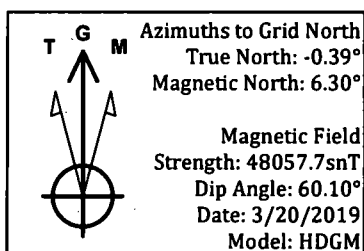




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 23H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

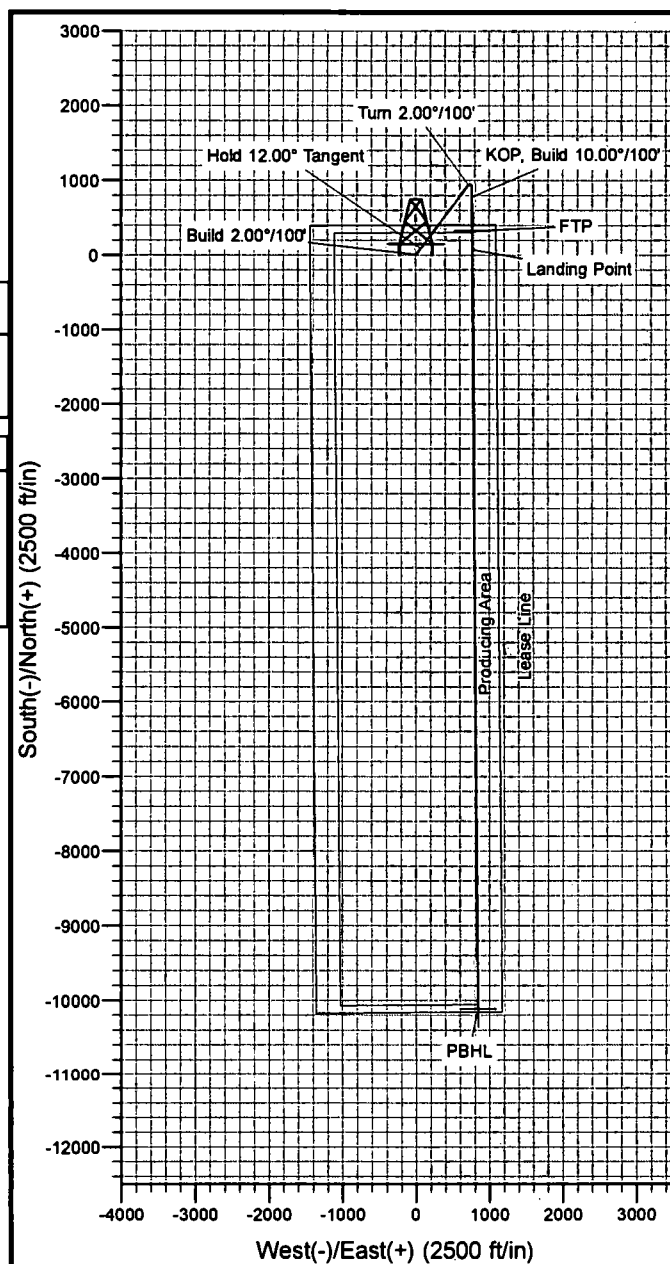
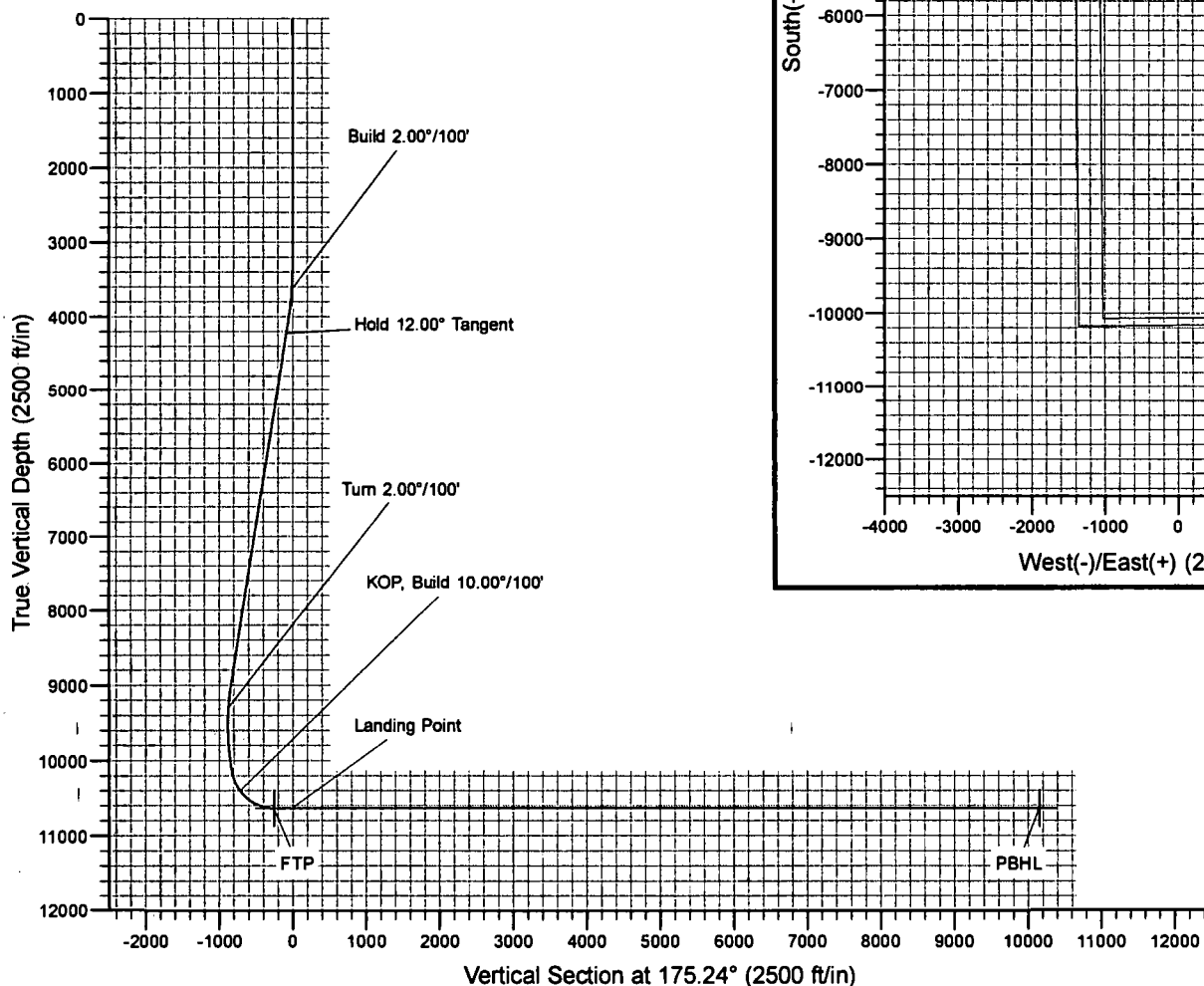


