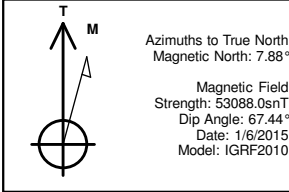




Project: Weld County, CO
Site: Sec 7-T10N-R57W
Well: Horsetail #07H-0613
Wellbore: Hz
Design: Design #1

PROJECT DETAILS: Weld County, CO
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level



WELL DETAILS: Horsetail #07H-0613

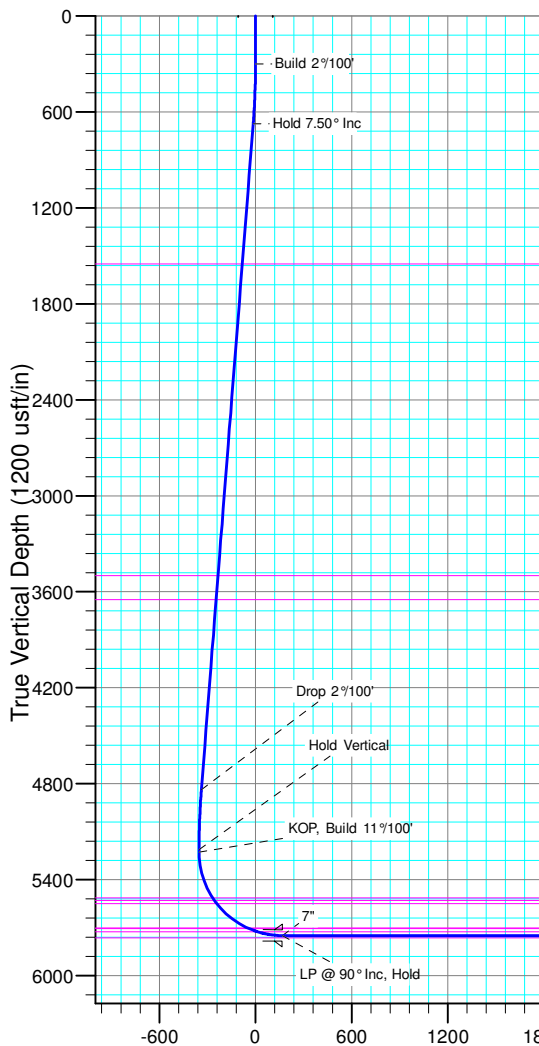
| +N/-S | +E/-W | Northing | Ground Level: | 4908.90 | Longitude | Slot |
|-------|-------|------------|---------------|------------|------------------|-------------------|
| 0.00 | 0.00 | 1558323.21 | Easting | 3473683.28 | 40° 51' 12.310 N | 103° 47' 15.600 W |

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 | 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 675.00 | 7.50 | 230.00 | 673.93 | -15.75 | -18.77 | 2.00 | 230.00 | -14.45 | |
| 4 | 4875.00 | 7.50 | 230.00 | 4838.00 | -368.14 | -438.73 | 0.00 | 0.00 | -337.76 | |
| 5 | 5250.00 | 0.00 | 0.00 | 5211.93 | -383.89 | -457.50 | 2.00 | 180.00 | -352.21 | |
| 6 | 5267.20 | 0.00 | 0.00 | 5229.13 | -383.89 | -457.50 | 0.00 | 0.00 | -352.21 | |
| 7 | 6085.38 | 90.00 | 359.69 | 5750.00 | 136.97 | -460.35 | 11.00 | 359.69 | 167.66 | PBHL 0613A |
| 8 | 13358.91 | 90.00 | 359.69 | 5750.00 | 7410.40 | -500.12 | 0.00 | 0.00 | 7427.25 | PBHL 0613A |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|---------|----------------|
| 1550.00 | 1558.63 | Upper Pierre |
| 3500.00 | 3525.46 | Hygiene |
| 3650.00 | 3676.75 | Lower Pierre |
| 5515.00 | 5569.81 | P200 Marker |
| 5530.00 | 5587.97 | P300 Marker |
| 5550.00 | 5612.90 | P350 Marker |
| 5702.00 | 5860.02 | Sharon Springs |
| 5707.00 | 5872.25 | Niobrara |
| 5727.00 | 5930.02 | Top A Chalk |



| ANNOTATIONS | | | | | | | | |
|-------------|----------|-------|--------|---------|---------|---------|-----------|---------------------|
| TVD | MD | Inc | Azi | +N/-S | +E/-W | Vsect | Departure | Annotation |
| 300.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Build 2°/100' |
| 673.93 | 675.00 | 7.50 | 230.00 | -15.75 | -18.77 | -14.45 | 24.51 | Hold 7.50° Inc |
| 4838.00 | 4875.00 | 7.50 | 230.00 | -368.14 | -438.73 | -337.76 | 572.72 | Drop 2°/100' |
| 5211.93 | 5250.00 | 0.00 | 0.00 | -383.89 | -457.50 | -352.21 | 597.23 | Hold Vertical |
| 5229.13 | 5267.20 | 0.00 | 0.00 | -383.89 | -457.50 | -352.21 | 597.23 | KOP, Build 11°/100' |
| 5750.00 | 6085.38 | 90.00 | 359.69 | 136.97 | -460.35 | 167.66 | 1118.10 | LP @ 90° Inc, Hold |
| 5750.00 | 13358.91 | 90.00 | 359.69 | 7410.40 | -500.12 | 7427.25 | 8391.63 | TD at 13358.91' MD |

| DESIGN TARGET DETAILS | | | | | | | |
|-----------------------|---------|---------|---------|------------|------------|------------------|-------------------|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| PBHL 0613A | 5750.00 | 7410.40 | -500.12 | 1565722.57 | 3473040.17 | 40° 52' 25.530 N | 103° 47' 22.110 W |

SHL:
2634' FSL, 660' FEL
Sec7-T10N-R57W

BHL:
600' FNL, 1142' FEL
Sec6-T10N-R57W

7":
2551' FNL, 1120' FEL
Sec7-T10N-R57W

