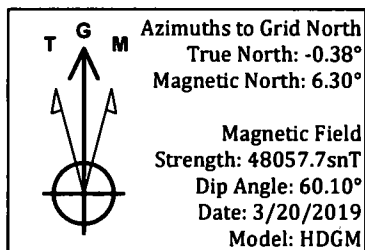




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 22H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

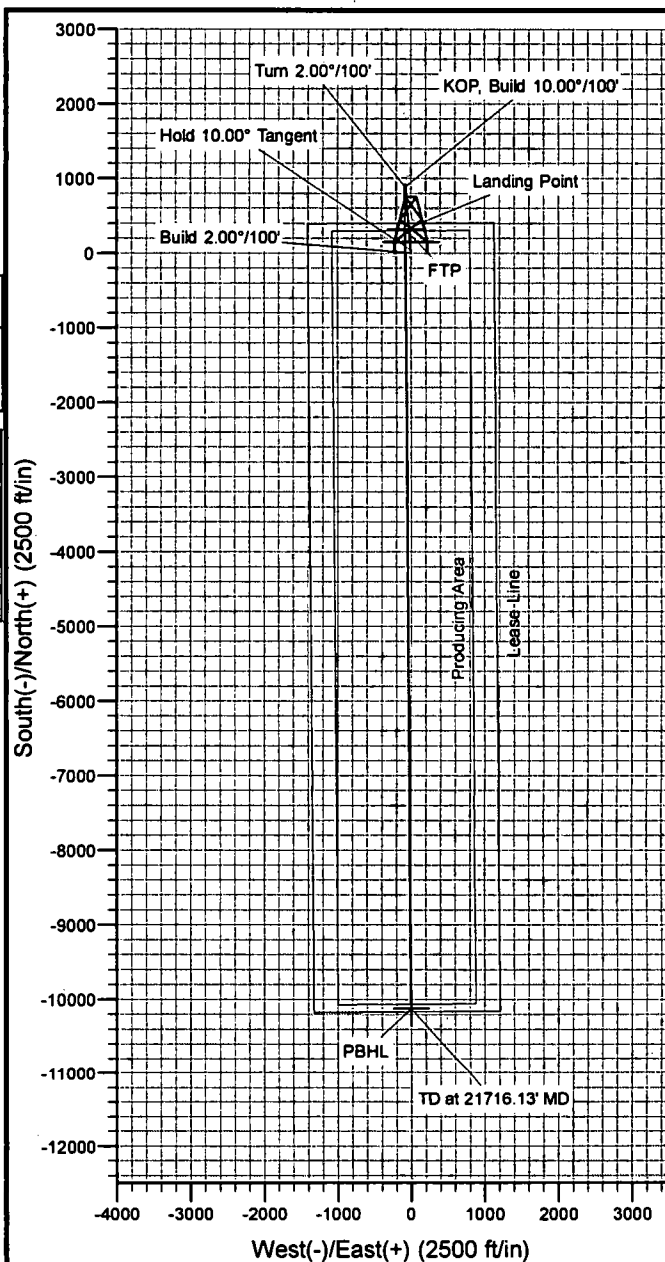
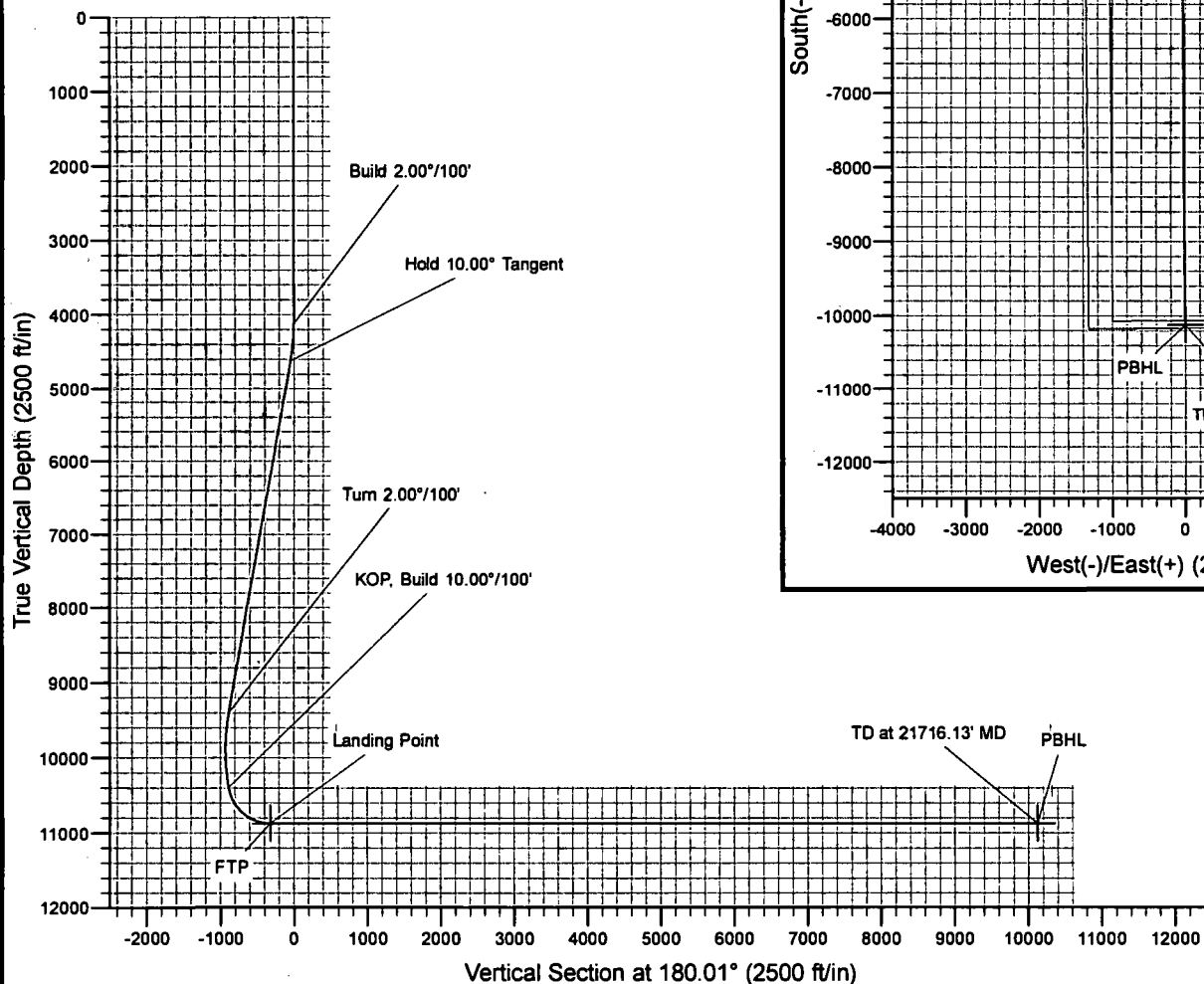


WELL DETAILS: AVOGATO 30_31 STATE COM 22H

+N-S	+E-W	Ground Level	Latitude	Longitude
0.00	0.00	3706.80	32° 22' 8.174111 N	103° 38' 55.107395 W
0.00	0.00	498994.73	763023.53	

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	
4120.00	0.00	0.00	4120.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
4820.10	10.00	355.17	4817.56	43.38	-3.67	2.00	355.17	-43.38	Hold 10.00° Tangent
9478.72	10.00	355.17	9400.37	883.89	-74.71	0.00	0.00	-883.88	Turn 2.00°/100'
10478.07	10.00	179.59	10394.64	883.60	-81.47	2.00	-177.76	-883.58	KOP, Build 10.00°/100'
11276.07	90.00	179.59	10868.10	319.36	-77.41	10.00	0.00	-319.34	Landing Point
21716.13	90.00	179.59	10868.10	-10120.43	-2.38	0.00	0.00	10120.43	TD at 21716.13' MD



OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 22H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

20 March, 2019

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 22H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference: Well AVOGATO 30_31 STATE COM 22H
TVD Reference: RKB=26.5' @ 3733.10ft
MD Reference: RKB=26.5' @ 3733.10ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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:	Map	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 22H			
Well Position	+N/-S	0.19 ft	Northing:	498,694.73 usft
	+E/-W	35.00 ft	Easting:	763,023.53 usft
Position Uncertainty	2.00 ft	Wellhead Elevation:	0.00 ft	Ground Level: 3,706.60 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	180.01

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	
4,120.00	0.00	0.00	4,120.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,620.10	10.00	355.17	4,617.56	43.38	-3.67	2.00	2.00	0.00	355.17	
9,476.72	10.00	355.17	9,400.37	883.89	-74.71	0.00	0.00	0.00	0.00	
10,476.07	10.00	179.59	10,394.64	883.60	-81.47	2.00	0.00	-17.57	-177.76	
