

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 31H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

20 March, 2019

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 31H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3729.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3729.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Project	PRD NM DIRECTIONAL PLANS (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Avogato 30-31		
Site Position:		Northing:	498,694.54 usft
From:	Map	Easting:	762,988.53 usft
Position Uncertainty:	2.00 ft	Slot Radius:	13.200 in
		Latitude:	32° 22' 8.174555 N
		Longitude:	103° 36' 55.512718 W
		Grid Convergence:	0.38 °

Well	AVOGATO 30_31 STATE COM 31H		
Well Position	+N/-S	180.02 ft	Northing:
	+E/-W	-0.97 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	32° 22' 9.955829 N
		Longitude:	103° 36' 55.512718 W
		Ground Level:	3,702.60 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	3/20/2019	6.68
			Dip Angle
			(°)
			60.10
			Field Strength
			(nT)
			48,058

Design	Permitting Plan		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			184.31

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	
4,180.00	0.00	0.00	4,180.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,680.17	10.00	312.32	4,677.63	29.32	-32.20	2.00	2.00	0.00	312.32	
10,633.31	10.00	312.32	10,540.27	725.56	-796.79	0.00	0.00	0.00	0.00	
11,548.84	10.00	179.59	11,449.64	699.38	-855.52	2.00	0.00	-14.50	-156.05	
12,348.84	90.00	179.59	11,923.10	135.14	-851.46	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
22,788.79	90.00	179.59	11,923.10	-10,304.54	-776.43	0.00	0.00	0.00	0.00	PBHL (Avogato)

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Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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
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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,180.00	0.00	0.00	4,180.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.40	312.32	4,200.00	0.05	-0.05	-0.04	2.00	2.00	0.00
4,300.00	2.40	312.32	4,299.97	1.69	-1.86	-1.55	2.00	2.00	0.00
4,400.00	4.40	312.32	4,399.78	5.68	-6.24	-5.20	2.00	2.00	0.00
4,500.00	6.40	312.32	4,499.34	12.02	-13.20	-10.99	2.00	2.00	0.00
4,600.00	8.40	312.32	4,598.50	20.69	-22.72	-18.93	2.00	2.00	0.00
4,680.17	10.00	312.32	4,677.63	29.32	-32.20	-26.82	2.00	2.00	0.00
4,700.00	10.00	312.32	4,697.16	31.64	-34.75	-28.94	0.00	0.00	0.00
4,800.00	10.00	312.32	4,795.64	43.34	-47.59	-39.64	0.00	0.00	0.00
4,900.00	10.00	312.32	4,894.12	55.03	-60.44	-50.34	0.00	0.00	0.00
5,000.00	10.00	312.32	4,992.60	66.73	-73.28	-61.03	0.00	0.00	0.00
5,100.00	10.00	312.32	5,091.08	78.42	-86.12	-71.73	0.00	0.00	0.00

