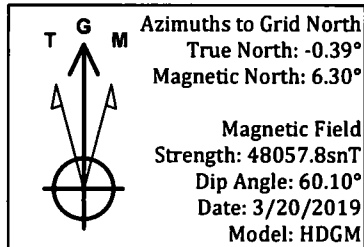




Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Avogato 30-31
 Well: AVOGATO 30_31 STATE COM 33H
 Wellbore: Wellbore #1
 Design: Permitting Plan

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

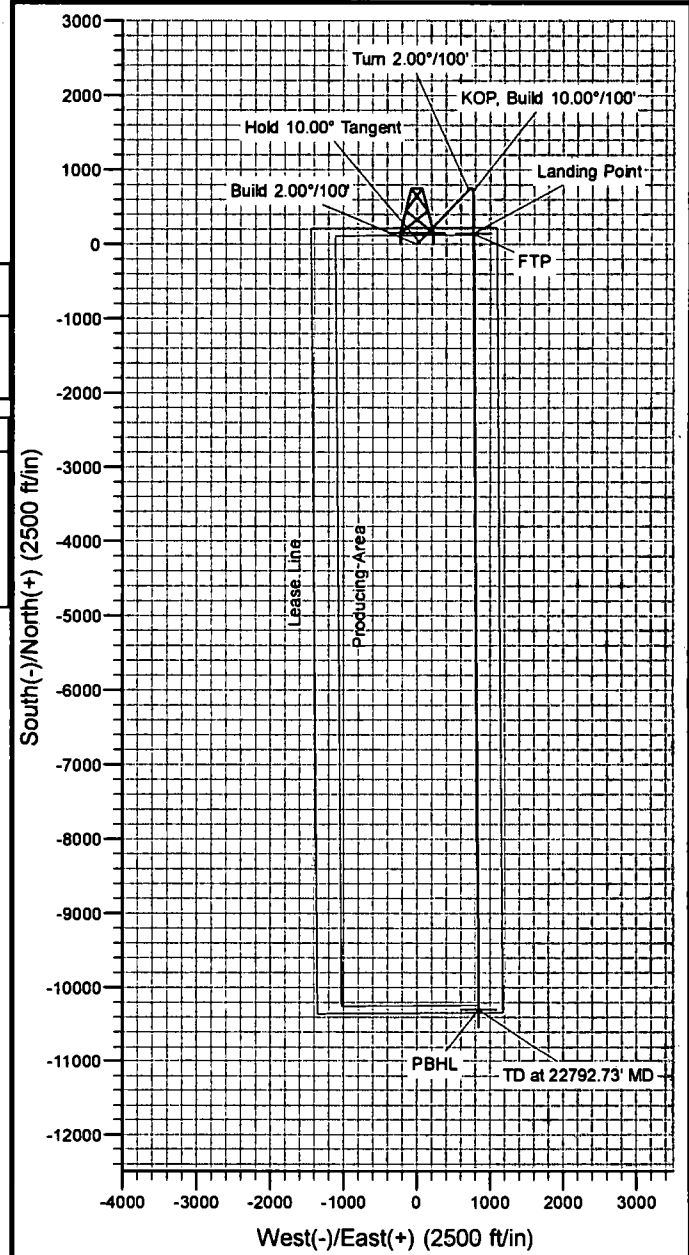
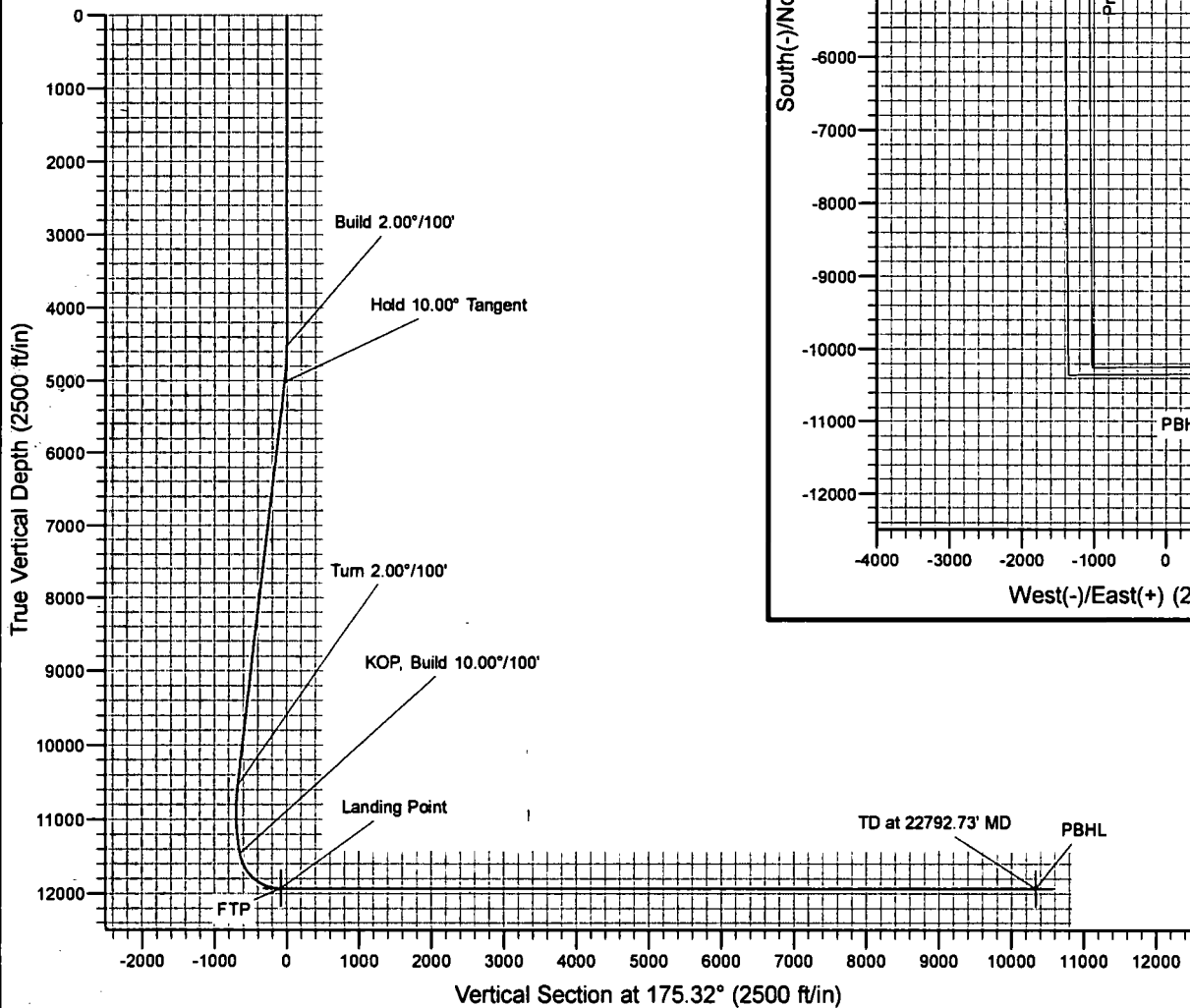


WELL DETAILS: AVOGATO 30_31 STATE COM 33H

+N-S	+E-W	Ground Level:	3701.70	Latitude	Longitude
0.00	0.00	Northing	498874.83	32° 22' 9.954942 N	103° 36' 54.696845 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VFace	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4520.00	0.00	0.00	4520.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
5020.05	10.00	44.07	5017.51	31.28	30.28	2.00	44.07	-28.70	Hold 10.00° Tangent
10827.57	10.00	44.07	10539.83	730.98	707.81	0.00	0.00	-870.74	Turn 2.00°/100'
11552.53	10.00	179.59	11458.74	708.16	764.54	2.00	157.45	-643.36	KOP, Build 10.00°/100'
12352.53	90.00	179.59	11932.20	143.93	768.60	10.00	0.00	-80.68	Landing Point
22792.73	90.00	179.59	11932.20	-10296.00	843.62	0.00	0.00	10330.50	TD at 22792.73' MD



OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Avogato 30-31

AVOGATO 30_31 STATE COM 33H

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 33H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference: Well AVOGATO 30_31 STATE COM 33H
TVD Reference: RKB=26.5' @ 3728.20ft
MD Reference: RKB=26.5' @ 3728.20ft
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 33H			
Well Position	+N/-S	180.40 ft	Northing:	498,874.93 usft
	+E/-W	69.02 ft	Easting:	763,057.55 usft
Position Uncertainty	2.00 ft	Wellhead Elevation:	0.00 ft	Ground Level: 3,701.70 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	175.32

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	
4,520.00	0.00	0.00	4,520.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,020.05	10.00	44.07	5,017.51	31.28	30.28	2.00	2.00	0.00	44.07	
10,627.57	10.00	44.07	10,539.83	730.96	707.61	0.00	0.00	0.00	0.00	
11,552.53	10.00	179.59	11,458.74	708.16	764.54	2.00	0.00	14.65	157.45	
12,352.53	90.00	179.59	11,932.20	143.93	768.60	10.00	10.00	0.00	0.00	FTP (Avogato 30-31)
