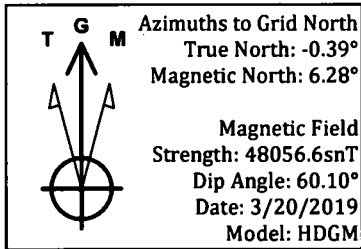




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 35H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

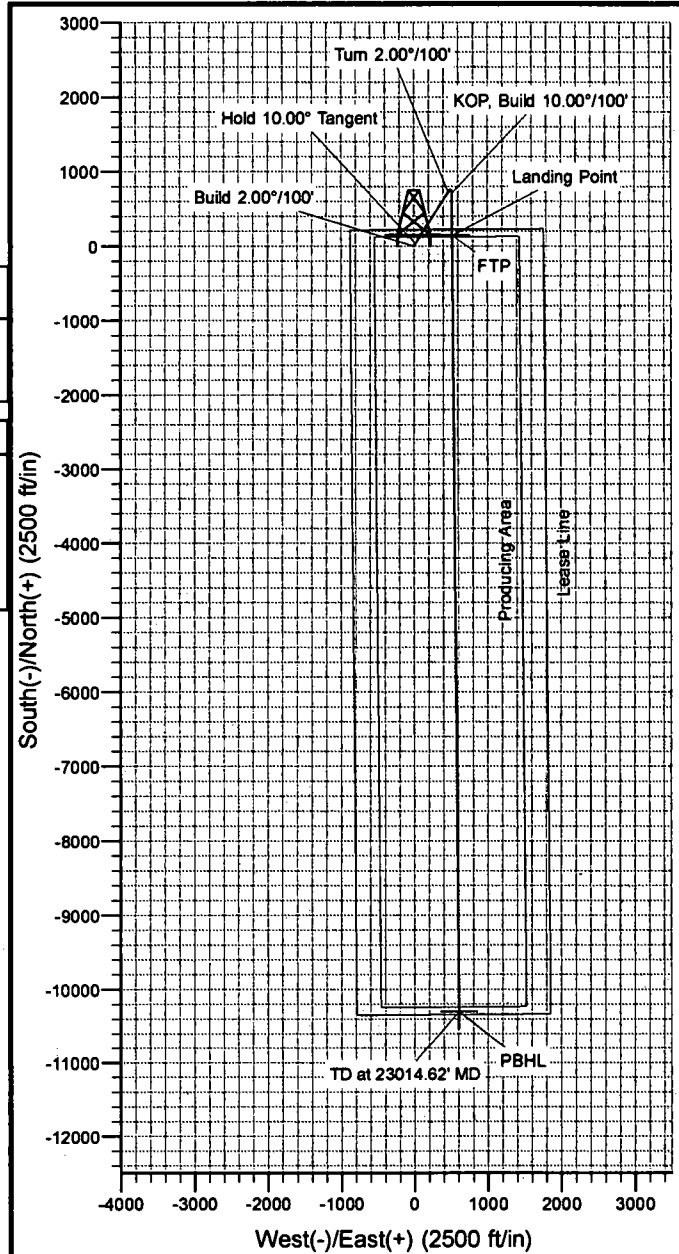
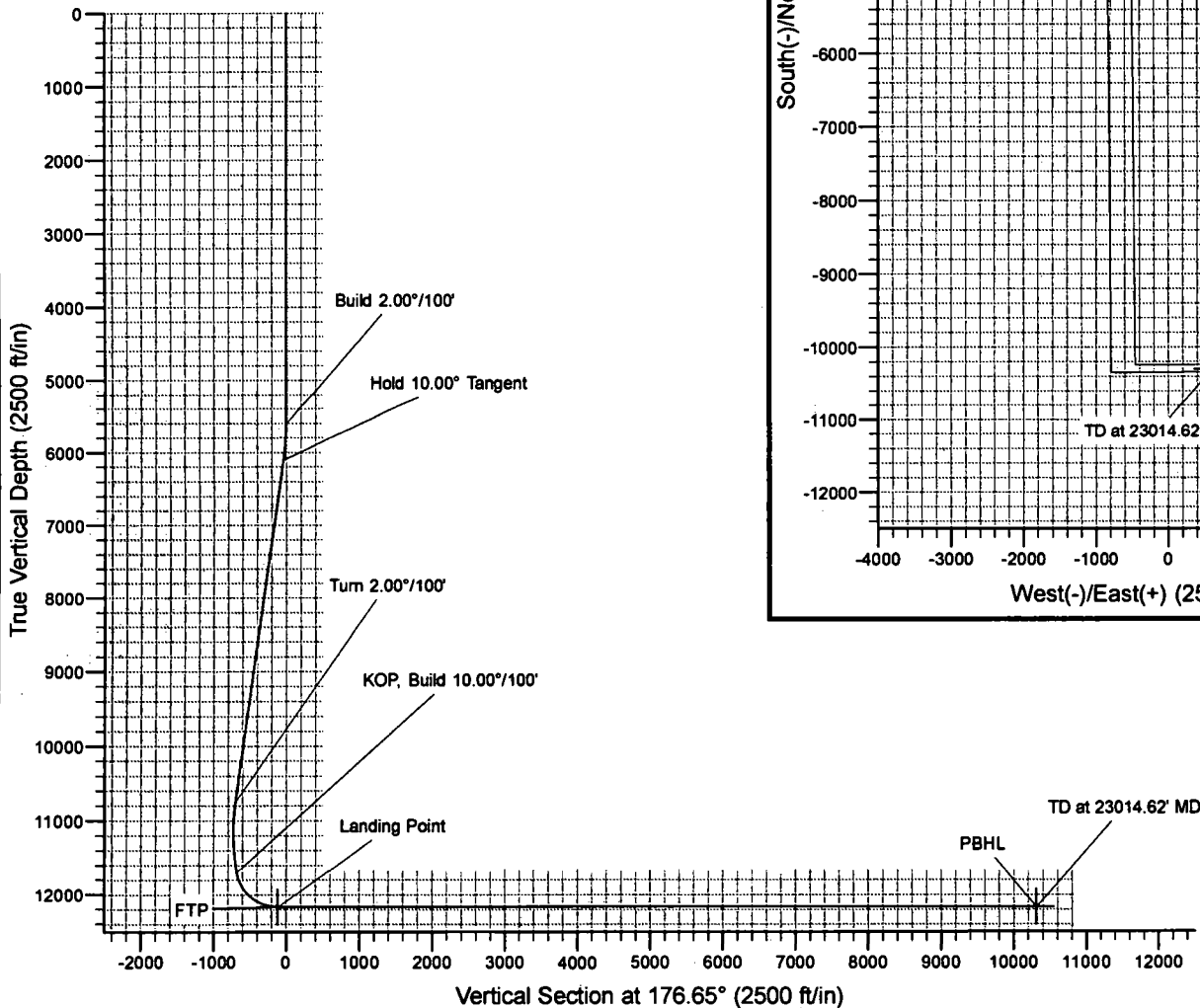


WELL DETAILS: AVOGATO 30_31 STATE COM 35H

+N-S	+E-W	Ground Level	3681.30	Latitude	Longitude
0.00	0.00	Northings	486884.82	Eastings	765020.72
			32° 22' 9.921867 N	103° 36' 31.806448 W	

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5803.00	0.00	0.00	5803.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
6103.05	10.00	33.23	6100.52	36.41	23.85	2.00	33.23	-34.86	Hold 10.00° Tangent
10617.40	10.00	33.23	10743.23	721.27	472.50	0.00	0.00	-692.39	Turn 2.00°/100'
11774.19	10.00	179.56	11694.34	707.57	519.09	2.00	162.92	-675.99	KOP, Build 10.00°/100'
12574.19	90.00	179.56	12167.80	143.34	523.42	10.00	0.00	-112.47	Landing Point
23014.62	90.00	179.56	12167.80	-10298.79	603.43	0.00	0.00	10314.45	TD at 23014.62' MD



OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 35H

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 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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 35H		
Well Position	+N/-S	190.29 ft	Northing:
	+E/-W	2,032.26 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	32° 22' 9.921867 N
		Longitude:	103° 36' 31.806448 W
		Ground Level:	3,681.30 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	3/20/2019	6.67
			Dip Angle
			(°)
			60.10
			Field Strength
			(nT)
			48,057

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
			(°)
			176.65

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	
5,603.00	0.00	0.00	5,603.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,103.05	10.00	33.23	6,100.52	36.41	23.85	2.00	2.00	0.00	33.23	
10,817.40	10.00	33.23	10,743.23	721.27	472.50	0.00	0.00	0.00	0.00	
11,774.19	10.00	179.56	11,694.34	707.57	519.09	2.00	0.00	15.29	162.92	
12,574.19	90.00	179.56	12,167.80	143.34	523.42	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