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Well:	AVOGATO 30_31 STATE COM 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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	10.00	312.32	5,189.56	90.12	-98.97	-82.43	0.00	0.00	0.00
5,300.00	10.00	312.32	5,288.04	101.81	-111.81	-93.12	0.00	0.00	0.00
5,400.00	10.00	312.32	5,386.52	113.51	-124.65	-103.82	0.00	0.00	0.00
5,500.00	10.00	312.32	5,485.00	125.20	-137.50	-114.52	0.00	0.00	0.00
5,600.00	10.00	312.32	5,583.48	136.90	-150.34	-125.22	0.00	0.00	0.00
5,700.00	10.00	312.32	5,681.96	148.59	-163.18	-135.91	0.00	0.00	0.00
5,800.00	10.00	312.32	5,780.44	160.29	-176.03	-146.61	0.00	0.00	0.00
5,900.00	10.00	312.32	5,878.92	171.99	-188.87	-157.31	0.00	0.00	0.00
6,000.00	10.00	312.32	5,977.40	183.68	-201.71	-168.01	0.00	0.00	0.00
6,100.00	10.00	312.32	6,075.88	195.38	-214.56	-178.70	0.00	0.00	0.00
6,200.00	10.00	312.32	6,174.36	207.07	-227.40	-189.40	0.00	0.00	0.00
6,300.00	10.00	312.32	6,272.84	218.77	-240.24	-200.10	0.00	0.00	0.00
6,400.00	10.00	312.32	6,371.32	230.46	-253.09	-210.79	0.00	0.00	0.00
6,500.00	10.00	312.32	6,469.80	242.16	-265.93	-221.49	0.00	0.00	0.00
6,600.00	10.00	312.32	6,568.28	253.85	-278.78	-232.19	0.00	0.00	0.00
6,700.00	10.00	312.32	6,666.76	265.55	-291.62	-242.89	0.00	0.00	0.00
6,800.00	10.00	312.32	6,765.24	277.24	-304.46	-253.58	0.00	0.00	0.00
6,900.00	10.00	312.32	6,863.72	288.94	-317.31	-264.28	0.00	0.00	0.00
7,000.00	10.00	312.32	6,962.20	300.63	-330.15	-274.98	0.00	0.00	0.00
7,100.00	10.00	312.32	7,060.68	312.33	-342.99	-285.67	0.00	0.00	0.00
7,200.00	10.00	312.32	7,159.16	324.02	-355.84	-296.37	0.00	0.00	0.00
7,300.00	10.00	312.32	7,257.64	335.72	-368.68	-307.07	0.00	0.00	0.00
7,400.00	10.00	312.32	7,356.12	347.41	-381.52	-317.77	0.00	0.00	0.00
7,500.00	10.00	312.32	7,454.60	359.11	-394.37	-328.46	0.00	0.00	0.00
7,600.00	10.00	312.32	7,553.07	370.80	-407.21	-339.16	0.00	0.00	0.00
7,700.00	10.00	312.32	7,651.55	382.50	-420.05	-349.86	0.00	0.00	0.00
7,800.00	10.00	312.32	7,750.03	394.19	-432.90	-360.55	0.00	0.00	0.00
7,900.00	10.00	312.32	7,848.51	405.89	-445.74	-371.25	0.00	0.00	0.00
8,000.00	10.00	312.32	7,946.99	417.59	-458.58	-381.95	0.00	0.00	0.00
8,100.00	10.00	312.32	8,045.47	429.28	-471.43	-392.65	0.00	0.00	0.00
8,200.00	10.00	312.32	8,143.95	440.98	-484.27	-403.34	0.00	0.00	0.00
8,300.00	10.00	312.32	8,242.43	452.67	-497.12	-414.04	0.00	0.00	0.00
8,400.00	10.00	312.32	8,340.91	464.37	-509.96	-424.74	0.00	0.00	0.00
8,500.00	10.00	312.32	8,439.39	476.06	-522.80	-435.44	0.00	0.00	0.00
8,600.00	10.00	312.32	8,537.87	487.76	-535.65	-446.13	0.00	0.00	0.00
8,700.00	10.00	312.32	8,636.35	499.45	-548.49	-456.83	0.00	0.00	0.00
8,800.00	10.00	312.32	8,734.83	511.15	-561.33	-467.53	0.00	0.00	0.00
8,900.00	10.00	312.32	8,833.31	522.84	-574.18	-478.22	0.00	0.00	0.00
9,000.00	10.00	312.32	8,931.79	534.54	-587.02	-488.92	0.00	0.00	0.00