11,276.07	90.00	179.59	10,868.10	319.36	-77.41	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
21,716.13	90.00	179.59	10,868.10	-10,120.43	-2.38	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 22H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 22H	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
4,120.00	0.00	0.00	4,120.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	1.60	355.17	4,199.99	1.11	-0.09	-1.11	2.00	2.00	0.00
4,300.00	3.60	355.17	4,299.88	5.63	-0.48	-5.63	2.00	2.00	0.00
4,400.00	5.60	355.17	4,399.55	13.62	-1.15	-13.62	2.00	2.00	0.00
4,500.00	7.60	355.17	4,498.89	25.08	-2.12	-25.08	2.00	2.00	0.00
4,600.00	9.60	355.17	4,597.76	39.98	-3.38	-39.98	2.00	2.00	0.00
4,620.10	10.00	355.17	4,617.56	43.38	-3.67	-43.38	2.00	2.00	0.00
4,700.00	10.00	355.17	4,696.25	57.21	-4.84	-57.21	0.00	0.00	0.00
4,800.00	10.00	355.17	4,794.73	74.52	-6.30	-74.52	0.00	0.00	0.00
4,900.00	10.00	355.17	4,893.21	91.83	-7.76	-91.82	0.00	0.00	0.00
5,000.00	10.00	355.17	4,991.69	109.13	-9.22	-109.13	0.00	0.00	0.00
5,100.00	10.00	355.17	5,090.17	126.44	-10.69	-126.44	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 22H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 22H	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	355.17	5,188.65	143.75	-12.15	-143.74	0.00	0.00	0.00
5,300.00	10.00	355.17	5,287.13	161.05	-13.61	-161.05	0.00	0.00	0.00
5,400.00	10.00	355.17	5,385.61	178.36	-15.08	-178.35	0.00	0.00	0.00
5,500.00	10.00	355.17	5,484.09	195.66	-16.54	-195.66	0.00	0.00	0.00
5,600.00	10.00	355.17	5,582.57	212.97	-18.00	-212.97	0.00	0.00	0.00
5,700.00	10.00	355.17	5,681.05	230.28	-19.46	-230.27	0.00	0.00	0.00
5,800.00	10.00	355.17	5,779.53	247.58	-20.93	-247.58	0.00	0.00	0.00
5,900.00	10.00	355.17	5,878.01	264.89	-22.39	-264.88	0.00	0.00	0.00
6,000.00	10.00	355.17	5,976.49	282.20	-23.85	-282.19	0.00	0.00	0.00
6,100.00	10.00	355.17	6,074.97	299.50	-25.32	-299.50	0.00	0.00	0.00
6,200.00	10.00	355.17	6,173.45	316.81	-26.78	-316.80	0.00	0.00	0.00
6,300.00	10.00	355.17	6,271.93	334.12	-28.24	-334.11	0.00	0.00	0.00
6,400.00	10.00	355.17	6,370.41	351.42	-29.70	-351.42	0.00	0.00	0.00
