

30-025-44063



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: RED TANK 30-31 STATE
 Well: RED TANK 30-31 STATE 34H
 Wellbore: WB00
 Design: Permitting Plan

WELL DETAILS: RED TANK 30-31 STATE 34H

+N/-S 0.00
 +E/-W 0.00

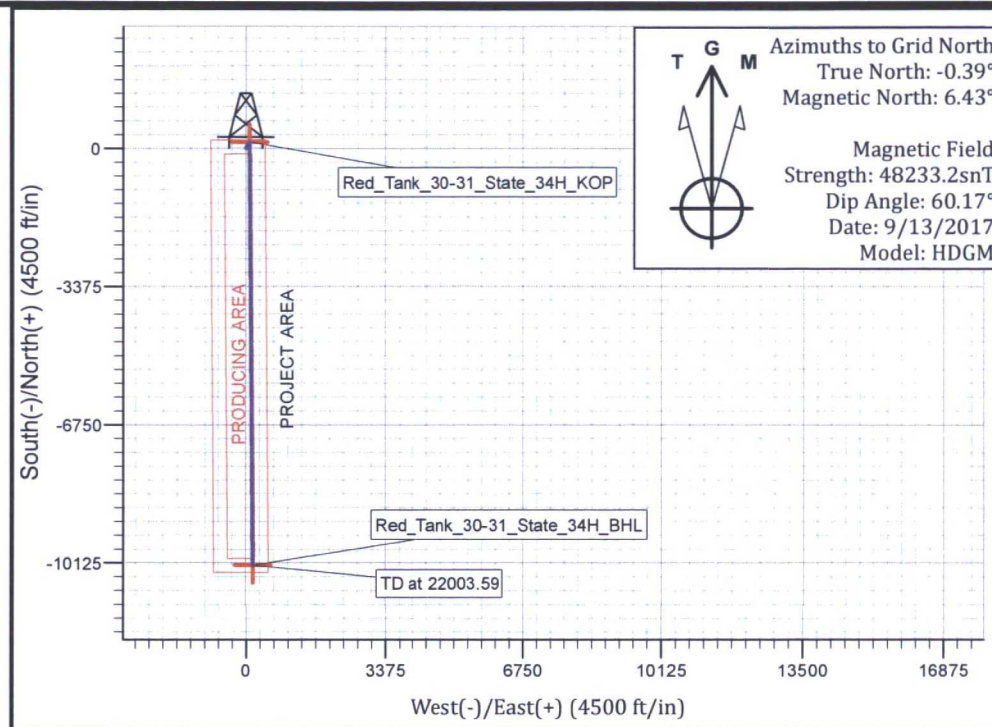
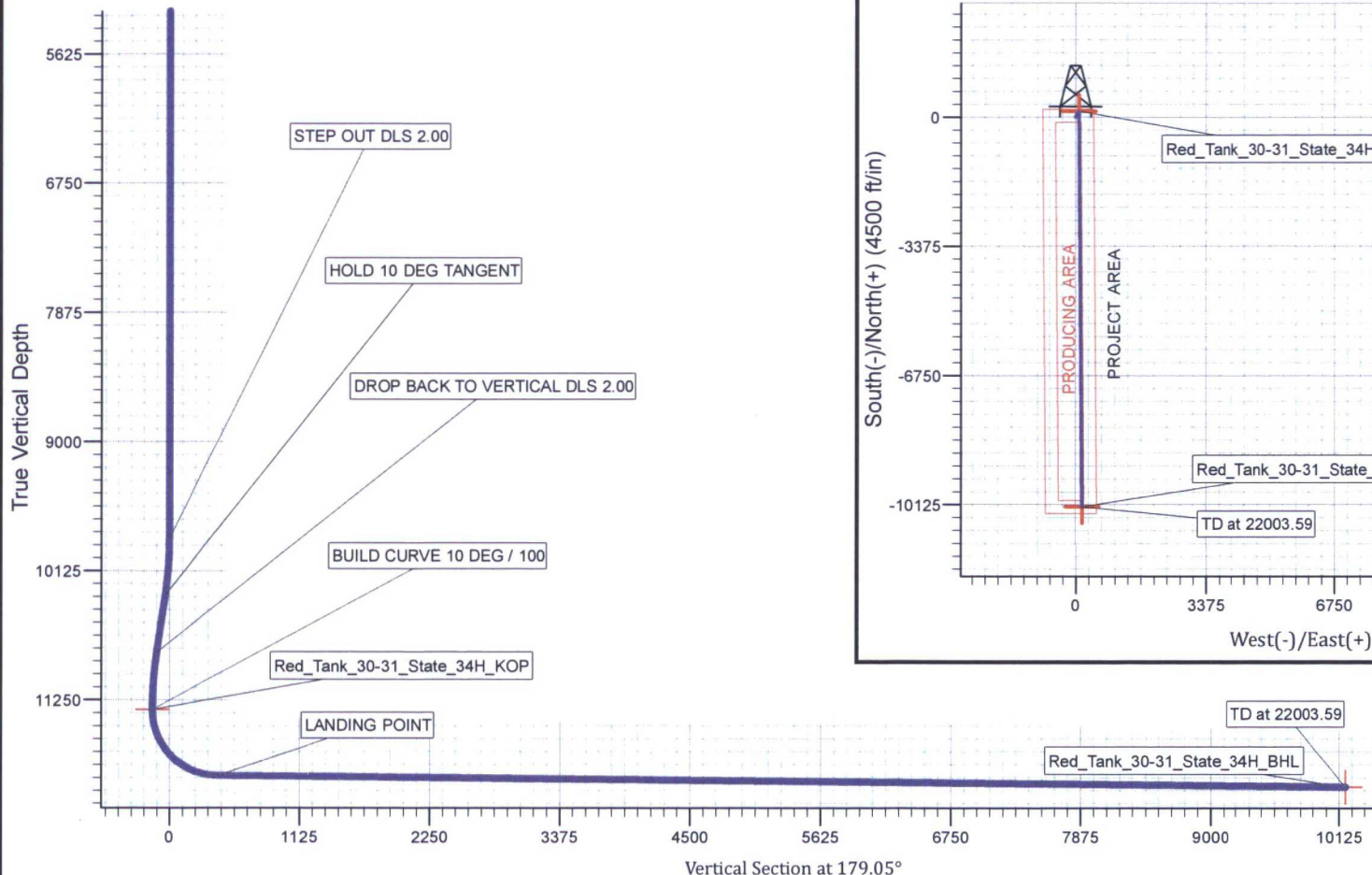
Northing 498932.40

