

Elm Ridge Exploration Company.

Project: La Plata County, Co (Nad 83)
Site: Sec 21, T33N, R8W
Well: IGS #419
Wellbore: DD
Plan: #1

Reference Details - WELL CENTRE

Geodetic System: US State Plane 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
Northing: 1163263.59
Easting: 2350681.94
Latitude: 37° 5' 37.644 N
Longitude: 107° 43' 34.788 W
Grid Convergence: 1.37° East
Ground Elevation: 6776.0
KB Elevation: Est RKB @ 6790.0usft (IGS 419)

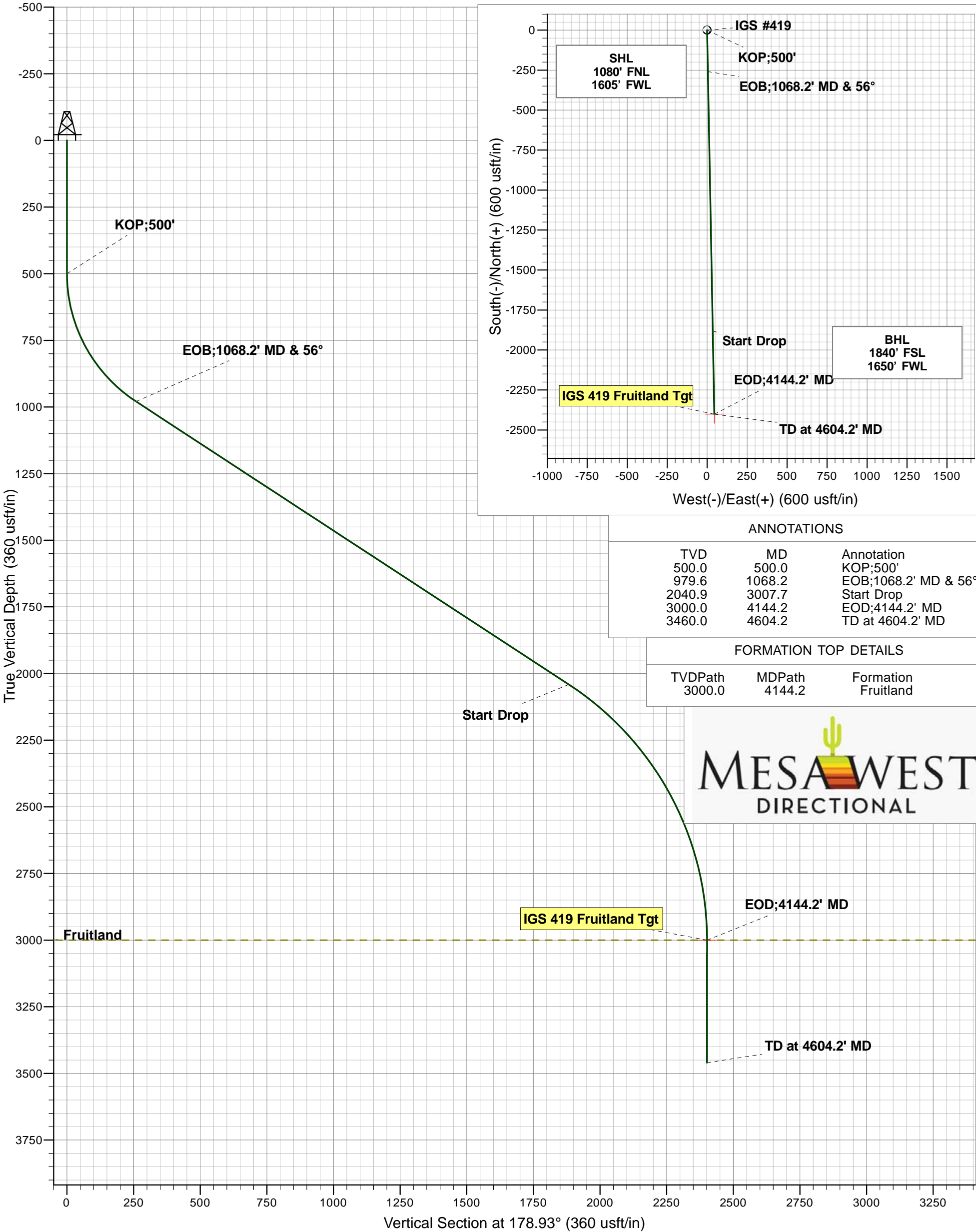


Azimuths to True North
Magnetic North: 9.57°

Magnetic Field
Strength: 50651.9snT
Dip Angle: 63.70°
Date: 5/7/2014
Model: IGRF2010

PLAN DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	1068.2	56.82	178.93	979.6	-259.4	4.9	10.00	178.93	259.4	
4	3007.7	56.82	178.93	2040.9	-1882.4	35.3	0.00	0.00	1882.7	
5	4144.2	0.00	0.00	3000.0	-2401.1	45.0	5.00	180.00	2401.6	IGS 419 Fruitland Tgt
6	4604.2	0.00	0.00	3460.0	-2401.1	45.0	0.00	0.00	2401.6	



ANNOTATIONS

TVD	MD	Annotation
500.0	500.0	KOP;500'
979.6	1068.2	EOB;1068.2' MD & 56°
2040.9	3007.7	Start Drop
3000.0	4144.2	EOD;4144.2' MD
3460.0	4604.2	TD at 4604.2' MD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3000.0	4144.2	Fruitland



