

Well Name: IGS

Well Number: 146

WELL LOCATION INFORMATION

QtrQtr/Lot NWSE Sec: 21 Twp: 33N Rng: 8W Meridian: N

Latitude: 37.088110 Longitude: -107.719560

Footage At Surface: 2124 feet, Dir: FSL (FNL/FSL) 1693 feet, Dir: FEL (FEL/FWL)

Field Name: IGNACIO BLANCO Field Number: 38300

Ground Elevation: 6876 feet County: LA PLATA

GPS Data:

Date of Measurement: 1/10/2014 PDOP Reading: 2.2 Instr. Op.'s Name Scott Weibe

If well is: DIRECTIONAL submit deviated drilling plan.

Footage At Top of Prod Zone: 1900 feet, Dir: FNL (FNL/FSL) 720 feet, Dir: FEL (FEL/FWL)

Top Sec: 21 Top Twp: 33N Top Rng: 8W

At Bottom Hole: 1900 feet, Dir: FNL (FNL/FSL) 720 feet, Dir: FEL (FEL/FWL)

Bot Sec: 21 Bot Twp: 33N Bot Rng: 8W

Elm Ridge Exploration Company.

Project: La Plata County, Co (Nad 83)
Site: Sec 21, T33N, R8W
Well: IGS 146
Wellbore: DD
Plan: #1

Reference Details - WELL CENTRE
Geodetic System: US State Plane 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
Northing: 1161148.21
Easting: 2352607.95
Latitude: 37° 5' 17.188 N
Longitude: 107° 43' 10.403 W
Grid Convergence: 1.36° East
Ground Elevation: 6876.0
KB Elevation: Est RKB @ 6890.0usft