Ground Level: 3659.90

Easting 766335.00
 Datum @ 3686.40ft

Latitude 32° 22' 10.304369 N

Longitude 103° 36' 16.478951 W



Azimuths to Grid North
 True North: -0.39°
 Magnetic North: 6.43°
 Magnetic Field
 Strength: 48233.2snT
 Dip Angle: 60.17°
 Date: 9/13/2017
 Model: HDGM

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9840.00	0.00	0.00	9840.00	0.00	0.00	0.00	0.00	0.00	
3	10339.44	9.99	30.56	10336.91	37.39	22.08	2.00	30.56	-37.02	
4	10846.30	9.99	30.56	10836.09	113.10	66.78	0.00	0.00	-111.98	
5	11345.74	0.00	179.56	11333.00	150.50	88.85	2.00	180.00	-149.01	
6	12239.74	89.40	179.56	11905.93	-416.45	93.20	10.00	179.56	417.93	
7	22003.59	89.43	179.56	12006.00	-10179.51	168.04	0.00	0.00	10180.89	

HOBBS

SEP 29 2017

RECEIVED

Annotation

STEP OUT DLS 2.00
 HOLD 10 DEG TANGENT
 DROP BACK TO VERTICAL DLS 2.00
 BUILD CURVE 10 DEG / 100
 LANDING POINT
 TD at 22003.59

