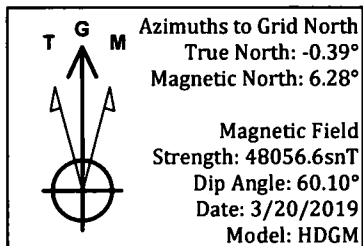




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30.31 STATE COM 34H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

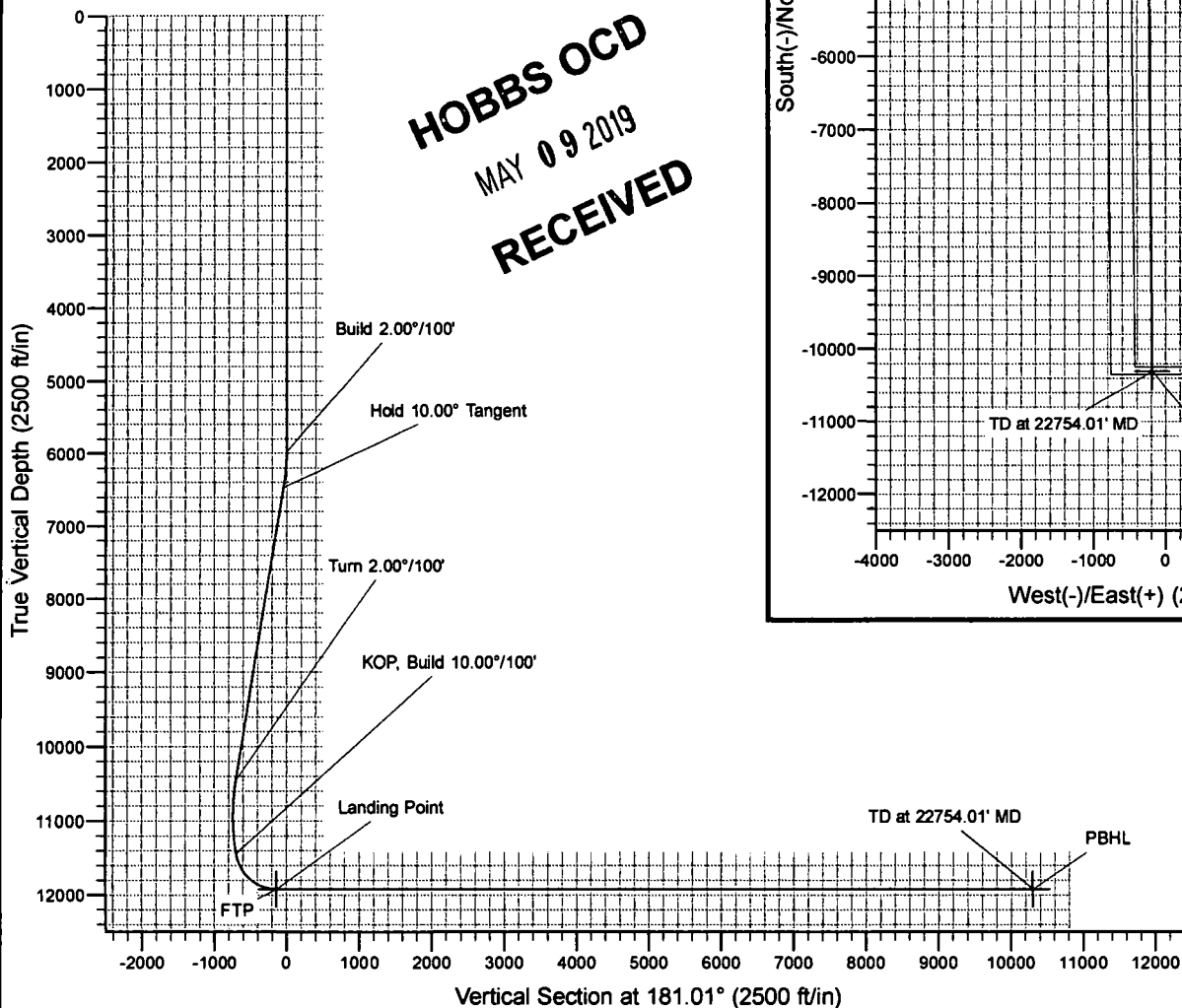
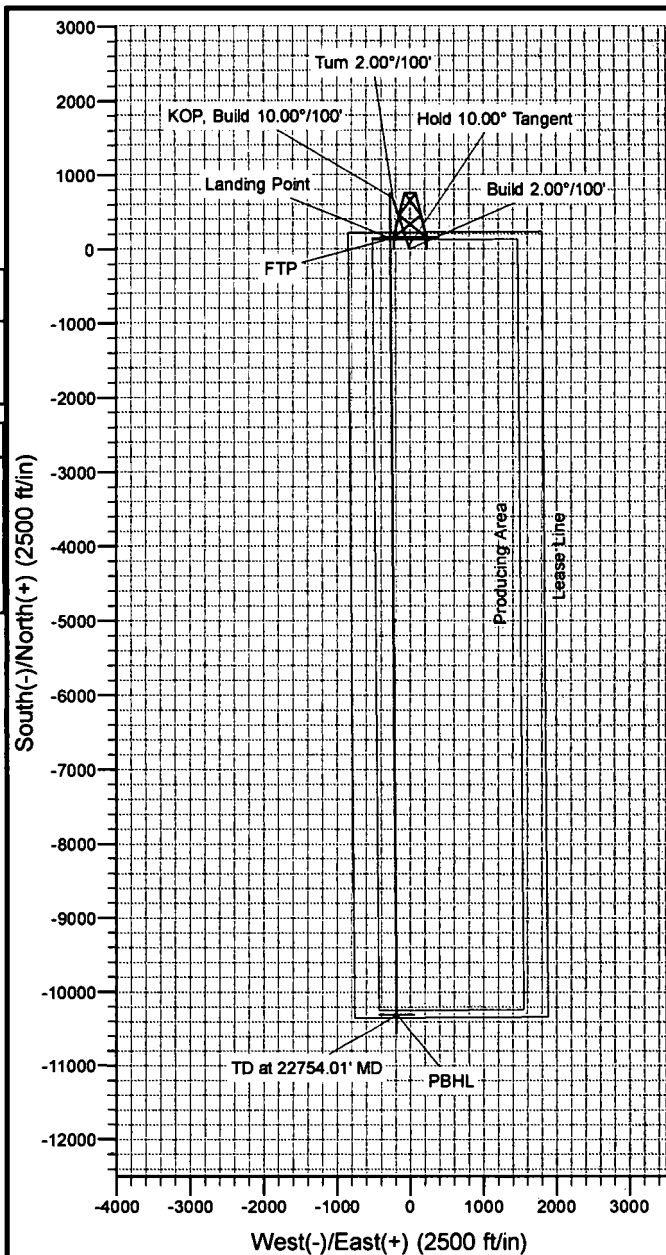


WELL DETAILS: AVOGATO 30.31 STATE COM 34H

+N-S	+E-W	Ground Level	Latitude	Longitude
0.00	0.00	3682.30	32° 22' 9.822332 N	103° 36' 32.214658 W
		Northings		
		Eastings		

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	
5875.00	0.00	0.00	5875.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
6475.03	10.00	341.35	6475.00	41.24	-13.92	2.00	341.35	-40.99	Hold 10.00° Tangent
10526.38	10.00	341.35	10462.29	707.86	-238.89	0.00	0.00	-703.54	Turn 2.00°/100'
11513.68	10.00	179.56	11444.34	703.32	-265.91	2.00	-170.78	-698.53	KOP, Build 10.00°/100'
12313.69	90.00	179.56	11917.80	139.08	-261.59	10.00	0.00	-134.45	Landing Point
22754.01	90.00	179.56	11917.80	-10300.93	-181.59	0.00	0.00	10302.53	TD at 22754.01' MD



HOBBS OCD
 MAY 09 2019
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OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 34H

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 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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 34H		
Well Position	+N/-S	190.10 ft	Northing:
	+E/-W	1,997.25 ft	Easting:
Position Uncertainty		2.00 ft	Wellhead Elevation:
			0.00 ft
			Latitude:
			32° 22' 9.922332 N
			Longitude:
			103° 36' 32.214659 W
			Ground Level:
			3,682.30 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
			(°)
			181.01

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	
5,975.00	0.00	0.00	5,975.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,475.03	10.00	341.35	6,472.50	41.24	-13.92	2.00	2.00	0.00	341.35	
10,526.38	10.00	341.35	10,462.29	707.86	-238.89	0.00	0.00	0.00	0.00	
11,513.69	10.00	179.56	11,444.34	703.32	-265.91	2.00	0.00	-16.39	-170.76	
12,313.69	90.00	179.56	11,917.80	139.08	-261.59	10.00	10.00	0.00	0.00	0.00 FTP (Avogato 30-31
