

Well Name: **Coleman C23-29D**

Surface Location: Coleman C23-29D Pad Sec.23-T4N-R64W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

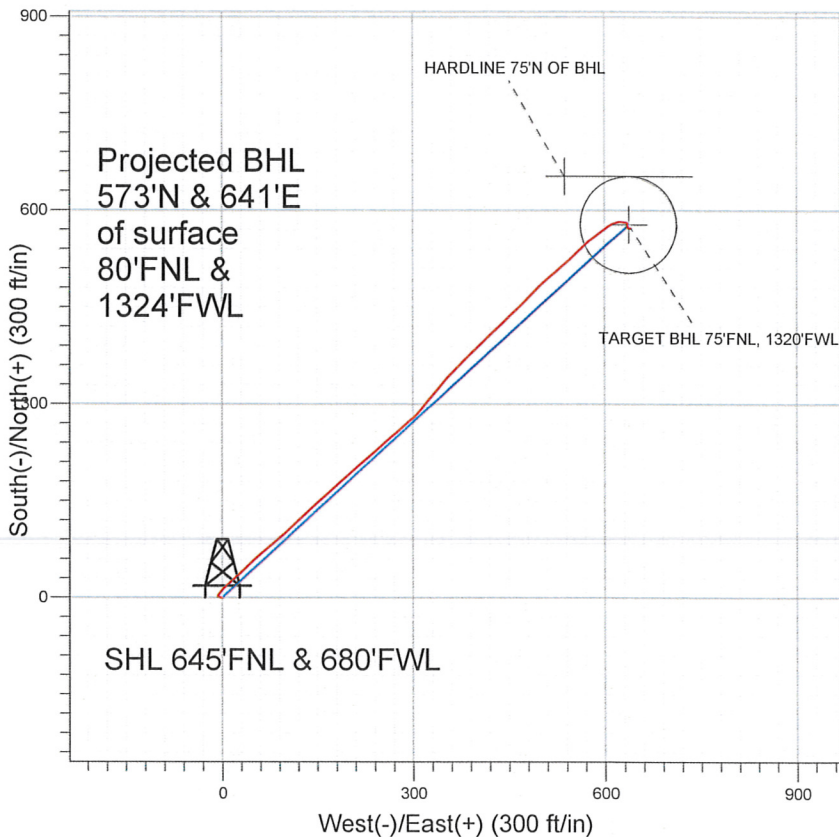
Ground Elevation: 4652.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1354883.06	3271948.37	40° 18' 12.420 N	104° 31' 29.748 W

Original Well Elev WELL @ 4665.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO

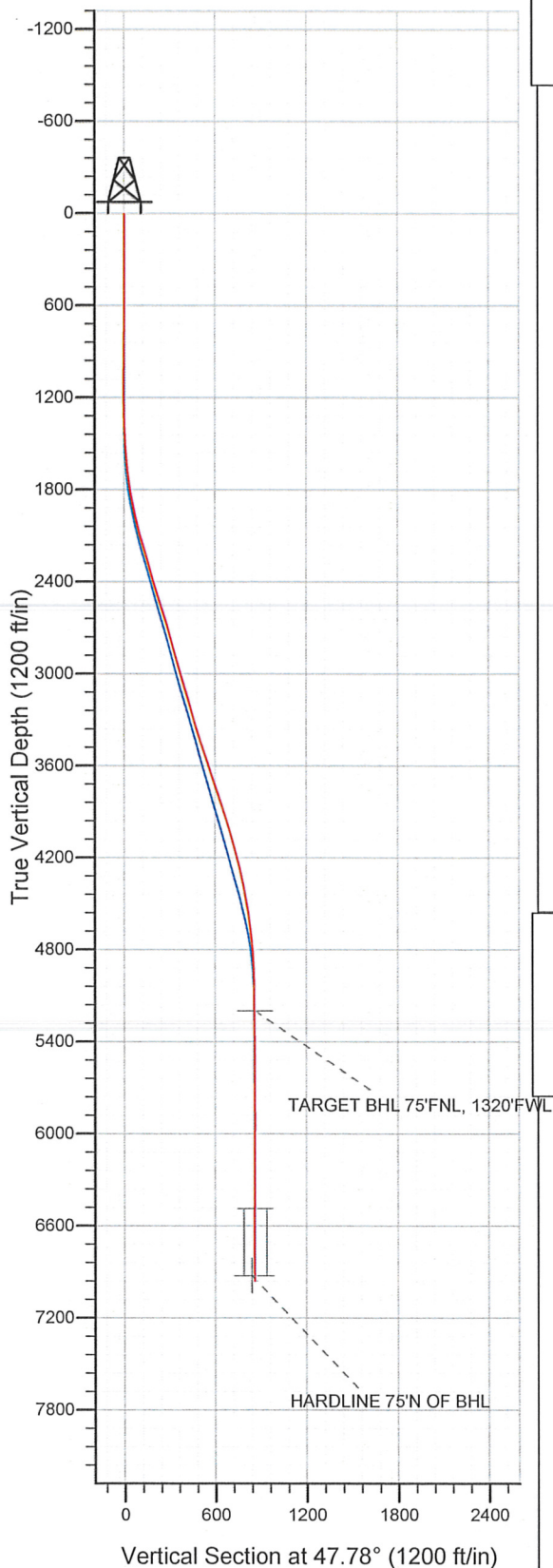


LEGEND

- ◆ Coleman C23-29D, Wellbore #1, Plan #1 (08-06-09) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7073'MD & 6958'TVD @ 860' VS
1.7 deg Inc 94.5 deg AZ