Oxy

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference	Well RED TANK 30-31 STATE 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	Datum @ 3686.40ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	Datum @ 3686.40ft
Site:	RED TANK 30-31 STATE	North Reference:	Grid
Well:	RED TANK 30-31 STATE 34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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		RED TANK 30-31 STATE			
Site Position:		Northing:	498,933.39 usft	Latitude:	32° 22' 10.302032 N
From:	Map	Easting:	766,514.99 usft	Longitude:	103° 36' 14.380295 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.39 °

Well	RED TANK 30-31 STATE 34H					
Well Position	+N/-S	-0.99 ft	Northing:	498,932.40 usft	Latitude:	32° 22' 10.304369 N
	+E/-W	-180.00 ft	Easting:	766,335.00 usft	Longitude:	103° 36' 16.478951 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,659.90 ft

Wellbore	WB00				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/13/2017	6.82	60.17	48,233

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	179.05

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	
9,840.00	0.00	0.00	9,840.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,339.44	9.99	30.56	10,336.91	37.39	22.08	2.00	2.00	0.00	30.56	
10,846.30	9.99	30.56	10,836.09	113.10	66.78	0.00	0.00	0.00	0.00	
11,345.74	0.00	179.56	11,333.00	150.50	88.85	2.00	-2.00	0.00	180.00	Red_Tank_30-31_S
12,239.74	89.40	179.56	11,905.93	-416.45	93.20	10.00	10.00	0.00	179.56	
22,003.60	89.43	179.56	12,006.00	-10,179.51	168.04	0.00	0.00	0.00	0.00	Red_Tank_30-31_S

Oxy

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference	Well RED TANK 30-31 STATE 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	Datum @ 3686.40ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	Datum @ 3686.40ft
Site:	RED TANK 30-31 STATE	North Reference:	Grid
Well:	RED TANK 30-31 STATE 34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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

Oxy Planning Report

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Wellbore:	WB00		
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)
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
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
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,840.00	0.00	0.00	9,840.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	1.20	30.56	9,900.00	0.54	0.32	-0.54	2.00	2.00	0.00
10,000.00	3.20	30.56	9,999.92	3.85	2.27	-3.81	2.00	2.00	0.00
10,100.00	5.20	30.56	10,099.64	10.15	5.99	-10.05	2.00	2.00	0.00
10,200.00	7.20	30.56	10,199.05	19.45	11.48	-19.26	2.00	2.00	0.00
10,300.00	9.20	30.56	10,298.03	31.73	18.74	-31.42	2.00	2.00	0.00
10,339.44	9.99	30.56	10,336.91	37.39	22.08	-37.02	2.00	2.00	0.00