9,100.00	10.00	312.32	9,030.27	546.23	-599.86	-499.62	0.00	0.00	0.00
9,200.00	10.00	312.32	9,128.75	557.93	-612.71	-510.32	0.00	0.00	0.00
9,300.00	10.00	312.32	9,227.23	569.62	-625.55	-521.01	0.00	0.00	0.00
9,400.00	10.00	312.32	9,325.71	581.32	-638.39	-531.71	0.00	0.00	0.00
9,500.00	10.00	312.32	9,424.19	593.01	-651.24	-542.41	0.00	0.00	0.00
9,600.00	10.00	312.32	9,522.67	604.71	-664.08	-553.10	0.00	0.00	0.00
9,700.00	10.00	312.32	9,621.15	616.40	-676.92	-563.80	0.00	0.00	0.00
9,800.00	10.00	312.32	9,719.63	628.10	-689.77	-574.50	0.00	0.00	0.00
9,900.00	10.00	312.32	9,818.11	639.80	-702.61	-585.20	0.00	0.00	0.00
10,000.00	10.00	312.32	9,916.59	651.49	-715.46	-595.89	0.00	0.00	0.00
10,100.00	10.00	312.32	10,015.07	663.19	-728.30	-606.59	0.00	0.00	0.00
10,200.00	10.00	312.32	10,113.55	674.88	-741.14	-617.29	0.00	0.00	0.00
10,300.00	10.00	312.32	10,212.03	686.58	-753.99	-627.98	0.00	0.00	0.00
10,400.00	10.00	312.32	10,310.51	698.27	-766.83	-638.68	0.00	0.00	0.00
10,500.00	10.00	312.32	10,408.99	709.97	-779.67	-649.38	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
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10,600.00	10.00	312.32	10,507.47	721.66	-792.52	-660.08	0.00	0.00	0.00
10,633.31	10.00	312.32	10,540.27	725.56	-796.79	-663.64	0.00	0.00	0.00
10,700.00	8.80	308.78	10,606.06	732.65	-805.05	-670.09	2.00	-1.80	-5.31
10,800.00	7.09	301.29	10,705.10	740.65	-816.29	-677.22	2.00	-1.72	-7.49
10,900.00	5.56	289.41	10,804.50	745.46	-826.13	-681.28	2.00	-1.52	-11.88
11,000.00	4.44	270.24	10,904.12	747.09	-834.57	-682.27	2.00	-1.13	-19.17
11,100.00	4.05	243.45	11,003.86	745.53	-841.60	-680.19	2.00	-0.39	-26.80
11,200.00	4.59	217.63	11,103.58	740.78	-847.20	-675.03	2.00	0.54	-25.82
11,300.00	5.81	199.95	11,203.18	732.85	-851.37	-666.81	2.00	1.22	-17.68
11,400.00	7.38	189.04	11,302.51	721.75	-854.11	-655.54	2.00	1.57	-10.91
11,500.00	9.12	182.09	11,401.48	707.49	-855.41	-641.22	2.00	1.74	-6.95
11,548.84	10.00	179.59	11,449.64	699.38	-855.52	-633.13	2.00	1.81	-5.13
11,600.00	15.12	179.59	11,499.56	688.26	-855.44	-622.04	10.00	10.00	0.00
11,700.00	25.12	179.59	11,593.34	653.91	-855.19	-587.81	10.00	10.00	0.00
11,800.00	35.12	179.59	11,679.73	603.80	-854.83	-537.87	10.00	10.00	0.00
11,900.00	45.12	179.59	11,756.11	539.45	-854.37	-473.73	10.00	10.00	0.00
12,000.00	55.12	179.59	11,820.15	462.82	-853.82	-397.36	10.00	10.00	0.00
12,100.00	65.12	179.59	11,869.91	376.22	-853.19	-311.06	10.00	10.00	0.00
12,200.00	75.12	179.59	11,903.88	282.31	-852.52	-217.46	10.00	10.00	0.00
12,300.00	85.12	179.59	11,921.02	183.92	-851.81	-119.40	10.00	10.00	0.00
12,348.84	90.00	179.59	11,923.10	135.14	-851.46	-70.79	10.00	10.00	0.00
12,400.00	90.00	179.59	11,923.10	83.98	-851.09	-19.80	0.00	0.00	0.00
12,500.00	90.00	179.59	11,923.10	-16.02	-850.37	79.86	0.00	0.00	0.00
12,600.00	90.00	179.59	11,923.10	-116.01	-849.66	179.52	0.00	0.00	0.00
