

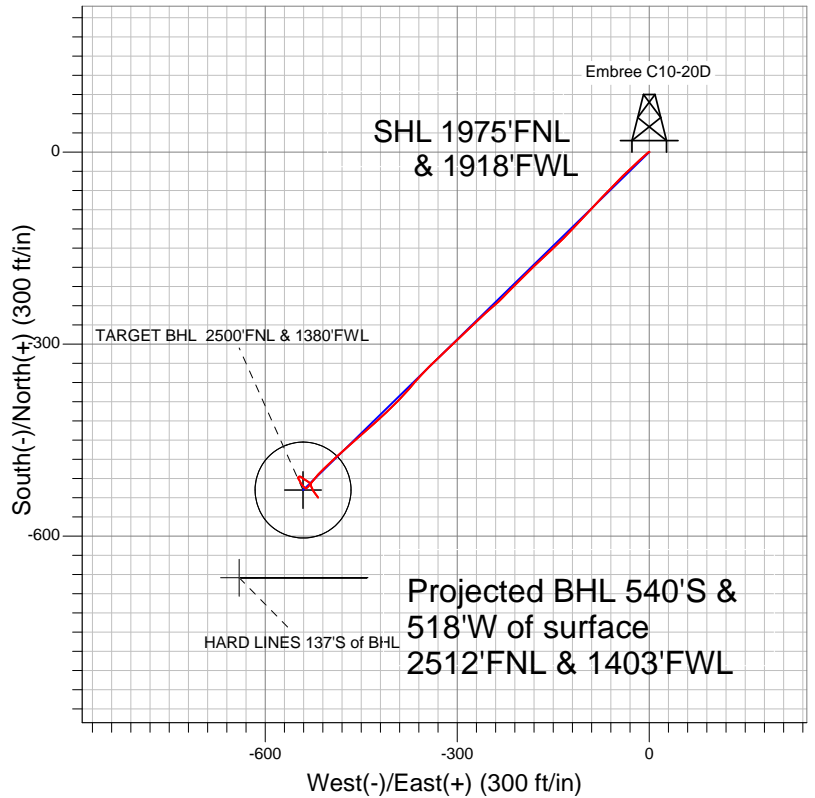


Well Name: Embree C10-20D

Surface Location: Embree C10-20D Sec.10-T4N-R64W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4663.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1364037.47	3267874.52	40.328700	-104.539180	
		Original Well Elev	WELL @ 4676.0ft (Original Well Elev)			

NOBLE ENERGY INC WELD COUNTY CO



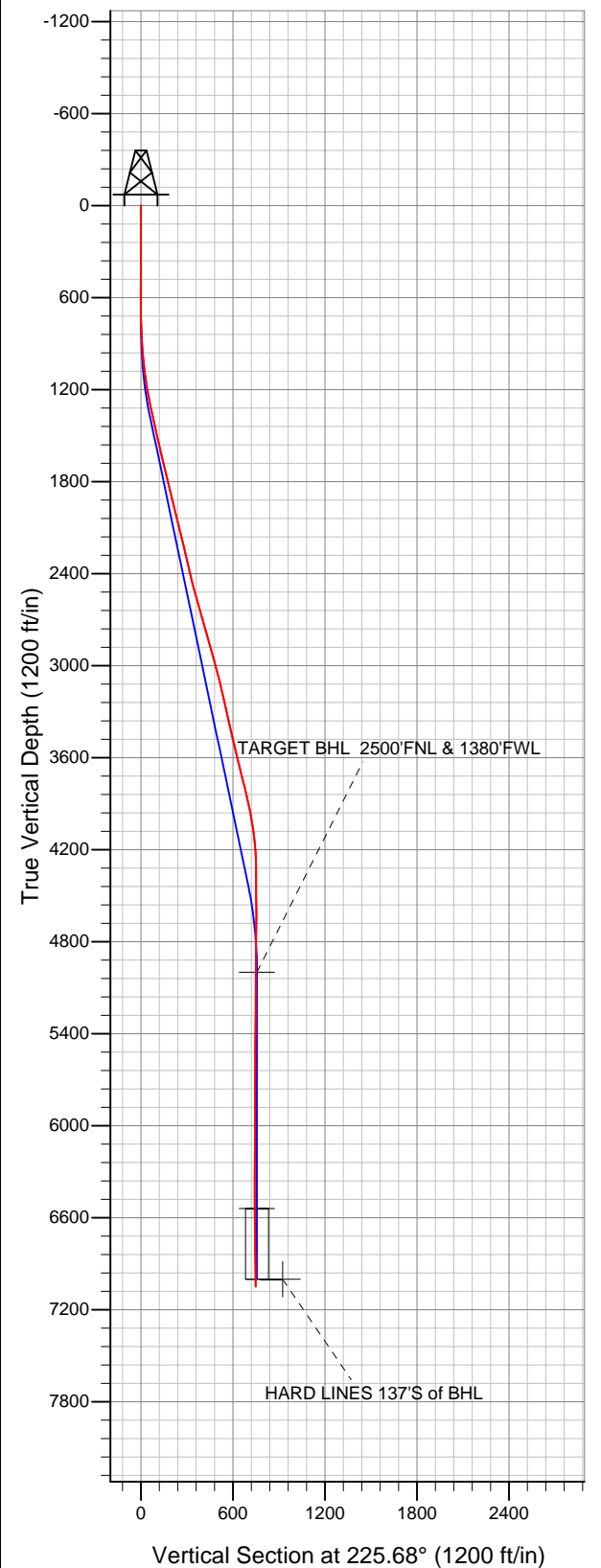
LEGEND

- Survey #1
- Embree C10-20D, Embree C10-20D, Noble Embree C10-20D Plan #2 (11-17-10) V0
- Embree C10-20D