22,792.73	90.00	179.59	11,932.20	-10,296.00	843.62	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 33H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3728.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3728.20ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 33H	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
4,520.00	0.00	0.00	4,520.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	1.60	44.07	4,599.99	0.80	0.78	-0.74	2.00	2.00	0.00
4,700.00	3.60	44.07	4,699.88	4.06	3.93	-3.73	2.00	2.00	0.00
4,800.00	5.60	44.07	4,799.55	9.82	9.51	-9.01	2.00	2.00	0.00
4,900.00	7.60	44.07	4,898.89	18.08	17.50	-16.59	2.00	2.00	0.00
5,000.00	9.60	44.07	4,997.76	28.82	27.90	-26.45	2.00	2.00	0.00
5,020.05	10.00	44.07	5,017.51	31.28	30.28	-28.70	2.00	2.00	0.00
5,100.00	10.00	44.07	5,096.25	41.25	39.93	-37.85	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 33H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3728.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3728.20ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 33H	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	44.07	5,194.73	53.73	52.01	-49.30	0.00	0.00	0.00
5,300.00	10.00	44.07	5,293.21	66.21	64.09	-60.75	0.00	0.00	0.00
5,400.00	10.00	44.07	5,391.69	78.69	76.17	-72.20	0.00	0.00	0.00
5,500.00	10.00	44.07	5,490.17	91.16	88.25	-83.65	0.00	0.00	0.00
5,600.00	10.00	44.07	5,588.65	103.64	100.33	-95.10	0.00	0.00	0.00
5,700.00	10.00	44.07	5,687.13	116.12	112.41	-106.55	0.00	0.00	0.00
5,800.00	10.00	44.07	5,785.61	128.60	124.49	-118.00	0.00	0.00	0.00
5,900.00	10.00	44.07	5,884.09	141.07	136.57	-129.45	0.00	0.00	0.00
6,000.00	10.00	44.07	5,982.57	153.55	148.65	-140.90	0.00	0.00	0.00
6,100.00	10.00	44.07	6,081.05	166.03	160.72	-152.35	0.00	0.00	0.00
6,200.00	10.00	44.07	6,179.54	178.51	172.80	-163.80	0.00	0.00	0.00
6,300.00	10.00	44.07	6,278.02	190.98	184.88	-175.25	0.00	0.00	0.00
6,400.00	10.00	44.07	6,376.50	203.46	196.96	-186.70	0.00	0.00	0.00
6,500.00	10.00	44.07	6,474.98	215.94	209.04	-198.15	0.00	0.00	0.00
6,600.00	10.00	44.07	6,573.46	228.42	221.12	-209.60	0.00	0.00	0.00
6,700.00	10.00	44.07	6,671.94	240.89	233.20	-221.05	0.00	0.00	0.00
6,800.00	10.00	44.07	6,770.42	253.37	245.28	-232.50	0.00	0.00	0.00
6,900.00	10.00	44.07	6,868.90	265.85	257.36	-243.95	0.00	0.00	0.00
