

# **Elm Ridge Exploration**

**SEC.9-T33N-R8W**

**IGE 128 PAD SEC.9-T33N-R8W**

**IGE 128**

**IGE 128**

**Plan: Design #1**

## **Standard Planning Report**

**07 January, 2009**



**OilField Guidance Inc.**



OilField Guidance Inc.

Well Name: IGE 128

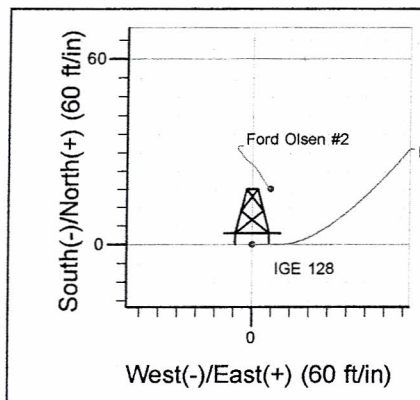
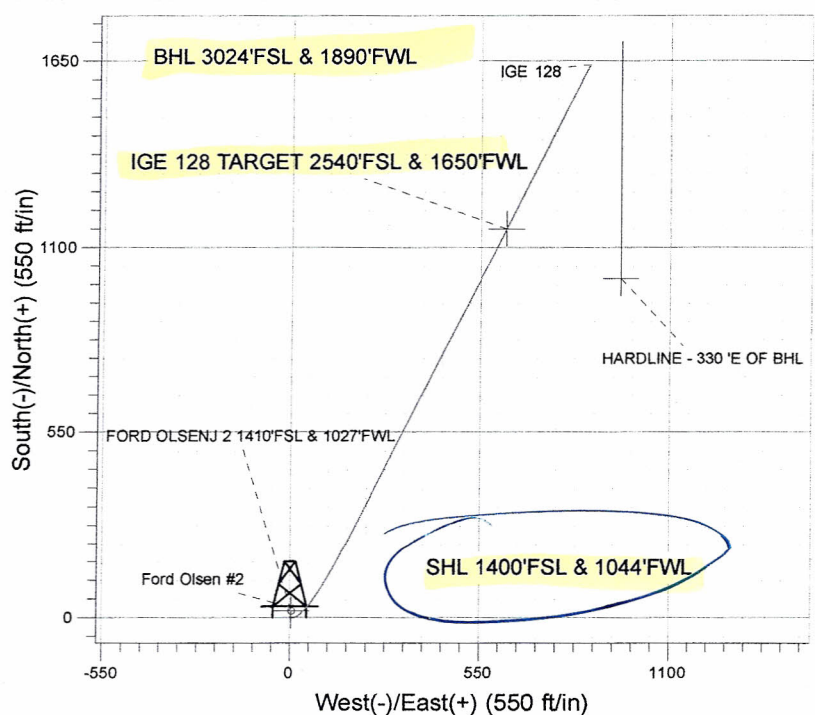
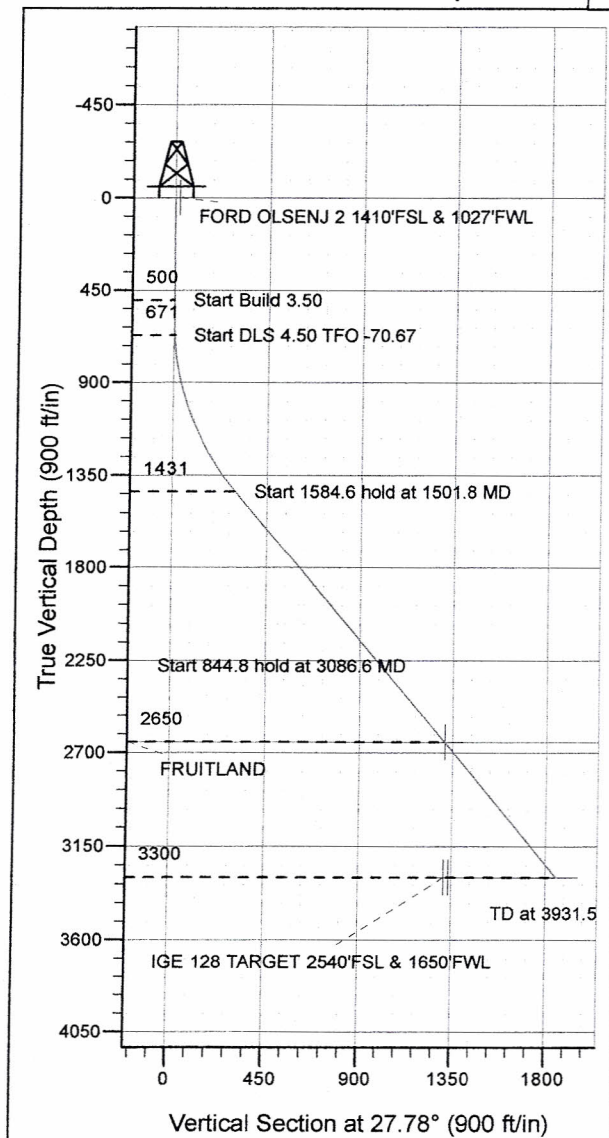
Surface Location: IGE 128 PA EC.9-T33N-R8W  
North American Datum 1983 US State Plane 1983 Colorado Southern Zone