23,014.62	90.00	179.56	12,167.80	-10,296.79	603.43	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 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,603.00	0.00	0.00	5,603.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	1.94	33.23	5,699.98	1.37	0.90	-1.32	2.00	2.00	0.00
5,800.00	3.94	33.23	5,799.84	5.66	3.71	-5.44	2.00	2.00	0.00
5,900.00	5.94	33.23	5,899.47	12.87	8.43	-12.35	2.00	2.00	0.00
6,000.00	7.94	33.23	5,998.73	22.97	15.05	-22.05	2.00	2.00	0.00
6,100.00	9.94	33.23	6,097.51	35.97	23.56	-34.53	2.00	2.00	0.00
6,103.05	10.00	33.23	6,100.52	36.41	23.85	-34.96	2.00	2.00	0.00
6,200.00	10.00	33.23	6,195.99	50.50	33.08	-48.48	0.00	0.00	0.00
6,300.00	10.00	33.23	6,294.47	65.02	42.60	-62.42	0.00	0.00	0.00
6,400.00	10.00	33.23	6,392.95	79.55	52.11	-76.37	0.00	0.00	0.00
6,500.00	10.00	33.23	6,491.43	94.08	61.63	-90.31	0.00	0.00	0.00
6,600.00	10.00	33.23	6,589.91	108.61	71.15	-104.26	0.00	0.00	0.00
6,700.00	10.00	33.23	6,688.39	123.13	80.66	-118.20	0.00	0.00	0.00
6,800.00	10.00	33.23	6,786.87	137.66	90.18	-132.15	0.00	0.00	0.00
6,900.00	10.00	33.23	6,885.35	152.19	99.70	-146.09	0.00	0.00	0.00
7,000.00	10.00	33.23	6,983.84	166.71	109.21	-160.04	0.00	0.00	0.00
7,100.00	10.00	33.23	7,082.32	181.24	118.73	-173.99	0.00	0.00	0.00
7,200.00	10.00	33.23	7,180.80	195.77	128.25	-187.93	0.00	0.00	0.00
7,300.00	10.00	33.23	7,279.28	210.30	137.76	-201.88	0.00	0.00	0.00
7,400.00	10.00	33.23	7,377.76	224.82	147.28	-215.82	0.00	0.00	0.00
7,500.00	10.00	33.23	7,476.24	239.35	156.80	-229.77	0.00	0.00	0.00
7,600.00	10.00	33.23	7,574.72	253.88	166.31	-243.71	0.00	0.00	0.00
7,700.00	10.00	33.23	7,673.20	268.40	175.83	-257.66	0.00	0.00	0.00
7,800.00	10.00	33.23	7,771.68	282.93	185.35	-271.60	0.00	0.00	0.00
7,900.00	10.00	33.23	7,870.16	297.46	194.86	-285.55	0.00	0.00	0.00
8,000.00	10.00	33.23	7,968.64	311.99	204.38	-299.49	0.00	0.00	0.00
8,100.00	10.00	33.23	8,067.12	326.51	213.89	-313.44	0.00	0.00	0.00
8,200.00	10.00	33.23	8,165.60	341.04	223.41	-327.39	0.00	0.00	0.00
