

Well Name: **Coleman C22-18D**

Surface Location: Coleman C22-18D Pad Sec.22-T4N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

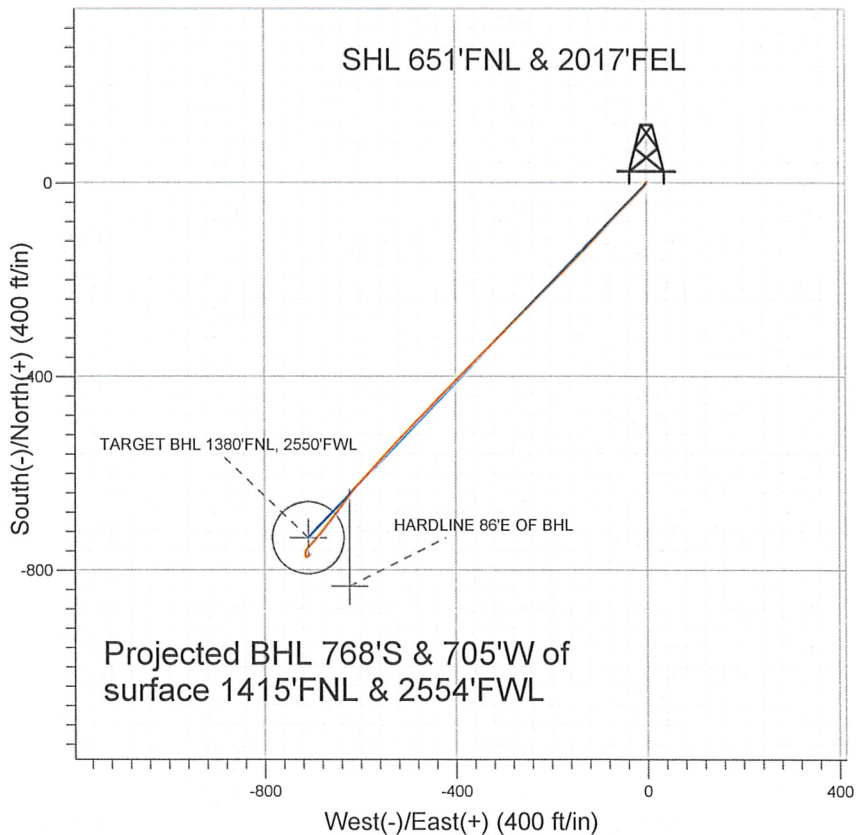
Ground Elevation: 4656.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1354838.98	3269251.66	40° 18' 12.276 N	104° 32' 4.560 W

Original Well Elev WELL @ 4669.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO



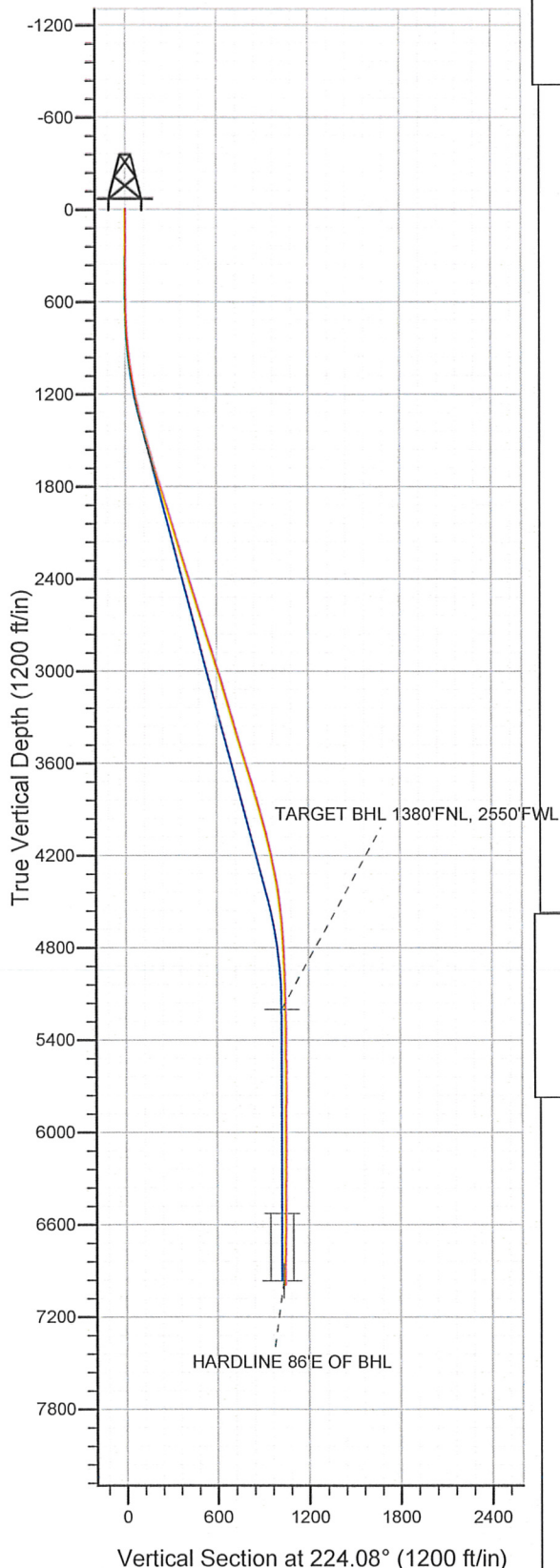
LEGEND

- ✕ Coleman C22-18D, Wellbore #1, Noble Coleman C22-18D Plan #1 (05-03-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7130'MD & 6989'TVD @ 1042'VS
 0.5 deg Inc 41.8 deg AZ