22,754.01	90.00	179.56	11,917.80	-10,300.93	-181.59	0.00	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 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,975.00	0.00	0.00	5,975.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.50	341.35	6,000.00	0.10	-0.03	-0.10	2.00	2.00	0.00
6,100.00	2.50	341.35	6,099.96	2.58	-0.87	-2.57	2.00	2.00	0.00
6,200.00	4.50	341.35	6,199.77	8.37	-2.82	-8.32	2.00	2.00	0.00
6,300.00	6.50	341.35	6,299.30	17.45	-5.89	-17.34	2.00	2.00	0.00
6,400.00	8.50	341.35	6,398.44	29.82	-10.06	-29.63	2.00	2.00	0.00
6,475.03	10.00	341.35	6,472.50	41.24	-13.92	-40.99	2.00	2.00	0.00
6,500.00	10.00	341.35	6,497.09	45.35	-15.31	-45.07	0.00	0.00	0.00
6,600.00	10.00	341.35	6,595.57	61.81	-20.86	-61.43	0.00	0.00	0.00
6,700.00	10.00	341.35	6,694.05	78.26	-26.41	-77.78	0.00	0.00	0.00
6,800.00	10.00	341.35	6,792.53	94.71	-31.96	-94.14	0.00	0.00	0.00
6,900.00	10.00	341.35	6,891.01	111.17	-37.52	-110.49	0.00	0.00	0.00
7,000.00	10.00	341.35	6,989.49	127.62	-43.07	-126.84	0.00	0.00	0.00
7,100.00	10.00	341.35	7,087.97	144.08	-48.62	-143.20	0.00	0.00	0.00
7,200.00	10.00	341.35	7,186.45	160.53	-54.18	-159.55	0.00	0.00	0.00
7,300.00	10.00	341.35	7,284.93	176.98	-59.73	-175.90	0.00	0.00	0.00
7,400.00	10.00	341.35	7,383.41	193.44	-65.28	-192.26	0.00	0.00	0.00
7,500.00	10.00	341.35	7,481.89	209.89	-70.83	-208.61	0.00	0.00	0.00
7,600.00	10.00	341.35	7,580.37	226.35	-76.39	-224.97	0.00	0.00	0.00
7,700.00	10.00	341.35	7,678.85	242.80	-81.94	-241.32	0.00	0.00	0.00
7,800.00	10.00	341.35	7,777.33	259.26	-87.49	-257.67	0.00	0.00	0.00
7,900.00	10.00	341.35	7,875.81	275.71	-93.05	-274.03	0.00	0.00	0.00
8,000.00	10.00	341.35	7,974.29	292.16	-98.60	-290.38	0.00	0.00	0.00
8,100.00	10.00	341.35	8,072.77	308.62	-104.15	-306.73	0.00	0.00	0.00
8,200.00	10.00	341.35	8,171.26	325.07	-109.71	-323.09	0.00	0.00	0.00
8,300.00	10.00	341.35	8,269.74	341.53	-115.26	-339.44	0.00	0.00	0.00
8,400.00	10.00	341.35	8,368.22	357.98	-120.81	-355.80	0.00	0.00	0.00