8,300.00	10.00	33.23	8,264.08	355.57	232.93	-341.33	0.00	0.00	0.00
8,400.00	10.00	33.23	8,362.56	370.09	242.44	-355.28	0.00	0.00	0.00
8,500.00	10.00	33.23	8,461.04	384.62	251.96	-369.22	0.00	0.00	0.00
8,600.00	10.00	33.23	8,559.52	399.15	261.48	-383.17	0.00	0.00	0.00
8,700.00	10.00	33.23	8,658.00	413.68	270.99	-397.11	0.00	0.00	0.00
8,800.00	10.00	33.23	8,756.48	428.20	280.51	-411.06	0.00	0.00	0.00
8,900.00	10.00	33.23	8,854.96	442.73	290.03	-425.00	0.00	0.00	0.00
9,000.00	10.00	33.23	8,953.44	457.26	299.54	-438.95	0.00	0.00	0.00
9,100.00	10.00	33.23	9,051.92	471.78	309.06	-452.89	0.00	0.00	0.00
9,200.00	10.00	33.23	9,150.41	486.31	318.58	-466.84	0.00	0.00	0.00
9,300.00	10.00	33.23	9,248.89	500.84	328.09	-480.79	0.00	0.00	0.00
9,400.00	10.00	33.23	9,347.37	515.37	337.61	-494.73	0.00	0.00	0.00
9,500.00	10.00	33.23	9,445.85	529.89	347.13	-508.68	0.00	0.00	0.00
9,600.00	10.00	33.23	9,544.33	544.42	356.64	-522.62	0.00	0.00	0.00
9,700.00	10.00	33.23	9,642.81	558.95	366.16	-536.57	0.00	0.00	0.00
9,800.00	10.00	33.23	9,741.29	573.47	375.68	-550.51	0.00	0.00	0.00
9,900.00	10.00	33.23	9,839.77	588.00	385.19	-564.46	0.00	0.00	0.00
10,000.00	10.00	33.23	9,938.25	602.53	394.71	-578.40	0.00	0.00	0.00
10,100.00	10.00	33.23	10,036.73	617.06	404.23	-592.35	0.00	0.00	0.00
10,200.00	10.00	33.23	10,135.21	631.58	413.74	-606.30	0.00	0.00	0.00
10,300.00	10.00	33.23	10,233.69	646.11	423.26	-620.24	0.00	0.00	0.00
10,400.00	10.00	33.23	10,332.17	660.64	432.78	-634.19	0.00	0.00	0.00
10,500.00	10.00	33.23	10,430.65	675.16	442.29	-648.13	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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)	
10,600.00	10.00	33.23	10,529.13	689.69	451.81	-662.08	0.00	0.00	0.00	
10,700.00	10.00	33.23	10,627.61	704.22	461.32	-676.02	0.00	0.00	0.00	
10,800.00	10.00	33.23	10,726.09	718.74	470.84	-689.97	0.00	0.00	0.00	
10,817.40	10.00	33.23	10,743.23	721.27	472.50	-692.39	0.00	0.00	0.00	
10,900.00	8.44	36.54	10,824.76	732.14	480.04	-702.80	2.00	-1.90	4.01	
11,000.00	6.60	42.60	10,923.90	742.26	488.29	-712.43	2.00	-1.84	6.06	