Ground Elevation: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1171046.39	2350246.18	37° 6' 54.468 N	107° 43' 42.456 W	
Original Well Elev						WELL @ 0.0ft (Original Well Elev)

## Fruitland plan

## Elm Ridge Exploration



Azimuths to True North  
Magnetic North: 10.23°  
Magnetic Field  
Strength: 51280.9snT  
Dip Angle: 63.86°  
Date: 12/6/2008  
Model: IGRF200510

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
FORD OLSENJ 2 1410'FSL & 1027'FWL	1.0	19.4	4.4	37° 6' 54.660 N	107° 43' 42.402 W	Circle (Radius: 10.0)
Fruitland Coal Target 2540'FSL & 1650'FWL	2650.0	1154.2	624.0	37° 7' 5.880 N	107° 43' 34.752 W	Point
HARDLINE - 330° E OF BHL	3300.0	1007.3	954.6	37° 7' 4.427 N	107° 43' 30.670 W	Polygon
IGE 128 TARGET 2540'FSL & 1650'FWL	3300.0	1154.2	624.0	37° 7' 5.880 N	107° 43' 34.752 W	Point

## 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	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	671.4	6.00	90.00	671.1	0.0	9.0	3.50	90.00	4.2	
4	1501.8	39.70	26.28	1430.6	246.6	175.7	4.50	-70.67	300.1	
5	3086.4	39.70	26.28	2649.8	1154.1	623.9	0.00	0.00	1311.9	
6	3086.6	39.70	26.28	2650.0	1154.2	624.0	1.00	-31.38	1312.0	Fruitland Coal Target 2540'FSL & 1650'FWL
7	3931.5	39.70	26.28	3300.0	1638.1	862.9	0.00	0.00	1851.5	

# Planning Report



OilField Guidance Inc.

**Database:** Compass  
**Company:** Elm Ridge Exploration  
**Project:** SEC.9-T33N-R8W  
**Site:** IGE 128 PAD SEC.9-T33N-R8W  
**Well:** IGE 128  
**Wellbore:** IGE 128  
**Design:** Design #1

**Local Co-ordinate Reference:** Well IGE 128  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	SEC.9-T33N-R8W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Southern Zone		Using geodetic scale factor

**Site** IGE 128 PAD SEC.9-T33N-R8W  
**Site Position:**  
**From:** Lat/Long **Northing:** 1,171,046.41 ft **Latitude:** 37° 6' 54.468 N  
**Position Uncertainty:** 0.0 ft **Easting:** 2,350,246.18 ft **Longitude:** 107° 43' 42.456 W  
**Slot Radius:** " **Grid Convergence:** -1.37 °