7,000.00	10.00	44.07	6,967.38	278.33	269.43	-255.40	0.00	0.00	0.00
7,100.00	10.00	44.07	7,065.86	290.81	281.51	-266.84	0.00	0.00	0.00
7,200.00	10.00	44.07	7,164.34	303.28	293.59	-278.29	0.00	0.00	0.00
7,300.00	10.00	44.07	7,262.82	315.76	305.67	-289.74	0.00	0.00	0.00
7,400.00	10.00	44.07	7,361.30	328.24	317.75	-301.19	0.00	0.00	0.00
7,500.00	10.00	44.07	7,459.78	340.72	329.83	-312.64	0.00	0.00	0.00
7,600.00	10.00	44.07	7,558.26	353.19	341.91	-324.09	0.00	0.00	0.00
7,700.00	10.00	44.07	7,656.74	365.67	353.99	-335.54	0.00	0.00	0.00
7,800.00	10.00	44.07	7,755.22	378.15	366.07	-346.99	0.00	0.00	0.00
7,900.00	10.00	44.07	7,853.70	390.63	378.15	-358.44	0.00	0.00	0.00
8,000.00	10.00	44.07	7,952.18	403.10	390.22	-369.89	0.00	0.00	0.00
8,100.00	10.00	44.07	8,050.66	415.58	402.30	-381.34	0.00	0.00	0.00
8,200.00	10.00	44.07	8,149.15	428.06	414.38	-392.79	0.00	0.00	0.00
8,300.00	10.00	44.07	8,247.63	440.54	426.46	-404.24	0.00	0.00	0.00
8,400.00	10.00	44.07	8,346.11	453.01	438.54	-415.69	0.00	0.00	0.00
8,500.00	10.00	44.07	8,444.59	465.49	450.62	-427.14	0.00	0.00	0.00
8,600.00	10.00	44.07	8,543.07	477.97	462.70	-438.59	0.00	0.00	0.00
8,700.00	10.00	44.07	8,641.55	490.45	474.78	-450.04	0.00	0.00	0.00
8,800.00	10.00	44.07	8,740.03	502.93	486.86	-461.49	0.00	0.00	0.00
8,900.00	10.00	44.07	8,838.51	515.40	498.94	-472.94	0.00	0.00	0.00
9,000.00	10.00	44.07	8,936.99	527.88	511.01	-484.39	0.00	0.00	0.00
9,100.00	10.00	44.07	9,035.47	540.36	523.09	-495.84	0.00	0.00	0.00
9,200.00	10.00	44.07	9,133.95	552.84	535.17	-507.29	0.00	0.00	0.00
9,300.00	10.00	44.07	9,232.43	565.31	547.25	-518.73	0.00	0.00	0.00
9,400.00	10.00	44.07	9,330.91	577.79	559.33	-530.18	0.00	0.00	0.00
9,500.00	10.00	44.07	9,429.39	590.27	571.41	-541.63	0.00	0.00	0.00
9,600.00	10.00	44.07	9,527.87	602.75	583.49	-553.08	0.00	0.00	0.00
9,700.00	10.00	44.07	9,626.35	615.22	595.57	-564.53	0.00	0.00	0.00
9,800.00	10.00	44.07	9,724.83	627.70	607.65	-575.98	0.00	0.00	0.00
9,900.00	10.00	44.07	9,823.31	640.18	619.72	-587.43	0.00	0.00	0.00
10,000.00	10.00	44.07	9,921.79	652.66	631.80	-598.88	0.00	0.00	0.00
10,100.00	10.00	44.07	10,020.27	665.13	643.88	-610.33	0.00	0.00	0.00
10,200.00	10.00	44.07	10,118.76	677.61	655.96	-621.78	0.00	0.00	0.00