11,100.00	4.89	53.08	11,023.39	749.05	495.58	-718.77	2.00	-1.71	10.48	
11,200.00	3.50	73.13	11,123.13	752.49	501.91	-721.84	2.00	-1.39	20.05	
11,300.00	2.92	108.03	11,222.98	752.59	507.25	-721.62	2.00	-0.57	34.91	
11,400.00	3.59	141.90	11,322.83	749.34	511.61	-718.12	2.00	0.66	33.86	
11,500.00	5.02	160.86	11,422.55	742.74	514.97	-711.34	2.00	1.43	18.96	
11,600.00	6.75	170.82	11,522.02	732.80	517.35	-701.28	2.00	1.73	9.97	
11,700.00	8.59	176.64	11,621.12	719.55	518.72	-687.97	2.00	1.85	5.82	
11,774.19	10.00	179.56	11,694.34	707.57	519.09	-675.99	2.00	1.90	3.93	
11,800.00	12.58	179.56	11,719.65	702.52	519.13	-670.94	10.00	10.00	0.00	
11,900.00	22.58	179.56	11,814.85	672.35	519.36	-640.82	10.00	10.00	0.00	
12,000.00	32.58	179.56	11,903.38	626.11	519.72	-594.63	10.00	10.00	0.00	
12,100.00	42.58	179.56	11,982.53	565.20	520.19	-533.80	10.00	10.00	0.00	
12,200.00	52.58	179.56	12,049.89	491.47	520.75	-460.17	10.00	10.00	0.00	
12,300.00	62.58	179.56	12,103.44	407.17	521.40	-375.97	10.00	10.00	0.00	
12,400.00	72.58	179.56	12,141.53	314.85	522.10	-283.76	10.00	10.00	0.00	
12,500.00	82.58	179.56	12,163.00	217.31	522.85	-186.35	10.00	10.00	0.00	
12,574.19	90.00	179.56	12,167.80	143.34	523.42	-112.47	10.00	10.00	0.00	
12,600.00	90.00	179.56	12,167.80	117.52	523.62	-86.69	0.00	0.00	0.00	
12,700.00	90.00	179.56	12,167.80	17.53	524.38	13.18	0.00	0.00	0.00	
12,800.00	90.00	179.56	12,167.80	-82.47	525.15	113.05	0.00	0.00	0.00	
12,900.00	90.00	179.56	12,167.80	-182.47	525.92	212.92	0.00	0.00	0.00	
13,000.00	90.00	179.56	12,167.80	-282.46	526.68	312.79	0.00	0.00	0.00	
13,100.00	90.00	179.56	12,167.80	-382.46	527.45	412.66	0.00	0.00	0.00	
13,200.00	90.00	179.56	12,167.80	-482.46	528.21	512.53	0.00	0.00	0.00	
13,300.00	90.00	179.56	12,167.80	-582.46	528.98	612.41	0.00	0.00	0.00	
13,400.00	90.00	179.56	12,167.80	-682.45	529.75	712.28	0.00	0.00	0.00	
13,500.00	90.00	179.56	12,167.80	-782.45	530.51	812.15	0.00	0.00	0.00	
13,600.00	90.00	179.56	12,167.80	-882.45	531.28	912.02	0.00	0.00	0.00	