Oxy

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference	Well RED TANK 30-31 STATE 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	Datum @ 3686.40ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	Datum @ 3686.40ft
Site:	RED TANK 30-31 STATE	North Reference:	Grid
Well:	RED TANK 30-31 STATE 34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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	9.99	30.56	10,396.56	46.44	27.42	-45.98	0.00	0.00	0.00
10,500.00	9.99	30.56	10,495.04	61.38	36.24	-60.77	0.00	0.00	0.00
10,600.00	9.99	30.56	10,593.52	76.31	45.06	-75.56	0.00	0.00	0.00
10,700.00	9.99	30.56	10,692.01	91.25	53.87	-90.35	0.00	0.00	0.00
10,800.00	9.99	30.56	10,790.49	106.19	62.69	-105.14	0.00	0.00	0.00
10,846.30	9.99	30.56	10,836.09	113.10	66.78	-111.98	0.00	0.00	0.00
10,900.00	8.91	30.56	10,889.06	120.70	71.26	-119.50	2.00	-2.00	0.00
11,000.00	6.91	30.56	10,988.10	132.55	78.26	-131.24	2.00	-2.00	0.00
11,100.00	4.91	30.56	11,087.57	141.43	83.50	-140.03	2.00	-2.00	0.00
11,200.00	2.91	30.56	11,187.33	147.30	86.97	-145.85	2.00	-2.00	0.00
11,300.00	0.91	30.56	11,287.27	150.18	88.67	-148.70	2.00	-2.00	0.00
11,345.74	0.00	179.56	11,333.00	150.50	88.85	-149.01	2.00	-2.00	0.00
11,400.00	5.43	179.56	11,387.18	147.93	88.87	-146.44	10.00	10.00	0.00
11,500.00	15.43	179.56	11,485.41	129.85	89.01	-128.37	10.00	10.00	0.00
11,600.00	25.43	179.56	11,579.00	95.00	89.28	-93.51	10.00	10.00	0.00
11,700.00	35.43	179.56	11,665.12	44.42	89.67	-42.94	10.00	10.00	0.00
11,800.00	45.43	179.56	11,741.15	-20.34	90.16	21.83	10.00	10.00	0.00
11,900.00	55.43	179.56	11,804.77	-97.32	90.75	98.81	10.00	10.00	0.00
12,000.00	65.43	179.56	11,854.06	-184.18	91.42	185.67	10.00	10.00	0.00
12,100.00	75.43	179.56	11,887.52	-278.28	92.14	279.76	10.00	10.00	0.00
12,200.00	85.43	179.56	11,904.13	-376.76	92.89	378.24	10.00	10.00	0.00
12,239.74	89.40	179.56	11,905.93	-416.45	93.20	417.93	10.00	10.00	0.00
12,300.00	89.40	179.56	11,906.56	-476.71	93.66	478.19	0.00	0.00	0.00
12,400.00	89.40	179.56	11,907.60	-576.70	94.43	578.18	0.00	0.00	0.00
12,500.00	89.40	179.56	11,908.65	-676.69	95.19	678.17	0.00	0.00	0.00
12,600.00	89.40	179.56	11,909.70	-776.68	95.96	778.16	0.00	0.00	0.00
12,700.00	89.40	179.56	11,910.74	-876.67	96.73	878.15	0.00	0.00	0.00
12,800.00	89.40	179.56	11,911.79	-976.66	97.49	978.14	0.00	0.00	0.00
12,900.00	89.40	179.56	11,912.83	-1,076.66	98.26	1,078.13	0.00	0.00	0.00
13,000.00	89.40	179.56	11,913.87	-1,176.65	99.03	1,178.12	0.00	0.00	0.00
13,100.00	89.40	179.56	11,914.92	-1,276.64	99.79	1,278.11	0.00	0.00	0.00
13,200.00	89.40	179.56	11,915.96	-1,376.63	100.56	1,378.10	0.00	0.00	0.00
13,300.00	89.40	179.56	11,917.00	-1,476.62	101.33	1,478.09	0.00	0.00	0.00
13,400.00	89.40	179.56	11,918.05	-1,576.61	102.09	1,578.08	0.00	0.00	0.00
13,500.00	89.40	179.56	11,919.09	-1,676.60	102.86	1,678.07	0.00	0.00	0.00
13,600.00	89.40	179.56	11,920.13	-1,776.60	103.62	1,778.06	0.00	0.00	0.00
13,700.00	89.40	179.56	11,921.17	-1,876.59	104.39	1,878.06	0.00	0.00	0.00
13,800.00	89.40	179.56	11,922.21	-1,976.58	105.16	1,978.05	0.00	0.00	0.00
13,900.00	89.40	179.56	11,923.25	-2,076.57	105.92	2,078.04	0.00	0.00	0.00
14,000.00	89.40	179.56	11,924.29	-2,176.56	106.69	2,178.03	0.00	0.00	0.00
14,100.00	89.40	179.56	11,925.33	-2,276.55	107.46	2,278.02	0.00	0.00	0.00
14,200.00	89.41	179.56	11,926.37	-2,376.55	108.22	2,378.01	0.00	0.00	0.00
14,300.00	89.41	179.56	11,927.40	-2,476.54	108.99	2,478.00	0.00	0.00	0.00
14,400.00	89.41	179.56	11,928.44	-2,576.53	109.76	2,577.99	0.00	0.00	0.00
14,500.00	89.41	179.56	11,929.48	-2,676.52	110.52	2,677.98	0.00	0.00	0.00
14,600.00	89.41	179.56	11,930.52	-2,776.51	111.29	2,777.97	0.00	0.00	0.00
14,700.00	89.41	179.56	11,931.55	-2,876.50	112.06	2,877.96	0.00	0.00	0.00
14,800.00	89.41	179.56	11,932.59	-2,976.50	112.82	2,977.95	0.00	0.00	0.00
14,900.00	89.41	179.56	11,933.62	-3,076.49	113.59	3,077.94	0.00	0.00	0.00
15,000.00	89.41	179.56	11,934.66	-3,176.48	114.36	3,177.93	0.00	0.00	0.00
15,100.00	89.41	179.56	11,935.69	-3,276.47	115.12	3,277.93	0.00	0.00	0.00
15,200.00	89.41	179.56	11,936.73	-3,376.46	115.89	3,377.92	0.00	0.00	0.00
15,300.00	89.41	179.56	11,937.76	-3,476.46	116.65	3,477.91	0.00	0.00	0.00

