-80.28	0.00	0.00	0.00
4,900.00	2.49	131.94	4,897.34	-82.38	91.70	-83.21	0.00	0.00	0.00



Dixon

Planning Report



Database:	dixon-compass	Local Co-ordinate Reference:	Well (03) Close Encounters State Com 102H
Company:	Lario Oil & Gas Company	TVD Reference:	23' RKB @ 4000.00usft
Project:	Lea County, NM (N83 - NME)	MD Reference:	23' RKB @ 4000.00usft
Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,000.00	2.49	131.94	4,997.25	-85.29	94.93	-86.14	0.00	0.00	0.00	
5,100.00	2.49	131.94	5,097.15	-88.19	98.16	-89.08	0.00	0.00	0.00	
5,200.00	2.49	131.94	5,197.06	-91.09	101.39	-92.01	0.00	0.00	0.00	
5,300.00	2.49	131.94	5,296.96	-93.99	104.62	-94.94	0.00	0.00	0.00	
5,400.00	2.49	131.94	5,396.87	-96.90	107.86	-97.87	0.00	0.00	0.00	
5,500.00	2.49	131.94	5,496.77	-99.80	111.09	-100.80	0.00	0.00	0.00	
5,600.00	2.49	131.94	5,596.68	-102.70	114.32	-103.74	0.00	0.00	0.00	
5,700.00	2.49	131.94	5,696.59	-105.61	117.55	-106.67	0.00	0.00	0.00	
5,800.00	2.49	131.94	5,796.49	-108.51	120.78	-109.60	0.00	0.00	0.00	
5,900.00	2.49	131.94	5,896.40	-111.41	124.01	-112.53	0.00	0.00	0.00	
6,000.00	2.49	131.94	5,996.30	-114.32	127.24	-115.47	0.00	0.00	0.00	
6,100.00	2.49	131.94	6,096.21	-117.22	130.48	-118.40	0.00	0.00	0.00	
6,200.00	2.49	131.94	6,196.11	-120.12	133.71	-121.33	0.00	0.00	0.00	
6,300.00	2.49	131.94	6,296.02	-123.02	136.94	-124.26	0.00	0.00	0.00	
6,400.00	2.49	131.94	6,395.93	-125.93	140.17	-127.19	0.00	0.00	0.00	
6,500.00	2.49	131.94	6,495.83	-128.83	143.40	-130.13	0.00	0.00	0.00	
6,600.00	2.49	131.94	6,595.74	-131.73	146.63	-133.06	0.00	0.00	0.00	
6,700.00	2.49	131.94	6,695.64	-134.64	149.86	-135.99	0.00	0.00	0.00	
6,800.00	2.49	131.94	6,795.55	-137.54	153.10	-138.92	0.00	0.00	0.00	
6,900.00	2.49	131.94	6,895.45	-140.44	156.33	-141.86	0.00	0.00	0.00	
7,000.00	2.49	131.94	6,995.36	-143.35	159.56	-144.79	0.00	0.00	0.00	
7,100.00	2.49	131.94	7,095.26	-146.25	162.79	-147.72	0.00	0.00	0.00	
7,200.00	2.49	131.94	7,195.17	-149.15	166.02	-150.65	0.00	0.00	0.00	
7,300.00	2.49	131.94	7,295.08	-152.06	169.25	-153.59	0.00	0.00	0.00	
7,400.00	2.49	131.94	7,394.98	-154.96	172.48	-156.52	0.00	0.00	0.00	
7,500.00	2.49	131.94	7,494.89	-157.86	175.72	-159.45	0.00	0.00	0.00	
7,582.58	2.49	131.94	7,577.38	-160.26	178.38	-161.87	0.00	0.00	0.00	
Start Drop -2.00										
7,600.00	2.49	131.94	7,594.79	-160.76	178.95	-162.38	0.00	0.00	0.00	
7,700.00	2.49	131.94	7,694.70	-163.67	182.18	-165.31	0.00	0.00	0.00	
7,711.62	2.49	131.94	7,706.31	-164.01	182.55	-165.66	0.00	0.00	0.00	
Start 200.04 hold at 7711.62 MD										
7,786.98	2.49	131.94	7,781.60	-166.19	184.99	-167.86	0.00	0.00	0.00	
7,800.00	2.23	131.94	7,794.60	-166.55	185.39	-168.23	2.00	-2.00	0.00	
7,900.00	0.23	131.94	7,894.58	-167.98	186.98	-169.67	2.00	-2.00	0.00	
7,911.47	0.00	0.01	7,906.04	-168.00	187.00	-169.69	2.00	-2.00	0.00	
7,911.66	0.00	359.48	7,906.24	-168.00	187.00	-169.69	0.00	0.00	0.00	
KOP: 7911.66'MD, 7906.04'TVD, 10.00'DLS										
7,950.00	3.85	359.48	7,944.55	-166.70	186.99	-168.39	10.05	10.05	0.00	
8,000.00	8.85	359.48	7,994.22	-161.17	186.94	-162.86	10.00	10.00	0.00	
8,050.00	13.85	359.48	8,043.23	-151.33	186.85	-153.02	10.00	10.00	0.00	
8,100.00	18.85	359.48	8,091.19	-137.26	186.72	-138.95	10.00	10.00	0.00	
8,150.00	23.85	359.48	8,137.75	-119.06	186.56	-120.75	10.00	10.00	0.00	
8,200.00	28.85	359.48	8,182.54	-96.87	186.35	-98.56	10.00	10.00	0.00	
8,250.00	33.85	359.48	8,225.22	-70.87	186.12	-72.55	10.00	10.00	0.00	
8,300.00	38.85	359.48	8,265.48	-41.24	185.85	-42.93	10.00	10.00	0.00	
8,350.00	43.85	359.48	8,303.00	-8.22	185.55	-9.90	10.00	10.00	0.00	
8,400.00	48.85	359.48	8,337.50	27.95	185.22	26.27	10.00	10.00	0.00	
8,450.00	53.85	359.48	8,368.71	66.99	184.87	65.31	10.00	10.00	0.00	
8,500.00	58.85	359.48	8,396.41	108.60	184.49	106.92	10.00	10.00	0.00	
8,550.00	63.85	359.48	8,420.37	152.46	184.09	150.78	10.00	10.00	0.00	
8,600.00	68.85	359.48	8,440.42	198.25	183.68	196.57	10.00	10.00	0.00	
8,650.00	73.85	359.48	8,456.40	245.60	183.25	243.93	10.00	10.00	0.00	