**Well** IGE 128  
**Well Position** **+N/-S** 0.0 ft **Northing:** 1,171,046.39 ft **Latitude:** 37° 6' 54.468 N  
**+E/-W** 0.0 ft **Easting:** 2,350,246.18 ft **Longitude:** 107° 43' 42.456 W  
**Position Uncertainty** 0.0 ft **Wellhead Elevation:** ft **Ground Level:** 0.0 ft

**Wellbore** IGE 128

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	1/8/2008	10.34	63.88	51,368
	IGRF200510	12/6/2008	10.23	63.86	51,281

**Design** Design #1

**Audit Notes:**

**Version:** **Phase:** PROTOTYPE **Tie On Depth:** 0.0

**Vertical Section:** **Depth From (TVD)** **+N/-S** **+E/-W** **Direction**  
 (ft) (ft) (ft) (°)  
 0.0 0.0 0.0 27.78

## Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
671.4	6.00	90.00	671.1	0.0	9.0	3.50	3.50	0.00	90.00	
1,501.8	39.70	26.28	1,430.6	246.6	175.7	4.50	4.06	-7.67	-70.67	
3,086.4	39.70	26.28	2,649.8	1,154.1	623.9	0.00	0.00	0.00	0.00	
3,086.6	39.70	26.28	2,650.0	1,154.2	624.0	1.00	0.85	-0.82	-31.38	Fruitland Coal Targ
3,931.5	39.70	26.28	3,300.0	1,638.1	862.9	0.00	0.00	0.00	0.00	



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**Well:** IGE 128  
**Wellbore:** IGE 128  
**Design:** Design #1

**Local Co-ordinate Reference:** Well IGE 128  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>FORD OLSENJ 2 1410'FSL &amp; 1027'FWL</b>									
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	0.00
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	0.00
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	0.00
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
270.0	0.00	0.00	270.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
390.0	0.00	0.00	390.0	0.0	0.0	0.0	0.00	0.00	0.00
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	0.00
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
510.0	0.35	90.00	510.0	0.0	0.0	0.0	3.50	3.50	0.00
540.0	1.40	90.00	540.0	0.0	0.5	0.2	3.50	3.50	0.00
570.0	2.45	90.00	570.0	0.0	1.5	0.7	3.50	3.50	0.00
600.0	3.50	90.00	599.9	0.0	3.1	1.4	3.50	3.50	0.00
630.0	4.55	90.00	629.9	0.0	5.2	2.4	3.50	3.50	0.00
660.0	5.60	90.00	659.7	0.0	7.8	3.6	3.50	3.50	0.00
671.4	6.00	90.00	671.1	0.0	9.0	4.2	3.50	3.50	0.00
690.0	6.33	82.82	689.6	0.1	11.0	5.2	4.50	1.75	-38.64
720.0	7.03	72.90	719.4	0.9	14.3	7.5	4.50	2.35	-33.07
750.0	7.91	64.97	749.1	2.3	18.0	10.4	4.50	2.91	-26.44
780.0	8.90	58.70	778.8	4.4	21.8	14.0	4.50	3.31	-20.90
810.0	9.98	53.72	808.4	7.1	25.9	18.4	4.50	3.59	-16.58
840.0	11.11	49.73	837.9	10.5	30.2	23.4	4.50	3.79	-13.30
870.0	12.29	46.49	867.3	14.6	34.7	29.1	4.50	3.93	-10.82
900.0	13.50	43.81	896.5	19.3	39.5	35.5	4.50	4.04	-8.93
930.0	14.74	41.56	925.6	24.7	44.4	42.5	4.50	4.11	-7.48
960.0	15.99	39.66	954.5	30.7	49.6	50.3	4.50	4.18	-6.34
990.0	17.26	38.03	983.3	37.4	55.0	58.7	4.50	4.22	-5.43
1,020.0	18.53	36.62	1,011.8	44.7	60.6	67.8	4.50	4.26	-4.71
1,050.0	19.82	35.39	1,040.2	52.7	66.3	77.6	4.50	4.29	-4.12
1,080.0	21.12	34.30	1,068.3	61.3	72.3	88.0	4.50	4.32	-3.63
1,110.0	22.42	33.33	1,096.1	70.6	78.5	99.0	4.50	4.34	-3.23
1,140.0	23.72	32.46	1,123.7	80.4	84.9	110.7	4.50	4.36	-2.89
1,170.0	25.04	31.68	1,151.0	90.9	91.5	123.1	4.50	4.37	-2.61
1,200.0	26.35	30.97	1,178.1	102.1	98.2	136.1	4.50	4.38	-2.36
1,230.0	27.67	30.32	1,204.8	113.8	105.2	149.7	4.50	4.39	-2.15
1,260.0	28.99	29.73	1,231.2	126.1	112.3	163.9	4.50	4.40	-1.97
1,290.0	30.31	29.19	1,257.3	139.0	119.6	178.7	4.50	4.41	-1.81
1,320.0	31.64	28.68	1,283.0	152.5	127.1	194.2	4.50	4.42	-1.68
1,350.0	32.96	28.22	1,308.4	166.6	134.7	210.2	4.50	4.42	-1.56
1,380.0	34.29	27.78	1,333.3	181.3	142.5	226.8	4.50	4.43	-1.45
1,410.0	35.62	27.38	1,357.9	196.5	150.5	244.0	4.50	4.43	-1.35
1,440.0	36.95	27.00	1,382.1	212.3	158.6	261.8	4.50	4.44	-1.27
1,470.0	38.28	26.64	1,405.9	228.7	166.8	280.1	4.50	4.44	-1.19