6,500.00	10.00	355.17	6,468.89	368.73	-31.17	-368.72	0.00	0.00	0.00
6,600.00	10.00	355.17	6,567.37	386.04	-32.63	-386.03	0.00	0.00	0.00
6,700.00	10.00	355.17	6,665.85	403.34	-34.09	-403.33	0.00	0.00	0.00
6,800.00	10.00	355.17	6,764.33	420.65	-35.56	-420.64	0.00	0.00	0.00
6,900.00	10.00	355.17	6,862.81	437.95	-37.02	-437.95	0.00	0.00	0.00
7,000.00	10.00	355.17	6,961.29	455.26	-38.48	-455.25	0.00	0.00	0.00
7,100.00	10.00	355.17	7,059.77	472.57	-39.95	-472.56	0.00	0.00	0.00
7,200.00	10.00	355.17	7,158.25	489.87	-41.41	-489.86	0.00	0.00	0.00
7,300.00	10.00	355.17	7,256.73	507.18	-42.87	-507.17	0.00	0.00	0.00
7,400.00	10.00	355.17	7,355.21	524.49	-44.33	-524.48	0.00	0.00	0.00
7,500.00	10.00	355.17	7,453.69	541.79	-45.80	-541.78	0.00	0.00	0.00
7,600.00	10.00	355.17	7,552.18	559.10	-47.26	-559.09	0.00	0.00	0.00
7,700.00	10.00	355.17	7,650.66	576.41	-48.72	-576.39	0.00	0.00	0.00
7,800.00	10.00	355.17	7,749.14	593.71	-50.19	-593.70	0.00	0.00	0.00
7,900.00	10.00	355.17	7,847.62	611.02	-51.65	-611.01	0.00	0.00	0.00
8,000.00	10.00	355.17	7,946.10	628.33	-53.11	-628.31	0.00	0.00	0.00
8,100.00	10.00	355.17	8,044.58	645.63	-54.57	-645.62	0.00	0.00	0.00
8,200.00	10.00	355.17	8,143.06	662.94	-56.04	-662.93	0.00	0.00	0.00
8,300.00	10.00	355.17	8,241.54	680.24	-57.50	-680.23	0.00	0.00	0.00
8,400.00	10.00	355.17	8,340.02	697.55	-58.96	-697.54	0.00	0.00	0.00
8,500.00	10.00	355.17	8,438.50	714.86	-60.43	-714.84	0.00	0.00	0.00
8,600.00	10.00	355.17	8,536.98	732.16	-61.89	-732.15	0.00	0.00	0.00
8,700.00	10.00	355.17	8,635.46	749.47	-63.35	-749.46	0.00	0.00	0.00
8,800.00	10.00	355.17	8,733.94	766.78	-64.81	-766.76	0.00	0.00	0.00
8,900.00	10.00	355.17	8,832.42	784.08	-66.28	-784.07	0.00	0.00	0.00
9,000.00	10.00	355.17	8,930.90	801.39	-67.74	-801.37	0.00	0.00	0.00
9,100.00	10.00	355.17	9,029.38	818.70	-69.20	-818.68	0.00	0.00	0.00
9,200.00	10.00	355.17	9,127.86	836.00	-70.67	-835.99	0.00	0.00	0.00
9,300.00	10.00	355.17	9,226.34	853.31	-72.13	-853.29	0.00	0.00	0.00
9,400.00	10.00	355.17	9,324.82	870.62	-73.59	-870.60	0.00	0.00	0.00