Final Survey Plot

Projected Final Survey -
7137'MD & 7050'TVD @ 747'VS
2.90 deg Inc 144.00 deg AZ

Project: SEC.10-T4N-R64W
Site: Embree C10-20D Sec.10-T4N-R64W
Well: Embree C10-20D
Plan: Embree C10-20D





NOBLE ENERGY INC WELD COUNTY CO

SEC.10-T4N-R64W

Embree C10-20D Sec.10-T4N-R64W

Embree C10-20D

Embree C10-20D

Survey: Survey #1

Standard Survey Report

09 March, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Embree C10-20D
Project:	SEC.10-T4N-R64W	TVD Reference:	WELL @ 4676.0ft (Original Well Elev)
Site:	Embree C10-20D Sec.10-T4N-R64W	MD Reference:	WELL @ 4676.0ft (Original Well Elev)
Well:	Embree C10-20D	North Reference:	True
Wellbore:	Embree C10-20D	Survey Calculation Method:	Minimum Curvature
Design:	Embree C10-20D	Database:	Landmark

Project	SEC.10-T4N-R64W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Embree C10-20D Sec.10-T4N-R64W		
Site Position:		Northing:	1,364,037.49ft
From:	Lat/Long	Easting:	3,267,874.52ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.328700
		Longitude:	-104.539180
		Grid Convergence:	0.62 °

Well	Embree C10-20D		
Well Position	+N-S	0.0 ft	Northing: 1,364,037.47 ft
	+E-W	0.0 ft	Easting: 3,267,874.52 ft
Position Uncertainty		0.0 ft	Wellhead Elevation: ft
			Latitude: 40.328700
			Longitude: -104.539180
			Ground Level: 4,663.0 ft

Wellbore	Embree C10-20D		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	2/21/2012	8.60
	IGRF2010	11/18/2010	8.81
			Dip Angle (°)
			67.02
			67.05
			Field Strength (nT)
			53,070
			53,180

Design	Embree C10-20D		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)
	0.0	0.0	0.0
			Direction (°)
			225.68

Survey Program	Date	3/9/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
48.0	7,137.0	Survey #1 (Embree C10-20D)	MWD	MWD - Standard

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
48.0	0.40	157.70	48.0	-0.2	0.1	0.1	0.83	0.83	0.00
258.0	0.30	357.40	258.0	-0.3	0.3	0.0	0.33	-0.05	-76.33
447.0	0.10	161.20	447.0	0.1	0.3	-0.3	0.21	-0.11	86.67
649.0	0.30	263.10	649.0	-0.2	-0.1	0.2	0.17	0.10	50.45
728.0	0.40	273.30	728.0	-0.2	-0.6	0.6	0.15	0.13	12.91
856.0	2.70	228.90	855.9	-2.1	-3.3	3.9	1.90	1.80	-34.69
985.0	5.40	227.80	984.6	-8.2	-10.1	13.0	2.09	2.09	-0.85
1,113.0	7.70	226.60	1,111.8	-18.2	-20.8	27.6	1.80	1.80	-0.94
1,241.0	10.60	226.40	1,238.1	-32.2	-35.6	47.9	2.27	2.27	-0.16
1,370.0	12.70	224.30	1,364.5	-50.5	-54.1	74.0	1.66	1.63	-1.63
1,498.0	12.90	223.40	1,489.3	-71.0	-73.7	102.3	0.22	0.16	-0.70

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Site:	Embree C10-20D Sec.10-T4N-R64W	MD Reference:	WELL @ 4676.0ft (Original Well Elev)
Well:	Embree C10-20D	North Reference:	True
Wellbore:	Embree C10-20D	Survey Calculation Method:	Minimum Curvature
Design:	Embree C10-20D	Database:	Landmark