Oxy

Planning Report

Database:	HOPSP	Local Co-ordinate Reference	Well RED TANK 30-31 STATE 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	Datum @ 3686.40ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	Datum @ 3686.40ft
Site:	RED TANK 30-31 STATE	North Reference:	Grid
Well:	RED TANK 30-31 STATE 34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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)
15,400.00	89.41	179.56	11,938.79	-3,576.45	117.42	3,577.90	0.00	0.00	0.00
15,500.00	89.41	179.56	11,939.83	-3,676.44	118.19	3,677.89	0.00	0.00	0.00
15,600.00	89.41	179.56	11,940.86	-3,776.43	118.95	3,777.88	0.00	0.00	0.00
15,700.00	89.41	179.56	11,941.89	-3,876.42	119.72	3,877.87	0.00	0.00	0.00
15,800.00	89.41	179.56	11,942.92	-3,976.41	120.49	3,977.86	0.00	0.00	0.00
15,900.00	89.41	179.56	11,943.95	-4,076.41	121.25	4,077.85	0.00	0.00	0.00
16,000.00	89.41	179.56	11,944.98	-4,176.40	122.02	4,177.84	0.00	0.00	0.00
16,100.00	89.41	179.56	11,946.01	-4,276.39	122.79	4,277.83	0.00	0.00	0.00
16,200.00	89.41	179.56	11,947.04	-4,376.38	123.55	4,377.82	0.00	0.00	0.00
16,300.00	89.41	179.56	11,948.07	-4,476.37	124.32	4,477.81	0.00	0.00	0.00
16,400.00	89.41	179.56	11,949.10	-4,576.36	125.09	4,577.81	0.00	0.00	0.00
16,500.00	89.41	179.56	11,950.13	-4,676.36	125.85	4,677.80	0.00	0.00	0.00
16,600.00	89.41	179.56	11,951.15	-4,776.35	126.62	4,777.79	0.00	0.00	0.00
16,700.00	89.41	179.56	11,952.18	-4,876.34	127.39	4,877.78	0.00	0.00	0.00
16,800.00	89.41	179.56	11,953.21	-4,976.33	128.15	4,977.77	0.00	0.00	0.00
16,900.00	89.41	179.56	11,954.23	-5,076.32	128.92	5,077.76	0.00	0.00	0.00
17,000.00	89.41	179.56	11,955.26	-5,176.32	129.68	5,177.75	0.00	0.00	0.00
17,100.00	89.41	179.56	11,956.28	-5,276.31	130.45	5,277.74	0.00	0.00	0.00
17,200.00	89.41	179.56	11,957.31	-5,376.30	131.22	5,377.73	0.00	0.00	0.00
17,300.00	89.41	179.56	11,958.33	-5,476.29	131.98	5,477.72	0.00	0.00	0.00
17,400.00	89.41	179.56	11,959.36	-5,576.28	132.75	5,577.71	0.00	0.00	0.00
17,500.00	89.41	179.56	11,960.38	-5,676.27	133.52	5,677.70	0.00	0.00	0.00
17,600.00	89.41	179.56	11,961.40	-5,776.27	134.28	5,777.70	0.00	0.00	0.00
17,700.00	89.41	179.56	11,962.43	-5,876.26	135.05	5,877.69	0.00	0.00	0.00
17,800.00	89.41	179.56	11,963.45	-5,976.25	135.82	5,977.68	0.00	0.00	0.00
17,900.00	89.41	179.56	11,964.47	-6,076.24	136.58	6,077.67	0.00	0.00	0.00
18,000.00	89.42	179.56	11,965.49	-6,176.23	137.35	6,177.66	0.00	0.00	0.00
18,100.00	89.42	179.56	11,966.51	-6,276.23	138.12	6,277.65	0.00	0.00	0.00