WELL DETAILS: AVOGATO 30_31 STATE COM 23H

		Ground Level:	3708.10		
+N-S	+E-W	Northing	Eastings	Latitude	Longitude
0.00	0.00	498894.92	763058.53	32° 22' 8.173667 N	103° 36' 54.699303 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3385.00	0.00	0.00	3385.00	0.00	0.00	0.00	0.00	0.00	
3985.16	12.00	37.23	3980.78	48.87	37.89	2.00	37.23	-46.56	
9171.47	12.00	37.23	9053.70	908.70	690.38	0.00	0.00	-848.25	
10306.59	12.00	179.59	10178.77	884.38	763.59	2.00	180.79	-817.93	
11086.59	90.00	179.59	10632.60	323.94	787.62	10.00	0.00	-259.10	
21526.78	90.00	179.59	10632.60	-10115.98	842.64	0.00	0.00	10151.01	



OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 23H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

03 April, 2019

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 23H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3732.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3732.60ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 23H	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' 55.515488 W
	Grid Convergence: 0.38 °

Well AVOGATO 30_31 STATE COM 23H	
Well Position +N/-S 0.38 ft	Northing: 498,694.92 usft
+E/-W 70.00 ft	Easting: 763,058.53 usft
Position Uncertainty 2.00 ft	Wellhead Elevation: 0.00 ft
	Latitude: 32° 22' 8.173668 N
	Longitude: 103° 36' 54.699303 W
	Ground Level: 3,706.10 ft

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

Design Permitting Plan	
Audit Notes:	
Version:	Phase: PROTOTYPE
	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)
	+N/-S (ft)
	+E/-W (ft)
	Direction (°)
	0.00 0.00 0.00 175.24

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	
3,385.00	0.00	0.00	3,385.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,985.16	12.00	37.23	3,980.78	49.87	37.89	2.00	2.00	0.00	37.23	
9,171.47	12.00	37.23	9,053.70	908.70	690.38	0.00	0.00	0.00	0.00	
10,306.59	12.00	179.59	10,178.77	884.36	763.59	2.00	0.00	12.54	160.79	
11,086.59	90.00	179.59	10,632.60	323.94	767.62	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
21,526.78	90.00	179.59	10,632.60	-10,115.98	842.64	0.00	0.00	0.00	0.00	PBHL (Avogato)