**Database:** Compass  
**Company:** Elm Ridge Exploration  
**Project:** SEC.9-T33N-R8W  
**Site:** IGE 128 PAD SEC.9-T33N-R8W  
**Well:** IGE 128  
**Wellbore:** IGE 128  
**Design:** Design #1

**Local Co-ordinate Reference:** Well IGE 128  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,500.0	39.62	26.30	1,429.2	245.6	175.2	298.9	4.50	4.44	-1.12
1,501.8	39.70	26.28	1,430.6	246.6	175.7	300.1	4.50	4.45	-1.09
1,530.0	39.70	26.28	1,452.3	262.7	183.7	318.1	0.00	0.00	0.00
1,560.0	39.70	26.28	1,475.4	279.9	192.2	337.2	0.00	0.00	0.00
1,590.0	39.70	26.28	1,498.5	297.1	200.7	356.4	0.00	0.00	0.00
1,620.0	39.70	26.28	1,521.5	314.3	209.2	375.5	0.00	0.00	0.00
1,650.0	39.70	26.28	1,544.6	331.5	217.7	394.7	0.00	0.00	0.00
1,680.0	39.70	26.28	1,567.7	348.6	226.1	413.9	0.00	0.00	0.00
1,710.0	39.70	26.28	1,590.8	365.8	234.6	433.0	0.00	0.00	0.00
1,740.0	39.70	26.28	1,613.9	383.0	243.1	452.2	0.00	0.00	0.00
1,770.0	39.70	26.28	1,636.9	400.2	251.6	471.3	0.00	0.00	0.00
1,800.0	39.70	26.28	1,660.0	417.4	260.1	490.5	0.00	0.00	0.00
1,830.0	39.70	26.28	1,683.1	434.6	268.6	509.6	0.00	0.00	0.00
1,860.0	39.70	26.28	1,706.2	451.7	277.1	528.8	0.00	0.00	0.00
1,890.0	39.70	26.28	1,729.3	468.9	285.5	548.0	0.00	0.00	0.00
1,920.0	39.70	26.28	1,752.4	486.1	294.0	567.1	0.00	0.00	0.00
1,950.0	39.70	26.28	1,775.4	503.3	302.5	586.3	0.00	0.00	0.00
1,980.0	39.70	26.28	1,798.5	520.5	311.0	605.4	0.00	0.00	0.00
2,010.0	39.70	26.28	1,821.6	537.6	319.5	624.6	0.00	0.00	0.00
2,040.0	39.70	26.28	1,844.7	554.8	328.0	643.7	0.00	0.00	0.00
2,070.0	39.70	26.28	1,867.8	572.0	336.4	662.9	0.00	0.00	0.00
2,100.0	39.70	26.28	1,890.9	589.2	344.9	682.0	0.00	0.00	0.00
2,130.0	39.70	26.28	1,913.9	606.4	353.4	701.2	0.00	0.00	0.00
2,160.0	39.70	26.28	1,937.0	623.5	361.9	720.4	0.00	0.00	0.00
2,190.0	39.70	26.28	1,960.1	640.7	370.4	739.5	0.00	0.00	0.00
