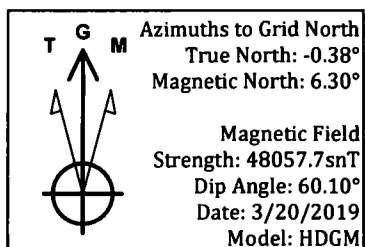




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 21H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

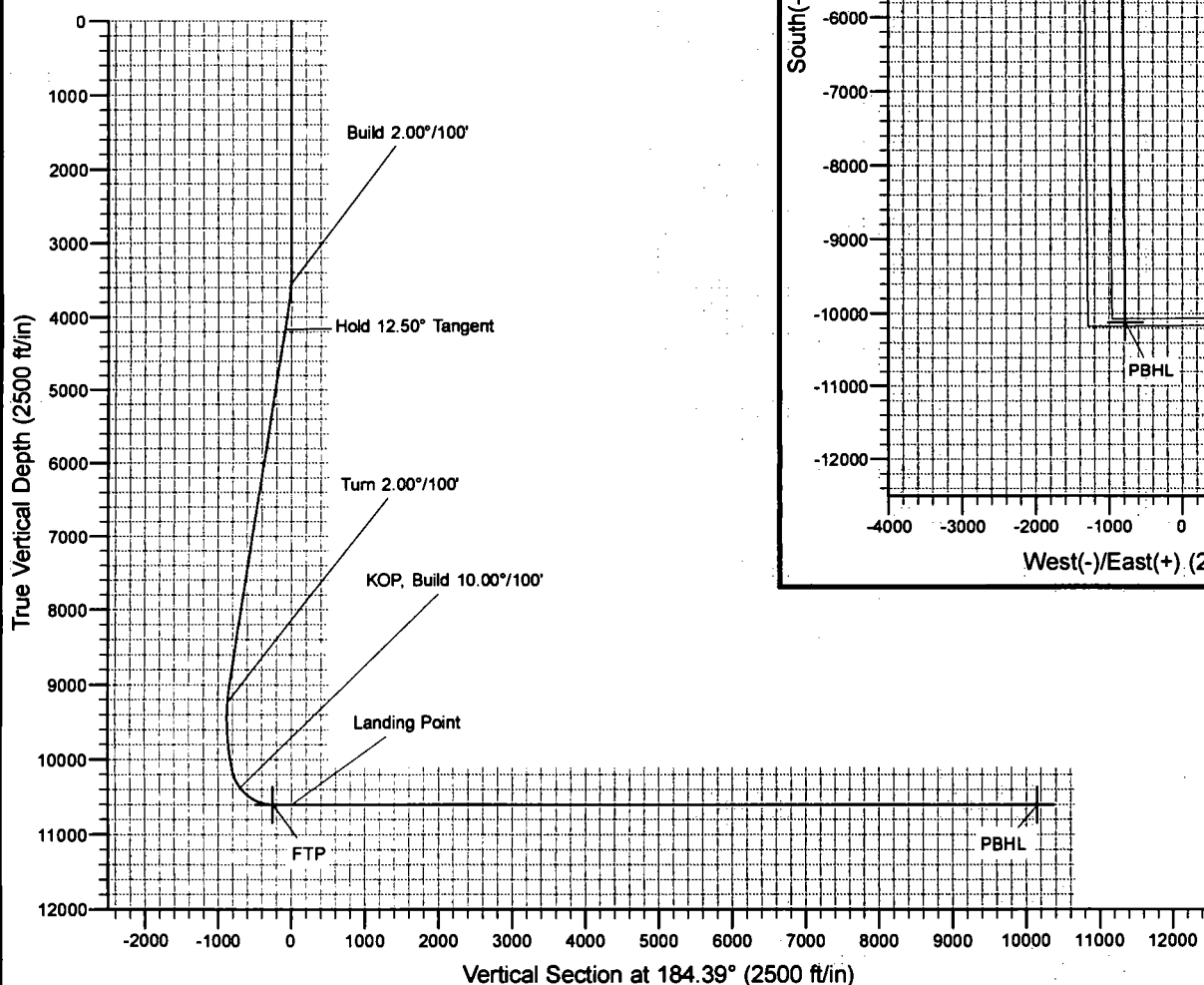
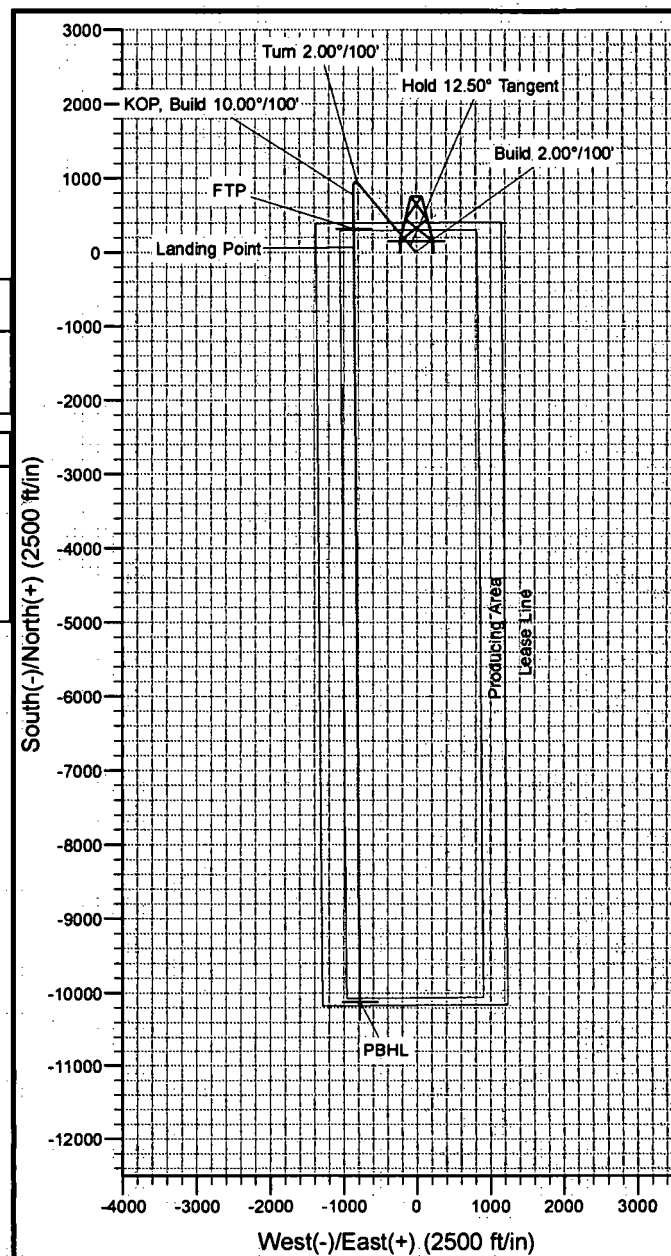


WELL DETAILS: AVOGATO 30_31 STATE COM 21H

+N/-S	+E/-W	Ground Level	3707.20	Latitude	Longitude
0.00	0.00	Northing	498894.54	32° 22' 8.174555 N	103° 38' 55.515488 W
		Easting	762988.53		

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3307.00	0.00	0.00	3307.00	0.00	0.00	0.00	0.00	0.00	
3931.96	12.50	319.48	3927.01	51.62	-44.11	2.00	319.48	-48.09	
9121.14	12.50	319.48	8993.21	905.40	-773.74	0.00	0.00	-843.51	
10294.22	12.50	179.59	10154.75	874.52	-858.45	2.00	-159.50	-808.39	
11093.22	90.00	179.59	10803.70	315.16	-852.43	10.00	0.00	-248.98	
21509.17	90.00	179.59	10803.70	-10124.52	-777.40	0.00	0.00	10154.32	



OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 21H

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 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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	Latitude:	32° 22' 8.174555 N	
From:	Easting:	762,988.53 usft	Longitude:	103° 36' 55.515488 W	
Position Uncertainty:	2.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	AVOGATO 30_31 STATE COM 21H					
Well Position	+N/-S	0.00 ft	Northing:	498,694.54 usft	Latitude:	32° 22' 8.174555 N
	+E/-W	0.00 ft	Easting:	762,988.53 usft	Longitude:	103° 36' 55.515488 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,707.20 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) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	184.39

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	
3,307.00	0.00	0.00	3,307.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,931.96	12.50	319.48	3,927.01	51.62	-44.11	2.00	2.00	0.00	319.48	
9,121.14	12.50	319.48	8,993.21	905.40	-773.74	0.00	0.00	0.00	0.00	
10,294.22	12.50	179.59	10,154.75	874.52	-856.45	2.00	0.00	-11.93	-159.50	
11,069.22	90.00	179.59	10,603.70	315.16	-852.43	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