9,476.72	10.00	355.17	9,400.37	883.89	-74.71	-883.88	0.00	0.00	0.00
9,500.00	9.54	355.06	9,423.31	887.83	-75.05	-887.81	2.00	-2.00	-0.47
9,600.00	7.54	354.43	9,522.20	902.61	-76.40	-902.59	2.00	-2.00	-0.63
9,700.00	5.54	353.36	9,621.55	913.94	-77.59	-913.92	2.00	-2.00	-1.07
9,800.00	3.55	351.09	9,721.23	921.80	-78.63	-921.78	2.00	-1.99	-2.27
9,900.00	1.58	343.08	9,821.12	926.17	-79.51	-926.15	2.00	-1.97	-8.00
10,000.00	0.61	216.96	9,921.11	927.06	-80.24	-927.04	2.00	-0.97	-126.12
10,100.00	2.50	186.33	10,021.07	924.47	-80.80	-924.45	2.00	1.89	-30.63
10,200.00	4.49	182.35	10,120.88	918.39	-81.20	-918.37	2.00	1.99	-3.98
10,300.00	6.48	180.81	10,220.42	908.83	-81.44	-908.81	2.00	1.99	-1.54
10,400.00	8.48	179.99	10,319.56	895.81	-81.52	-895.79	2.00	2.00	-0.82

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 22H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 22H	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)
10,476.07	10.00	179.59	10,394.64	883.60	-81.47	-883.58	2.00	2.00	-0.53
10,500.00	12.39	179.59	10,418.11	878.95	-81.43	-878.93	10.00	10.00	0.00
10,600.00	22.39	179.59	10,513.42	849.10	-81.22	-849.08	10.00	10.00	0.00
10,700.00	32.39	179.59	10,602.09	803.15	-80.89	-803.13	10.00	10.00	0.00
10,800.00	42.39	179.59	10,681.44	742.50	-80.45	-742.48	10.00	10.00	0.00
10,900.00	52.39	179.59	10,749.05	668.99	-79.93	-668.97	10.00	10.00	0.00
11,000.00	62.39	179.59	10,802.87	584.86	-79.32	-584.84	10.00	10.00	0.00
11,100.00	72.39	179.59	10,841.26	492.66	-78.66	-492.65	10.00	10.00	0.00
11,200.00	82.39	179.59	10,863.06	395.20	-77.96	-395.18	10.00	10.00	0.00
11,276.07	90.00	179.59	10,868.10	319.36	-77.41	-319.34	10.00	10.00	0.00
11,300.00	90.00	179.59	10,868.10	295.43	-77.24	-295.41	0.00	0.00	0.00
11,400.00	90.00	179.59	10,868.10	195.43	-76.52	-195.41	0.00	0.00	0.00
11,500.00	90.00	179.59	10,868.10	95.43	-75.80	-95.41	0.00	0.00	0.00
11,600.00	90.00	179.59	10,868.10	-4.56	-75.08	4.58	0.00	0.00	0.00
11,700.00	90.00	179.59	10,868.10	-104.56	-74.37	104.58	0.00	0.00	0.00
11,800.00	90.00	179.59	10,868.10	-204.56	-73.65	204.58	0.00	0.00	0.00
11,900.00	90.00	179.59	10,868.10	-304.56	-72.93	304.57	0.00	0.00	0.00
