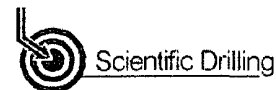


Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Peaches 19 Federal #1H
Project:	Cottonwood Draw	TVD Reference:	WELL @ 0 00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 00usft (Original Well Elev)
Well:	Peaches 19 Federal #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0712810	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0712810	Database:	EDM-Regulatory

Project	Cottonwood Draw		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Eddy County, NM			
Site Position:		Northing:	408,122 00 usft	Latitude:	32° 7' 19 200 N
From:	Lat/Long	Easting:	532,609 47 usft	Longitude:	104° 13' 40.800 W
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 06 °

Well:	Peaches 19 Federal #1H, Vertical					
Well Position	+N/-S	0 00 usft	Northing:	408,122 00 usft	Latitude:	32° 7' 19 200 N
	+E/-W	0 00 usft	Easting:	532,609 47 usft	Longitude:	104° 13' 40 800 W
Position Uncertainty		0 00 usft	Wellhead Elevation:	usft	Ground Level:	0 00 usft

Wellbore	VH - Job #32K0712810				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/02/12	7 75	59 95	48,402

Design	VH - Job #32K0712810			
Audit Notes:				
Version:	1 0	Phase:	ACTUAL	Tie On Depth: 0 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0 00	0 00	0 00	335 88

Survey Program		Date	08/13/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
87 10	920 19	Gyro (VH - Job #32K0712810)	Keeper	Keeper Surface Readout	

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
87 10	0 54	307 17	87 10	0 25	-0 33	307 17	0 41
177 27	0 72	332 31	177 26	1 01	-0 93	317 29	1 37
267 44	1 17	341 04	267 42	2 38	-1 49	327 91	2 81
358 68	2 16	337 81	358 62	4 85	-2 44	333 27	5 43
451 38	4 29	340 31	451 17	9 73	-4 27	336 31	10 63
542 08	6 97	337 21	541 42	18 00	-7 55	337 26	19 52
636 54	7 17	335 41	635 17	28 65	-12 22	336 90	31 15
731 09	9 43	336 50	728 72	41 12	-17 76	336 63	44 79
825 30	12 47	335 94	821 20	57 49	-24 99	336 50	62 68
920 19	15 51	332 76	913 27	78 13	-34 98	335 88	85 60