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)
1,627.0	12.90	222.90	1,615.0	-92.0	-93.4	131.1	0.09	0.00	-0.39
1,755.0	13.40	222.70	1,739.7	-113.3	-113.2	160.2	0.39	0.39	-0.16
1,883.0	14.00	225.20	1,864.0	-135.1	-134.2	190.5	0.66	0.47	1.95
2,012.0	13.80	227.10	1,989.2	-156.6	-156.6	221.4	0.39	-0.16	1.47
2,140.0	14.20	226.20	2,113.4	-177.9	-179.1	252.4	0.36	0.31	-0.70
2,269.0	13.10	226.20	2,238.8	-198.9	-201.1	282.8	0.85	-0.85	0.00
2,397.0	12.90	222.70	2,363.5	-219.5	-221.2	311.6	0.63	-0.16	-2.73
2,525.0	14.80	229.40	2,487.8	-240.6	-243.3	342.2	1.94	1.48	5.23
2,654.0	15.80	226.20	2,612.2	-263.5	-268.5	376.2	1.01	0.78	-2.48
2,782.0	16.20	226.00	2,735.3	-288.0	-293.9	411.5	0.32	0.31	-0.16
2,911.0	15.60	227.10	2,859.3	-312.3	-319.6	446.8	0.52	-0.47	0.85
3,039.0	15.20	225.00	2,982.7	-335.9	-344.1	480.8	0.54	-0.31	-1.64
3,167.0	13.80	221.30	3,106.7	-359.2	-366.0	512.8	1.31	-1.09	-2.89
3,296.0	12.80	221.30	3,232.2	-381.5	-385.6	542.4	0.78	-0.78	0.00
3,424.0	13.20	227.10	3,356.9	-402.1	-405.6	571.1	1.07	0.31	4.53
3,553.0	12.90	228.30	3,482.6	-421.7	-427.2	600.3	0.31	-0.23	0.93
3,681.0	13.50	229.00	3,607.2	-441.0	-449.1	629.4	0.49	0.47	0.55
3,809.0	14.40	227.60	3,731.4	-461.5	-472.2	660.3	0.75	0.70	-1.09
3,938.0	13.20	227.60	3,856.7	-482.3	-494.9	691.0	0.93	-0.93	0.00
4,066.0	10.20	224.30	3,982.0	-500.3	-513.6	717.0	2.40	-2.34	-2.58
4,195.0	7.20	216.90	4,109.5	-514.9	-526.4	736.4	2.48	-2.33	-5.74
4,323.0	3.30	225.70	4,237.0	-523.9	-533.9	748.0	3.10	-3.05	6.88
4,451.0	1.10	321.30	4,364.9	-525.5	-537.3	751.6	2.80	-1.72	74.69
4,580.0	1.40	311.30	4,493.9	-523.5	-539.3	751.6	0.29	0.23	-7.75
4,708.0	1.60	315.30	4,621.8	-521.2	-541.7	751.7	0.18	0.16	3.13
4,837.0	1.80	331.50	4,750.8	-518.1	-543.9	751.1	0.40	0.16	12.56
4,965.0	1.70	335.00	4,878.7	-514.6	-545.7	750.0	0.11	-0.08	2.73
5,085.9	1.23	327.52	4,999.6	-511.9	-547.1	749.1	0.42	-0.39	-6.19
TARGET BHL 2500'FNL & 1380'FWL									
5,093.0	1.20	326.90	5,006.7	-511.8	-547.2	749.1	0.42	-0.38	-8.74
5,222.0	0.70	332.00	5,135.7	-510.0	-548.3	748.6	0.39	-0.39	3.95
5,350.0	0.50	8.10	5,263.6	-508.7	-548.6	747.9	0.33	-0.16	28.20
5,479.0	0.80	55.70	5,392.6	-507.7	-547.8	746.6	0.46	0.23	36.90
5,607.0	0.50	83.70	5,520.6	-507.1	-546.5	745.3	0.33	-0.23	21.88
5,735.0	0.40	98.90	5,648.6	-507.1	-545.5	744.6	0.12	-0.08	11.88
5,864.0	0.80	123.40	5,777.6	-507.7	-544.3	744.1	0.36	0.31	18.99
5,992.0	0.90	126.40	5,905.6	-508.8	-542.7	743.8	0.09	0.08	2.34
6,121.0	1.10	124.50	6,034.6	-510.1	-540.9	743.4	0.16	0.16	-1.47
6,249.0	1.30	121.30	6,162.6	-511.5	-538.7	742.8	0.16	0.16	-2.50
6,377.0	1.80	123.20	6,290.5	-513.4	-535.7	742.0	0.39	0.39	1.48
6,506.0	2.20	120.60	6,419.4	-515.7	-531.9	740.9	0.32	0.31	-2.02
6,627.6	1.89	162.39	6,541.0	-518.8	-529.3	741.2	1.22	-0.26	34.35
TARGET CIRCLE 2500'FNL & 1380'FWL									
6,634.0	1.90	164.70	6,547.4	-519.0	-529.2	741.3	1.22	0.23	36.36
6,763.0	2.50	159.90	6,676.3	-523.7	-527.7	743.5	0.49	0.47	-3.72
6,891.0	3.00	148.70	6,804.1	-529.2	-525.0	745.4	0.57	0.39	-8.75
7,019.0	3.10	143.10	6,931.9	-534.9	-521.2	746.6	0.25	0.08	-4.38
7,089.8	2.90	144.30	7,002.6	-537.8	-519.0	747.1	0.30	-0.28	1.69
HARD LINES 137'S of BHL									
7,090.0	2.90	144.30	7,002.8	-537.9	-519.0	747.1	0.30	-0.28	1.81
7,137.0	2.90	144.00	7,049.8	-539.8	-517.6	747.4	0.03	0.00	-0.64

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Checked By: _____ Approved By: _____ Date: _____