21,509.17	90.00	179.59	10,603.70	-10,124.52	-777.40	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 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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
3,307.00	0.00	0.00	3,307.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	1.86	319.48	3,399.98	1.15	-0.98	-1.07	2.00	2.00	0.00
3,500.00	3.86	319.48	3,499.85	4.94	-4.22	-4.60	2.00	2.00	0.00
3,600.00	5.86	319.48	3,599.49	11.38	-9.73	-10.60	2.00	2.00	0.00
3,700.00	7.86	319.48	3,698.77	20.46	-17.49	-19.06	2.00	2.00	0.00
3,800.00	9.86	319.48	3,797.57	32.17	-27.49	-29.97	2.00	2.00	0.00
3,900.00	11.86	319.48	3,895.77	46.49	-39.73	-43.31	2.00	2.00	0.00
3,931.96	12.50	319.48	3,927.01	51.62	-44.11	-48.09	2.00	2.00	0.00
4,000.00	12.50	319.48	3,993.44	62.81	-53.68	-58.52	0.00	0.00	0.00
4,100.00	12.50	319.48	4,091.07	79.27	-67.74	-73.85	0.00	0.00	0.00
4,200.00	12.50	319.48	4,188.70	95.72	-81.80	-89.18	0.00	0.00	0.00
4,300.00	12.50	319.48	4,286.33	112.17	-95.86	-104.50	0.00	0.00	0.00
4,400.00	12.50	319.48	4,383.96	128.62	-109.92	-119.83	0.00	0.00	0.00
4,500.00	12.50	319.48	4,481.59	145.08	-123.98	-135.16	0.00	0.00	0.00
4,600.00	12.50	319.48	4,579.22	161.53	-138.04	-150.49	0.00	0.00	0.00
4,700.00	12.50	319.48	4,676.85	177.98	-152.10	-165.82	0.00	0.00	0.00
4,800.00	12.50	319.48	4,774.48	194.44	-166.16	-181.15	0.00	0.00	0.00
4,900.00	12.50	319.48	4,872.11	210.89	-180.22	-196.47	0.00	0.00	0.00
5,000.00	12.50	319.48	4,969.74	227.34	-194.28	-211.80	0.00	0.00	0.00
5,100.00	12.50	319.48	5,067.37	243.80	-208.34	-227.13	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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	12.50	319.48	5,165.00	260.25	-222.40	-242.46	0.00	0.00	0.00
5,300.00	12.50	319.48	5,262.63	276.70	-236.46	-257.79	0.00	0.00	0.00
5,400.00	12.50	319.48	5,360.26	293.16	-250.52	-273.12	0.00	0.00	0.00
5,500.00	12.50	319.48	5,457.89	309.61	-264.59	-288.44	0.00	0.00	0.00
5,600.00	12.50	319.48	5,555.52	326.06	-278.65	-303.77	0.00	0.00	0.00
5,700.00	12.50	319.48	5,653.15	342.52	-292.71	-319.10	0.00	0.00	0.00
5,800.00	12.50	319.48	5,750.78	358.97	-306.77	-334.43	0.00	0.00	0.00
5,900.00	12.50	319.48	5,848.41	375.42	-320.83	-349.76	0.00	0.00	0.00