10,300.00	10.00	44.07	10,217.24	690.09	668.04	-633.23	0.00	0.00	0.00
10,400.00	10.00	44.07	10,315.72	702.57	680.12	-644.68	0.00	0.00	0.00
10,500.00	10.00	44.07	10,414.20	715.04	692.20	-656.13	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well AVOGATO 30_31 STATE COM 33H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3728.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3728.20ft
Site:	Avogato 30-31	North Reference:	Grid
Well:	AVOGATO 30_31 STATE COM 33H	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	44.07	10,512.68	727.52	704.28	-667.58	0.00	0.00	0.00
10,627.57	10.00	44.07	10,539.83	730.96	707.61	-670.74	0.00	0.00	0.00
10,700.00	8.68	47.75	10,611.30	739.16	716.03	-678.21	2.00	-1.82	5.08
10,800.00	6.94	55.07	10,710.37	747.69	726.57	-685.86	2.00	-1.74	7.32
10,900.00	5.39	66.89	10,809.79	752.99	735.84	-690.39	2.00	-1.56	11.82
11,000.00	4.22	86.55	10,909.44	755.06	743.83	-691.79	2.00	-1.16	19.65
11,100.00	3.82	114.81	11,009.21	753.88	750.54	-690.07	2.00	-0.40	28.26
11,200.00	4.41	141.79	11,108.96	749.46	755.94	-685.23	2.00	0.58	26.98
11,300.00	5.67	159.62	11,208.58	741.81	760.04	-677.27	2.00	1.27	17.82
11,400.00	7.28	170.31	11,307.94	730.93	762.82	-666.20	2.00	1.60	10.70
11,500.00	9.04	177.02	11,406.93	716.85	764.30	-652.04	2.00	1.76	6.71
11,552.53	10.00	179.59	11,458.74	708.16	764.54	-643.36	2.00	1.83	4.88
11,600.00	14.75	179.59	11,505.09	698.00	764.62	-633.22	10.00	10.00	0.00
11,700.00	24.75	179.59	11,599.09	664.25	764.86	-599.57	10.00	10.00	0.00
11,800.00	34.75	179.59	11,685.80	614.70	765.22	-550.16	10.00	10.00	0.00
11,900.00	44.75	179.59	11,762.59	550.85	765.67	-486.48	10.00	10.00	0.00
12,000.00	54.75	179.59	11,827.12	474.62	766.22	-410.47	10.00	10.00	0.00
12,100.00	64.75	179.59	11,877.44	388.36	766.84	-324.44	10.00	10.00	0.00
12,200.00	74.75	179.59	11,912.02	294.66	767.51	-231.00	10.00	10.00	0.00
12,300.00	84.75	179.59	11,929.79	196.38	768.22	-132.99	10.00	10.00	0.00
12,352.53	90.00	179.59	11,932.20	143.93	768.60	-80.68	10.00	10.00	0.00
12,400.00	90.00	179.59	11,932.20	96.46	768.94	-33.34	0.00	0.00	0.00
12,500.00	90.00	179.59	11,932.20	-3.54	769.66	66.38	0.00	0.00	0.00
12,600.00	90.00	179.59	11,932.20	-103.53	770.38	166.10	0.00	0.00	0.00
12,700.00	90.00	179.59	11,932.20	-203.53	771.10	265.82	0.00	0.00	0.00
