

Whiting Pawnee 16-13H ST02 R0 Ivs 8-Jan-11 Proposal Report (Non-Def Plan)

Report Date: January 08, 2011 - 11:16 AM
Client: Whiting Oil & Gas
Field: CO, Weld County (NAD 83 NZ)
Structure / Slot: Whiting 16-10N-59W (Pawnee 16-13H) / Pawnee 16-13H
Well: Pawnee 16-13H
Borehole: ST02
UWI / API#: Unknown / Unknown
Survey Name: Whiting Pawnee 16-13H ST02 R0 Ivs 8-Jan-11
Survey Date: January 08, 2011
Tort / AHD / DDI / ERD Ratio: 159.721' / 4122.310 ft / 6.023 / 0.648
Grid Coordinate System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 50' 6.79213", W 103° 59' 31.81201"
Location Grid N/E Y/X: N 1550666.157 ftUS, E 3417230.030 ftUS
Grid Convergence Angle: 0.97425941°
Grid Scale Factor: 1.00000883

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 104.908° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
Seabed / Ground Elevation: 5129.000 ft above MSL
Magnetic Declination: 5115.000 ft above MSL
Total Field Strength: 8.485°
Magnetic Dip Angle: 53462.186 nT
Declination Date: 67.554°
Magnetic Declination Model: January 08, 2011
North Reference: BGGM 2010
Grid Correction: True North
Total Corr Mag North->True North: 0.000°
Local Coord Referenced To: 8.485°
Structure Reference Point:

Comments	MD (ft)	Incl (°)	Azlm True (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In to ST01, Turn	7896.00	89.79	103.79	6336.76	1207.76	1765.66	-469.80	1702.09	1.67	1550225.36	3418939.87	N 40 50 2.15	W 103 59 9.67
5.8 deg/100ft	7987.25	89.60	98.50	6337.25	1208.25	1856.69	-487.43	1791.59	5.80	1550209.25	3419029.66	N 40 50 1.98	W 103 59 8.50
Hold	8087.25	89.60	98.50	6337.95	1208.95	1956.06	-502.21	1890.49	0.00	1550196.16	3419128.80	N 40 50 1.83	W 103 59 7.22
Turn	8388.58	90.00	100.00	6339.00	1210.00	2255.90	-550.65	2187.88	0.52	1550152.79	3419426.98	N 40 50 1.35	W 103 59 3.35
BHL / TD	10190.00	90.00	100.00	6339.00	1210.00	4050.72	-863.46	3961.94	0.00	1549870.18	3421206.11	N 40 49 58.26	W 103 58 40.27

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
0.000	14.000	Act Sins	SLB_MWD-STD-Depth Only	ST01 / Whiting Pawnee 16-13H ST01 Surveys
14.000	7896.000	Act Sins	SLB_MWD-STD	ST01 / Whiting Pawnee 16-13H ST01 Surveys
7896.000	10190.000	1/100.000	SLB_MWD-STD	ST02 / Whiting Pawnee 16-13H ST02 R0 Ivs 8-Jan-11