6,000.00	12.50	319.48	5,946.04	391.87	-334.89	-365.09	0.00	0.00	0.00
6,100.00	12.50	319.48	6,043.67	408.33	-348.95	-380.42	0.00	0.00	0.00
6,200.00	12.50	319.48	6,141.30	424.78	-363.01	-395.74	0.00	0.00	0.00
6,300.00	12.50	319.48	6,238.93	441.23	-377.07	-411.07	0.00	0.00	0.00
6,400.00	12.50	319.48	6,336.56	457.69	-391.13	-426.40	0.00	0.00	0.00
6,500.00	12.50	319.48	6,434.19	474.14	-405.19	-441.73	0.00	0.00	0.00
6,600.00	12.50	319.48	6,531.82	490.59	-419.25	-457.06	0.00	0.00	0.00
6,700.00	12.50	319.48	6,629.45	507.05	-433.31	-472.39	0.00	0.00	0.00
6,800.00	12.50	319.48	6,727.08	523.50	-447.37	-487.71	0.00	0.00	0.00
6,900.00	12.50	319.48	6,824.71	539.95	-461.43	-503.04	0.00	0.00	0.00
7,000.00	12.50	319.48	6,922.34	556.41	-475.49	-518.37	0.00	0.00	0.00
7,100.00	12.50	319.48	7,019.97	572.86	-489.55	-533.70	0.00	0.00	0.00
7,200.00	12.50	319.48	7,117.60	589.31	-503.61	-549.03	0.00	0.00	0.00
7,300.00	12.50	319.48	7,215.23	605.76	-517.67	-564.36	0.00	0.00	0.00
7,400.00	12.50	319.48	7,312.86	622.22	-531.73	-579.68	0.00	0.00	0.00
7,500.00	12.50	319.48	7,410.49	638.67	-545.79	-595.01	0.00	0.00	0.00
7,600.00	12.50	319.48	7,508.12	655.12	-559.86	-610.34	0.00	0.00	0.00
7,700.00	12.50	319.48	7,605.75	671.58	-573.92	-625.67	0.00	0.00	0.00
7,800.00	12.50	319.48	7,703.38	688.03	-587.98	-641.00	0.00	0.00	0.00
7,900.00	12.50	319.48	7,801.01	704.48	-602.04	-656.33	0.00	0.00	0.00
8,000.00	12.50	319.48	7,898.64	720.94	-616.10	-671.66	0.00	0.00	0.00
8,100.00	12.50	319.48	7,996.27	737.39	-630.16	-686.98	0.00	0.00	0.00
8,200.00	12.50	319.48	8,093.90	753.84	-644.22	-702.31	0.00	0.00	0.00
8,300.00	12.50	319.48	8,191.53	770.30	-658.28	-717.64	0.00	0.00	0.00
8,400.00	12.50	319.48	8,289.16	786.75	-672.34	-732.97	0.00	0.00	0.00
8,500.00	12.50	319.48	8,386.79	803.20	-686.40	-748.30	0.00	0.00	0.00
8,600.00	12.50	319.48	8,484.42	819.66	-700.46	-763.63	0.00	0.00	0.00
8,700.00	12.50	319.48	8,582.05	836.11	-714.52	-778.95	0.00	0.00	0.00
8,800.00	12.50	319.48	8,679.68	852.56	-728.58	-794.28	0.00	0.00	0.00
8,900.00	12.50	319.48	8,777.31	869.01	-742.64	-809.61	0.00	0.00	0.00