2,220.0	39.70	26.28	1,983.2	657.9	378.9	758.7	0.00	0.00	0.00
2,250.0	39.70	26.28	2,006.3	675.1	387.4	777.8	0.00	0.00	0.00
2,280.0	39.70	26.28	2,029.4	692.3	395.8	797.0	0.00	0.00	0.00
2,310.0	39.70	26.28	2,052.4	709.5	404.3	816.1	0.00	0.00	0.00
2,340.0	39.70	26.28	2,075.5	726.6	412.8	835.3	0.00	0.00	0.00
2,370.0	39.70	26.28	2,098.6	743.8	421.3	854.4	0.00	0.00	0.00
2,400.0	39.70	26.28	2,121.7	761.0	429.8	873.6	0.00	0.00	0.00
2,430.0	39.70	26.28	2,144.8	778.2	438.3	892.8	0.00	0.00	0.00
2,460.0	39.70	26.28	2,167.8	795.4	446.7	911.9	0.00	0.00	0.00
2,490.0	39.70	26.28	2,190.9	812.5	455.2	931.1	0.00	0.00	0.00
2,520.0	39.70	26.28	2,214.0	829.7	463.7	950.2	0.00	0.00	0.00
2,550.0	39.70	26.28	2,237.1	846.9	472.2	969.4	0.00	0.00	0.00
2,580.0	39.70	26.28	2,260.2	864.1	480.7	988.5	0.00	0.00	0.00
2,610.0	39.70	26.28	2,283.3	881.3	489.2	1,007.7	0.00	0.00	0.00
2,640.0	39.70	26.28	2,306.3	898.4	497.7	1,026.8	0.00	0.00	0.00
2,670.0	39.70	26.28	2,329.4	915.6	506.1	1,046.0	0.00	0.00	0.00
2,700.0	39.70	26.28	2,352.5	932.8	514.6	1,065.2	0.00	0.00	0.00
2,730.0	39.70	26.28	2,375.6	950.0	523.1	1,084.3	0.00	0.00	0.00
2,760.0	39.70	26.28	2,398.7	967.2	531.6	1,103.5	0.00	0.00	0.00
2,790.0	39.70	26.28	2,421.8	984.4	540.1	1,122.6	0.00	0.00	0.00
2,820.0	39.70	26.28	2,444.8	1,001.5	548.6	1,141.8	0.00	0.00	0.00
2,850.0	39.70	26.28	2,467.9	1,018.7	557.1	1,160.9	0.00	0.00	0.00
2,880.0	39.70	26.28	2,491.0	1,035.9	565.5	1,180.1	0.00	0.00	0.00
2,910.0	39.70	26.28	2,514.1	1,053.1	574.0	1,199.2	0.00	0.00	0.00
2,940.0	39.70	26.28	2,537.2	1,070.3	582.5	1,218.4	0.00	0.00	0.00
2,970.0	39.70	26.28	2,560.3	1,087.4	591.0	1,237.6	0.00	0.00	0.00
3,000.0	39.70	26.28	2,583.3	1,104.6	599.5	1,256.7	0.00	0.00	0.00
3,030.0	39.70	26.28	2,606.4	1,121.8	608.0	1,275.9	0.00	0.00	0.00
3,060.0	39.70	26.28	2,629.5	1,139.0	616.4	1,295.0	0.00	0.00	0.00