8,500.00	10.00	341.35	8,466.70	374.43	-126.36	-372.15	0.00	0.00	0.00
8,600.00	10.00	341.35	8,565.18	390.89	-131.92	-388.50	0.00	0.00	0.00
8,700.00	10.00	341.35	8,663.66	407.34	-137.47	-404.86	0.00	0.00	0.00
8,800.00	10.00	341.35	8,762.14	423.80	-143.02	-421.21	0.00	0.00	0.00
8,900.00	10.00	341.35	8,860.62	440.25	-148.58	-437.56	0.00	0.00	0.00
9,000.00	10.00	341.35	8,959.10	456.71	-154.13	-453.92	0.00	0.00	0.00
9,100.00	10.00	341.35	9,057.58	473.16	-159.68	-470.27	0.00	0.00	0.00
9,200.00	10.00	341.35	9,156.06	489.61	-165.24	-486.63	0.00	0.00	0.00
9,300.00	10.00	341.35	9,254.54	506.07	-170.79	-502.98	0.00	0.00	0.00
9,400.00	10.00	341.35	9,353.02	522.52	-176.34	-519.33	0.00	0.00	0.00
9,500.00	10.00	341.35	9,451.50	538.98	-181.89	-535.69	0.00	0.00	0.00
9,600.00	10.00	341.35	9,549.98	555.43	-187.45	-552.04	0.00	0.00	0.00
9,700.00	10.00	341.35	9,648.46	571.88	-193.00	-568.39	0.00	0.00	0.00
9,800.00	10.00	341.35	9,746.94	588.34	-198.55	-584.75	0.00	0.00	0.00
9,900.00	10.00	341.35	9,845.43	604.79	-204.11	-601.10	0.00	0.00	0.00
10,000.00	10.00	341.35	9,943.91	621.25	-209.66	-617.46	0.00	0.00	0.00
10,100.00	10.00	341.35	10,042.39	637.70	-215.21	-633.81	0.00	0.00	0.00
10,200.00	10.00	341.35	10,140.87	654.16	-220.77	-650.16	0.00	0.00	0.00
10,300.00	10.00	341.35	10,239.35	670.61	-226.32	-666.52	0.00	0.00	0.00
10,400.00	10.00	341.35	10,337.83	687.06	-231.87	-682.87	0.00	0.00	0.00
10,500.00	10.00	341.35	10,436.31	703.52	-237.42	-699.22	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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)
10,526.38	10.00	341.35	10,462.29	707.86	-238.89	-703.54	0.00	0.00	0.00
10,600.00	8.55	339.76	10,534.94	719.05	-242.83	-714.66	2.00	-1.97	-2.16
10,700.00	6.60	336.49	10,634.07	731.30	-247.69	-726.82	2.00	-1.95	-3.27
10,800.00	4.68	330.54	10,733.58	740.12	-251.99	-735.56	2.00	-1.92	-5.96
10,900.00	2.88	316.82	10,833.36	745.51	-255.72	-740.88	2.00	-1.80	-13.71
11,000.00	1.65	274.54	10,933.29	747.45	-258.87	-742.78	2.00	-1.24	-42.28