12,000.00	90.00	179.59	10,868.10	-404.55	-72.21	404.57	0.00	0.00	0.00
12,100.00	90.00	179.59	10,868.10	-504.55	-71.49	504.57	0.00	0.00	0.00
12,200.00	90.00	179.59	10,868.10	-604.55	-70.77	604.57	0.00	0.00	0.00
12,300.00	90.00	179.59	10,868.10	-704.55	-70.05	704.56	0.00	0.00	0.00
12,400.00	90.00	179.59	10,868.10	-804.54	-69.34	804.56	0.00	0.00	0.00
12,500.00	90.00	179.59	10,868.10	-904.54	-68.62	904.56	0.00	0.00	0.00
12,600.00	90.00	179.59	10,868.10	-1,004.54	-67.90	1,004.55	0.00	0.00	0.00
12,700.00	90.00	179.59	10,868.10	-1,104.54	-67.18	1,104.55	0.00	0.00	0.00
12,800.00	90.00	179.59	10,868.10	-1,204.53	-66.46	1,204.55	0.00	0.00	0.00
12,900.00	90.00	179.59	10,868.10	-1,304.53	-65.74	1,304.55	0.00	0.00	0.00
13,000.00	90.00	179.59	10,868.10	-1,404.53	-65.02	1,404.54	0.00	0.00	0.00
13,100.00	90.00	179.59	10,868.10	-1,504.53	-64.30	1,504.54	0.00	0.00	0.00
13,200.00	90.00	179.59	10,868.10	-1,604.52	-63.59	1,604.54	0.00	0.00	0.00
13,300.00	90.00	179.59	10,868.10	-1,704.52	-62.87	1,704.54	0.00	0.00	0.00
13,400.00	90.00	179.59	10,868.10	-1,804.52	-62.15	1,804.53	0.00	0.00	0.00
13,500.00	90.00	179.59	10,868.10	-1,904.52	-61.43	1,904.53	0.00	0.00	0.00
13,600.00	90.00	179.59	10,868.10	-2,004.51	-60.71	2,004.53	0.00	0.00	0.00
13,700.00	90.00	179.59	10,868.10	-2,104.51	-59.99	2,104.52	0.00	0.00	0.00
13,800.00	90.00	179.59	10,868.10	-2,204.51	-59.27	2,204.52	0.00	0.00	0.00
13,900.00	90.00	179.59	10,868.10	-2,304.51	-58.55	2,304.52	0.00	0.00	0.00
14,000.00	90.00	179.59	10,868.10	-2,404.50	-57.84	2,404.52	0.00	0.00	0.00
14,100.00	90.00	179.59	10,868.10	-2,504.50	-57.12	2,504.51	0.00	0.00	0.00
14,200.00	90.00	179.59	10,868.10	-2,604.50	-56.40	2,604.51	0.00	0.00	0.00
14,300.00	90.00	179.59	10,868.10	-2,704.50	-55.68	2,704.51	0.00	0.00	0.00
14,400.00	90.00	179.59	10,868.10	-2,804.49	-54.96	2,804.51	0.00	0.00	0.00
14,500.00	90.00	179.59	10,868.10	-2,904.49	-54.24	2,904.50	0.00	0.00	0.00
14,600.00	90.00	179.59	10,868.10	-3,004.49	-53.52	3,004.50	0.00	0.00	0.00
14,700.00	90.00	179.59	10,868.10	-3,104.48	-52.81	3,104.50	0.00	0.00	0.00