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**Survey Calculation Method:** Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,086.4	39.70	26.28	2,649.8	1,154.1	623.9	1,311.9	0.00	0.00	0.00
3,086.6	39.70	26.28	2,650.0	1,154.2	624.0	1,312.0	1.00	0.85	-0.82
<b>FRUITLAND - Fruitland Coal Target 2540'FSL &amp; 1650'FWL</b>									
3,090.0	39.70	26.28	2,652.6	1,156.2	624.9	1,314.2	0.00	0.00	0.00
3,120.0	39.70	26.28	2,675.7	1,173.4	633.4	1,333.3	0.00	0.00	0.00
3,150.0	39.70	26.28	2,698.7	1,190.5	641.9	1,352.5	0.00	0.00	0.00
3,180.0	39.70	26.28	2,721.8	1,207.7	650.4	1,371.6	0.00	0.00	0.00
3,210.0	39.70	26.28	2,744.9	1,224.9	658.9	1,390.8	0.00	0.00	0.00
3,240.0	39.70	26.28	2,768.0	1,242.1	667.4	1,410.0	0.00	0.00	0.00
3,270.0	39.70	26.28	2,791.1	1,259.3	675.8	1,429.1	0.00	0.00	0.00
3,300.0	39.70	26.28	2,814.2	1,276.4	684.3	1,448.3	0.00	0.00	0.00
3,330.0	39.70	26.28	2,837.2	1,293.6	692.8	1,467.4	0.00	0.00	0.00
3,360.0	39.70	26.28	2,860.3	1,310.8	701.3	1,486.6	0.00	0.00	0.00
3,390.0	39.70	26.28	2,883.4	1,328.0	709.8	1,505.7	0.00	0.00	0.00
3,420.0	39.70	26.28	2,906.5	1,345.2	718.3	1,524.9	0.00	0.00	0.00
3,450.0	39.70	26.28	2,929.6	1,362.4	726.7	1,544.1	0.00	0.00	0.00
3,480.0	39.70	26.28	2,952.6	1,379.5	735.2	1,563.2	0.00	0.00	0.00
3,510.0	39.70	26.28	2,975.7	1,396.7	743.7	1,582.4	0.00	0.00	0.00
3,540.0	39.70	26.28	2,998.8	1,413.9	752.2	1,601.5	0.00	0.00	0.00
3,570.0	39.70	26.28	3,021.9	1,431.1	760.7	1,620.7	0.00	0.00	0.00
3,586.8	39.70	26.28	3,034.8	1,440.7	765.4	1,631.4	0.00	0.00	0.00
<b>IGE 128 TARGET 2540'FSL &amp; 1650'FWL</b>									
3,596.1	39.70	26.28	3,042.0	1,446.0	768.1	1,637.3	0.00	0.00	0.00
<b>HARDLINE - 330' E OF BHL</b>									
3,600.0	39.70	26.28	3,045.0	1,448.3	769.2	1,639.8	0.00	0.00	0.00
3,630.0	39.70	26.28	3,068.1	1,465.5	777.7	1,659.0	0.00	0.00	0.00
3,660.0	39.70	26.28	3,091.1	1,482.6	786.1	1,678.2	0.00	0.00	0.00
3,690.0	39.70	26.28	3,114.2	1,499.8	794.6	1,697.3	0.00	0.00	0.00
3,720.0	39.70	26.28	3,137.3	1,517.0	803.1	1,716.5	0.00	0.00	0.00
3,750.0	39.70	26.28	3,160.4	1,534.2	811.6	1,735.6	0.00	0.00	0.00
3,780.0	39.70	26.28	3,183.5	1,551.4	820.1	1,754.8	0.00	0.00	0.00
3,810.0	39.70	26.28	3,206.6	1,568.5	828.6	1,773.9	0.00	0.00	0.00
3,840.0	39.70	26.28	3,229.6	1,585.7	837.0	1,793.1	0.00	0.00	0.00
3,870.0	39.70	26.28	3,252.7	1,602.9	845.5	1,812.2	0.00	0.00	0.00
3,900.0	39.70	26.28	3,275.8	1,620.1	854.0	1,831.4	0.00	0.00	0.00
3,930.0	39.70	26.28	3,298.9	1,637.3	862.5	1,850.6	0.00	0.00	0.00
3,931.5	39.70	26.28	3,300.0	1,638.1	862.9	1,851.5	0.00	0.00	0.00

## Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,086.6	2,650.0	FRUITLAND		0.00	