

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Riteaway 32J-103**

Surface Location: Riteaway NW-32 Pad Sec.32-T5N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

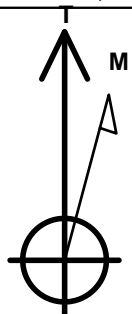
Ground Elevation: 4795.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|-------|-------|------------|------------|-----------|-------------|------|
| 0.0 | 0.0 | 1375474.98 | 3161584.89 | 40.362630 | -104.920140 | |

Original Well Elev WELL @ 4810.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Shape |
|---------------------------|--------|---------|--------|---------|
| HARD LINE BHL 460'FSL | 1.0 | -4488.2 | 100.0 | Polygon |
| HARD LINE SHL 460'FNL | 1.0 | -167.0 | 100.0 | Polygon |
| SECTION LINE 292'N OF SHL | 1.0 | 292.0 | 100.0 | Polygon |
| BHL 500'FSL, 1320'FWL | 6654.0 | -4448.2 | -487.8 | Point |



Azimuths to True North
Magnetic North: 8.84°

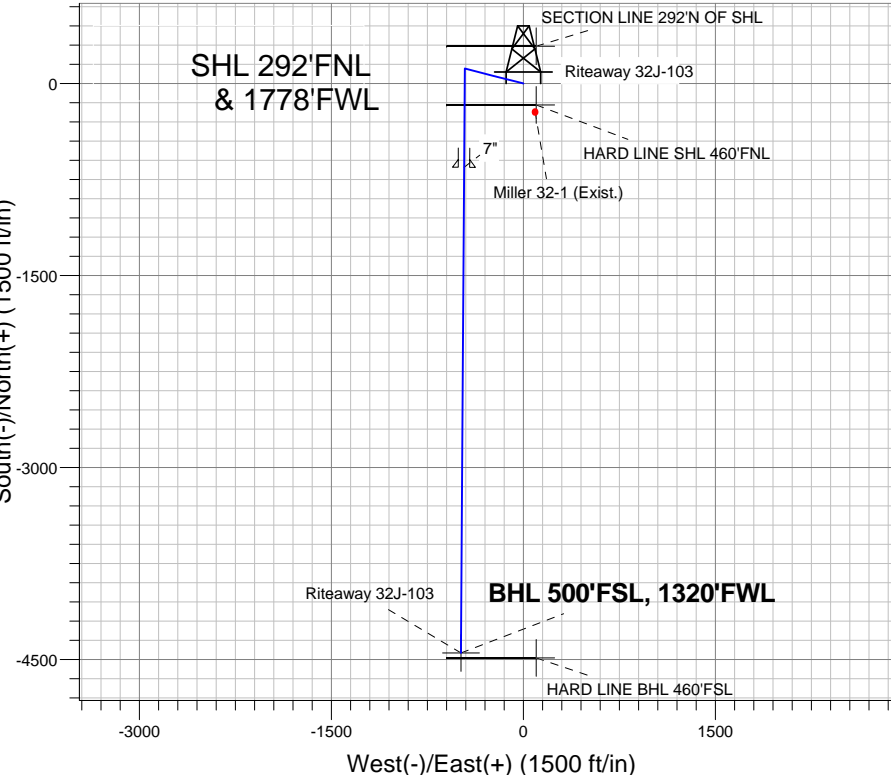
Magnetic Field
Strength: 53012.7nT
Dip Angle: 66.97°
Date: 3/27/2012
Model: IGRF2010

Riteaway NW-32 Pad Sec.32-T5N-R67W
Riteaway 32J-103
Plan #1 (3-27-12)
15:58, April 10 2012