9,000.00	12.50	319.48	8,874.94	885.47	-756.70	-824.94	0.00	0.00	0.00
9,100.00	12.50	319.48	8,972.57	901.92	-770.76	-840.27	0.00	0.00	0.00
9,121.14	12.50	319.48	8,993.21	905.40	-773.74	-843.51	0.00	0.00	0.00
9,200.00	11.04	316.60	9,070.41	917.37	-784.47	-854.62	2.00	-1.86	-3.66
9,300.00	9.23	311.66	9,168.85	929.66	-797.04	-865.91	2.00	-1.80	-4.94
9,400.00	7.53	304.43	9,267.78	938.69	-808.44	-874.05	2.00	-1.70	-7.23
9,500.00	6.01	293.31	9,367.08	944.47	-818.65	-879.03	2.00	-1.52	-11.12
9,600.00	4.85	275.92	9,466.64	946.98	-827.66	-880.84	2.00	-1.16	-17.39
9,700.00	4.35	251.56	9,566.32	946.21	-835.46	-879.48	2.00	-0.50	-24.36
9,800.00	4.72	226.49	9,666.02	942.18	-842.05	-874.95	2.00	0.37	-25.07
9,900.00	5.80	207.96	9,765.61	934.88	-847.40	-867.26	2.00	1.08	-18.53
10,000.00	7.28	196.04	9,864.96	924.32	-851.52	-856.42	2.00	1.48	-11.91
10,100.00	8.96	188.35	9,963.95	910.52	-854.41	-842.44	2.00	1.68	-7.70
10,200.00	10.75	183.13	10,062.47	893.50	-856.05	-825.34	2.00	1.79	-5.22
10,294.22	12.50	179.59	10,154.75	874.52	-856.45	-806.39	2.00	1.85	-3.75
10,300.00	13.08	179.59	10,160.39	873.24	-856.44	-805.12	10.00	10.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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	23.08	179.59	10,255.34	842.25	-856.22	-774.23	10.00	10.00	0.00
10,500.00	33.08	179.59	10,343.45	795.24	-855.88	-727.39	10.00	10.00	0.00
10,600.00	43.08	179.59	10,422.07	733.65	-855.44	-666.01	10.00	10.00	0.00
10,700.00	53.08	179.59	10,488.80	659.34	-854.90	-591.96	10.00	10.00	0.00
10,800.00	63.08	179.59	10,541.61	574.57	-854.30	-507.49	10.00	10.00	0.00
10,900.00	73.08	179.59	10,578.89	481.92	-853.63	-415.16	10.00	10.00	0.00
11,000.00	83.08	179.59	10,599.52	384.21	-852.93	-317.78	10.00	10.00	0.00
11,069.22	90.00	179.59	10,603.70	315.16	-852.43	-248.98	10.00	10.00	0.00
11,100.00	90.00	179.59	10,603.70	284.38	-852.21	-218.30	0.00	0.00	0.00
11,200.00	90.00	179.59	10,603.70	184.38	-851.49	-118.65	0.00	0.00	0.00
11,300.00	90.00	179.59	10,603.70	84.38	-850.77	-19.01	0.00	0.00	0.00
11,400.00	90.00	179.59	10,603.70	-15.61	-850.05	80.64	0.00	0.00	0.00
11,500.00	90.00	179.59	10,603.70	-115.61	-849.34	180.29	0.00	0.00	0.00