Dixon Planning Report



Database:	dixon-compass	Local Co-ordinate Reference:	Well (03) Close Encounters State Com 102H
Company:	Lario Oil & Gas Company	TVD Reference:	23' RKB @ 4000.00usft
Project:	Lea County, NM (N83 - NME)	MD Reference:	23' RKB @ 4000.00usft
Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.00	78.85	359.48	8,468.19	294.18	182.81	292.50	10.00	10.00	0.00
8,750.00	83.85	359.48	8,475.71	343.59	182.36	341.92	10.00	10.00	0.00
8,800.00	88.85	359.48	8,478.89	393.47	181.90	391.80	10.00	10.00	0.00
8,811.47	90.00	359.48	8,479.00	404.93	181.80	403.27	10.00	10.00	0.00
8,811.66	90.00	359.48	8,479.00	405.13	181.80	403.46	0.00	0.00	0.00
EOC: 8811.66'MD, 8479.00'TVD, 403.27'VS									
8,900.00	91.77	359.48	8,477.63	493.45	181.00	491.79	2.00	2.00	0.00
9,000.00	93.77	359.48	8,472.80	593.32	180.10	591.67	2.00	2.00	0.00
9,059.04	94.95	359.48	8,468.31	652.19	179.57	650.53	2.00	2.00	0.00
9,100.00	94.95	359.48	8,464.77	693.00	179.20	691.34	0.00	0.00	0.00
9,200.00	94.95	359.48	8,456.14	792.62	178.30	790.97	0.00	0.00	0.00
9,300.00	94.95	359.48	8,447.51	892.24	177.41	890.59	0.00	0.00	0.00
9,400.00	94.95	359.48	8,438.88	991.86	176.51	990.22	0.00	0.00	0.00
9,500.00	94.95	359.48	8,430.25	1,091.49	175.61	1,089.85	0.00	0.00	0.00
9,600.00	94.95	359.48	8,421.62	1,191.11	174.72	1,189.48	0.00	0.00	0.00
9,700.00	94.95	359.48	8,412.99	1,290.73	173.82	1,289.10	0.00	0.00	0.00
9,800.00	94.95	359.48	8,404.36	1,390.36	172.93	1,388.73	0.00	0.00	0.00
9,900.00	94.95	359.48	8,395.73	1,489.98	172.03	1,488.36	0.00	0.00	0.00
9,919.99	94.95	359.48	8,394.00	1,509.89	171.85	1,508.27	0.00	0.00	0.00
10,000.00	96.55	359.48	8,385.98	1,589.49	171.13	1,587.88	2.00	2.00	0.00
10,054.66	97.64	359.48	8,379.23	1,643.74	170.64	1,642.12	2.00	2.00	0.00
10,100.00	97.64	359.48	8,373.20	1,688.67	170.24	1,687.05	0.00	0.00	0.00
10,200.00	97.64	359.48	8,359.89	1,787.77	169.34	1,786.16	0.00	0.00	0.00
10,300.00	97.64	359.48	8,346.59	1,886.88	168.44	1,885.28	0.00	0.00	0.00
10,400.00	97.64	359.48	8,333.29	1,985.99	167.54	1,984.39	0.00	0.00	0.00