Project: SEC.22-T4N-R64W
 Site: Coleman C22-18D Pad Sec.22-T4N-R64W
 Well: Coleman C22-18D
 Plan: Wellbore #1



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 Project: SEC.22-T4N-R64W
 Site: Coleman C22-18D Pad Sec.22-T4N-R64W
 Well: Coleman C22-18D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Coleman C22-18D
 TVD Reference: WELL @ 4669.0ft (Original Well Elev)
 MD Reference: WELL @ 4669.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

Project	SEC.22-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 C22-18D Pad Sec.22-T4N-R64W

Site Position:		Northing:	1,354,838.99 ft	Latitude:	40° 18' 12.276 N
From:	Lat/Long	Easting:	3,269,251.66 ft	Longitude:	104° 32' 4.560 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.62 °

Well	Coleman C22-18D					
Well Position	+N/-S	0.0 ft	Northing:	1,354,838.98 ft	Latitude:	40° 18' 12.276 N
	+E/-W	0.0 ft	Easting:	3,269,251.66 ft	Longitude:	104° 32' 4.560 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,656.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/15/2011	8.78	67.02	53,142

Design Wellbore #1

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	224.08

Survey Program Date 4/25/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
565.0	7,130.0	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
565.0	0.40	147.30	565.0	-1.7	1.1	0.5	0.07	0.07	0.00
638.0	1.10	212.60	638.0	-2.5	0.8	1.2	1.37	0.96	89.45
725.0	2.60	220.90	724.9	-4.7	-0.9	4.0	1.75	1.72	9.54
810.0	4.20	223.40	809.8	-8.4	-4.3	9.0	1.89	1.88	2.94
896.0	6.10	223.70	895.4	-14.0	-9.6	16.7	2.21	2.21	0.35
981.0	7.70	223.00	979.8	-21.4	-16.6	27.0	1.88	1.88	-0.82
1,067.0	9.50	225.10	1,064.8	-30.6	-25.6	39.8	2.12	2.09	2.44
1,153.0	10.70	224.90	1,149.5	-41.3	-36.3	54.9	1.40	1.40	-0.23
1,238.0	12.50	225.20	1,232.8	-53.4	-48.4	72.0	2.12	2.12	0.35
1,324.0	14.20	221.80	1,316.5	-67.8	-62.0	91.8	2.18	1.98	-3.95
1,409.0	14.90	222.90	1,398.7	-83.6	-76.4	113.2	0.89	0.82	1.29
1,495.0	14.90	222.70	1,481.8	-99.8	-91.4	135.3	0.06	0.00	-0.23