11,600.00	90.00	179.59	10,603.70	-215.61	-848.62	279.94	0.00	0.00	0.00
11,700.00	90.00	179.59	10,603.70	-315.61	-847.90	379.59	0.00	0.00	0.00
11,800.00	90.00	179.59	10,603.70	-415.60	-847.18	479.24	0.00	0.00	0.00
11,900.00	90.00	179.59	10,603.70	-515.60	-846.46	578.89	0.00	0.00	0.00
12,000.00	90.00	179.59	10,603.70	-615.60	-845.74	678.54	0.00	0.00	0.00
12,100.00	90.00	179.59	10,603.70	-715.60	-845.02	778.19	0.00	0.00	0.00
12,200.00	90.00	179.59	10,603.70	-815.59	-844.30	877.84	0.00	0.00	0.00
12,300.00	90.00	179.59	10,603.70	-915.59	-843.59	977.48	0.00	0.00	0.00
12,400.00	90.00	179.59	10,603.70	-1,015.59	-842.87	1,077.13	0.00	0.00	0.00
12,500.00	90.00	179.59	10,603.70	-1,115.59	-842.15	1,176.78	0.00	0.00	0.00
12,600.00	90.00	179.59	10,603.70	-1,215.58	-841.43	1,276.43	0.00	0.00	0.00
12,700.00	90.00	179.59	10,603.70	-1,315.58	-840.71	1,376.08	0.00	0.00	0.00
12,800.00	90.00	179.59	10,603.70	-1,415.58	-839.99	1,475.73	0.00	0.00	0.00
12,900.00	90.00	179.59	10,603.70	-1,515.58	-839.27	1,575.38	0.00	0.00	0.00
13,000.00	90.00	179.59	10,603.70	-1,615.57	-838.55	1,675.03	0.00	0.00	0.00
13,100.00	90.00	179.59	10,603.70	-1,715.57	-837.84	1,774.68	0.00	0.00	0.00
13,200.00	90.00	179.59	10,603.70	-1,815.57	-837.12	1,874.32	0.00	0.00	0.00
13,300.00	90.00	179.59	10,603.70	-1,915.56	-836.40	1,973.97	0.00	0.00	0.00
13,400.00	90.00	179.59	10,603.70	-2,015.56	-835.68	2,073.62	0.00	0.00	0.00
13,500.00	90.00	179.59	10,603.70	-2,115.56	-834.96	2,173.27	0.00	0.00	0.00
13,600.00	90.00	179.59	10,603.70	-2,215.56	-834.24	2,272.92	0.00	0.00	0.00
13,700.00	90.00	179.59	10,603.70	-2,315.55	-833.52	2,372.57	0.00	0.00	0.00
13,800.00	90.00	179.59	10,603.70	-2,415.55	-832.80	2,472.22	0.00	0.00	0.00
13,900.00	90.00	179.59	10,603.70	-2,515.55	-832.09	2,571.87	0.00	0.00	0.00
14,000.00	90.00	179.59	10,603.70	-2,615.55	-831.37	2,671.52	0.00	0.00	0.00
14,100.00	90.00	179.59	10,603.70	-2,715.54	-830.65	2,771.17	0.00	0.00	0.00
14,200.00	90.00	179.59	10,603.70	-2,815.54	-829.93	2,870.81	0.00	0.00	0.00
14,300.00	90.00	179.59	10,603.70	-2,915.54	-829.21	2,970.46	0.00	0.00	0.00
14,400.00	90.00	179.59	10,603.70	-3,015.54	-828.49	3,070.11	0.00	0.00	0.00