18,200.00	89.42	179.56	11,967.53	-6,376.22	138.88	6,377.64	0.00	0.00	0.00
18,300.00	89.42	179.56	11,968.55	-6,476.21	139.65	6,477.63	0.00	0.00	0.00
18,400.00	89.42	179.56	11,969.57	-6,576.20	140.42	6,577.62	0.00	0.00	0.00
18,500.00	89.42	179.56	11,970.59	-6,676.19	141.18	6,677.61	0.00	0.00	0.00
18,600.00	89.42	179.56	11,971.61	-6,776.18	141.95	6,777.60	0.00	0.00	0.00
18,700.00	89.42	179.56	11,972.63	-6,876.18	142.71	6,877.60	0.00	0.00	0.00
18,800.00	89.42	179.56	11,973.64	-6,976.17	143.48	6,977.59	0.00	0.00	0.00
18,900.00	89.42	179.56	11,974.66	-7,076.16	144.25	7,077.58	0.00	0.00	0.00
19,000.00	89.42	179.56	11,975.68	-7,176.15	145.01	7,177.57	0.00	0.00	0.00
19,100.00	89.42	179.56	11,976.69	-7,276.14	145.78	7,277.56	0.00	0.00	0.00
19,200.00	89.42	179.56	11,977.71	-7,376.14	146.55	7,377.55	0.00	0.00	0.00
19,300.00	89.42	179.56	11,978.72	-7,476.13	147.31	7,477.54	0.00	0.00	0.00
19,400.00	89.42	179.56	11,979.74	-7,576.12	148.08	7,577.53	0.00	0.00	0.00
19,500.00	89.42	179.56	11,980.75	-7,676.11	148.85	7,677.52	0.00	0.00	0.00
19,600.00	89.42	179.56	11,981.77	-7,776.10	149.61	7,777.51	0.00	0.00	0.00
19,700.00	89.42	179.56	11,982.78	-7,876.10	150.38	7,877.50	0.00	0.00	0.00
19,800.00	89.42	179.56	11,983.79	-7,976.09	151.15	7,977.50	0.00	0.00	0.00
19,900.00	89.42	179.56	11,984.81	-8,076.08	151.91	8,077.49	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference	Well RED TANK 30-31 STATE 34H
Company:	ENGINEERING DESIGNS	TVD Reference:	Datum @ 3686.40ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	Datum @ 3686.40ft
Site:	RED TANK 30-31 STATE	North Reference:	Grid
Well:	RED TANK 30-31 STATE 34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
Design:	Permitting Plan		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Red_Tank_30-31_Stat	0.00	0.00	11,333.00	150.50	88.85	499,082.89	766,423.85	32° 22' 11.787484 N	103° 36' 15.431058
- plan hits target center									
- Point									
Red_Tank_30-31_Stat	0.00	0.00	12,006.00	-10,179.51	168.04	488,753.25	766,503.03	32° 20' 29.569798 N	103° 36' 15.328086
- plan misses target center by 2103.59ft at 19900.00ft MD (11984.81 TVD, -8076.08 N, 151.91 E)									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
9,840.00	9,840.00	0.00	0.00	STEP OUT DLS 2.00
10,339.44	10,336.91	37.39	22.08	HOLD 10 DEG TANGENT
10,846.30	10,836.09	113.10	66.78	DROP BACK TO VERTICAL DLS 2.00
11,345.74	11,333.00	150.50	88.85	BUILD CURVE 10 DEG / 100
12,239.74	11,905.93	-416.45	93.20	LANDING POINT
22,003.60	12,006.00	-10,179.51	168.04	TD at 22003.59