12,800.00	90.00	179.59	11,932.20	-303.53	771.81	365.54	0.00	0.00	0.00
12,900.00	90.00	179.59	11,932.20	-403.53	772.53	465.27	0.00	0.00	0.00
13,000.00	90.00	179.59	11,932.20	-503.52	773.25	564.99	0.00	0.00	0.00
13,100.00	90.00	179.59	11,932.20	-603.52	773.97	664.71	0.00	0.00	0.00
13,200.00	90.00	179.59	11,932.20	-703.52	774.69	764.43	0.00	0.00	0.00
13,300.00	90.00	179.59	11,932.20	-803.52	775.41	864.15	0.00	0.00	0.00
13,400.00	90.00	179.59	11,932.20	-903.51	776.13	963.88	0.00	0.00	0.00
13,500.00	90.00	179.59	11,932.20	-1,003.51	776.84	1,063.60	0.00	0.00	0.00
13,600.00	90.00	179.59	11,932.20	-1,103.51	777.56	1,163.32	0.00	0.00	0.00
13,700.00	90.00	179.59	11,932.20	-1,203.51	778.28	1,263.04	0.00	0.00	0.00
13,800.00	90.00	179.59	11,932.20	-1,303.50	779.00	1,362.76	0.00	0.00	0.00
13,900.00	90.00	179.59	11,932.20	-1,403.50	779.72	1,462.49	0.00	0.00	0.00
14,000.00	90.00	179.59	11,932.20	-1,503.50	780.44	1,562.21	0.00	0.00	0.00
14,100.00	90.00	179.59	11,932.20	-1,603.50	781.16	1,661.93	0.00	0.00	0.00
14,200.00	90.00	179.59	11,932.20	-1,703.49	781.87	1,761.65	0.00	0.00	0.00
14,300.00	90.00	179.59	11,932.20	-1,803.49	782.59	1,861.38	0.00	0.00	0.00
14,400.00	90.00	179.59	11,932.20	-1,903.49	783.31	1,961.10	0.00	0.00	0.00
14,500.00	90.00	179.59	11,932.20	-2,003.49	784.03	2,060.82	0.00	0.00	0.00
14,600.00	90.00	179.59	11,932.20	-2,103.48	784.75	2,160.54	0.00	0.00	0.00
14,700.00	90.00	179.59	11,932.20	-2,203.48	785.47	2,260.26	0.00	0.00	0.00
14,800.00	90.00	179.59	11,932.20	-2,303.48	786.19	2,359.99	0.00	0.00	0.00
14,900.00	90.00	179.59	11,932.20	-2,403.47	786.90	2,459.71	0.00	0.00	0.00
15,000.00	90.00	179.59	11,932.20	-2,503.47	787.62	2,559.43	0.00	0.00	0.00
15,100.00	90.00	179.59	11,932.20	-2,603.47	788.34	2,659.15	0.00	0.00	0.00
15,200.00	90.00	179.59	11,932.20	-2,703.47	789.06	2,758.87	0.00	0.00	0.00
15,300.00	90.00	179.59	11,932.20	-2,803.46	789.78	2,858.60	0.00	0.00	0.00
15,400.00	90.00	179.59	11,932.20	-2,903.46	790.50	2,958.32	0.00	0.00	0.00
15,500.00	90.00	179.59	11,932.20	-3,003.46	791.22	3,058.04	0.00	0.00	0.00
15,600.00	90.00	179.59	11,932.20	-3,103.46	791.93	3,157.76	0.00	0.00	0.00

Oxy Planning Report

Database: HOPSPP
Company: ENGINEERING DESIGNS