Project: SEC.23-T4N-R64W
Site: Coleman C23-29D Pad Sec.23-T4N-R64W
Well: Coleman C23-29D
Plan: Wellbore #1

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.23-T4N-R64W
Site: Coleman C23-29D Pad Sec.23-T4N-R64W
Well: Coleman C23-29D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Coleman C23-29D
TVD Reference: WELL @ 4665.0ft (Original Well Elev)
MD Reference: WELL @ 4665.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.23-T4N-R64W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Coleman C23-29D Pad Sec.23-T4N-R64W

Site Position:		Northing:	1,354,883.07 ft	Latitude:	40° 18' 12.420 N
From:	Lat/Long	Easting:	3,271,948.37 ft	Longitude:	104° 31' 29.748 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.63 °

Well	Coleman C23-29D				
Well Position	+N/-S	0.0 ft	Northing:	1,354,883.06 ft	Latitude: 40° 18' 12.420 N
	+E/-W	0.0 ft	Easting:	3,271,948.37 ft	Longitude: 104° 31' 29.748 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 4,652.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/8/2011	8.76	67.02	53,137

Design Wellbore #1

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
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Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	5,200.0	0.0	0.0	47.78

Survey Program Date 3/14/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
597.0	7,073.0	Survey #1 (Wellbore #1)	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
597.0	0.30	286.40	597.0	0.4	-1.5	-0.8	0.05	0.05	0.00
682.0	0.60	276.80	682.0	0.6	-2.2	-1.2	0.36	0.35	-11.29
768.0	0.70	282.50	768.0	0.7	-3.1	-1.8	0.14	0.12	6.63
854.0	0.70	298.10	854.0	1.1	-4.1	-2.3	0.22	0.00	18.14
939.0	0.50	285.50	939.0	1.4	-4.9	-2.7	0.28	-0.24	-14.82
1,025.0	0.50	283.60	1,025.0	1.6	-5.6	-3.1	0.02	0.00	-2.21
1,111.0	0.60	282.30	1,111.0	1.8	-6.4	-3.6	0.12	0.12	-1.51
1,196.0	0.50	290.40	1,196.0	2.0	-7.2	-4.0	0.15	-0.12	9.53
1,282.0	1.10	13.50	1,282.0	3.0	-7.4	-3.5	1.34	0.70	96.63
1,367.0	2.40	34.10	1,366.9	5.2	-6.2	-1.1	1.68	1.53	24.24
1,453.0	3.10	36.90	1,452.8	8.6	-3.8	3.0	0.83	0.81	3.26
1,538.0	4.40	46.10	1,537.6	12.7	-0.1	8.5	1.68	1.53	10.82