14,800.00	90.00	179.59	10,868.10	-3,204.48	-52.09	3,204.49	0.00	0.00	0.00
14,900.00	90.00	179.59	10,868.10	-3,304.48	-51.37	3,304.49	0.00	0.00	0.00
15,000.00	90.00	179.59	10,868.10	-3,404.48	-50.65	3,404.49	0.00	0.00	0.00
15,100.00	90.00	179.59	10,868.10	-3,504.47	-49.93	3,504.49	0.00	0.00	0.00
15,200.00	90.00	179.59	10,868.10	-3,604.47	-49.21	3,604.48	0.00	0.00	0.00
15,300.00	90.00	179.59	10,868.10	-3,704.47	-48.49	3,704.48	0.00	0.00	0.00
15,400.00	90.00	179.59	10,868.10	-3,804.47	-47.77	3,804.48	0.00	0.00	0.00
15,500.00	90.00	179.59	10,868.10	-3,904.46	-47.06	3,904.47	0.00	0.00	0.00
15,600.00	90.00	179.59	10,868.10	-4,004.46	-46.34	4,004.47	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 22H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 22H	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	10,868.10	-4,104.46	-45.62	4,104.47	0.00	0.00	0.00
15,800.00	90.00	179.59	10,868.10	-4,204.46	-44.90	4,204.47	0.00	0.00	0.00
15,900.00	90.00	179.59	10,868.10	-4,304.45	-44.18	4,304.46	0.00	0.00	0.00
16,000.00	90.00	179.59	10,868.10	-4,404.45	-43.46	4,404.46	0.00	0.00	0.00
16,100.00	90.00	179.59	10,868.10	-4,504.45	-42.74	4,504.46	0.00	0.00	0.00
16,200.00	90.00	179.59	10,868.10	-4,604.45	-42.02	4,604.46	0.00	0.00	0.00
16,300.00	90.00	179.59	10,868.10	-4,704.44	-41.31	4,704.45	0.00	0.00	0.00
16,400.00	90.00	179.59	10,868.10	-4,804.44	-40.59	4,804.45	0.00	0.00	0.00
16,500.00	90.00	179.59	10,868.10	-4,904.44	-39.87	4,904.45	0.00	0.00	0.00
16,600.00	90.00	179.59	10,868.10	-5,004.44	-39.15	5,004.44	0.00	0.00	0.00
16,700.00	90.00	179.59	10,868.10	-5,104.43	-38.43	5,104.44	0.00	0.00	0.00
16,800.00	90.00	179.59	10,868.10	-5,204.43	-37.71	5,204.44	0.00	0.00	0.00
16,900.00	90.00	179.59	10,868.10	-5,304.43	-36.99	5,304.44	0.00	0.00	0.00
17,000.00	90.00	179.59	10,868.10	-5,404.43	-36.27	5,404.43	0.00	0.00	0.00
17,100.00	90.00	179.59	10,868.10	-5,504.42	-35.56	5,504.43	0.00	0.00	0.00
17,200.00	90.00	179.59	10,868.10	-5,604.42	-34.84	5,604.43	0.00	0.00	0.00
17,300.00	90.00	179.59	10,868.10	-5,704.42	-34.12	5,704.43	0.00	0.00	0.00
17,400.00	90.00	179.59	10,868.10	-5,804.42	-33.40	5,804.42	0.00	0.00	0.00
