

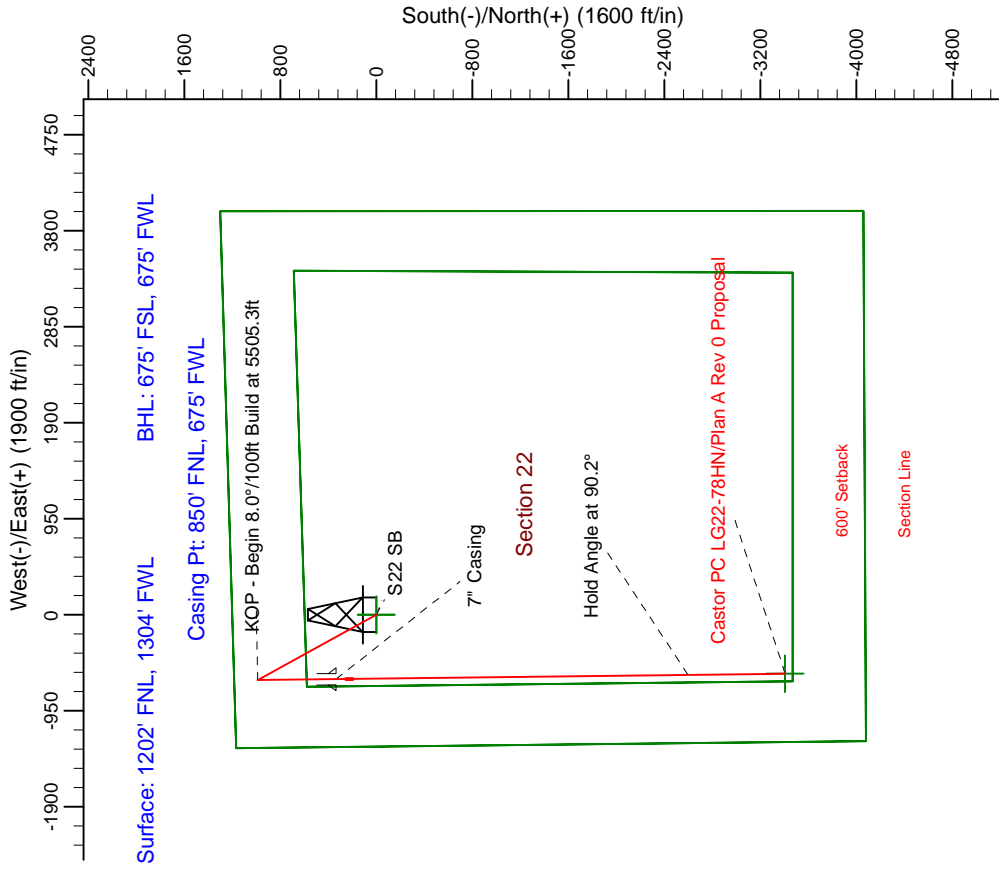
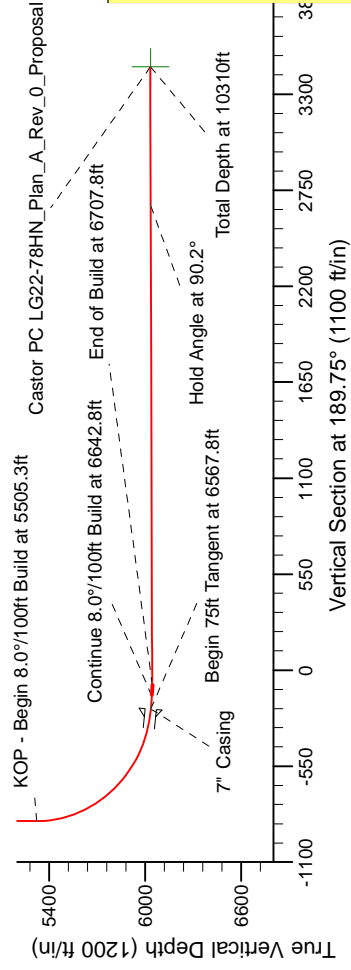
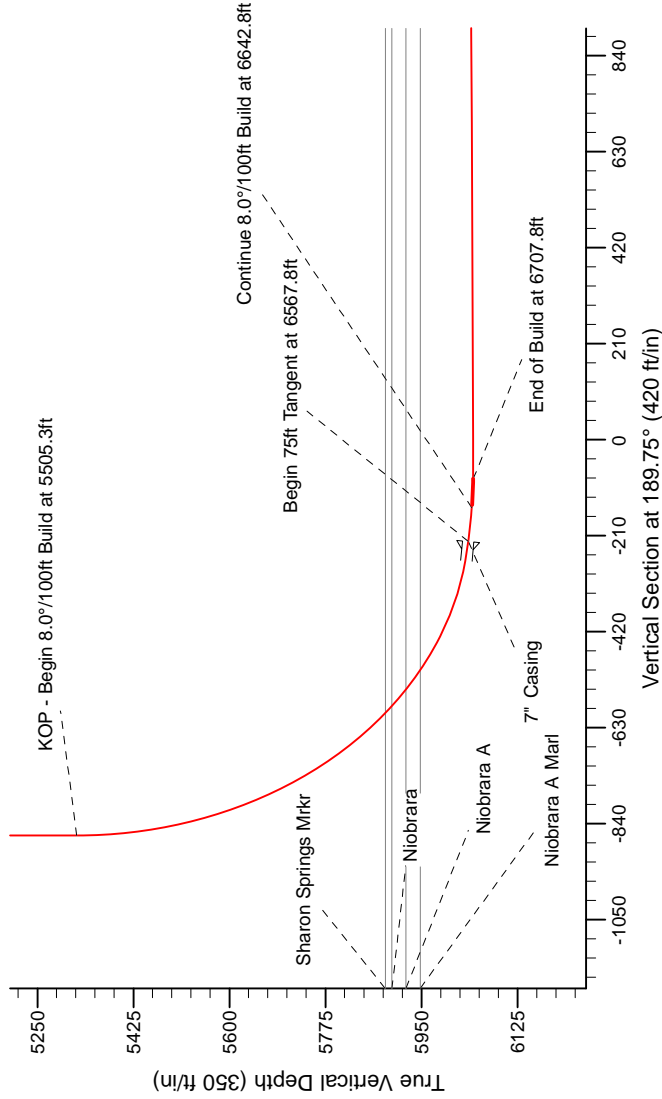
Project: Weld County Colorado (NAD 83)
Site: Sec. 22, T8N, R59W
Well: Castor PC LG22-78HN
Wellbore: Plan A Rev 0 (PERMITTING PLAN ONLY)
Design: Plan A Rev 0 Proposal