10,500.00	97.64	359.48	8,319.98	2,085.10	166.65	2,083.50	0.00	0.00	0.00
10,600.00	97.64	359.48	8,306.68	2,184.20	165.75	2,182.61	0.00	0.00	0.00
10,700.00	97.64	359.48	8,293.38	2,283.31	164.85	2,281.72	0.00	0.00	0.00
10,800.00	97.64	359.48	8,280.07	2,382.42	163.95	2,380.83	0.00	0.00	0.00
10,900.00	97.64	359.48	8,266.77	2,481.52	163.06	2,479.94	0.00	0.00	0.00
11,000.00	97.64	359.48	8,253.47	2,580.63	162.16	2,579.05	0.00	0.00	0.00
11,100.00	97.64	359.48	8,240.16	2,679.74	161.26	2,678.16	0.00	0.00	0.00
11,200.00	97.64	359.48	8,226.86	2,778.85	160.36	2,777.28	0.00	0.00	0.00
11,300.00	97.64	359.48	8,213.56	2,877.95	159.47	2,876.39	0.00	0.00	0.00
11,400.00	97.64	359.48	8,200.25	2,977.06	158.57	2,975.50	0.00	0.00	0.00
11,500.00	97.64	359.48	8,186.95	3,076.17	157.67	3,074.61	0.00	0.00	0.00
11,600.00	97.64	359.48	8,173.65	3,175.27	156.77	3,173.72	0.00	0.00	0.00
11,700.00	97.64	359.48	8,160.34	3,274.38	155.88	3,272.83	0.00	0.00	0.00
11,800.00	97.64	359.48	8,147.04	3,373.49	154.98	3,371.94	0.00	0.00	0.00
11,900.00	97.64	359.48	8,133.74	3,472.60	154.08	3,471.05	0.00	0.00	0.00
12,000.00	97.64	359.48	8,120.43	3,571.70	153.18	3,570.16	0.00	0.00	0.00
12,100.00	97.64	359.48	8,107.13	3,670.81	152.29	3,669.28	0.00	0.00	0.00
12,200.00	97.64	359.48	8,093.83	3,769.92	151.39	3,768.39	0.00	0.00	0.00
12,300.00	97.64	359.48	8,080.52	3,869.02	150.49	3,867.50	0.00	0.00	0.00
12,400.00	97.64	359.48	8,067.22	3,968.13	149.60	3,966.61	0.00	0.00	0.00
12,500.00	97.64	359.48	8,053.92	4,067.24	148.70	4,065.72	0.00	0.00	0.00
12,600.00	97.64	359.48	8,040.61	4,166.34	147.80	4,164.83	0.00	0.00	0.00
12,700.00	97.64	359.48	8,027.31	4,265.45	146.90	4,263.94	0.00	0.00	0.00
12,800.00	97.64	359.48	8,014.01	4,364.56	146.01	4,363.05	0.00	0.00	0.00
12,900.00	97.64	359.48	8,000.70	4,463.67	145.11	4,462.17	0.00	0.00	0.00
13,000.00	97.64	359.48	7,987.40	4,562.77	144.21	4,561.28	0.00	0.00	0.00
13,100.00	97.64	359.48	7,974.10	4,661.88	143.31	4,660.39	0.00	0.00	0.00
13,200.00	97.64	359.48	7,960.79	4,760.99	142.42	4,759.50	0.00	0.00	0.00
13,300.00	97.64	359.48	7,947.49	4,860.09	141.52	4,858.61	0.00	0.00	0.00