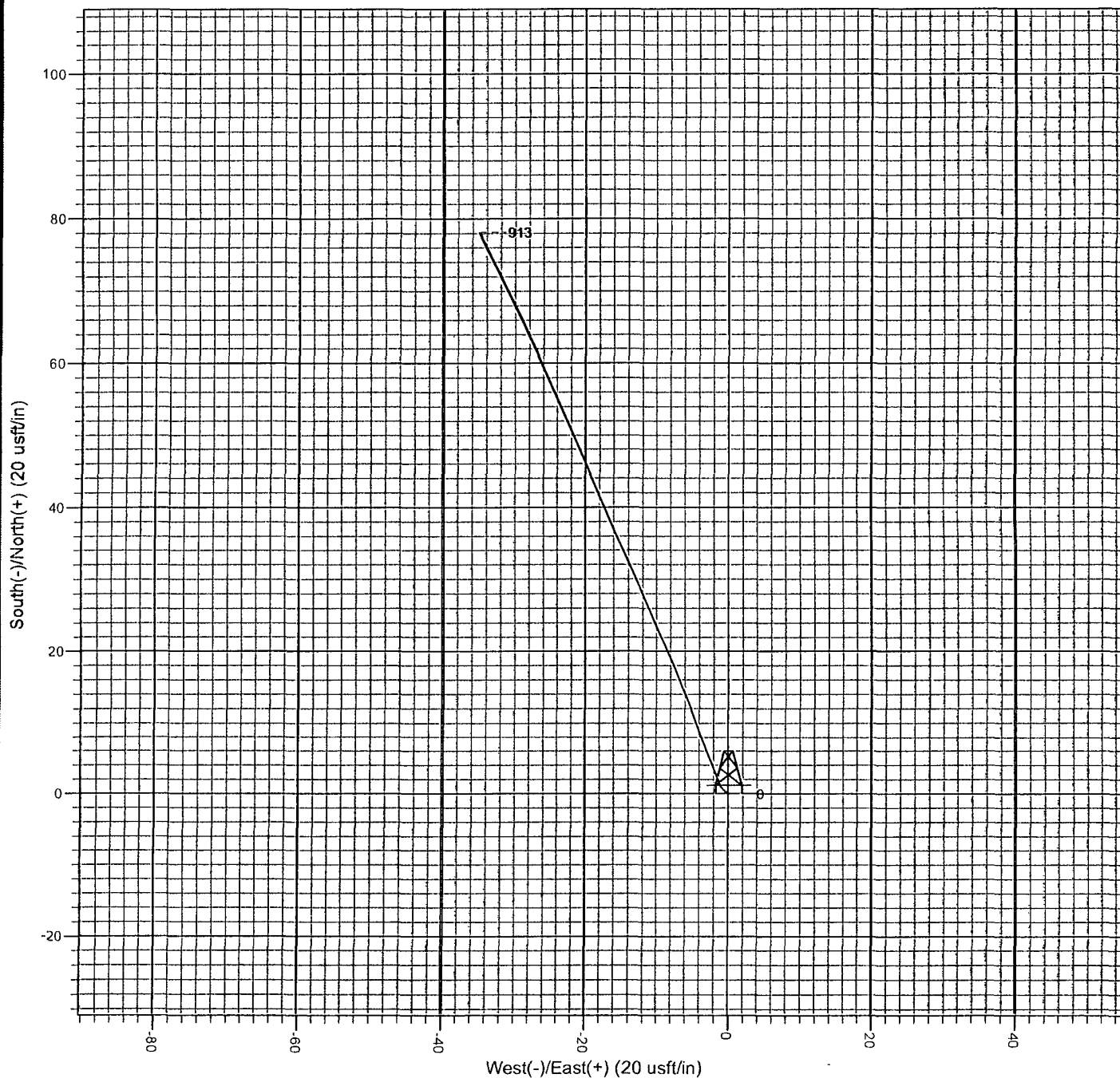


Scientific Drilling

Project: Cottonwood Draw
Eddy County, NM
Well: Peaches 19 Federal #1H
Wellbore: VH - Job #32K0712810
Design: VH - Job #32K0712810

WELL DETAILS Peaches 19 Federal #1H
WELL @ 0.00usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	408122.00	532609.47	32° 7' 19.200 N	104° 13' 40.800 W	



PROJECT DETAILS: Cottonwood Draw	SITE DETAILS: Eddy County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 7' 19.200 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 104° 13' 40.800 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.06
System Datum: Mean Sea Level	Local North: Grid



Gyroscopic Survey Report
for
OXY

Well Location	EDDY COUNTY, NEW MEXICO
Well Name	PEACHES 19 FED #1H
Rig Name	RENEGADE CRANE
Survey Date	8/10/2012
Latitude	32.1220000°N
North Reference	True North
Grid Correction	None
Depth Reference	RKB (26.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.00Azim (deg)
Definitive Survey	FINAL GYRO SURVEY
Operator(s)	LEO GARZA