Noble Energy



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	0.0
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	0.0
3	1760.0	19.00	326.84	1746.1	104.5	-68.3	2.50	326.84	-91.5	
4	4621.6	19.00	326.84	4451.8	884.5	-577.9	0.00	0.00	-773.9	
5	5381.6	0.00	0.00	5198.0	989.0	-646.2	2.50	180.00	-865.3	
6	5505.3	0.00	0.00	5321.7	989.0	-646.2	0.00	0.00	-865.3	
7	6567.8	85.00	179.20	6035.2	335.3	-637.1	8.00	179.20	-222.6	
8	6842.8	85.00	179.20	6041.7	280.6	-636.0	0.00	0.00	-149.1	
9	6707.8	90.20	179.20	6044.4	195.6	-635.1	8.00	0.00	-85.3	
10	6031.0	90.20	179.21	6031.9	-3406.1	-585.1	0.00	106.36	3456.0	Castor PC LG22-78HN_Plan_A_Rev_0_Proposal



WELL DETAILS: Castor PC LG22-78HN (NAD83 Geodetic System)

Northing 452273.03 Easting 1044001.07 Ground Level: 4850.0
Latitude 40° 39' 5.148 N Longitude 103° 58' 3.252 W

Plan: Plan A Rev 0 Proposal (Castor PC LG22-78HN/Plan A Rev 0 (PERMITTING PLAN ONLY))

Created By: Jose Patino Date: 10-18-January 12 2012

Magnetic Model: IGRF 2005.10

Azimuth to Grid North
True North: 0.99°
Magnetic North: 1.35°

Strength: 53305.467 T
Dip Angle: 67.37°
Date: 1/11/2012

G M T

All Grid Norths 0.99° East of True North (Grid Convergence)
All Magnetic Norths 1.35° East of True North (Magnetic Convergence)
Magnetic North is 2.32° East of Grid North (Magnetic Convergence)
To convert a Magnetic Direction to a True Direction: Add 1.32° East
To convert a Grid Direction to a True Direction: Add 0.99° East