11,100.00	2.26	215.43	11,033.24	745.96	-261.45	-741.24	2.00	0.61	-59.11
11,200.00	3.94	194.37	11,133.09	741.03	-263.45	-736.27	2.00	1.68	-21.06
11,300.00	5.82	186.34	11,232.72	732.66	-264.86	-727.88	2.00	1.88	-8.03
11,400.00	7.76	182.26	11,332.02	720.87	-265.69	-716.07	2.00	1.94	-4.07
11,500.00	9.73	179.82	11,430.85	705.67	-265.93	-700.87	2.00	1.97	-2.44
11,513.69	10.00	179.56	11,444.34	703.32	-265.91	-698.53	2.00	1.97	-1.90
11,600.00	18.63	179.56	11,527.89	682.00	-265.75	-677.21	10.00	10.00	0.00
11,700.00	28.63	179.56	11,619.39	641.97	-265.44	-637.19	10.00	10.00	0.00
11,800.00	38.63	179.56	11,702.54	586.66	-265.02	-581.89	10.00	10.00	0.00
11,900.00	48.63	179.56	11,774.83	517.74	-264.49	-513.00	10.00	10.00	0.00
12,000.00	58.63	179.56	11,834.05	437.33	-263.87	-432.61	10.00	10.00	0.00
12,100.00	68.63	179.56	11,878.41	347.85	-263.19	-343.16	10.00	10.00	0.00
12,200.00	78.63	179.56	11,906.56	252.03	-262.45	-247.36	10.00	10.00	0.00
12,300.00	88.63	179.56	11,917.64	152.77	-261.69	-148.14	10.00	10.00	0.00
12,313.69	90.00	179.56	11,917.80	139.08	-261.59	-134.45	10.00	10.00	0.00
12,400.00	90.00	179.56	11,917.80	52.78	-260.93	-48.17	0.00	0.00	0.00
12,500.00	90.00	179.56	11,917.80	-47.22	-260.16	51.80	0.00	0.00	0.00
12,600.00	90.00	179.56	11,917.80	-147.22	-259.40	151.77	0.00	0.00	0.00
12,700.00	90.00	179.56	11,917.80	-247.22	-258.63	251.73	0.00	0.00	0.00
12,800.00	90.00	179.56	11,917.80	-347.21	-257.86	351.70	0.00	0.00	0.00
12,900.00	90.00	179.56	11,917.80	-447.21	-257.10	451.67	0.00	0.00	0.00
13,000.00	90.00	179.56	11,917.80	-547.21	-256.33	551.64	0.00	0.00	0.00
13,100.00	90.00	179.56	11,917.80	-647.20	-255.56	651.61	0.00	0.00	0.00
13,200.00	90.00	179.56	11,917.80	-747.20	-254.80	751.58	0.00	0.00	0.00
13,300.00	90.00	179.56	11,917.80	-847.20	-254.03	851.54	0.00	0.00	0.00
13,400.00	90.00	179.56	11,917.80	-947.19	-253.27	951.51	0.00	0.00	0.00
13,500.00	90.00	179.56	11,917.80	-1,047.19	-252.50	1,051.48	0.00	0.00	0.00