13,700.00	90.00	179.56	12,167.80	-982.44	532.05	1,011.89	0.00	0.00	0.00	
13,800.00	90.00	179.56	12,167.80	-1,082.44	532.81	1,111.76	0.00	0.00	0.00	
13,900.00	90.00	179.56	12,167.80	-1,182.44	533.58	1,211.63	0.00	0.00	0.00	
14,000.00	90.00	179.56	12,167.80	-1,282.44	534.35	1,311.50	0.00	0.00	0.00	
14,100.00	90.00	179.56	12,167.80	-1,382.43	535.11	1,411.37	0.00	0.00	0.00	
14,200.00	90.00	179.56	12,167.80	-1,482.43	535.88	1,511.24	0.00	0.00	0.00	
14,300.00	90.00	179.56	12,167.80	-1,582.43	536.64	1,611.11	0.00	0.00	0.00	
14,400.00	90.00	179.56	12,167.80	-1,682.42	537.41	1,710.98	0.00	0.00	0.00	
14,500.00	90.00	179.56	12,167.80	-1,782.42	538.18	1,810.85	0.00	0.00	0.00	
14,600.00	90.00	179.56	12,167.80	-1,882.42	538.94	1,910.72	0.00	0.00	0.00	
14,700.00	90.00	179.56	12,167.80	-1,982.41	539.71	2,010.59	0.00	0.00	0.00	
14,800.00	90.00	179.56	12,167.80	-2,082.41	540.48	2,110.46	0.00	0.00	0.00	
14,900.00	90.00	179.56	12,167.80	-2,182.41	541.24	2,210.34	0.00	0.00	0.00	
15,000.00	90.00	179.56	12,167.80	-2,282.41	542.01	2,310.21	0.00	0.00	0.00	
15,100.00	90.00	179.56	12,167.80	-2,382.40	542.78	2,410.08	0.00	0.00	0.00	
15,200.00	90.00	179.56	12,167.80	-2,482.40	543.54	2,509.95	0.00	0.00	0.00	
15,300.00	90.00	179.56	12,167.80	-2,582.40	544.31	2,609.82	0.00	0.00	0.00	
15,400.00	90.00	179.56	12,167.80	-2,682.39	545.07	2,709.69	0.00	0.00	0.00	
15,500.00	90.00	179.56	12,167.80	-2,782.39	545.84	2,809.56	0.00	0.00	0.00	
15,600.00	90.00	179.56	12,167.80	-2,882.39	546.61	2,909.43	0.00	0.00	0.00	

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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	179.56	12,167.80	-2,982.39	547.37	3,009.30	0.00	0.00	0.00
15,800.00	90.00	179.56	12,167.80	-3,082.38	548.14	3,109.17	0.00	0.00	0.00
15,900.00	90.00	179.56	12,167.80	-3,182.38	548.91	3,209.04	0.00	0.00	0.00
16,000.00	90.00	179.56	12,167.80	-3,282.38	549.67	3,308.91	0.00	0.00	0.00
16,100.00	90.00	179.56	12,167.80	-3,382.37	550.44	3,408.78	0.00	0.00	0.00
16,200.00	90.00	179.56	12,167.80	-3,482.37	551.21	3,508.65	0.00	0.00	0.00