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 23H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3732.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3732.60ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 23H	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
3,385.00	0.00	0.00	3,385.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.30	37.23	3,400.00	0.03	0.02	-0.03	2.00	2.00	0.00
3,500.00	2.30	37.23	3,499.97	1.84	1.40	-1.72	2.00	2.00	0.00
3,600.00	4.30	37.23	3,599.80	6.42	4.88	-5.99	2.00	2.00	0.00
3,700.00	6.30	37.23	3,699.37	13.78	10.47	-12.86	2.00	2.00	0.00
3,800.00	8.30	37.23	3,798.55	23.89	18.15	-22.30	2.00	2.00	0.00
3,900.00	10.30	37.23	3,897.23	36.76	27.93	-34.31	2.00	2.00	0.00
3,985.16	12.00	37.23	3,980.78	49.87	37.89	-46.56	2.00	2.00	0.00
4,000.00	12.00	37.23	3,995.30	52.33	39.76	-48.85	0.00	0.00	0.00
4,100.00	12.00	37.23	4,093.11	68.89	52.34	-64.31	0.00	0.00	0.00
4,200.00	12.00	37.23	4,190.92	85.45	64.92	-79.77	0.00	0.00	0.00
4,300.00	12.00	37.23	4,288.74	102.01	77.50	-95.22	0.00	0.00	0.00
4,400.00	12.00	37.23	4,386.55	118.57	90.08	-110.68	0.00	0.00	0.00
4,500.00	12.00	37.23	4,484.36	135.13	102.66	-126.14	0.00	0.00	0.00
4,600.00	12.00	37.23	4,582.18	151.69	115.24	-141.60	0.00	0.00	0.00
4,700.00	12.00	37.23	4,679.99	168.25	127.83	-157.06	0.00	0.00	0.00
4,800.00	12.00	37.23	4,777.80	184.81	140.41	-172.51	0.00	0.00	0.00
4,900.00	12.00	37.23	4,875.62	201.37	152.99	-187.97	0.00	0.00	0.00
5,000.00	12.00	37.23	4,973.43	217.93	165.57	-203.43	0.00	0.00	0.00
5,100.00	12.00	37.23	5,071.25	234.49	178.15	-218.89	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 23H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3732.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3732.60ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 23H	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	12.00	37.23	5,169.06	251.05	190.73	-234.35	0.00	0.00	0.00
5,300.00	12.00	37.23	5,266.87	267.60	203.31	-249.80	0.00	0.00	0.00
5,400.00	12.00	37.23	5,364.69	284.16	215.89	-265.26	0.00	0.00	0.00
5,500.00	12.00	37.23	5,462.50	300.72	228.47	-280.72	0.00	0.00	0.00
5,600.00	12.00	37.23	5,560.31	317.28	241.05	-296.18	0.00	0.00	0.00
5,700.00	12.00	37.23	5,658.13	333.84	253.63	-311.64	0.00	0.00	0.00
5,800.00	12.00	37.23	5,755.94	350.40	266.22	-327.09	0.00	0.00	0.00
5,900.00	12.00	37.23	5,853.75	366.96	278.80	-342.55	0.00	0.00	0.00
6,000.00	12.00	37.23	5,951.57	383.52	291.38	-358.01	0.00	0.00	0.00
6,100.00	12.00	37.23	6,049.38	400.08	303.96	-373.47	0.00	0.00	0.00
6,200.00	12.00	37.23	6,147.20	416.64	316.54	-388.93	0.00	0.00	0.00
6,300.00	12.00	37.23	6,245.01	433.20	329.12	-404.38	0.00	0.00	0.00
6,400.00	12.00	37.23	6,342.82	449.76	341.70	-419.84	0.00	0.00	0.00