Well Notes



Survey:		FINAL GYRO SURVEY							
Survey Date:		8/10/2012							
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	7100ft	ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00
98.34	0.63	337.78	98.34	0.50	0.50	-0.20	337.78	0.64	0.54
100.00	0.67	347.55	100.00	0.52	0.52	-0.21	337.95	7.17	0.56
115.00	0.70	353.17	115.00	0.70	0.70	-0.24	340.97	0.49	0.74
130.00	0.62	343.20	130.00	0.87	0.87	-0.27	342.40	0.96	0.91
145.00	0.60	343.51	144.99	1.02	1.02	-0.32	342.54	0.11	1.07
160.00	0.56	343.61	159.99	1.16	1.16	-0.36	342.67	0.24	1.22
175.00	0.64	346.99	174.99	1.32	1.32	-0.40	342.98	0.56	1.38
190.00	0.73	357.90	189.99	1.49	1.49	-0.42	344.11	1.07	1.55
205.00	0.76	354.56	204.99	1.69	1.69	-0.44	345.45	0.34	1.74
220.00	0.81	349.09	219.99	1.89	1.89	-0.47	346.11	0.61	1.95
235.00	0.94	350.21	234.99	2.12	2.12	-0.51	346.49	0.90	2.18
250.00	1.14	350.12	249.99	2.38	2.38	-0.55	346.90	1.29	2.45
265.00	1.38	348.44	264.98	2.71	2.71	-0.62	347.17	1.64	2.78
280.00	1.59	346.22	279.98	3.09	3.09	-0.70	347.18	1.45	3.17
295.00	1.83	345.71	294.97	3.52	3.52	-0.81	347.03	1.61	3.61
310.00	2.10	344.82	309.96	4.02	4.02	-0.94	346.80	1.81	4.13
325.00	2.30	343.16	324.95	4.57	4.57	-1.10	346.45	1.37	4.70
340.00	2.54	342.12	339.94	5.18	5.18	-1.29	346.00	1.67	5.33
355.00	2.77	340.88	354.92	5.83	5.83	-1.51	345.48	1.54	6.03
370.00	2.98	339.82	369.90	6.54	6.54	-1.76	344.91	1.46	6.78
385.00	3.31	339.44	384.88	7.31	7.31	-2.05	344.34	2.21	7.60
400.00	3.66	339.48	399.85	8.17	8.17	-2.37	343.81	2.33	8.50
415.00	3.98	339.21	414.82	9.10	9.10	-2.72	343.34	2.11	9.50
430.00	4.28	338.42	429.78	10.11	10.11	-3.11	342.88	2.07	10.58
445.00	4.45	338.06	444.74	11.17	11.17	-3.54	342.43	1.18	11.72
460.00	4.68	337.95	459.69	12.28	12.28	-3.98	342.02	1.50	12.91
475.00	5.02	337.99	474.63	13.45	13.45	-4.46	341.66	2.26	14.17
490.00	5.27	337.97	489.57	14.70	14.70	-4.96	341.34	1.67	15.51
505.00	5.52	337.53	504.51	16.00	16.00	-5.50	341.04	1.72	16.92
520.00	5.85	336.99	519.43	17.38	17.38	-6.07	340.74	2.23	18.41
535.00	6.02	336.86	534.35	18.80	18.80	-6.68	340.44	1.09	19.95
550.00	6.06	336.78	549.27	20.25	20.25	-7.30	340.17	0.26	21.53
565.00	6.18	336.98	564.18	21.72	21.72	-7.93	339.95	0.86	23.13
580.00	6.35	336.61	579.09	23.23	23.23	-8.57	339.74	1.13	24.76
595.00	6.51	336.59	594.00	24.77	24.77	-9.24	339.54	1.05	26.44
610.00	6.63	336.67	608.90	26.34	26.34	-9.92	339.36	0.85	28.15
625.00	6.74	337.10	623.80	27.95	27.95	-10.61	339.22	0.80	29.90
640.00	6.98	336.66	638.69	29.60	29.60	-11.31	339.08	1.62	31.69
655.00	7.20	335.71	653.58	31.29	31.29	-12.06	338.92	1.68	33.54