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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)
1,581.0	16.30	223.20	1,564.7	-116.7	-107.2	158.4	1.64	1.63	0.58
1,666.0	16.40	223.60	1,646.2	-134.1	-123.6	182.3	0.18	0.12	0.47
1,752.0	16.90	224.40	1,728.6	-151.8	-140.7	207.0	0.64	0.58	0.93
1,837.0	17.40	225.90	1,809.8	-169.5	-158.5	232.0	0.79	0.59	1.76
1,923.0	17.30	224.20	1,891.9	-187.6	-176.6	257.7	0.60	-0.12	-1.98
2,009.0	18.20	223.10	1,973.8	-206.6	-194.7	283.9	1.12	1.05	-1.28
2,094.0	18.40	225.90	2,054.5	-225.6	-213.4	310.6	1.06	0.24	3.29
2,180.0	17.20	227.60	2,136.4	-243.6	-232.6	336.8	1.52	-1.40	1.98
2,265.0	16.50	224.30	2,217.8	-260.7	-250.3	361.4	1.39	-0.82	-3.88
2,351.0	16.90	225.30	2,300.1	-278.3	-267.7	386.1	0.57	0.47	1.16
2,437.0	16.60	223.40	2,382.5	-296.0	-285.0	410.9	0.73	-0.35	-2.21
2,522.0	17.40	226.40	2,463.8	-313.6	-302.6	435.8	1.40	0.94	3.53
2,608.0	18.20	225.60	2,545.7	-331.8	-321.5	462.0	0.97	0.93	-0.93
2,693.0	17.80	225.20	2,626.5	-350.3	-340.2	488.3	0.49	-0.47	-0.47
2,779.0	18.60	224.50	2,708.2	-369.3	-359.1	515.2	0.96	0.93	-0.81
2,865.0	18.30	224.70	2,789.8	-388.7	-378.2	542.4	0.36	-0.35	0.23
2,950.0	17.00	225.40	2,870.8	-406.9	-396.5	568.1	1.55	-1.53	0.82
3,036.0	18.20	224.70	2,952.7	-425.3	-414.9	594.1	1.42	1.40	-0.81
3,121.0	16.70	224.10	3,033.8	-443.5	-432.7	619.6	1.78	-1.76	-0.71
3,207.0	16.20	224.10	3,116.3	-461.0	-449.7	644.0	0.58	-0.58	0.00
3,293.0	15.60	223.90	3,199.0	-477.9	-466.0	667.5	0.70	-0.70	-0.23
3,378.0	16.90	225.50	3,280.6	-494.8	-482.8	691.3	1.62	1.53	1.88
3,464.0	16.60	224.10	3,363.0	-512.4	-500.2	716.1	0.58	-0.35	-1.63
3,549.0	17.10	224.50	3,444.3	-530.1	-517.4	740.7	0.60	0.59	0.47
3,635.0	17.00	222.60	3,526.6	-548.3	-534.8	766.0	0.66	-0.12	-2.21
3,721.0	17.40	221.80	3,608.7	-567.2	-551.9	791.4	0.54	0.47	-0.93
3,806.0	16.90	223.00	3,689.9	-585.7	-568.8	816.4	0.72	-0.59	1.41
3,892.0	16.00	222.50	3,772.4	-603.6	-585.3	840.8	1.06	-1.05	-0.58
3,977.0	15.40	223.20	3,854.2	-620.4	-601.0	863.8	0.74	-0.71	0.82
4,063.0	15.50	217.30	3,937.1	-637.9	-615.7	886.6	1.83	0.12	-6.86
4,149.0	14.90	217.10	4,020.1	-655.8	-629.4	909.0	0.70	-0.70	-0.23
4,234.0	14.10	217.30	4,102.4	-672.8	-642.2	930.1	0.94	-0.94	0.24
4,320.0	13.50	217.30	4,185.9	-689.1	-654.7	950.5	0.70	-0.70	0.00
4,405.0	11.60	218.40	4,268.9	-703.7	-666.0	968.8	2.25	-2.24	1.29
4,491.0	10.20	219.00	4,353.3	-716.4	-676.2	985.0	1.63	-1.63	0.70
4,577.0	8.70	219.70	4,438.2	-727.3	-685.1	999.1	1.75	-1.74	0.81
4,662.0	7.50	219.80	4,522.3	-736.5	-692.8	1,011.0	1.41	-1.41	0.12
4,748.0	5.70	225.40	4,607.8	-743.8	-699.4	1,020.9	2.22	-2.09	6.51
4,833.0	4.20	222.90	4,692.4	-749.1	-704.5	1,028.2	1.78	-1.76	-2.94
4,919.0	2.90	217.80	4,778.3	-753.1	-708.0	1,033.5	1.55	-1.51	-5.93
5,090.0	1.90	217.40	4,949.1	-758.8	-712.4	1,040.7	0.58	-0.58	-0.23
5,261.0	1.80	191.40	5,120.0	-763.7	-714.6	1,045.7	0.49	-0.06	-15.20
5,340.1	1.64	183.49	5,199.1	-766.0	-714.9	1,047.6	0.36	-0.20	-10.00
TARGET BHL 1380'FNL, 2550'FWL									
5,433.0	1.50	172.30	5,292.0	-768.6	-714.9	1,049.4	0.36	-0.15	-12.04
5,604.0	0.60	144.80	5,462.9	-771.5	-714.0	1,051.0	0.59	-0.53	-16.08
5,775.0	0.50	157.30	5,633.9	-772.9	-713.2	1,051.4	0.09	-0.06	7.31
5,946.0	0.10	105.20	5,804.9	-773.6	-712.8	1,051.6	0.26	-0.23	-30.47
6,117.0	0.40	110.00	5,975.9	-773.9	-712.1	1,051.3	0.18	0.18	2.81
6,289.0	0.50	67.70	6,147.9	-773.8	-710.8	1,050.4	0.20	0.06	-24.59
6,460.0	0.60	57.80	6,318.9	-773.1	-709.4	1,048.8	0.08	0.06	-5.79
6,631.0	0.40	35.50	6,489.9	-772.1	-708.3	1,047.4	0.16	-0.12	-13.04
6,665.4	0.46	36.02	6,524.3	-771.9	-708.1	1,047.1	0.18	0.18	1.51
TARGET CIRCLE 1380'FNL, 2550'FWL									

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6,802.0	0.70	37.20	6,660.9	-770.8	-707.3	1,045.8	0.18	0.18	0.86
7,080.0	0.50	41.80	6,938.9	-768.5	-705.5	1,042.9	0.07	-0.07	1.65
7,105.2	0.50	41.80	6,964.1	-768.4	-705.3	1,042.6	0.00	0.00	0.00
HARDLINE 86'E OF BHL									
7,130.0	0.50	41.80	6,988.9	-768.2	-705.2	1,042.4	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____