16,300.00	90.00	179.56	12,167.80	-3,582.37	551.97	3,608.52	0.00	0.00	0.00
16,400.00	90.00	179.56	12,167.80	-3,682.36	552.74	3,708.39	0.00	0.00	0.00
16,500.00	90.00	179.56	12,167.80	-3,782.36	553.51	3,808.27	0.00	0.00	0.00
16,600.00	90.00	179.56	12,167.80	-3,882.36	554.27	3,908.14	0.00	0.00	0.00
16,700.00	90.00	179.56	12,167.80	-3,982.36	555.04	4,008.01	0.00	0.00	0.00
16,800.00	90.00	179.56	12,167.80	-4,082.35	555.80	4,107.88	0.00	0.00	0.00
16,900.00	90.00	179.56	12,167.80	-4,182.35	556.57	4,207.75	0.00	0.00	0.00
17,000.00	90.00	179.56	12,167.80	-4,282.35	557.34	4,307.62	0.00	0.00	0.00
17,100.00	90.00	179.56	12,167.80	-4,382.34	558.10	4,407.49	0.00	0.00	0.00
17,200.00	90.00	179.56	12,167.80	-4,482.34	558.87	4,507.36	0.00	0.00	0.00
17,300.00	90.00	179.56	12,167.80	-4,582.34	559.64	4,607.23	0.00	0.00	0.00
17,400.00	90.00	179.56	12,167.80	-4,682.34	560.40	4,707.10	0.00	0.00	0.00
17,500.00	90.00	179.56	12,167.80	-4,782.33	561.17	4,806.97	0.00	0.00	0.00
17,600.00	90.00	179.56	12,167.80	-4,882.33	561.94	4,906.84	0.00	0.00	0.00
17,700.00	90.00	179.56	12,167.80	-4,982.33	562.70	5,006.71	0.00	0.00	0.00
17,800.00	90.00	179.56	12,167.80	-5,082.32	563.47	5,106.58	0.00	0.00	0.00
17,900.00	90.00	179.56	12,167.80	-5,182.32	564.23	5,206.45	0.00	0.00	0.00
18,000.00	90.00	179.56	12,167.80	-5,282.32	565.00	5,306.32	0.00	0.00	0.00
18,100.00	90.00	179.56	12,167.80	-5,382.32	565.77	5,406.20	0.00	0.00	0.00
18,200.00	90.00	179.56	12,167.80	-5,482.31	566.53	5,506.07	0.00	0.00	0.00
18,300.00	90.00	179.56	12,167.80	-5,582.31	567.30	5,605.94	0.00	0.00	0.00
18,400.00	90.00	179.56	12,167.80	-5,682.31	568.07	5,705.81	0.00	0.00	0.00
18,500.00	90.00	179.56	12,167.80	-5,782.30	568.83	5,805.68	0.00	0.00	0.00
18,600.00	90.00	179.56	12,167.80	-5,882.30	569.60	5,905.55	0.00	0.00	0.00
18,700.00	90.00	179.56	12,167.80	-5,982.30	570.37	6,005.42	0.00	0.00	0.00
18,800.00	90.00	179.56	12,167.80	-6,082.29	571.13	6,105.29	0.00	0.00	0.00
18,900.00	90.00	179.56	12,167.80	-6,182.29	571.90	6,205.16	0.00	0.00	0.00