Survey: FINAL GYRO SURVEY

Survey Date: 8/10/2012

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Dogleg Severity 1/100ft	Closure Distance ft
670.00	7.43	335.99	668.46	33.03	33.03	-12.84	338.76	1.55	35.44
685.00	7.84	336.59	683.32	34.86	34.86	-13.64	338.63	2.79	37.43
700.00	8.23	336.79	698.18	36.79	36.79	-14.47	338.52	2.58	39.53
715.00	8.58	336.60	713.01	38.80	38.80	-15.34	338.43	2.37	41.72
730.00	9.07	336.94	727.84	40.91	40.91	-16.25	338.34	3.28	44.02
745.00	9.47	337.12	742.64	43.14	43.14	-17.19	338.27	2.64	46.44
760.00	9.88	337.00	757.43	45.46	45.46	-18.17	338.21	2.78	48.96
775.00	10.41	336.53	772.19	47.89	47.89	-19.21	338.14	3.58	51.60
790.00	10.88	336.48	786.93	50.43	50.43	-20.32	338.05	3.13	54.37
805.00	11.36	336.25	801.65	53.08	53.08	-21.48	337.97	3.23	57.26
820.00	11.92	335.72	816.34	55.85	55.85	-22.71	337.87	3.77	60.29
835.00	12.47	335.10	831.01	58.73	58.73	-24.03	337.75	3.75	63.45
850.00	12.97	334.22	845.64	61.71	61.71	-25.44	337.59	3.60	66.75
865.00	13.38	333.87	860.24	64.79	64.79	-26.94	337.42	2.80	70.16
880.00	13.66	333.55	874.83	67.93	67.93	-28.50	337.24	1.89	73.66
895.00	14.10	333.32	889.39	71.15	71.15	-30.10	337.07	2.95	77.25
910.00	14.45	332.88	903.93	74.44	74.44	-31.78	336.88	2.45	80.94
925.00	14.75	332.48	918.44	77.80	77.80	-33.51	336.70	2.14	84.71
940.00	15.03	332.24	932.94	81.22	81.22	-35.30	336.51	1.88	88.56
955.00	15.11	331.87	947.42	84.66	84.66	-37.13	336.32	0.85	92.44
970.00	15.16	331.61	961.90	88.11	88.11	-38.98	336.13	0.54	96.35
985.00	15.21	331.33	976.38	91.56	91.56	-40.86	335.95	0.63	100.27
1000.00	15.28	331.29	990.85	95.02	95.02	-42.75	335.78	0.45	104.20
1015.00	15.31	331.34	1005.32	98.49	98.49	-44.65	335.61	0.21	108.14
1030.00	15.31	330.98	1019.79	101.96	101.96	-46.56	335.46	0.63	112.09
1045.00	15.27	331.15	1034.26	105.43	105.43	-48.48	335.31	0.43	116.04
1060.00	15.11	330.75	1048.73	108.86	108.86	-50.38	335.16	1.25	119.96
1075.00	14.87	330.08	1063.22	112.24	112.24	-52.30	335.02	1.97	123.82
1090.00	14.62	329.46	1077.73	115.53	115.53	-54.22	334.86	1.96	127.62
1105.00	14.18	328.73	1092.26	118.73	118.73	-56.14	334.70	3.21	131.34
1120.00	13.63	327.86	1106.82	121.80	121.80	-58.03	334.53	3.88	134.92
1135.00	13.12	327.07	1121.41	124.73	124.73	-59.90	334.35	3.63	138.36
1150.00	12.51	325.99	1136.04	127.50	127.50	-61.73	334.17	4.34	141.66
1165.00	11.99	325.09	1150.69	130.13	130.13	-63.53	333.98	3.72	144.81
1180.00	11.64	324.28	1165.38	132.63	132.63	-65.31	333.79	2.56	147.84
1195.00	11.38	323.64	1180.07	135.06	135.06	-67.07	333.59	1.93	150.79
1210.00	11.18	323.04	1194.78	137.41	137.41	-68.82	333.40	1.55	153.68
1225.00	11.01	322.46	1209.50	139.71	139.71	-70.57	333.20	1.36	156.52
1240.00	10.79	322.06	1224.23	141.95	141.95	-72.30	333.01	1.56	159.31
1255.00	10.58	321.62	1238.97	144.14	144.14	-74.02	332.82	1.49	162.04