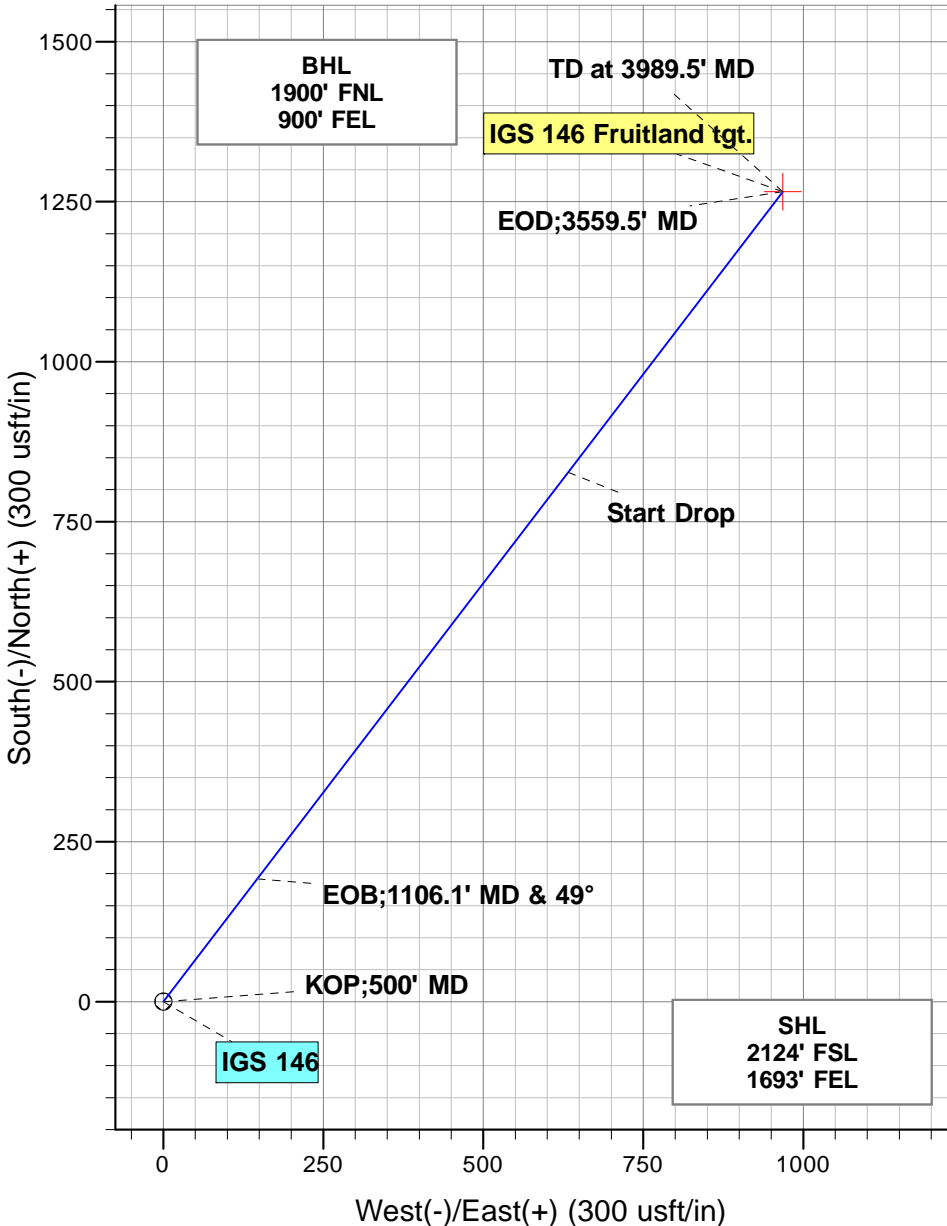
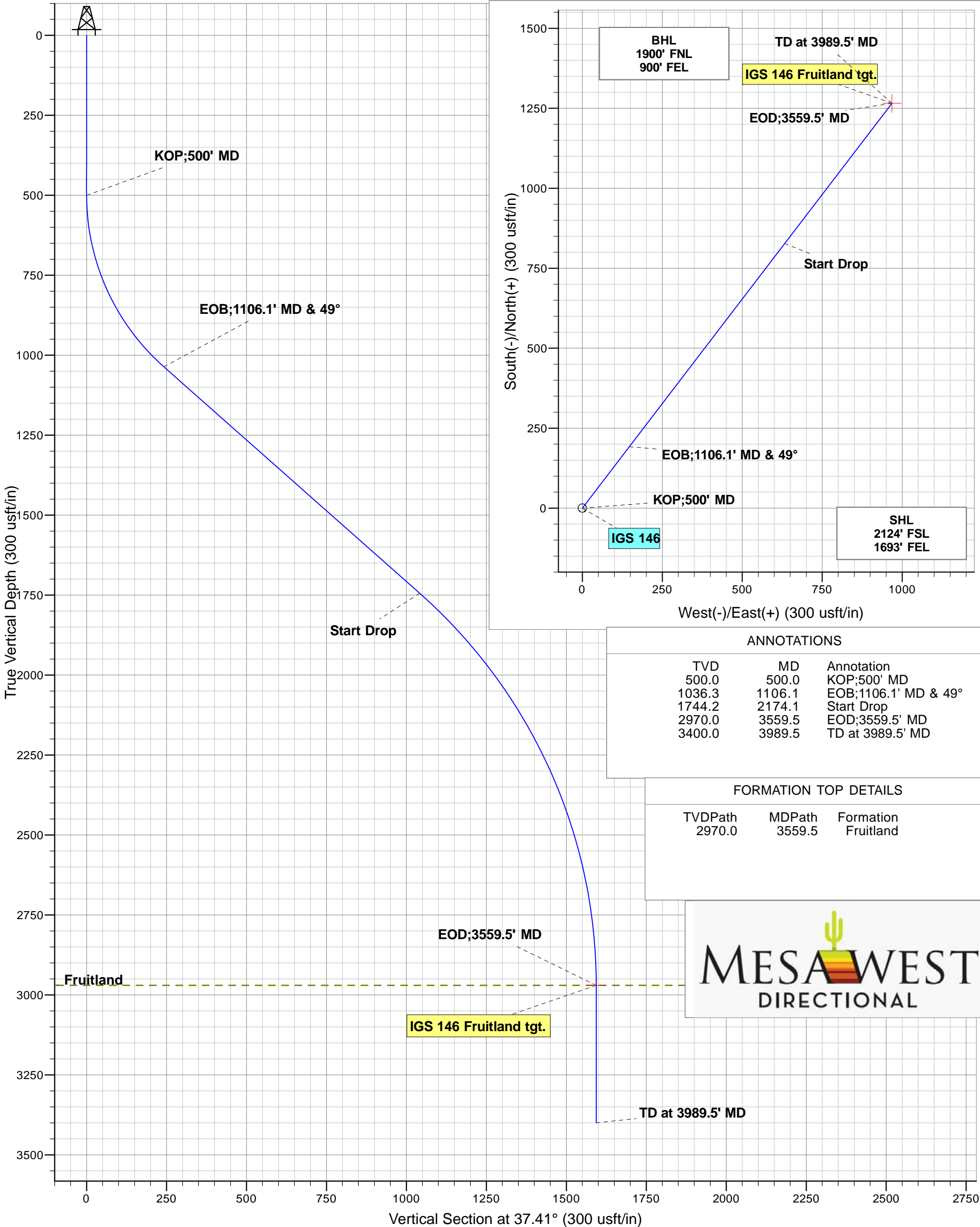