6,500.00	12.00	37.23	6,440.64	466.32	354.28	-435.30	0.00	0.00	0.00
6,600.00	12.00	37.23	6,538.45	482.88	366.86	-450.76	0.00	0.00	0.00
6,700.00	12.00	37.23	6,636.26	499.44	379.44	-466.22	0.00	0.00	0.00
6,800.00	12.00	37.23	6,734.08	516.00	392.02	-481.67	0.00	0.00	0.00
6,900.00	12.00	37.23	6,831.89	532.56	404.61	-497.13	0.00	0.00	0.00
7,000.00	12.00	37.23	6,929.70	549.12	417.19	-512.59	0.00	0.00	0.00
7,100.00	12.00	37.23	7,027.52	565.67	429.77	-528.05	0.00	0.00	0.00
7,200.00	12.00	37.23	7,125.33	582.23	442.35	-543.51	0.00	0.00	0.00
7,300.00	12.00	37.23	7,223.14	598.79	454.93	-558.96	0.00	0.00	0.00
7,400.00	12.00	37.23	7,320.96	615.35	467.51	-574.42	0.00	0.00	0.00
7,500.00	12.00	37.23	7,418.77	631.91	480.09	-589.88	0.00	0.00	0.00
7,600.00	12.00	37.23	7,516.59	648.47	492.67	-605.34	0.00	0.00	0.00
7,700.00	12.00	37.23	7,614.40	665.03	505.25	-620.79	0.00	0.00	0.00
7,800.00	12.00	37.23	7,712.21	681.59	517.83	-636.25	0.00	0.00	0.00
7,900.00	12.00	37.23	7,810.03	698.15	530.42	-651.71	0.00	0.00	0.00
8,000.00	12.00	37.23	7,907.84	714.71	543.00	-667.17	0.00	0.00	0.00
8,100.00	12.00	37.23	8,005.65	731.27	555.58	-682.63	0.00	0.00	0.00
8,200.00	12.00	37.23	8,103.47	747.83	568.16	-698.08	0.00	0.00	0.00
8,300.00	12.00	37.23	8,201.28	764.39	580.74	-713.54	0.00	0.00	0.00
8,400.00	12.00	37.23	8,299.09	780.95	593.32	-729.00	0.00	0.00	0.00
8,500.00	12.00	37.23	8,396.91	797.51	605.90	-744.46	0.00	0.00	0.00
8,600.00	12.00	37.23	8,494.72	814.07	618.48	-759.92	0.00	0.00	0.00
8,700.00	12.00	37.23	8,592.54	830.63	631.06	-775.37	0.00	0.00	0.00
8,800.00	12.00	37.23	8,690.35	847.19	643.64	-790.83	0.00	0.00	0.00
8,900.00	12.00	37.23	8,788.16	863.74	656.22	-806.29	0.00	0.00	0.00
9,000.00	12.00	37.23	8,885.98	880.30	668.81	-821.75	0.00	0.00	0.00
9,100.00	12.00	37.23	8,983.79	896.86	681.39	-837.21	0.00	0.00	0.00
9,171.47	12.00	37.23	9,053.70	908.70	690.38	-848.25	0.00	0.00	0.00
9,200.00	11.47	38.17	9,081.63	913.29	693.93	-852.54	2.00	-1.88	3.31
9,300.00	9.61	42.29	9,179.94	927.28	705.69	-865.50	2.00	-1.85	4.12
9,400.00	7.83	48.32	9,278.78	937.99	716.39	-875.28	2.00	-1.78	6.02
9,500.00	6.18	57.68	9,378.04	945.40	726.03	-881.87	2.00	-1.65	9.37
9,600.00	4.81	73.02	9,477.58	949.50	734.59	-885.24	2.00	-1.37	15.34
9,700.00	4.00	97.12	9,577.29	950.29	742.06	-885.41	2.00	-0.81	24.10
9,800.00	4.11	125.67	9,677.05	947.77	748.43	-882.37	2.00	0.11	28.55
9,900.00	5.07	147.82	9,776.74	941.94	753.70	-876.12	2.00	0.96	22.15
10,000.00	6.52	161.57	9,876.23	932.81	757.85	-866.68	2.00	1.45	13.75
10,100.00	8.21	170.03	9,975.40	920.38	760.88	-854.05	2.00	1.69	8.46
10,200.00	10.01	175.55	10,074.14	904.68	762.79	-838.24	2.00	1.80	5.52
10,300.00	11.88	179.38	10,172.32	885.73	763.58	-819.29	2.00	1.86	3.83
10,306.59	12.00	179.59	10,178.77	884.36	763.59	-817.93	2.00	1.89	3.20