13,600.00	90.00	179.56	11,917.80	-1,147.19	-251.73	1,151.45	0.00	0.00	0.00
13,700.00	90.00	179.56	11,917.80	-1,247.19	-250.97	1,251.42	0.00	0.00	0.00
13,800.00	90.00	179.56	11,917.80	-1,347.18	-250.20	1,351.38	0.00	0.00	0.00
13,900.00	90.00	179.56	11,917.80	-1,447.18	-249.43	1,451.35	0.00	0.00	0.00
14,000.00	90.00	179.56	11,917.80	-1,547.18	-248.67	1,551.32	0.00	0.00	0.00
14,100.00	90.00	179.56	11,917.80	-1,647.17	-247.90	1,651.29	0.00	0.00	0.00
14,200.00	90.00	179.56	11,917.80	-1,747.17	-247.13	1,751.26	0.00	0.00	0.00
14,300.00	90.00	179.56	11,917.80	-1,847.17	-246.37	1,851.22	0.00	0.00	0.00
14,400.00	90.00	179.56	11,917.80	-1,947.17	-245.60	1,951.19	0.00	0.00	0.00
14,500.00	90.00	179.56	11,917.80	-2,047.16	-244.84	2,051.16	0.00	0.00	0.00
14,600.00	90.00	179.56	11,917.80	-2,147.16	-244.07	2,151.13	0.00	0.00	0.00
14,700.00	90.00	179.56	11,917.80	-2,247.16	-243.30	2,251.10	0.00	0.00	0.00
14,800.00	90.00	179.56	11,917.80	-2,347.15	-242.54	2,351.06	0.00	0.00	0.00
14,900.00	90.00	179.56	11,917.80	-2,447.15	-241.77	2,451.03	0.00	0.00	0.00
15,000.00	90.00	179.56	11,917.80	-2,547.15	-241.00	2,551.00	0.00	0.00	0.00
15,100.00	90.00	179.56	11,917.80	-2,647.14	-240.24	2,650.97	0.00	0.00	0.00
15,200.00	90.00	179.56	11,917.80	-2,747.14	-239.47	2,750.94	0.00	0.00	0.00
15,300.00	90.00	179.56	11,917.80	-2,847.14	-238.71	2,850.90	0.00	0.00	0.00
15,400.00	90.00	179.56	11,917.80	-2,947.14	-237.94	2,950.87	0.00	0.00	0.00
15,500.00	90.00	179.56	11,917.80	-3,047.13	-237.17	3,050.84	0.00	0.00	0.00
15,600.00	90.00	179.56	11,917.80	-3,147.13	-236.41	3,150.81	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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	11,917.80	-3,247.13	-235.64	3,250.78	0.00	0.00	0.00
15,800.00	90.00	179.56	11,917.80	-3,347.12	-234.87	3,350.74	0.00	0.00	0.00
15,900.00	90.00	179.56	11,917.80	-3,447.12	-234.11	3,450.71	0.00	0.00	0.00
16,000.00	90.00	179.56	11,917.80	-3,547.12	-233.34	3,550.68	0.00	0.00	0.00
16,100.00	90.00	179.56	11,917.80	-3,647.12	-232.58	3,650.65	0.00	0.00	0.00