12,700.00	90.00	179.59	11,923.10	-216.01	-848.94	279.19	0.00	0.00	0.00
12,800.00	90.00	179.59	11,923.10	-316.01	-848.22	378.85	0.00	0.00	0.00
12,900.00	90.00	179.59	11,923.10	-416.01	-847.50	478.51	0.00	0.00	0.00
13,000.00	90.00	179.59	11,923.10	-516.00	-846.78	578.17	0.00	0.00	0.00
13,100.00	90.00	179.59	11,923.10	-616.00	-846.06	677.83	0.00	0.00	0.00
13,200.00	90.00	179.59	11,923.10	-716.00	-845.34	777.49	0.00	0.00	0.00
13,300.00	90.00	179.59	11,923.10	-816.00	-844.63	877.15	0.00	0.00	0.00
13,400.00	90.00	179.59	11,923.10	-915.99	-843.91	976.81	0.00	0.00	0.00
13,500.00	90.00	179.59	11,923.10	-1,015.99	-843.19	1,076.47	0.00	0.00	0.00
13,600.00	90.00	179.59	11,923.10	-1,115.99	-842.47	1,176.13	0.00	0.00	0.00
13,700.00	90.00	179.59	11,923.10	-1,215.99	-841.75	1,275.79	0.00	0.00	0.00
13,800.00	90.00	179.59	11,923.10	-1,315.98	-841.03	1,375.45	0.00	0.00	0.00
13,900.00	90.00	179.59	11,923.10	-1,415.98	-840.31	1,475.11	0.00	0.00	0.00
14,000.00	90.00	179.59	11,923.10	-1,515.98	-839.59	1,574.78	0.00	0.00	0.00
14,100.00	90.00	179.59	11,923.10	-1,615.98	-838.88	1,674.44	0.00	0.00	0.00
14,200.00	90.00	179.59	11,923.10	-1,715.97	-838.16	1,774.10	0.00	0.00	0.00
14,300.00	90.00	179.59	11,923.10	-1,815.97	-837.44	1,873.76	0.00	0.00	0.00
14,400.00	90.00	179.59	11,923.10	-1,915.97	-836.72	1,973.42	0.00	0.00	0.00
14,500.00	90.00	179.59	11,923.10	-2,015.96	-836.00	2,073.08	0.00	0.00	0.00
14,600.00	90.00	179.59	11,923.10	-2,115.96	-835.28	2,172.74	0.00	0.00	0.00
14,700.00	90.00	179.59	11,923.10	-2,215.96	-834.56	2,272.40	0.00	0.00	0.00
14,800.00	90.00	179.59	11,923.10	-2,315.96	-833.84	2,372.06	0.00	0.00	0.00
14,900.00	90.00	179.59	11,923.10	-2,415.95	-833.13	2,471.72	0.00	0.00	0.00
15,000.00	90.00	179.59	11,923.10	-2,515.95	-832.41	2,571.38	0.00	0.00	0.00
15,100.00	90.00	179.59	11,923.10	-2,615.95	-831.69	2,671.04	0.00	0.00	0.00
15,200.00	90.00	179.59	11,923.10	-2,715.95	-830.97	2,770.70	0.00	0.00	0.00
15,300.00	90.00	179.59	11,923.10	-2,815.94	-830.25	2,870.37	0.00	0.00	0.00
15,400.00	90.00	179.59	11,923.10	-2,915.94	-829.53	2,970.03	0.00	0.00	0.00
15,500.00	90.00	179.59	11,923.10	-3,015.94	-828.81	3,069.69	0.00	0.00	0.00
15,600.00	90.00	179.59	11,923.10	-3,115.94	-828.09	3,169.35	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 31H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3729.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3729.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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)
15,700.00	90.00	179.59	11,923.10	-3,215.93	-827.38	3,269.01	0.00	0.00	0.00
15,800.00	90.00	179.59	11,923.10	-3,315.93	-826.66	3,368.67	0.00	0.00	0.00
15,900.00	90.00	179.59	11,923.10	-3,415.93	-825.94	3,468.33	0.00	0.00	0.00
16,000.00	90.00	179.59	11,923.10	-3,515.93	-825.22	3,567.99	0.00	0.00	0.00
16,100.00	90.00	179.59	11,923.10	-3,615.92	-824.50	3,667.65	0.00	0.00	0.00