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 23H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3732.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3732.60ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 23H	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)
10,400.00	21.34	179.59	10,268.15	857.60	763.78	-791.24	10.00	10.00	0.00
10,500.00	31.34	179.59	10,357.65	813.29	764.10	-747.05	10.00	10.00	0.00
10,600.00	41.34	179.59	10,438.10	754.10	764.53	-688.04	10.00	10.00	0.00
10,700.00	51.34	179.59	10,507.05	681.85	765.05	-615.99	10.00	10.00	0.00
10,800.00	61.34	179.59	10,562.41	598.73	765.64	-533.10	10.00	10.00	0.00
10,900.00	71.34	179.59	10,602.48	507.25	766.30	-441.89	10.00	10.00	0.00
11,000.00	81.34	179.59	10,626.07	410.20	767.00	-345.12	10.00	10.00	0.00
11,086.59	90.00	179.59	10,632.60	323.94	767.62	-259.10	10.00	10.00	0.00
11,100.00	90.00	179.59	10,632.60	310.53	767.71	-245.73	0.00	0.00	0.00
11,200.00	90.00	179.59	10,632.60	210.54	768.43	-146.02	0.00	0.00	0.00
11,300.00	90.00	179.59	10,632.60	110.54	769.15	-46.31	0.00	0.00	0.00
11,400.00	90.00	179.59	10,632.60	10.54	769.87	53.40	0.00	0.00	0.00
11,500.00	90.00	179.59	10,632.60	-89.45	770.59	153.11	0.00	0.00	0.00
11,600.00	90.00	179.59	10,632.60	-189.45	771.31	252.82	0.00	0.00	0.00
11,700.00	90.00	179.59	10,632.60	-289.45	772.03	352.54	0.00	0.00	0.00
11,800.00	90.00	179.59	10,632.60	-389.45	772.74	452.25	0.00	0.00	0.00
11,900.00	90.00	179.59	10,632.60	-489.44	773.46	551.96	0.00	0.00	0.00
12,000.00	90.00	179.59	10,632.60	-589.44	774.18	651.67	0.00	0.00	0.00
12,100.00	90.00	179.59	10,632.60	-689.44	774.90	751.38	0.00	0.00	0.00
12,200.00	90.00	179.59	10,632.60	-789.44	775.62	851.10	0.00	0.00	0.00
12,300.00	90.00	179.59	10,632.60	-889.43	776.34	950.81	0.00	0.00	0.00
12,400.00	90.00	179.59	10,632.60	-989.43	777.06	1,050.52	0.00	0.00	0.00
12,500.00	90.00	179.59	10,632.60	-1,089.43	777.77	1,150.23	0.00	0.00	0.00
12,600.00	90.00	179.59	10,632.60	-1,189.43	778.49	1,249.94	0.00	0.00	0.00
12,700.00	90.00	179.59	10,632.60	-1,289.42	779.21	1,349.66	0.00	0.00	0.00
12,800.00	90.00	179.59	10,632.60	-1,389.42	779.93	1,449.37	0.00	0.00	0.00
12,900.00	90.00	179.59	10,632.60	-1,489.42	780.65	1,549.08	0.00	0.00	0.00
13,000.00	90.00	179.59	10,632.60	-1,589.42	781.37	1,648.79	0.00	0.00	0.00
13,100.00	90.00	179.59	10,632.60	-1,689.41	782.09	1,748.50	0.00	0.00	0.00
13,200.00	90.00	179.59	10,632.60	-1,789.41	782.80	1,848.22	0.00	0.00	0.00
13,300.00	90.00	179.59	10,632.60	-1,889.41	783.52	1,947.93	0.00	0.00	0.00
13,400.00	90.00	179.59	10,632.60	-1,989.41	784.24	2,047.64	0.00	0.00	0.00
13,500.00	90.00	179.59	10,632.60	-2,089.40	784.96	2,147.35	0.00	0.00	0.00
13,600.00	90.00	179.59	10,632.60	-2,189.40	785.68	2,247.06	0.00	0.00	0.00
13,700.00	90.00	179.59	10,632.60	-2,289.40	786.40	2,346.78	0.00	0.00	0.00
13,800.00	90.00	179.59	10,632.60	-2,389.40	787.12	2,446.49	0.00	0.00	0.00
13,900.00	90.00	179.59	10,632.60	-2,489.39	787.84	2,546.20	0.00	0.00	0.00
14,000.00	90.00	179.59	10,632.60	-2,589.39	788.55	2,645.91	0.00	0.00	0.00
14,100.00	90.00	179.59	10,632.60	-2,689.39	789.27	2,745.62	0.00	0.00	0.00
14,200.00	90.00	179.59	10,632.60	-2,789.39	789.99	2,845.34	0.00	0.00	0.00
14,300.00	90.00	179.59	10,632.60	-2,889.38	790.71	2,945.05	0.00	0.00	0.00
14,400.00	90.00	179.59	10,632.60	-2,989.38	791.43	3,044.76	0.00	0.00	0.00
14,500.00	90.00	179.59	10,632.60	-3,089.38	792.15	3,144.47	0.00	0.00	0.00
14,600.00	90.00	179.59	10,632.60	-3,189.37	792.87	3,244.18	0.00	0.00	0.00
14,700.00	90.00	179.59	10,632.60	-3,289.37	793.58	3,343.90	0.00	0.00	0.00
14,800.00	90.00	179.59	10,632.60	-3,389.37	794.30	3,443.61	0.00	0.00	0.00
14,900.00	90.00	179.59	10,632.60	-3,489.37	795.02	3,543.32	0.00	0.00	0.00
15,000.00	90.00	179.59	10,632.60	-3,589.36	795.74	3,643.03	0.00	0.00	0.00
15,100.00	90.00	179.59	10,632.60	-3,689.36	796.46	3,742.74	0.00	0.00	0.00
15,200.00	90.00	179.59	10,632.60	-3,789.36	797.18	3,842.46	0.00	0.00	0.00
15,300.00	90.00	179.59	10,632.60	-3,889.36	797.90	3,942.17	0.00	0.00	0.00
15,400.00	90.00	179.59	10,632.60	-3,989.35	798.61	4,041.88	0.00	0.00	0.00
15,500.00	90.00	179.59	10,632.60	-4,089.35	799.33	4,141.59	0.00	0.00	0.00
15,600.00	90.00	179.59	10,632.60	-4,189.35	800.05	4,241.30	0.00	0.00	0.00