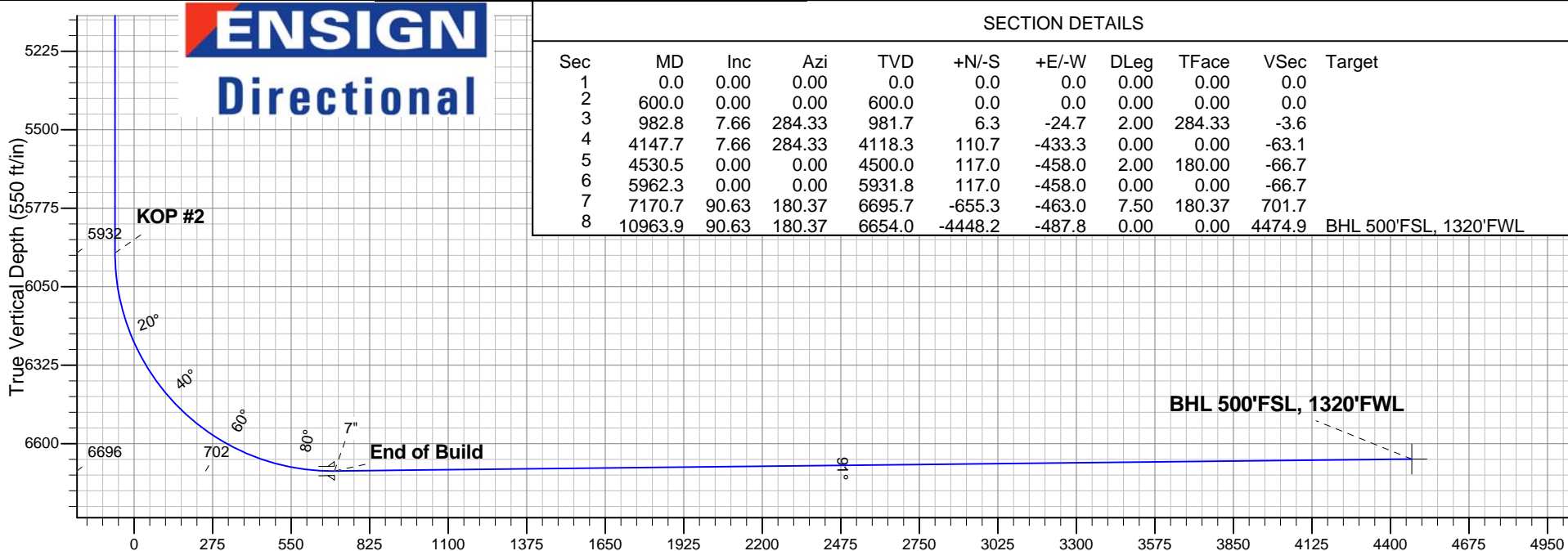
ANNOTATIONS

| TVD | MD | Annotation |
|--------|--------|--------------|
| 600.0 | 600.0 | KOP #1 |
| 5931.8 | 5962.3 | KOP #2 |
| 6695.7 | 7170.7 | End of Build |

South(-)/North(+) (1500 ft/in)



ENSIGN
Directional



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 | |
| 2 | 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 982.8 | 7.66 | 284.33 | 981.7 | 6.3 | -24.7 | 2.00 | 284.33 | -3.6 | |
| 4 | 4147.7 | 7.66 | 284.33 | 4118.3 | 110.7 | -433.3 | 0.00 | 0.00 | -63.1 | |
| 5 | 4530.5 | 0.00 | 0.00 | 4500.0 | 117.0 | -458.0 | 2.00 | 180.00 | -66.7 | |
| 6 | 5962.3 | 0.00 | 0.00 | 5931.8 | 117.0 | -458.0 | 0.00 | 0.00 | -66.7 | |
| 7 | 7170.7 | 90.63 | 180.37 | 6695.7 | -655.3 | -463.0 | 7.50 | 180.37 | 701.7 | |
| 8 | 10963.9 | 90.63 | 180.37 | 6654.0 | -4448.2 | -487.8 | 0.00 | 0.00 | 4474.9 | BHL 500'FSL, 1320'FWL |

Vertical Section at 186.23° (550 ft/in)