16,200.00	90.00	179.59	11,923.10	-3,715.92	-823.78	3,767.31	0.00	0.00	0.00
16,300.00	90.00	179.59	11,923.10	-3,815.92	-823.06	3,866.97	0.00	0.00	0.00
16,400.00	90.00	179.59	11,923.10	-3,915.92	-822.35	3,966.63	0.00	0.00	0.00
16,500.00	90.00	179.59	11,923.10	-4,015.91	-821.63	4,066.29	0.00	0.00	0.00
16,600.00	90.00	179.59	11,923.10	-4,115.91	-820.91	4,165.96	0.00	0.00	0.00
16,700.00	90.00	179.59	11,923.10	-4,215.91	-820.19	4,265.62	0.00	0.00	0.00
16,800.00	90.00	179.59	11,923.10	-4,315.91	-819.47	4,365.28	0.00	0.00	0.00
16,900.00	90.00	179.59	11,923.10	-4,415.90	-818.75	4,464.94	0.00	0.00	0.00
17,000.00	90.00	179.59	11,923.10	-4,515.90	-818.03	4,564.60	0.00	0.00	0.00
17,100.00	90.00	179.59	11,923.10	-4,615.90	-817.31	4,664.26	0.00	0.00	0.00
17,200.00	90.00	179.59	11,923.10	-4,715.90	-816.60	4,763.92	0.00	0.00	0.00
17,300.00	90.00	179.59	11,923.10	-4,815.89	-815.88	4,863.58	0.00	0.00	0.00
17,400.00	90.00	179.59	11,923.10	-4,915.89	-815.16	4,963.24	0.00	0.00	0.00
17,500.00	90.00	179.59	11,923.10	-5,015.89	-814.44	5,062.90	0.00	0.00	0.00
17,600.00	90.00	179.59	11,923.10	-5,115.88	-813.72	5,162.56	0.00	0.00	0.00
17,700.00	90.00	179.59	11,923.10	-5,215.88	-813.00	5,262.22	0.00	0.00	0.00
17,800.00	90.00	179.59	11,923.10	-5,315.88	-812.28	5,361.88	0.00	0.00	0.00
17,900.00	90.00	179.59	11,923.10	-5,415.88	-811.56	5,461.55	0.00	0.00	0.00
18,000.00	90.00	179.59	11,923.10	-5,515.87	-810.85	5,561.21	0.00	0.00	0.00
18,100.00	90.00	179.59	11,923.10	-5,615.87	-810.13	5,660.87	0.00	0.00	0.00
18,200.00	90.00	179.59	11,923.10	-5,715.87	-809.41	5,760.53	0.00	0.00	0.00
18,300.00	90.00	179.59	11,923.10	-5,815.87	-808.69	5,860.19	0.00	0.00	0.00
18,400.00	90.00	179.59	11,923.10	-5,915.86	-807.97	5,959.85	0.00	0.00	0.00
18,500.00	90.00	179.59	11,923.10	-6,015.86	-807.25	6,059.51	0.00	0.00	0.00
18,600.00	90.00	179.59	11,923.10	-6,115.86	-806.53	6,159.17	0.00	0.00	0.00
18,700.00	90.00	179.59	11,923.10	-6,215.86	-805.81	6,258.83	0.00	0.00	0.00
18,800.00	90.00	179.59	11,923.10	-6,315.85	-805.10	6,358.49	0.00	0.00	0.00
18,900.00	90.00	179.59	11,923.10	-6,415.85	-804.38	6,458.15	0.00	0.00	0.00
19,000.00	90.00	179.59	11,923.10	-6,515.85	-803.66	6,557.81	0.00	0.00	0.00
19,100.00	90.00	179.59	11,923.10	-6,615.85	-802.94	6,657.47	0.00	0.00	0.00
19,200.00	90.00	179.59	11,923.10	-6,715.84	-802.22	6,757.14	0.00	0.00	0.00
19,300.00	90.00	179.59	11,923.10	-6,815.84	-801.50	6,856.80	0.00	0.00	0.00
19,400.00	90.00	179.59	11,923.10	-6,915.84	-800.78	6,956.46	0.00	0.00	0.00
19,500.00	90.00	179.59	11,923.10	-7,015.84	-800.07	7,056.12	0.00	0.00	0.00
19,600.00	90.00	179.59	11,923.10	-7,115.83	-799.35	7,155.78	0.00	0.00	0.00
19,700.00	90.00	179.59	11,923.10	-7,215.83	-798.63	7,255.44	0.00	0.00	0.00
19,800.00	90.00	179.59	11,923.10	-7,315.83	-797.91	7,355.10	0.00	0.00	0.00
19,900.00	90.00	179.59	11,923.10	-7,415.83	-797.19	7,454.76	0.00	0.00	0.00