Oxy Planning Report

Database: HOPSPP
Company: ENGINEERING DESIGNS
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Avogato 30-31
Well: AVOGATO 30_31 STATE COM 23H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference: Well AVOGATO 30_31 STATE COM 23H
TVD Reference: RKB=26.5' @ 3732.60ft
MD Reference: RKB=26.5' @ 3732.60ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	10,632.60	-4,289.35	800.77	4,341.01	0.00	0.00	0.00
15,800.00	90.00	179.59	10,632.60	-4,389.34	801.49	4,440.73	0.00	0.00	0.00
15,900.00	90.00	179.59	10,632.60	-4,489.34	802.21	4,540.44	0.00	0.00	0.00
16,000.00	90.00	179.59	10,632.60	-4,589.34	802.93	4,640.15	0.00	0.00	0.00
16,100.00	90.00	179.59	10,632.60	-4,689.34	803.64	4,739.86	0.00	0.00	0.00
16,200.00	90.00	179.59	10,632.60	-4,789.33	804.36	4,839.57	0.00	0.00	0.00
16,300.00	90.00	179.59	10,632.60	-4,889.33	805.08	4,939.29	0.00	0.00	0.00
16,400.00	90.00	179.59	10,632.60	-4,989.33	805.80	5,039.00	0.00	0.00	0.00
16,500.00	90.00	179.59	10,632.60	-5,089.33	806.52	5,138.71	0.00	0.00	0.00
16,600.00	90.00	179.59	10,632.60	-5,189.32	807.24	5,238.42	0.00	0.00	0.00
16,700.00	90.00	179.59	10,632.60	-5,289.32	807.96	5,338.13	0.00	0.00	0.00
16,800.00	90.00	179.59	10,632.60	-5,389.32	808.67	5,437.85	0.00	0.00	0.00
16,900.00	90.00	179.59	10,632.60	-5,489.32	809.39	5,537.56	0.00	0.00	0.00
17,000.00	90.00	179.59	10,632.60	-5,589.31	810.11	5,637.27	0.00	0.00	0.00
17,100.00	90.00	179.59	10,632.60	-5,689.31	810.83	5,736.98	0.00	0.00	0.00
17,200.00	90.00	179.59	10,632.60	-5,789.31	811.55	5,836.69	0.00	0.00	0.00
17,300.00	90.00	179.59	10,632.60	-5,889.31	812.27	5,936.41	0.00	0.00	0.00
17,400.00	90.00	179.59	10,632.60	-5,989.30	812.99	6,036.12	0.00	0.00	0.00
17,500.00	90.00	179.59	10,632.60	-6,089.30	813.70	6,135.83	0.00	0.00	0.00
17,600.00	90.00	179.59	10,632.60	-6,189.30	814.42	6,235.54	0.00	0.00	0.00
17,700.00	90.00	179.59	10,632.60	-6,289.29	815.14	6,335.25	0.00	0.00	0.00
17,800.00	90.00	179.59	10,632.60	-6,389.29	815.86	6,434.97	0.00	0.00	0.00
17,900.00	90.00	179.59	10,632.60	-6,489.29	816.58	6,534.68	0.00	0.00	0.00
18,000.00	90.00	179.59	10,632.60	-6,589.29	817.30	6,634.39	0.00	0.00	0.00
18,100.00	90.00	179.59	10,632.60	-6,689.28	818.02	6,734.10	0.00	0.00	0.00
18,200.00	90.00	179.59	10,632.60	-6,789.28	818.73	6,833.81	0.00	0.00	0.00
18,300.00	90.00	179.59	10,632.60	-6,889.28	819.45	6,933.53	0.00	0.00	0.00
18,400.00	90.00	179.59	10,632.60	-6,989.28	820.17	7,033.24	0.00	0.00	0.00
18,500.00	90.00	179.59	10,632.60	-7,089.27	820.89	7,132.95	0.00	0.00	0.00
18,600.00	90.00	179.59	10,632.60	-7,189.27	821.61	7,232.66	0.00	0.00	0.00
18,700.00	90.00	179.59	10,632.60	-7,289.27	822.33	7,332.37	0.00	0.00	0.00
18,800.00	90.00	179.59	10,632.60	-7,389.27	823.05	7,432.09	0.00	0.00	0.00
18,900.00	90.00	179.59	10,632.60	-7,489.26	823.76	7,531.80	0.00	0.00	0.00
19,000.00	90.00	179.59	10,632.60	-7,589.26	824.48	7,631.51	0.00	0.00	0.00