Dixon
Planning Report



Database:	dixon-compass	Local Co-ordinate Reference:	Well (03) Close Encounters State Com 102H
Company:	Lario Oil & Gas Company	TVD Reference:	23' RKB @ 4000.00usft
Project:	Lea County, NM (N83 - NME)	MD Reference:	23' RKB @ 4000.00usft
Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	97.64	359.48	7,934.18	4,959.20	140.62	4,957.72	0.00	0.00	0.00
13,500.00	97.64	359.48	7,920.88	5,058.31	139.72	5,056.83	0.00	0.00	0.00
13,600.00	97.64	359.48	7,907.58	5,157.42	138.83	5,155.94	0.00	0.00	0.00
13,700.00	97.64	359.48	7,894.27	5,256.52	137.93	5,255.05	0.00	0.00	0.00
13,800.00	97.64	359.48	7,880.97	5,355.63	137.03	5,354.17	0.00	0.00	0.00
13,900.00	97.64	359.48	7,867.67	5,454.74	136.13	5,453.28	0.00	0.00	0.00
14,000.00	97.64	359.48	7,854.36	5,553.84	135.24	5,552.39	0.00	0.00	0.00
14,100.00	97.64	359.48	7,841.06	5,652.95	134.34	5,651.50	0.00	0.00	0.00
14,200.00	97.64	359.48	7,827.76	5,752.06	133.44	5,750.61	0.00	0.00	0.00
14,300.00	97.64	359.48	7,814.45	5,851.17	132.55	5,849.72	0.00	0.00	0.00
14,400.00	97.64	359.48	7,801.15	5,950.27	131.65	5,948.83	0.00	0.00	0.00
14,500.00	97.64	359.48	7,787.85	6,049.38	130.75	6,047.94	0.00	0.00	0.00
14,600.00	97.64	359.48	7,774.54	6,148.49	129.85	6,147.06	0.00	0.00	0.00
14,700.00	97.64	359.48	7,761.24	6,247.59	128.96	6,246.17	0.00	0.00	0.00
14,800.00	97.64	359.48	7,747.94	6,346.70	128.06	6,345.28	0.00	0.00	0.00
14,900.00	97.64	359.48	7,734.63	6,445.81	127.16	6,444.39	0.00	0.00	0.00
15,000.00	97.64	359.48	7,721.33	6,544.92	126.26	6,543.50	0.00	0.00	0.00
15,100.00	97.64	359.48	7,708.03	6,644.02	125.37	6,642.61	0.00	0.00	0.00
15,200.00	97.64	359.48	7,694.72	6,743.13	124.47	6,741.72	0.00	0.00	0.00
15,300.00	97.64	359.48	7,681.42	6,842.24	123.57	6,840.83	0.00	0.00	0.00
15,400.00	97.64	359.48	7,668.12	6,941.34	122.67	6,939.94	0.00	0.00	0.00
15,500.00	97.64	359.48	7,654.81	7,040.45	121.78	7,039.06	0.00	0.00	0.00
15,600.00	97.64	359.48	7,641.51	7,139.56	120.88	7,138.17	0.00	0.00	0.00
15,700.00	97.64	359.48	7,628.21	7,238.66	119.98	7,237.28	0.00	0.00	0.00
15,800.00	97.64	359.48	7,614.90	7,337.77	119.08	7,336.39	0.00	0.00	0.00
15,900.00	97.64	359.48	7,601.60	7,436.88	118.19	7,435.50	0.00	0.00	0.00
16,000.00	97.64	359.48	7,588.30	7,535.99	117.29	7,534.61	0.00	0.00	0.00
16,032.30	97.64	359.48	7,584.00	7,568.00	117.00	7,566.63	0.00	0.00	0.00