Azimuths to True North
Magnetic North: 9.55°

Magnetic Field
Strength: 50637.1snT
Dip Angle: 63.70°
Date: 6/19/2014
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	1106.1	48.49	37.41	1036.3	191.9	146.7	8.00	37.41	241.5	
4	2174.1	48.49	37.41	1744.2	827.1	632.6	0.00	0.00	1041.3	
5	3559.5	0.00	0.00	2970.0	1265.7	967.9	3.50	180.00	1593.3	IGS 146 Fruitland tgt.
6	3989.5	0.00	0.00	3400.0	1265.7	967.9	0.00	0.00	1593.3	



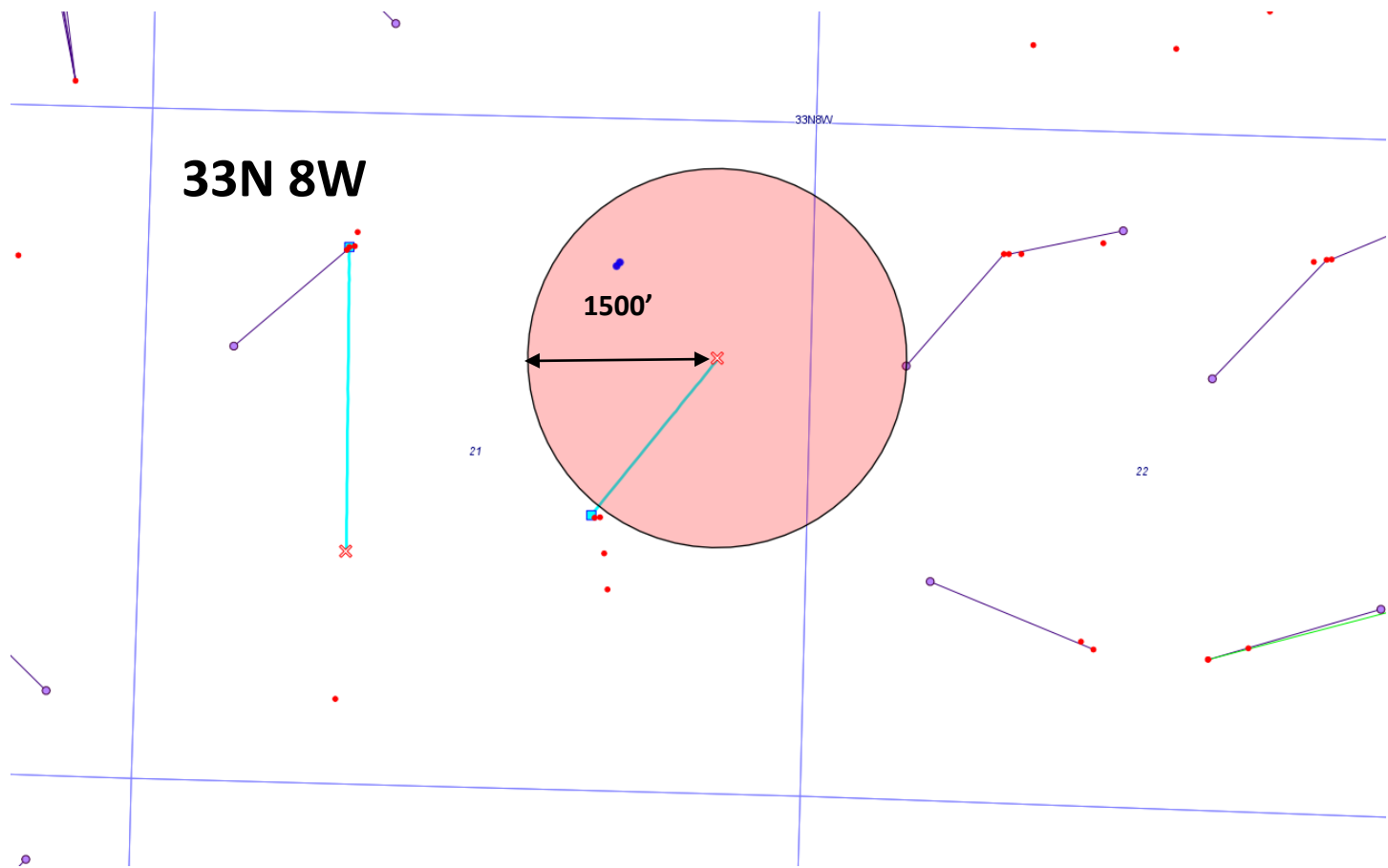
ANNOTATIONS

TVD	MD	Annotation
500.0	500.0	KOP;500' MD
1036.3	1106.1	EOB;1106.1' MD & 49°
1744.2	2174.1	Start Drop
2970.0	3559.5	EOD;3559.5' MD
3400.0	3989.5	TD at 3989.5' MD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2970.0	3559.5	Fruitland





Oil and Gas Wells Selected

**05-067-08796, CRIEGLER 1-A
CASING, LINER and CEMENT**

Submit contractor's cement job summary for each string cemented.

[illegible]