19,100.00	90.00	179.59	10,632.60	-7,689.26	825.20	7,731.22	0.00	0.00	0.00
19,200.00	90.00	179.59	10,632.60	-7,789.26	825.92	7,830.93	0.00	0.00	0.00
19,300.00	90.00	179.59	10,632.60	-7,889.25	826.64	7,930.64	0.00	0.00	0.00
19,400.00	90.00	179.59	10,632.60	-7,989.25	827.36	8,030.36	0.00	0.00	0.00
19,500.00	90.00	179.59	10,632.60	-8,089.25	828.08	8,130.07	0.00	0.00	0.00
19,600.00	90.00	179.59	10,632.60	-8,189.25	828.80	8,229.78	0.00	0.00	0.00
19,700.00	90.00	179.59	10,632.60	-8,289.24	829.51	8,329.49	0.00	0.00	0.00
19,800.00	90.00	179.59	10,632.60	-8,389.24	830.23	8,429.20	0.00	0.00	0.00
19,900.00	90.00	179.59	10,632.60	-8,489.24	830.95	8,528.92	0.00	0.00	0.00
20,000.00	90.00	179.59	10,632.60	-8,589.24	831.67	8,628.63	0.00	0.00	0.00
20,100.00	90.00	179.59	10,632.60	-8,689.23	832.39	8,728.34	0.00	0.00	0.00
20,200.00	90.00	179.59	10,632.60	-8,789.23	833.11	8,828.05	0.00	0.00	0.00
20,300.00	90.00	179.59	10,632.60	-8,889.23	833.83	8,927.76	0.00	0.00	0.00
20,400.00	90.00	179.59	10,632.60	-8,989.23	834.54	9,027.48	0.00	0.00	0.00
20,500.00	90.00	179.59	10,632.60	-9,089.22	835.26	9,127.19	0.00	0.00	0.00
20,600.00	90.00	179.59	10,632.60	-9,189.22	835.98	9,226.90	0.00	0.00	0.00
20,700.00	90.00	179.59	10,632.60	-9,289.22	836.70	9,326.61	0.00	0.00	0.00
20,800.00	90.00	179.59	10,632.60	-9,389.21	837.42	9,426.32	0.00	0.00	0.00
20,900.00	90.00	179.59	10,632.60	-9,489.21	838.14	9,526.04	0.00	0.00	0.00
21,000.00	90.00	179.59	10,632.60	-9,589.21	838.86	9,625.75	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 23H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3732.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3732.60ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 23H	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	10,632.60	-9,689.21	839.57	9,725.46	0.00	0.00	0.00
21,200.00	90.00	179.59	10,632.60	-9,789.20	840.29	9,825.17	0.00	0.00	0.00
21,300.00	90.00	179.59	10,632.60	-9,889.20	841.01	9,924.88	0.00	0.00	0.00
21,400.00	90.00	179.59	10,632.60	-9,989.20	841.73	10,024.60	0.00	0.00	0.00
21,500.00	90.00	179.59	10,632.60	-10,089.20	842.45	10,124.31	0.00	0.00	0.00
21,526.78	90.00	179.59	10,632.60	-10,115.98	842.64	10,151.02	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Avogato 30-31 - plan hits target center - Point	0.00	0.00	10,632.60	-10,115.98	842.64	488,579.31	763,901.14	32° 20' 28.022902 N	103° 36' 45.668931
FTP (Avogato 30-31 - plan hits target center - Point	0.00	0.00	10,632.60	323.94	767.62	499,018.85	763,826.12	32° 22' 11.327914 N	103° 36' 45.724262

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,635.00	3,635.00	0.00	0.00	Build 2.00°/100'
4,235.16	4,230.78	49.87	37.89	Hold 12.00° Tangent
9,421.47	9,303.70	908.70	690.38	Turn 2.00°/100'
10,556.59	10,428.77	884.36	763.59	KOP, Build 10.00°/100'
11,336.59	10,882.60	323.94	767.62	Landing Point
21,776.78	10,882.60	-10,115.98	842.64	TD at 21776.78' MD