14,500.00	90.00	179.59	10,603.70	-3,115.53	-827.77	3,169.76	0.00	0.00	0.00
14,600.00	90.00	179.59	10,603.70	-3,215.53	-827.06	3,269.41	0.00	0.00	0.00
14,700.00	90.00	179.59	10,603.70	-3,315.53	-826.34	3,369.06	0.00	0.00	0.00
14,800.00	90.00	179.59	10,603.70	-3,415.53	-825.62	3,468.71	0.00	0.00	0.00
14,900.00	90.00	179.59	10,603.70	-3,515.52	-824.90	3,568.36	0.00	0.00	0.00
15,000.00	90.00	179.59	10,603.70	-3,615.52	-824.18	3,668.01	0.00	0.00	0.00
15,100.00	90.00	179.59	10,603.70	-3,715.52	-823.46	3,767.65	0.00	0.00	0.00
15,200.00	90.00	179.59	10,603.70	-3,815.52	-822.74	3,867.30	0.00	0.00	0.00
15,300.00	90.00	179.59	10,603.70	-3,915.51	-822.02	3,966.95	0.00	0.00	0.00
15,400.00	90.00	179.59	10,603.70	-4,015.51	-821.31	4,066.60	0.00	0.00	0.00
15,500.00	90.00	179.59	10,603.70	-4,115.51	-820.59	4,166.25	0.00	0.00	0.00
15,600.00	90.00	179.59	10,603.70	-4,215.51	-819.87	4,265.90	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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	10,603.70	-4,315.50	-819.15	4,365.55	0.00	0.00	0.00
15,800.00	90.00	179.59	10,603.70	-4,415.50	-818.43	4,465.20	0.00	0.00	0.00
15,900.00	90.00	179.59	10,603.70	-4,515.50	-817.71	4,564.85	0.00	0.00	0.00
16,000.00	90.00	179.59	10,603.70	-4,615.50	-816.99	4,664.50	0.00	0.00	0.00
16,100.00	90.00	179.59	10,603.70	-4,715.49	-816.27	4,764.14	0.00	0.00	0.00
16,200.00	90.00	179.59	10,603.70	-4,815.49	-815.56	4,863.79	0.00	0.00	0.00
16,300.00	90.00	179.59	10,603.70	-4,915.49	-814.84	4,963.44	0.00	0.00	0.00
16,400.00	90.00	179.59	10,603.70	-5,015.48	-814.12	5,063.09	0.00	0.00	0.00
16,500.00	90.00	179.59	10,603.70	-5,115.48	-813.40	5,162.74	0.00	0.00	0.00
16,600.00	90.00	179.59	10,603.70	-5,215.48	-812.68	5,262.39	0.00	0.00	0.00
16,700.00	90.00	179.59	10,603.70	-5,315.48	-811.96	5,362.04	0.00	0.00	0.00
16,800.00	90.00	179.59	10,603.70	-5,415.47	-811.24	5,461.69	0.00	0.00	0.00
16,900.00	90.00	179.59	10,603.70	-5,515.47	-810.52	5,561.34	0.00	0.00	0.00
17,000.00	90.00	179.59	10,603.70	-5,615.47	-809.81	5,660.98	0.00	0.00	0.00
17,100.00	90.00	179.59	10,603.70	-5,715.47	-809.09	5,760.63	0.00	0.00	0.00