19,000.00	90.00	179.56	12,167.80	-6,282.29	572.66	6,305.03	0.00	0.00	0.00
19,100.00	90.00	179.56	12,167.80	-6,382.29	573.43	6,404.90	0.00	0.00	0.00
19,200.00	90.00	179.56	12,167.80	-6,482.28	574.20	6,504.77	0.00	0.00	0.00
19,300.00	90.00	179.56	12,167.80	-6,582.28	574.96	6,604.64	0.00	0.00	0.00
19,400.00	90.00	179.56	12,167.80	-6,682.28	575.73	6,704.51	0.00	0.00	0.00
19,500.00	90.00	179.56	12,167.80	-6,782.27	576.50	6,804.38	0.00	0.00	0.00
19,600.00	90.00	179.56	12,167.80	-6,882.27	577.26	6,904.25	0.00	0.00	0.00
19,700.00	90.00	179.56	12,167.80	-6,982.27	578.03	7,004.13	0.00	0.00	0.00
19,800.00	90.00	179.56	12,167.80	-7,082.27	578.80	7,104.00	0.00	0.00	0.00
19,900.00	90.00	179.56	12,167.80	-7,182.26	579.56	7,203.87	0.00	0.00	0.00
20,000.00	90.00	179.56	12,167.80	-7,282.26	580.33	7,303.74	0.00	0.00	0.00
20,100.00	90.00	179.56	12,167.80	-7,382.26	581.09	7,403.61	0.00	0.00	0.00
20,200.00	90.00	179.56	12,167.80	-7,482.25	581.86	7,503.48	0.00	0.00	0.00
20,300.00	90.00	179.56	12,167.80	-7,582.25	582.63	7,603.35	0.00	0.00	0.00
20,400.00	90.00	179.56	12,167.80	-7,682.25	583.39	7,703.22	0.00	0.00	0.00
20,500.00	90.00	179.56	12,167.80	-7,782.24	584.16	7,803.09	0.00	0.00	0.00
20,600.00	90.00	179.56	12,167.80	-7,882.24	584.93	7,902.96	0.00	0.00	0.00
20,700.00	90.00	179.56	12,167.80	-7,982.24	585.69	8,002.83	0.00	0.00	0.00
20,800.00	90.00	179.56	12,167.80	-8,082.24	586.46	8,102.70	0.00	0.00	0.00
20,900.00	90.00	179.56	12,167.80	-8,182.23	587.23	8,202.57	0.00	0.00	0.00
21,000.00	90.00	179.56	12,167.80	-8,282.23	587.99	8,302.44	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 35H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3707.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3707.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 35H	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	179.56	12,167.80	-8,382.23	588.76	8,402.31	0.00	0.00	0.00
21,200.00	90.00	179.56	12,167.80	-8,482.22	589.52	8,502.18	0.00	0.00	0.00
21,300.00	90.00	179.56	12,167.80	-8,582.22	590.29	8,602.06	0.00	0.00	0.00