20,000.00	90.00	179.59	11,923.10	-7,515.82	-796.47	7,554.42	0.00	0.00	0.00
20,100.00	90.00	179.59	11,923.10	-7,615.82	-795.75	7,654.08	0.00	0.00	0.00
20,200.00	90.00	179.59	11,923.10	-7,715.82	-795.03	7,753.74	0.00	0.00	0.00
20,300.00	90.00	179.59	11,923.10	-7,815.82	-794.32	7,853.40	0.00	0.00	0.00
20,400.00	90.00	179.59	11,923.10	-7,915.81	-793.60	7,953.06	0.00	0.00	0.00
20,500.00	90.00	179.59	11,923.10	-8,015.81	-792.88	8,052.73	0.00	0.00	0.00
20,600.00	90.00	179.59	11,923.10	-8,115.81	-792.16	8,152.39	0.00	0.00	0.00
20,700.00	90.00	179.59	11,923.10	-8,215.80	-791.44	8,252.05	0.00	0.00	0.00
20,800.00	90.00	179.59	11,923.10	-8,315.80	-790.72	8,351.71	0.00	0.00	0.00
20,900.00	90.00	179.59	11,923.10	-8,415.80	-790.00	8,451.37	0.00	0.00	0.00
21,000.00	90.00	179.59	11,923.10	-8,515.80	-789.28	8,551.03	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 31H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3729.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3729.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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)
21,100.00	90.00	179.59	11,923.10	-8,615.79	-788.57	8,650.69	0.00	0.00	0.00
21,200.00	90.00	179.59	11,923.10	-8,715.79	-787.85	8,750.35	0.00	0.00	0.00
21,300.00	90.00	179.59	11,923.10	-8,815.79	-787.13	8,850.01	0.00	0.00	0.00
21,400.00	90.00	179.59	11,923.10	-8,915.79	-786.41	8,949.67	0.00	0.00	0.00
21,500.00	90.00	179.59	11,923.10	-9,015.78	-785.69	9,049.33	0.00	0.00	0.00
21,600.00	90.00	179.59	11,923.10	-9,115.78	-784.97	9,148.99	0.00	0.00	0.00
21,700.00	90.00	179.59	11,923.10	-9,215.78	-784.25	9,248.65	0.00	0.00	0.00
21,800.00	90.00	179.59	11,923.10	-9,315.78	-783.53	9,348.32	0.00	0.00	0.00
21,900.00	90.00	179.59	11,923.10	-9,415.77	-782.82	9,447.98	0.00	0.00	0.00
22,000.00	90.00	179.59	11,923.10	-9,515.77	-782.10	9,547.64	0.00	0.00	0.00
22,100.00	90.00	179.59	11,923.10	-9,615.77	-781.38	9,647.30	0.00	0.00	0.00
22,200.00	90.00	179.59	11,923.10	-9,715.77	-780.66	9,746.96	0.00	0.00	0.00
22,300.00	90.00	179.59	11,923.10	-9,815.76	-779.94	9,846.62	0.00	0.00	0.00
22,400.00	90.00	179.59	11,923.10	-9,915.76	-779.22	9,946.28	0.00	0.00	0.00
22,500.00	90.00	179.59	11,923.10	-10,015.76	-778.50	10,045.94	0.00	0.00	0.00
22,600.00	90.00	179.59	11,923.10	-10,115.76	-777.79	10,145.60	0.00	0.00	0.00
22,700.00	90.00	179.59	11,923.10	-10,215.75	-777.07	10,245.26	0.00	0.00	0.00
22,788.79	90.00	179.59	11,923.10	-10,304.54	-776.43	10,333.75	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
- hit/miss target									
- Shape									
FTP (Avogato 30-31 - plan hits target center - Point	0.00	0.00	11,923.10	135.14	-851.46	499,009.69	762,136.13	32° 22' 11.349458 N	103° 37' 5.429378
PBHL (Avogato 30-31 - plan hits target center - Point	0.00	0.00	11,923.10	-10,304.54	-776.43	488,570.39	762,211.16	32° 20' 28.046735 N	103° 37' 5.367689