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Avogato 30-31
Well: AVOGATO 30_31 STATE COM 33H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well AVOGATO 30_31 STATE COM 33H
RKB=26.5' @ 3728.20ft
RKB=26.5' @ 3728.20ft
Grid
Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,700.00	90.00	179.59	11,932.20	-3,203.45	792.65	3,257.49	0.00	0.00	0.00
15,800.00	90.00	179.59	11,932.20	-3,303.45	793.37	3,357.21	0.00	0.00	0.00
15,900.00	90.00	179.59	11,932.20	-3,403.45	794.09	3,456.93	0.00	0.00	0.00
16,000.00	90.00	179.59	11,932.20	-3,503.45	794.81	3,556.65	0.00	0.00	0.00
16,100.00	90.00	179.59	11,932.20	-3,603.44	795.53	3,656.37	0.00	0.00	0.00
16,200.00	90.00	179.59	11,932.20	-3,703.44	796.25	3,756.10	0.00	0.00	0.00
16,300.00	90.00	179.59	11,932.20	-3,803.44	796.96	3,855.82	0.00	0.00	0.00
16,400.00	90.00	179.59	11,932.20	-3,903.44	797.68	3,955.54	0.00	0.00	0.00
16,500.00	90.00	179.59	11,932.20	-4,003.43	798.40	4,055.26	0.00	0.00	0.00
16,600.00	90.00	179.59	11,932.20	-4,103.43	799.12	4,154.98	0.00	0.00	0.00
16,700.00	90.00	179.59	11,932.20	-4,203.43	799.84	4,254.71	0.00	0.00	0.00
16,800.00	90.00	179.59	11,932.20	-4,303.43	800.56	4,354.43	0.00	0.00	0.00
16,900.00	90.00	179.59	11,932.20	-4,403.42	801.28	4,454.15	0.00	0.00	0.00
17,000.00	90.00	179.59	11,932.20	-4,503.42	801.99	4,553.87	0.00	0.00	0.00
17,100.00	90.00	179.59	11,932.20	-4,603.42	802.71	4,653.59	0.00	0.00	0.00
17,200.00	90.00	179.59	11,932.20	-4,703.42	803.43	4,753.32	0.00	0.00	0.00
17,300.00	90.00	179.59	11,932.20	-4,803.41	804.15	4,853.04	0.00	0.00	0.00
17,400.00	90.00	179.59	11,932.20	-4,903.41	804.87	4,952.76	0.00	0.00	0.00
17,500.00	90.00	179.59	11,932.20	-5,003.41	805.59	5,052.48	0.00	0.00	0.00
17,600.00	90.00	179.59	11,932.20	-5,103.41	806.31	5,152.21	0.00	0.00	0.00
17,700.00	90.00	179.59	11,932.20	-5,203.40	807.02	5,251.93	0.00	0.00	0.00
17,800.00	90.00	179.59	11,932.20	-5,303.40	807.74	5,351.65	0.00	0.00	0.00
17,900.00	90.00	179.59	11,932.20	-5,403.40	808.46	5,451.37	0.00	0.00	0.00
18,000.00	90.00	179.59	11,932.20	-5,503.39	809.18	5,551.09	0.00	0.00	0.00
18,100.00	90.00	179.59	11,932.20	-5,603.39	809.90	5,650.82	0.00	0.00	0.00
18,200.00	90.00	179.59	11,932.20	-5,703.39	810.62	5,750.54	0.00	0.00	0.00