17,500.00	90.00	179.59	10,868.10	-5,904.41	-32.68	5,904.42	0.00	0.00	0.00
17,600.00	90.00	179.59	10,868.10	-6,004.41	-31.96	6,004.42	0.00	0.00	0.00
17,700.00	90.00	179.59	10,868.10	-6,104.41	-31.24	6,104.41	0.00	0.00	0.00
17,800.00	90.00	179.59	10,868.10	-6,204.40	-30.53	6,204.41	0.00	0.00	0.00
17,900.00	90.00	179.59	10,868.10	-6,304.40	-29.81	6,304.41	0.00	0.00	0.00
18,000.00	90.00	179.59	10,868.10	-6,404.40	-29.09	6,404.41	0.00	0.00	0.00
18,100.00	90.00	179.59	10,868.10	-6,504.40	-28.37	6,504.40	0.00	0.00	0.00
18,200.00	90.00	179.59	10,868.10	-6,604.39	-27.65	6,604.40	0.00	0.00	0.00
18,300.00	90.00	179.59	10,868.10	-6,704.39	-26.93	6,704.40	0.00	0.00	0.00
18,400.00	90.00	179.59	10,868.10	-6,804.39	-26.21	6,804.40	0.00	0.00	0.00
18,500.00	90.00	179.59	10,868.10	-6,904.39	-25.49	6,904.39	0.00	0.00	0.00
18,600.00	90.00	179.59	10,868.10	-7,004.38	-24.78	7,004.39	0.00	0.00	0.00
18,700.00	90.00	179.59	10,868.10	-7,104.38	-24.06	7,104.39	0.00	0.00	0.00
18,800.00	90.00	179.59	10,868.10	-7,204.38	-23.34	7,204.38	0.00	0.00	0.00
18,900.00	90.00	179.59	10,868.10	-7,304.38	-22.62	7,304.38	0.00	0.00	0.00
19,000.00	90.00	179.59	10,868.10	-7,404.37	-21.90	7,404.38	0.00	0.00	0.00
19,100.00	90.00	179.59	10,868.10	-7,504.37	-21.18	7,504.38	0.00	0.00	0.00
19,200.00	90.00	179.59	10,868.10	-7,604.37	-20.46	7,604.37	0.00	0.00	0.00
19,300.00	90.00	179.59	10,868.10	-7,704.37	-19.74	7,704.37	0.00	0.00	0.00
19,400.00	90.00	179.59	10,868.10	-7,804.36	-19.03	7,804.37	0.00	0.00	0.00
19,500.00	90.00	179.59	10,868.10	-7,904.36	-18.31	7,904.36	0.00	0.00	0.00
19,600.00	90.00	179.59	10,868.10	-8,004.36	-17.59	8,004.36	0.00	0.00	0.00
19,700.00	90.00	179.59	10,868.10	-8,104.36	-16.87	8,104.36	0.00	0.00	0.00
19,800.00	90.00	179.59	10,868.10	-8,204.35	-16.15	8,204.36	0.00	0.00	0.00
19,900.00	90.00	179.59	10,868.10	-8,304.35	-15.43	8,304.35	0.00	0.00	0.00
20,000.00	90.00	179.59	10,868.10	-8,404.35	-14.71	8,404.35	0.00	0.00	0.00
20,100.00	90.00	179.59	10,868.10	-8,504.35	-14.00	8,504.35	0.00	0.00	0.00
20,200.00	90.00	179.59	10,868.10	-8,604.34	-13.28	8,604.35	0.00	0.00	0.00