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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)
1,624.0	6.00	44.60	1,623.3	18.2	5.5	16.3	1.87	1.86	-1.74
1,710.0	7.30	51.20	1,708.7	24.8	12.9	26.2	1.75	1.51	7.67
1,795.0	9.00	47.20	1,792.8	32.7	22.0	38.2	2.11	2.00	-4.71
1,881.0	10.90	47.30	1,877.5	42.8	32.9	53.1	2.21	2.21	0.12
1,966.0	12.70	46.00	1,960.7	54.7	45.5	70.5	2.14	2.12	-1.53
2,052.0	14.50	47.80	2,044.3	68.5	60.3	90.7	2.15	2.09	2.09
2,137.0	15.60	52.10	2,126.4	82.7	77.2	112.7	1.84	1.29	5.06
2,223.0	16.40	47.80	2,209.1	97.9	95.3	136.4	1.66	0.93	-5.00
2,309.0	16.40	47.70	2,291.6	114.3	113.3	160.7	0.03	0.00	-0.12
2,394.0	16.30	47.50	2,373.1	130.4	131.0	184.6	0.14	-0.12	-0.24
2,479.0	16.20	47.30	2,454.8	146.5	148.5	208.4	0.13	-0.12	-0.24
2,565.0	17.10	49.30	2,537.1	162.9	166.9	233.0	1.24	1.05	2.33
2,651.0	17.30	48.40	2,619.3	179.6	186.0	258.5	0.39	0.23	-1.05
2,736.0	17.30	47.50	2,700.5	196.6	204.8	283.7	0.31	0.00	-1.06
2,822.0	17.40	49.60	2,782.5	213.5	224.0	309.4	0.74	0.12	2.44
2,907.0	14.80	49.30	2,864.2	228.8	241.9	332.9	3.06	-3.06	-0.35
2,993.0	17.30	48.50	2,946.8	244.5	259.8	356.7	2.92	2.91	-0.93
3,078.0	16.20	48.60	3,028.2	260.7	278.2	381.2	1.29	-1.29	0.12
3,164.0	16.00	50.50	3,110.9	276.2	296.3	405.0	0.66	-0.23	2.21
3,249.0	16.20	39.80	3,192.5	292.7	313.0	428.5	3.49	0.24	-12.59
3,335.0	16.10	39.30	3,275.2	311.2	328.2	452.2	0.20	-0.12	-0.58
3,421.0	17.50	39.50	3,357.5	330.4	344.0	476.8	1.63	1.63	0.23
3,507.0	18.20	44.30	3,439.3	350.0	361.6	503.0	1.89	0.81	5.58
3,592.0	18.50	46.10	3,520.0	368.8	380.6	529.7	0.75	0.35	2.12
3,678.0	18.60	45.00	3,601.6	388.0	400.1	557.0	0.42	0.12	-1.28
3,764.0	18.80	46.40	3,683.0	407.2	419.8	584.6	0.57	0.23	1.63
3,849.0	18.70	46.20	3,763.5	426.1	439.6	611.9	0.14	-0.12	-0.24
3,935.0	17.00	47.20	3,845.4	444.2	458.8	638.2	2.01	-1.98	1.16
4,021.0	18.50	45.00	3,927.3	462.4	477.6	664.4	1.91	1.74	-2.56
4,106.0	17.90	43.90	4,008.0	481.3	496.2	690.9	0.81	-0.71	-1.29
4,192.0	16.20	50.80	4,090.2	498.5	514.7	716.1	3.07	-1.98	8.02
4,278.0	14.80	47.80	4,173.1	513.4	532.1	739.1	1.88	-1.63	-3.49
4,363.0	13.60	48.80	4,255.5	527.3	547.7	759.9	1.44	-1.41	1.18
4,448.0	12.60	44.00	4,338.3	540.5	561.7	779.2	1.74	-1.18	-5.65
4,577.0	9.40	54.70	4,464.9	556.8	580.0	803.7	2.93	-2.48	8.29
4,662.0	8.20	52.90	4,548.9	564.4	590.5	816.6	1.45	-1.41	-2.12
4,748.0	7.20	51.60	4,634.2	571.5	599.6	828.1	1.18	-1.16	-1.51
4,833.0	5.50	55.70	4,718.6	577.1	607.2	837.4	2.07	-2.00	4.82
4,919.0	5.50	67.90	4,804.2	580.9	614.4	845.4	1.36	0.00	14.19
5,048.0	2.30	90.70	4,932.9	583.2	622.7	853.1	2.71	-2.48	17.67
5,133.0	1.80	96.20	5,017.9	583.1	625.8	855.2	0.63	-0.59	6.47
5,219.0	1.30	101.90	5,103.8	582.7	628.1	856.7	0.61	-0.58	6.63
5,304.0	0.80	111.40	5,188.8	582.3	629.6	857.5	0.62	-0.59	11.18
5,315.3	0.80	110.82	5,200.1	582.3	629.7	857.6	0.07	0.00	-5.11
TARGET BHL 75'FNL, 1320'FWL									
5,390.0	0.80	107.00	5,274.8	581.9	630.7	858.1	0.07	0.00	-5.12
5,475.0	0.60	76.80	5,359.8	581.8	631.7	858.8	0.49	-0.24	-35.53
5,561.0	0.30	43.50	5,445.8	582.1	632.3	859.4	0.45	-0.35	-38.72
5,689.0	0.20	17.40	5,573.8	582.6	632.6	859.9	0.12	-0.08	-20.39
5,817.0	0.40	161.00	5,701.8	582.4	632.8	860.0	0.45	0.16	112.19
5,946.0	0.40	109.10	5,830.8	581.8	633.4	860.0	0.27	0.00	-40.23
6,074.0	0.40	107.50	5,958.8	581.5	634.2	860.4	0.01	0.00	-1.25
6,203.0	0.20	111.50	6,087.8	581.3	634.9	860.8	0.16	-0.16	3.10
6,331.0	0.10	204.70	6,215.8	581.1	635.0	860.8	0.18	-0.08	72.81

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6,459.0	0.30	199.30	6,343.8	580.7	634.9	860.4	0.16	0.16	-4.22
6,587.0	0.80	180.50	6,471.8	579.5	634.7	859.5	0.41	0.39	-14.69
6,602.2	0.82	179.93	6,487.0	579.3	634.7	859.3	0.16	0.15	-3.76
TARGET CIRCLE 75'FNL, 1320'FWL									
6,716.0	1.00	176.50	6,600.8	577.5	634.8	858.2	0.16	0.16	-3.01
6,844.0	1.30	150.00	6,728.8	575.1	635.6	857.1	0.47	0.23	-20.70
7,023.0	1.70	94.50	6,907.7	573.1	639.3	858.5	0.80	0.22	-31.01
HARDLINE 75'N OF BHL									
7,073.0	1.70	94.50	6,957.7	573.0	640.7	859.6	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____