18,300.00	90.00	179.59	11,932.20	-5,803.39	811.34	5,850.26	0.00	0.00	0.00
18,400.00	90.00	179.59	11,932.20	-5,903.38	812.05	5,949.98	0.00	0.00	0.00
18,500.00	90.00	179.59	11,932.20	-6,003.38	812.77	6,049.70	0.00	0.00	0.00
18,600.00	90.00	179.59	11,932.20	-6,103.38	813.49	6,149.43	0.00	0.00	0.00
18,700.00	90.00	179.59	11,932.20	-6,203.38	814.21	6,249.15	0.00	0.00	0.00
18,800.00	90.00	179.59	11,932.20	-6,303.37	814.93	6,348.87	0.00	0.00	0.00
18,900.00	90.00	179.59	11,932.20	-6,403.37	815.65	6,448.59	0.00	0.00	0.00
19,000.00	90.00	179.59	11,932.20	-6,503.37	816.37	6,548.31	0.00	0.00	0.00
19,100.00	90.00	179.59	11,932.20	-6,603.37	817.09	6,648.04	0.00	0.00	0.00
19,200.00	90.00	179.59	11,932.20	-6,703.36	817.80	6,747.76	0.00	0.00	0.00
19,300.00	90.00	179.59	11,932.20	-6,803.36	818.52	6,847.48	0.00	0.00	0.00
19,400.00	90.00	179.59	11,932.20	-6,903.36	819.24	6,947.20	0.00	0.00	0.00
19,500.00	90.00	179.59	11,932.20	-7,003.36	819.96	7,046.93	0.00	0.00	0.00
19,600.00	90.00	179.59	11,932.20	-7,103.35	820.68	7,146.65	0.00	0.00	0.00
19,700.00	90.00	179.59	11,932.20	-7,203.35	821.40	7,246.37	0.00	0.00	0.00
19,800.00	90.00	179.59	11,932.20	-7,303.35	822.12	7,346.09	0.00	0.00	0.00
19,900.00	90.00	179.59	11,932.20	-7,403.35	822.83	7,445.81	0.00	0.00	0.00
20,000.00	90.00	179.59	11,932.20	-7,503.34	823.55	7,545.54	0.00	0.00	0.00
20,100.00	90.00	179.59	11,932.20	-7,603.34	824.27	7,645.26	0.00	0.00	0.00
20,200.00	90.00	179.59	11,932.20	-7,703.34	824.99	7,744.98	0.00	0.00	0.00
20,300.00	90.00	179.59	11,932.20	-7,803.34	825.71	7,844.70	0.00	0.00	0.00
20,400.00	90.00	179.59	11,932.20	-7,903.33	826.43	7,944.42	0.00	0.00	0.00
20,500.00	90.00	179.59	11,932.20	-8,003.33	827.15	8,044.15	0.00	0.00	0.00
20,600.00	90.00	179.59	11,932.20	-8,103.33	827.86	8,143.87	0.00	0.00	0.00
20,700.00	90.00	179.59	11,932.20	-8,203.33	828.58	8,243.59	0.00	0.00	0.00
20,800.00	90.00	179.59	11,932.20	-8,303.32	829.30	8,343.31	0.00	0.00	0.00
20,900.00	90.00	179.59	11,932.20	-8,403.32	830.02	8,443.03	0.00	0.00	0.00
21,000.00	90.00	179.59	11,932.20	-8,503.32	830.74	8,542.76	0.00	0.00	0.00

Oxy Planning Report

Database: HOPSPP
Company: ENGINEERING DESIGNS
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Avogato 30-31