20,300.00	90.00	179.59	10,868.10	-8,704.34	-12.56	8,704.34	0.00	0.00	0.00
20,400.00	90.00	179.59	10,868.10	-8,804.34	-11.84	8,804.34	0.00	0.00	0.00
20,500.00	90.00	179.59	10,868.10	-8,904.34	-11.12	8,904.34	0.00	0.00	0.00
20,600.00	90.00	179.59	10,868.10	-9,004.33	-10.40	9,004.33	0.00	0.00	0.00
20,700.00	90.00	179.59	10,868.10	-9,104.33	-9.68	9,104.33	0.00	0.00	0.00
20,800.00	90.00	179.59	10,868.10	-9,204.33	-8.96	9,204.33	0.00	0.00	0.00
20,900.00	90.00	179.59	10,868.10	-9,304.32	-8.25	9,304.33	0.00	0.00	0.00
21,000.00	90.00	179.59	10,868.10	-9,404.32	-7.53	9,404.32	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 22H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3733.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3733.10ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 22H	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	10,868.10	-9,504.32	-6.81	9,504.32	0.00	0.00	0.00
21,200.00	90.00	179.59	10,868.10	-9,604.32	-6.09	9,604.32	0.00	0.00	0.00
21,300.00	90.00	179.59	10,868.10	-9,704.31	-5.37	9,704.32	0.00	0.00	0.00
21,400.00	90.00	179.59	10,868.10	-9,804.31	-4.65	9,804.31	0.00	0.00	0.00
21,500.00	90.00	179.59	10,868.10	-9,904.31	-3.93	9,904.31	0.00	0.00	0.00
21,600.00	90.00	179.59	10,868.10	-10,004.31	-3.21	10,004.31	0.00	0.00	0.00
21,700.00	90.00	179.59	10,868.10	-10,104.30	-2.50	10,104.30	0.00	0.00	0.00
21,716.13	90.00	179.59	10,868.10	-10,120.43	-2.38	10,120.43	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	10,868.10	319.36	-77.41	499,014.08	762,946.12	32° 22' 11.339237 N	103° 36' 55.984973
PBHL (Avogato 30-31 - plan hits target center - Point)	0.00	0.00	10,868.10	-10,120.43	-2.38	488,574.67	763,021.15	32° 20' 28.035466 N	103° 36' 55.926274

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,120.00	4,120.00	0.00	0.00	Build 2.00°/100'
4,620.10	4,617.56	43.38	-3.67	Hold 10.00° Tangent
9,476.72	9,400.37	883.89	-74.71	Turn 2.00°/100'
10,476.07	10,394.64	883.60	-81.47	KOP, Build 10.00°/100'
11,276.07	10,868.10	319.36	-77.41	Landing Point
21,716.13	10,868.10	-10,120.43	-2.38	TD at 21716.13' MD