16,200.00	90.00	179.56	11,917.80	-3,747.11	-231.81	3,750.62	0.00	0.00	0.00
16,300.00	90.00	179.56	11,917.80	-3,847.11	-231.04	3,850.58	0.00	0.00	0.00
16,400.00	90.00	179.56	11,917.80	-3,947.11	-230.28	3,950.55	0.00	0.00	0.00
16,500.00	90.00	179.56	11,917.80	-4,047.10	-229.51	4,050.52	0.00	0.00	0.00
16,600.00	90.00	179.56	11,917.80	-4,147.10	-228.74	4,150.49	0.00	0.00	0.00
16,700.00	90.00	179.56	11,917.80	-4,247.10	-227.98	4,250.46	0.00	0.00	0.00
16,800.00	90.00	179.56	11,917.80	-4,347.09	-227.21	4,350.42	0.00	0.00	0.00
16,900.00	90.00	179.56	11,917.80	-4,447.09	-226.44	4,450.39	0.00	0.00	0.00
17,000.00	90.00	179.56	11,917.80	-4,547.09	-225.68	4,550.36	0.00	0.00	0.00
17,100.00	90.00	179.56	11,917.80	-4,647.09	-224.91	4,650.33	0.00	0.00	0.00
17,200.00	90.00	179.56	11,917.80	-4,747.08	-224.15	4,750.30	0.00	0.00	0.00
17,300.00	90.00	179.56	11,917.80	-4,847.08	-223.38	4,850.26	0.00	0.00	0.00
17,400.00	90.00	179.56	11,917.80	-4,947.08	-222.61	4,950.23	0.00	0.00	0.00
17,500.00	90.00	179.56	11,917.80	-5,047.07	-221.85	5,050.20	0.00	0.00	0.00
17,600.00	90.00	179.56	11,917.80	-5,147.07	-221.08	5,150.17	0.00	0.00	0.00
17,700.00	90.00	179.56	11,917.80	-5,247.07	-220.31	5,250.14	0.00	0.00	0.00
17,800.00	90.00	179.56	11,917.80	-5,347.07	-219.55	5,350.10	0.00	0.00	0.00
17,900.00	90.00	179.56	11,917.80	-5,447.06	-218.78	5,450.07	0.00	0.00	0.00
18,000.00	90.00	179.56	11,917.80	-5,547.06	-218.02	5,550.04	0.00	0.00	0.00
18,100.00	90.00	179.56	11,917.80	-5,647.06	-217.25	5,650.01	0.00	0.00	0.00
18,200.00	90.00	179.56	11,917.80	-5,747.05	-216.48	5,749.98	0.00	0.00	0.00
18,300.00	90.00	179.56	11,917.80	-5,847.05	-215.72	5,849.94	0.00	0.00	0.00
18,400.00	90.00	179.56	11,917.80	-5,947.05	-214.95	5,949.91	0.00	0.00	0.00
18,500.00	90.00	179.56	11,917.80	-6,047.04	-214.18	6,049.88	0.00	0.00	0.00
18,600.00	90.00	179.56	11,917.80	-6,147.04	-213.42	6,149.85	0.00	0.00	0.00
18,700.00	90.00	179.56	11,917.80	-6,247.04	-212.65	6,249.82	0.00	0.00	0.00