Well: AVOGATO 30_31 STATE COM 33H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference: Well AVOGATO 30_31 STATE COM 33H
TVD Reference: RKB=26.5' @ 3728.20ft
MD Reference: RKB=26.5' @ 3728.20ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,100.00	90.00	179.59	11,932.20	-8,603.31	831.46	8,642.48	0.00	0.00	0.00
21,200.00	90.00	179.59	11,932.20	-8,703.31	832.18	8,742.20	0.00	0.00	0.00
21,300.00	90.00	179.59	11,932.20	-8,803.31	832.89	8,841.92	0.00	0.00	0.00
21,400.00	90.00	179.59	11,932.20	-8,903.31	833.61	8,941.65	0.00	0.00	0.00
21,500.00	90.00	179.59	11,932.20	-9,003.30	834.33	9,041.37	0.00	0.00	0.00
21,600.00	90.00	179.59	11,932.20	-9,103.30	835.05	9,141.09	0.00	0.00	0.00
21,700.00	90.00	179.59	11,932.20	-9,203.30	835.77	9,240.81	0.00	0.00	0.00
21,800.00	90.00	179.59	11,932.20	-9,303.30	836.49	9,340.53	0.00	0.00	0.00
21,900.00	90.00	179.59	11,932.20	-9,403.29	837.21	9,440.26	0.00	0.00	0.00
22,000.00	90.00	179.59	11,932.20	-9,503.29	837.92	9,539.98	0.00	0.00	0.00
22,100.00	90.00	179.59	11,932.20	-9,603.29	838.64	9,639.70	0.00	0.00	0.00
22,200.00	90.00	179.59	11,932.20	-9,703.29	839.36	9,739.42	0.00	0.00	0.00
22,300.00	90.00	179.59	11,932.20	-9,803.28	840.08	9,839.14	0.00	0.00	0.00
22,400.00	90.00	179.59	11,932.20	-9,903.28	840.80	9,938.87	0.00	0.00	0.00
22,500.00	90.00	179.59	11,932.20	-10,003.28	841.52	10,038.59	0.00	0.00	0.00
22,600.00	90.00	179.59	11,932.20	-10,103.28	842.24	10,138.31	0.00	0.00	0.00
22,700.00	90.00	179.59	11,932.20	-10,203.27	842.95	10,238.03	0.00	0.00	0.00
22,792.73	90.00	179.59	11,932.20	-10,296.00	843.62	10,330.50	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	0.00	0.00	11,932.20	-10,296.00	843.62	488,579.31	763,901.14	32° 20' 28.022902 N	103° 36' 45.668931
- plan hits target center									
- Point									
FTP (Avogato 30-31	0.00	0.00	11,932.20	143.93	768.60	499,018.85	763,826.12	32° 22' 11.327914 N	103° 36' 45.724262
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,520.00	4,520.00	0.00	0.00	Build 2.00°/100'
5,020.05	5,017.51	31.28	30.28	Hold 10.00° Tangent
10,627.57	10,539.83	730.96	707.61	Turn 2.00°/100'
11,552.53	11,458.74	708.16	764.54	KOP, Build 10.00°/100'
12,352.53	11,932.20	143.93	768.60	Landing Point
22,792.73	11,932.20	-10,296.00	843.62	TD at 22792.73' MD