TD: 16032.50'MD, 7584.00'TVD, 7566.63'VS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - v2 - (03) Close E	0.00	0.00	7,584.00	7,568.00	117.00	641,955.00	792,750.00	32.76210001	-103.51546845
- plan hits target center									
- Point									
LTP - v2 - (03) Close En	0.00	0.01	7,590.40	7,518.00	117.00	641,905.00	792,750.00	32.76196259	-103.51546971
- plan misses target center by 0.55usft at 15981.90usft MD (7590.71 TVD, 7518.05 N, 117.45 E)									
- Point									
KOP - v2 - (03) Close Er	0.00	0.00	7,906.04	-168.00	187.00	634,219.00	792,820.00	32.74083694	-103.51543510
- plan hits target center									
- Point									
WP01 - v2 - (03) Close E	0.00	0.00	8,394.00	1,509.89	171.85	635,896.89	792,804.85	32.74544877	-103.51544224
- plan hits target center									
- Point									
FTP/LP - v2 - (03) Close	0.00	0.00	8,479.00	332.00	183.00	634,719.00	792,816.00	32.74221122	-103.51543556
- plan misses target center by 4.66usft at 8739.03usft MD (8474.43 TVD, 332.69 N, 182.46 E)									
- Point									



Dixon

Planning Report



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Company:	Lario Oil & Gas Company	TVD Reference:	23' RKB @ 4000.00usft
Project:	Lea County, NM (N83 - NME)	MD Reference:	23' RKB @ 4000.00usft
Site:	Close Encounters Pad	North Reference:	Grid
Well:	(03) Close Encounters State Com 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H		
Design:	Plan 2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,793.29	1,793.29	RS LR				
2,880.46	2,879.71	TNSL				
2,970.69	2,969.85	YTES				
4,865.40	4,862.77	GRBG				
5,463.72	5,460.53	CRCN				
5,530.20	5,526.95	BLCN				
5,895.85	5,892.25	BRSC				
6,779.08	6,774.65	AVNS				
7,287.34	7,282.43	BSPG				
7,699.68	7,694.38	BSPG1				
8,523.88	8,408.33	BSPG1_SAND				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,129.04	2,129.00	-1.94	2.16	Start 5453.53 hold at 2129.04 MD	
7,582.58	7,577.38	-160.26	178.38	Start Drop -2.00	
7,711.62	7,706.31	-164.01	182.55	Start 200.04 hold at 7711.62 MD	
7,911.66	7,906.24	-168.00	187.00	KOP: 7911.66'MD, 7906.04'TVD, 10.00'DLS	
8,811.66	8,479.00	405.13	181.80	EOC: 8811.66'MD, 8479.00'TVD, 403.27'VS	
16,032.30	7,584.00	7,568.00	117.00	TD: 16032.50'MD, 7584.00'TVD, 7566.63'VS	

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Lario Oil & Gas Co.