18,800.00	90.00	179.56	11,917.80	-6,347.04	-211.89	6,349.78	0.00	0.00	0.00
18,900.00	90.00	179.56	11,917.80	-6,447.03	-211.12	6,449.75	0.00	0.00	0.00
19,000.00	90.00	179.56	11,917.80	-6,547.03	-210.35	6,549.72	0.00	0.00	0.00
19,100.00	90.00	179.56	11,917.80	-6,647.03	-209.59	6,649.69	0.00	0.00	0.00
19,200.00	90.00	179.56	11,917.80	-6,747.02	-208.82	6,749.66	0.00	0.00	0.00
19,300.00	90.00	179.56	11,917.80	-6,847.02	-208.05	6,849.62	0.00	0.00	0.00
19,400.00	90.00	179.56	11,917.80	-6,947.02	-207.29	6,949.59	0.00	0.00	0.00
19,500.00	90.00	179.56	11,917.80	-7,047.02	-206.52	7,049.56	0.00	0.00	0.00
19,600.00	90.00	179.56	11,917.80	-7,147.01	-205.76	7,149.53	0.00	0.00	0.00
19,700.00	90.00	179.56	11,917.80	-7,247.01	-204.99	7,249.50	0.00	0.00	0.00
19,800.00	90.00	179.56	11,917.80	-7,347.01	-204.22	7,349.46	0.00	0.00	0.00
19,900.00	90.00	179.56	11,917.80	-7,447.00	-203.46	7,449.43	0.00	0.00	0.00
20,000.00	90.00	179.56	11,917.80	-7,547.00	-202.69	7,549.40	0.00	0.00	0.00
20,100.00	90.00	179.56	11,917.80	-7,647.00	-201.92	7,649.37	0.00	0.00	0.00
20,200.00	90.00	179.56	11,917.80	-7,747.00	-201.16	7,749.34	0.00	0.00	0.00
20,300.00	90.00	179.56	11,917.80	-7,846.99	-200.39	7,849.31	0.00	0.00	0.00
20,400.00	90.00	179.56	11,917.80	-7,946.99	-199.62	7,949.27	0.00	0.00	0.00
20,500.00	90.00	179.56	11,917.80	-8,046.99	-198.86	8,049.24	0.00	0.00	0.00
20,600.00	90.00	179.56	11,917.80	-8,146.98	-198.09	8,149.21	0.00	0.00	0.00
20,700.00	90.00	179.56	11,917.80	-8,246.98	-197.33	8,249.18	0.00	0.00	0.00
20,800.00	90.00	179.56	11,917.80	-8,346.98	-196.56	8,349.15	0.00	0.00	0.00
20,900.00	90.00	179.56	11,917.80	-8,446.97	-195.79	8,449.11	0.00	0.00	0.00
21,000.00	90.00	179.56	11,917.80	-8,546.97	-195.03	8,549.08	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3708.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3708.80ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 34H	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	11,917.80	-8,646.97	-194.26	8,649.05	0.00	0.00	0.00