21,400.00	90.00	179.56	12,167.80	-8,682.22	591.06	8,701.93	0.00	0.00	0.00
21,500.00	90.00	179.56	12,167.80	-8,782.22	591.82	8,801.80	0.00	0.00	0.00
21,600.00	90.00	179.56	12,167.80	-8,882.21	592.59	8,901.67	0.00	0.00	0.00
21,700.00	90.00	179.56	12,167.80	-8,982.21	593.36	9,001.54	0.00	0.00	0.00
21,800.00	90.00	179.56	12,167.80	-9,082.21	594.12	9,101.41	0.00	0.00	0.00
21,900.00	90.00	179.56	12,167.80	-9,182.20	594.89	9,201.28	0.00	0.00	0.00
22,000.00	90.00	179.56	12,167.80	-9,282.20	595.66	9,301.15	0.00	0.00	0.00
22,100.00	90.00	179.56	12,167.80	-9,382.20	596.42	9,401.02	0.00	0.00	0.00
22,200.00	90.00	179.56	12,167.80	-9,482.19	597.19	9,500.89	0.00	0.00	0.00
22,300.00	90.00	179.56	12,167.80	-9,582.19	597.95	9,600.76	0.00	0.00	0.00
22,400.00	90.00	179.56	12,167.80	-9,682.19	598.72	9,700.63	0.00	0.00	0.00
22,500.00	90.00	179.56	12,167.80	-9,782.19	599.49	9,800.50	0.00	0.00	0.00
22,600.00	90.00	179.56	12,167.80	-9,882.18	600.25	9,900.37	0.00	0.00	0.00
22,700.00	90.00	179.56	12,167.80	-9,982.18	601.02	10,000.24	0.00	0.00	0.00
22,800.00	90.00	179.56	12,167.80	-10,082.18	601.79	10,100.12	0.00	0.00	0.00
22,900.00	90.00	179.56	12,167.80	-10,182.17	602.55	10,199.99	0.00	0.00	0.00
23,000.00	90.00	179.56	12,167.80	-10,282.17	603.32	10,299.86	0.00	0.00	0.00
23,014.62	90.00	179.56	12,167.80	-10,296.79	603.43	10,314.45	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
FTP (Avogato 30-31 - hit/miss target - Shape - Point)	0.00	0.00	12,167.80	143.34	523.42	499,028.15	765,544.12	32° 22' 11.305019 N	103° 36' 25.692574
PBHL (Avogato 30-31 - plan hits target center - Point)	0.00	0.00	12,167.80	-10,296.79	603.43	488,588.40	765,624.13	32° 20' 27.997683 N	103° 36' 25.585421

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,603.00	5,603.00	0.00	0.00	Build 2.00°/100'
6,103.05	6,100.52	36.41	23.85	Hold 10.00° Tangent
10,817.40	10,743.23	721.27	472.50	Turn 2.00°/100'
11,774.19	11,694.34	707.57	519.09	KOP, Build 10.00°/100'
12,574.19	12,167.80	143.34	523.42	Landing Point
23,014.62	12,167.80	-10,296.79	603.43	TD at 23014.62' MD