17,200.00	90.00	179.59	10,603.70	-5,815.46	-808.37	5,860.28	0.00	0.00	0.00
17,300.00	90.00	179.59	10,603.70	-5,915.46	-807.65	5,959.93	0.00	0.00	0.00
17,400.00	90.00	179.59	10,603.70	-6,015.46	-806.93	6,059.58	0.00	0.00	0.00
17,500.00	90.00	179.59	10,603.70	-6,115.46	-806.21	6,159.23	0.00	0.00	0.00
17,600.00	90.00	179.59	10,603.70	-6,215.45	-805.49	6,258.88	0.00	0.00	0.00
17,700.00	90.00	179.59	10,603.70	-6,315.45	-804.78	6,358.53	0.00	0.00	0.00
17,800.00	90.00	179.59	10,603.70	-6,415.45	-804.06	6,458.18	0.00	0.00	0.00
17,900.00	90.00	179.59	10,603.70	-6,515.45	-803.34	6,557.83	0.00	0.00	0.00
18,000.00	90.00	179.59	10,603.70	-6,615.44	-802.62	6,657.47	0.00	0.00	0.00
18,100.00	90.00	179.59	10,603.70	-6,715.44	-801.90	6,757.12	0.00	0.00	0.00
18,200.00	90.00	179.59	10,603.70	-6,815.44	-801.18	6,856.77	0.00	0.00	0.00
18,300.00	90.00	179.59	10,603.70	-6,915.44	-800.46	6,956.42	0.00	0.00	0.00
18,400.00	90.00	179.59	10,603.70	-7,015.43	-799.74	7,056.07	0.00	0.00	0.00
18,500.00	90.00	179.59	10,603.70	-7,115.43	-799.03	7,155.72	0.00	0.00	0.00
18,600.00	90.00	179.59	10,603.70	-7,215.43	-798.31	7,255.37	0.00	0.00	0.00
18,700.00	90.00	179.59	10,603.70	-7,315.43	-797.59	7,355.02	0.00	0.00	0.00
18,800.00	90.00	179.59	10,603.70	-7,415.42	-796.87	7,454.67	0.00	0.00	0.00
18,900.00	90.00	179.59	10,603.70	-7,515.42	-796.15	7,554.31	0.00	0.00	0.00
19,000.00	90.00	179.59	10,603.70	-7,615.42	-795.43	7,653.96	0.00	0.00	0.00
19,100.00	90.00	179.59	10,603.70	-7,715.42	-794.71	7,753.61	0.00	0.00	0.00
19,200.00	90.00	179.59	10,603.70	-7,815.41	-793.99	7,853.26	0.00	0.00	0.00
19,300.00	90.00	179.59	10,603.70	-7,915.41	-793.28	7,952.91	0.00	0.00	0.00
19,400.00	90.00	179.59	10,603.70	-8,015.41	-792.56	8,052.56	0.00	0.00	0.00
19,500.00	90.00	179.59	10,603.70	-8,115.40	-791.84	8,152.21	0.00	0.00	0.00
19,600.00	90.00	179.59	10,603.70	-8,215.40	-791.12	8,251.86	0.00	0.00	0.00
19,700.00	90.00	179.59	10,603.70	-8,315.40	-790.40	8,351.51	0.00	0.00	0.00
19,800.00	90.00	179.59	10,603.70	-8,415.40	-789.68	8,451.16	0.00	0.00	0.00
19,900.00	90.00	179.59	10,603.70	-8,515.39	-788.96	8,550.80	0.00	0.00	0.00