21,200.00	90.00	179.56	11,917.80	-8,746.97	-193.49	8,749.02	0.00	0.00	0.00
21,300.00	90.00	179.56	11,917.80	-8,846.96	-192.73	8,848.99	0.00	0.00	0.00
21,400.00	90.00	179.56	11,917.80	-8,946.96	-191.96	8,948.95	0.00	0.00	0.00
21,500.00	90.00	179.56	11,917.80	-9,046.96	-191.20	9,048.92	0.00	0.00	0.00
21,600.00	90.00	179.56	11,917.80	-9,146.95	-190.43	9,148.89	0.00	0.00	0.00
21,700.00	90.00	179.56	11,917.80	-9,246.95	-189.66	9,248.86	0.00	0.00	0.00
21,800.00	90.00	179.56	11,917.80	-9,346.95	-188.90	9,348.83	0.00	0.00	0.00
21,900.00	90.00	179.56	11,917.80	-9,446.95	-188.13	9,448.79	0.00	0.00	0.00
22,000.00	90.00	179.56	11,917.80	-9,546.94	-187.36	9,548.76	0.00	0.00	0.00
22,100.00	90.00	179.56	11,917.80	-9,646.94	-186.60	9,648.73	0.00	0.00	0.00
22,200.00	90.00	179.56	11,917.80	-9,746.94	-185.83	9,748.70	0.00	0.00	0.00
22,300.00	90.00	179.56	11,917.80	-9,846.93	-185.07	9,848.67	0.00	0.00	0.00
22,400.00	90.00	179.56	11,917.80	-9,946.93	-184.30	9,948.63	0.00	0.00	0.00
22,500.00	90.00	179.56	11,917.80	-10,046.93	-183.53	10,048.60	0.00	0.00	0.00
22,600.00	90.00	179.56	11,917.80	-10,146.92	-182.77	10,148.57	0.00	0.00	0.00
22,700.00	90.00	179.56	11,917.80	-10,246.92	-182.00	10,248.54	0.00	0.00	0.00
22,754.01	90.00	179.56	11,917.80	-10,300.93	-181.59	10,302.53	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
PBHL (Avogato 30-31 - hit/miss target - Shape - Point)	0.00	0.00	11,917.80	-10,300.93	-181.59	488,584.07	764,804.13	32° 20' 28.009757 N	103° 36' 35.143500
FTP (Avogato 30-31 - plan hits target center - Point)	0.00	0.00	11,917.80	139.08	-261.59	499,023.71	764,724.13	32° 22' 11.316045 N	103° 36' 35.253563

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
5,975.00	5,975.00	0.00	0.00	Build 2.00°/100'
6,475.03	6,472.50	41.24	-13.92	Hold 10.00° Tangent
10,526.38	10,462.29	707.86	-238.89	Turn 2.00°/100'
11,513.69	11,444.34	703.32	-265.91	KOP, Build 10.00°/100'
12,313.69	11,917.80	139.08	-261.59	Landing Point
22,754.01	11,917.80	-10,300.93	-181.59	TD at 22754.01' MD