OGRID: 13089

Date: 4-1-24

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Close Encounters State Com 101H	30-025-	N-13-18S-34E	245 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 102H	30-025-	N-13-18S-34E	270 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 103H	30-025-	N-13-18S-34E	295 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 104H	30-025-	N-13-18S-34E	320 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 301H	30-025-	N-13-18S-34E	220 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 302H	30-025-	N-13-18S-34E	219 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 303H	30-025-	N-13-18S-34E	170 FSL & 1961 FWL	1150	550	1575
Close Encounters State Com 304H	30-025-	N-13-18S-34E	145 FSL & 1961 FWL	1150	550	1575

IV. Central Delivery Point Name: DCP Midstream, LP (248749) in M-24-18s-34e [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Close Encounters State Com 101H	30-025-	6-1-24	7-1-24	7-5-24	8-5-24	8-10-24
Close Encounters State Com 102H	30-025-	7-1-24	8-1-24	8-5-24	9-5-24	9-10-24
Close Encounters State Com 103H	30-025-	8-1-24	9-1-24	9-5-24	10-5-24	10-10-24
Close Encounters State Com 104H	30-025-	9-1-24	10-1-24	10-5-24	11-5-24	11-10-24
Close Encounters State Com 301H	30-025-	10-1-24	11-1-24	11-5-24	12-5-24	12-10-24

Close Encounters State Com 302H	30-025-	11-1-24	12-1-24	12-5-24	1-5-25	1-10-25
Close Encounters State Com 303H	30-025-	12-1-24	1-1-25	1-5-25	2-5-25	2-10-25
Close Encounters State Com 304H	30-025-	1-1-25	2-1-25	2-5-25	3-5-25	3-10-25

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☒ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

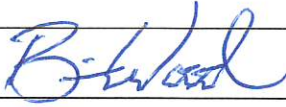
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	
Printed Name:	Brian Wood
Title:	Consultant
E-mail Address:	brian@permitswest.com
Date:	4-1-24
Phone:	505 466-8120
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. Equipment

Lario Oil & Gas Co. tentatively plans to install:

fuel safety shut-off valves
gas scrubbers
oil tanks
meters
stack
separators
compressor
water tanks
heater-treaters
vapor recovery units
vapor recovery piping for all tanks

VII. Operational Practices

NMAC 19.15.27.8 (A) Venting & Flaring of Natural Gas

1. Lario Oil & Gas Co. (LARIO) will comply NMAC 19.15.27.8 – venting and flaring of gas during drilling, completion, or production that constitutes waste as defined in 19.15.2 is banned.

NMAC 19.15.27.8 (B) Venting & Flaring During Drilling

1. LARIO will capture or combust gas if technically feasible during drilling operations using best industry practices.
2. A flare stack with a 100% capacity for expected volume will be set on the pad ≥ 100 feet from the nearest well head and storage tank.
3. In an emergency, LARIO will vent gas in order to avoid substantial impact. LARIO will report vented or flared gas to the NMOCD.

NMAC 19.15.27.8 (C) Venting & Flaring During Completion or Recompletion

1. Facilities will be built and ready from the first day of flowback
2. Test separator will be properly separate gas and liquids. Temporary test separator will be used initially to process volumes. In addition, separator will be tied into flowback tanks which will be tied into the gas processing equipment for sale down a pipeline.
3. Should the facility not be ready to process gas, or the gas does not meet quality standards, then storage tanks will be set that are tied into gas busters or a temporary flare to manage all gas. This flare would meet the following requirements:
 - a) An appropriate sized flare stack with an automatic igniter
 - b) LARIO analyzes gas samples twice a week

- c) LARIO flows the gas into a gathering line as soon as the pipeline specifications are met
- d) LARIO provides the NMOCD with pipeline specifications and natural gas data.