20,000.00	90.00	179.59	10,603.70	-8,615.39	-788.25	8,650.45	0.00	0.00	0.00
20,100.00	90.00	179.59	10,603.70	-8,715.39	-787.53	8,750.10	0.00	0.00	0.00
20,200.00	90.00	179.59	10,603.70	-8,815.39	-786.81	8,849.75	0.00	0.00	0.00
20,300.00	90.00	179.59	10,603.70	-8,915.38	-786.09	8,949.40	0.00	0.00	0.00
20,400.00	90.00	179.59	10,603.70	-9,015.38	-785.37	9,049.05	0.00	0.00	0.00
20,500.00	90.00	179.59	10,603.70	-9,115.38	-784.65	9,148.70	0.00	0.00	0.00
20,600.00	90.00	179.59	10,603.70	-9,215.38	-783.93	9,248.35	0.00	0.00	0.00
20,700.00	90.00	179.59	10,603.70	-9,315.37	-783.21	9,348.00	0.00	0.00	0.00
20,800.00	90.00	179.59	10,603.70	-9,415.37	-782.50	9,447.64	0.00	0.00	0.00
20,900.00	90.00	179.59	10,603.70	-9,515.37	-781.78	9,547.29	0.00	0.00	0.00
21,000.00	90.00	179.59	10,603.70	-9,615.37	-781.06	9,646.94	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.70ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 21H	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	10,603.70	-9,715.36	-780.34	9,746.59	0.00	0.00	0.00
21,200.00	90.00	179.59	10,603.70	-9,815.36	-779.62	9,846.24	0.00	0.00	0.00
21,300.00	90.00	179.59	10,603.70	-9,915.36	-778.90	9,945.89	0.00	0.00	0.00
21,400.00	90.00	179.59	10,603.70	-10,015.36	-778.18	10,045.54	0.00	0.00	0.00
21,500.00	90.00	179.59	10,603.70	-10,115.35	-777.46	10,145.19	0.00	0.00	0.00
21,509.17	90.00	179.59	10,603.70	-10,124.52	-777.40	10,154.32	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									
PBHL (Avogato 30-31 - plan hits target center - Point	0.00	0.00	10,603.70	-10,124.52	-777.40	488,570.39	762,211.16	32° 20' 28.046735 N	103° 37' 5.367689
FTP (Avogato 30-31 - plan hits target center - Point	0.00	0.00	10,603.70	315.16	-852.43	499,009.69	762,136.13	32° 22' 11.349458 N	103° 37' 5.429378

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
3,558.00	3,558.00	0.00	0.00	Build 2.00°/100'
4,183.08	4,178.13	51.64	-44.13	Hold 12.50° Tangent
9,371.05	9,243.10	905.38	-773.71	Turn 2.00°/100'
10,544.24	10,404.75	874.52	-856.45	KOP, Build 10.00°/100'
11,319.24	10,853.70	315.16	-852.43	Landing Point
21,759.19	10,853.70	-10,124.52	-777.40	TD at 21759.19' MD