Plan Annotations

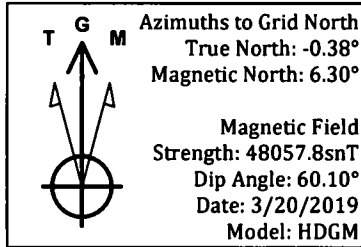
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,180.00	4,180.00	0.00	0.00	Build 2.00°/100'
4,680.17	4,677.63	29.32	-32.20	Hold 10.00° Tangent
10,633.31	10,540.27	725.56	-796.79	Turn 2.00°/100'
11,548.84	11,449.64	699.38	-855.52	KOP, Build 10.00°/100'
12,348.84	11,923.10	135.14	-851.46	Landing Point
22,788.79	11,923.10	-10,304.54	-776.43	TD at 22788.79' MD



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 31H
 Wellbore: Wellbore #1
 Design: Permitting Plan

PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



WELL DETAILS: AVOGATO 30_31 STATE COM 31H

+N/S	+E/W	Northing	Ground Level	Easting	Latitude	Longitude
0.00	0.00	498874.55	3702.60	762987.58	32° 22' 9.955829 N	103° 38' 55.512718 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/S	+E/W	Diep	TFace	VSecl	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4180.00	0.00	0.00	4180.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
4680.17	10.00	312.32	4677.83	29.32	-32.20	2.00	312.32	-26.82	Hold 10.00° Tangent
10633.31	10.00	312.32	10540.27	725.56	-798.79	0.00	0.00	-663.64	Turn 2.00°/100'
11548.83	10.00	179.59	11448.84	699.38	-855.52	2.00	-158.05	-633.13	KOP, Build 10.00°/100'
12348.83	90.00	179.59	11823.10	135.14	-851.46	10.00	0.00	-70.79	Landing Point
22788.79	90.00	179.59	11823.10	-10304.54	-776.43	0.00	0.00	10333.75	TD at 22788.79' MD