NMAC 19.15.27.8 (D) Venting & Flaring During Production

LARIO will not vent or flare natural gas except:

1. During an emergency or malfunction
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided
 - a) LARIO does not vent after the well achieves a stabilized rate and pressure
 - b) LARIO will be on-site while unloading liquids by manual purging and take all reasonable actions to achieve a stabilized rate and pressure as soon as possible
 - c) LARIO will optimize the system to minimize gas venting if the well is equipped with a plunger lift or auto control system
 - d) Best management practices will be used during downhole well maintenance.
3. During the first year of production from an exploratory well provided
 - a) LARIO receives approval from the NMOCD
 - b) LARIO stays in compliance with NMOCD gas capture requirements
 - c) LARIO submits an updated C-129 form to the NMOCD
4. During the following activities unless prohibited
 - a) Gauging or sampling a storage tank or low-pressure production vessel
 - b) Loading out liquids from a storage tank
 - c) Repair and maintenance
 - d) Normal operation of a gas-activated pneumatic controller or pump
 - e) Normal operation of a storage tank but not including venting from a thief hatch
 - f) Normal operation of dehydration units
 - g) Normal operations of compressors, engines, turbines, valves, flanges, & connectors
 - h) During a Braden head, packer leak test, or production test lasting <24 hours
 - i) When natural gas does not meet the gathering line specifications
 - j) Commissioning of lines, equipment, or facilities only for as long as necessary to purge introduced impurities.

NMAC 19.15.27.8 (E) Performance Standards

1. LARIO used a safety factor to design the separation and storage equipment. The equipment will be routed to a vapor recovery system and uses a flare as back up for startup, shutdown, maintenance, or malfunction of the VRU system.
2. LARIO will install a flare that will handle the full facility vapor volume in case the VRU fails. It will have an auto-ignition system.
3. Flare stacks will be appropriately sized and designed to ensure proper combustion efficiency
 - a) Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.

- b) Previously installed flare stacks will be retrofitted within 18 months of May 25, 2021 with an automatic ignitor, continuous pilot, or technology that alerts LARIO to flare malfunction.
 - c) Flare stacks replaced after May 25, 2021 will be equipped with an automatic ignitor or continuous pilot if at a well or facility with an average production of ≤ 60 Mcfd of natural gas.
 - d) Flare stacks will be located >100 feet from well head and storage tanks and securely anchored.
- 4. LARIO will conduct an audio/visual/olfactory inspection on all components for leaks and defects every week.
 - 5. LARIO will make and keep records of AVO inspections available to the NMOCD for at least 5 years.
 - 6. LARIO may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
 - 7. Facilities will be designed to minimize waste.
 - 8. LARIO will resolve emergencies as promptly as possible.

NMAC 19.15.27.8 (F) Measuring or Estimating Vented & Flared Natural Gas

- 1. LARIO will have meters on both the low pressure and high-pressure sides of the flares. Volumes will be recorded in the SCADA system.
- 2. LARIO will install equipment to measure the volume of flared natural gas that has an average production of ≥ 60 Mcfd.
- 3. LARIO's measuring equipment will conform to industry standards.
- 4. Measurement system will be designed such that it cannot be bypassed except for inspections and servicing the meters.
- 5. LARIO will estimate the volume of vented or flared gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
- 6. LARIO will estimate the volume of vented and flared gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on form C-116.
- 7. LARIO will install measuring equipment whenever the NMOCD determines that metering is necessary.

VIII. Best Management Practices

LARIO Permian LLC will minimize venting during maintenance by:

- 1. Designing and operating system to route storage tank and process equipment emissions to the VRU. If the VRU is not operable, then vapors will be routed to the flare.
- 2. Scheduling maintenance for multiple tasks to minimize the need for blowdowns.
- 3. After completion of maintenance, gas will be flared until it meets pipeline specifications.