Survey:		FINAL GYRO SURVEY							
Survey Date:		8/10/2012							
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft
1270.00	10.29	321.33	1253.73	146.27	146.27	-75.71	332.63	1.97	164.70
1285.00	9.78	320.83	1268.50	148.30	148.30	-77.36	332.45	3.45	167.26
1300.00	9.37	320.24	1283.29	150.23	150.23	-78.94	332.28	2.81	169.71
1315.00	9.00	320.05	1298.09	152.06	152.06	-80.48	332.11	2.50	172.05
1330.00	8.71	319.29	1312.92	153.83	153.83	-81.97	331.95	2.06	174.30
1345.00	8.55	318.70	1327.75	155.52	155.52	-83.45	331.78	1.21	176.50
1360.00	8.36	318.35	1342.58	157.18	157.18	-84.91	331.62	1.36	178.65
1375.00	8.11	318.41	1357.43	158.78	158.78	-86.34	331.47	1.62	180.74
1390.00	7.82	318.41	1372.28	160.34	160.34	-87.72	331.32	1.97	182.76
1405.00	7.33	318.28	1387.15	161.82	161.82	-89.03	331.18	3.25	184.69
1420.00	6.83	319.12	1402.04	163.21	163.21	-90.25	331.06	3.40	186.50
1435.00	6.48	319.24	1416.94	164.52	164.52	-91.39	330.95	2.35	188.20
1450.00	6.02	319.12	1431.85	165.76	165.76	-92.46	330.85	3.06	189.80
1465.00	5.54	319.81	1446.77	166.90	166.90	-93.44	330.76	3.26	191.28
1480.00	5.00	319.30	1461.71	167.95	167.95	-94.33	330.68	3.61	192.63
1495.00	4.21	317.70	1476.66	168.86	168.86	-95.13	330.60	5.32	193.81
1510.00	3.46	316.32	1491.62	169.59	169.59	-95.81	330.54	5.06	194.78
1525.00	2.95	314.08	1506.60	170.19	170.19	-96.40	330.47	3.45	195.59
1540.00	2.56	310.94	1521.58	170.67	170.67	-96.93	330.41	2.83	196.28
1555.00	2.19	307.95	1536.57	171.07	171.07	-97.41	330.34	2.59	196.86
1570.00	1.75	304.69	1551.56	171.38	171.38	-97.82	330.28	2.98	197.33
1585.00	1.35	301.40	1566.56	171.60	171.60	-98.16	330.23	2.74	197.69
1600.00	1.10	301.62	1581.55	171.77	171.77	-98.44	330.18	1.66	197.97
1615.00	0.95	299.39	1596.55	171.90	171.90	-98.67	330.15	1.06	198.21
1630.00	0.77	295.31	1611.55	172.01	172.01	-98.87	330.11	1.28	198.40
1645.00	0.59	291.25	1626.55	172.08	172.08	-99.03	330.08	1.21	198.54
1660.00	0.34	263.61	1641.55	172.10	172.10	-99.15	330.05	2.18	198.62
1675.00	0.54	183.63	1656.55	172.02	172.02	-99.20	330.03	3.91	198.58
1690.00	1.14	165.27	1671.55	171.81	171.81	-99.16	330.01	4.37	198.37
1705.00	1.76	154.70	1686.54	171.46	171.46	-99.03	329.99	4.43	198.00
1720.00	2.30	152.01	1701.53	170.98	170.98	-98.79	329.98	3.67	197.47
1735.00	2.87	148.20	1716.52	170.40	170.40	-98.45	329.98	4.01	196.79
1750.00	3.41	146.11	1731.49	169.71	169.71	-98.00	330.00	3.67	195.97
1765.00	3.91	145.19	1746.46	168.92	168.92	-97.46	330.02	3.30	195.02
1780.00	4.34	143.93	1761.42	168.04	168.04	-96.83	330.05	2.99	193.94
1795.00	4.63	144.11	1776.38	167.09	167.09	-96.14	330.08	1.92	192.78
1810.00	4.87	143.96	1791.33	166.08	166.08	-95.41	330.12	1.58	191.54
1825.00	5.29	143.98	1806.27	165.01	165.01	-94.63	330.17	2.80	190.22
1840.00	5.74	143.90	1821.20	163.84	163.84	-93.78	330.21	2.98	188.79
1855.00	6.08	144.10	1836.12	162.60	162.60	-92.88	330.26	2.26	187.25



Survey:		FINAL GYRO SURVEY									
Survey Date:		8/10/2012									
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance		
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft		
1870.00	6.38	144 16	1851.03	161.28	161.28	-91.92	330 32	2.05	185.63		
1885.00	6.55	144 13	1865.93	159.91	159.91	-90.93	330.37	1.11	183.95		
1900.00	6.58	144.30	1880.84	158.52	158.52	-89.93	330.43	0.27	182.25		
1915 00	6.62	144 23	1895 74	157.12	157.12	-88.92	330.49	0.24	180 53		
1930.00	6.62	143.95	1910.64	155.72	155.72	-87.91	330.55	0 22	178 82		
1945.00	6.65	143.88	1925.54	154 31	154.31	-86.89	330.62	0 22	177.10		
1960.00	6.65	143.86	1940.44	152 91	152.91	-85.87	330.68	0.01	175.37		
1975.00	6.67	143.48	1955 33	151.51	151.51	-84 83	330.75	0.32	173.64		
1990 00	6 58	143.62	1970 23	150.12	150 12	-83.81	330.83	0.60	171 93		
2005 00	6 27	143 37	1985 14	148 77	148 77	-82.81	330.90	2.04	170.26		
2020.00	6.02	142 82	2000.05	147 48	147 48	-81 84	330.97	1.75	168 67		
2035 00	5.90	142.46	2014.97	146.25	146 25	-80 90	331.05	0 82	167.13		
2050.00	5.75	142.53	2029.89	145.04	145 04	-79.97	331 13	0.97	165.63		
2065.00	5.59	142.52	2044.82	143.86	143.86	-79.07	331.21	1 10	164.16		
2080.00	5 59	143.58	2059.75	142.69	142 69	-78.19	331 28	0 69	162.71		
2095.00	5.64	143.87	2074 68	141 51	141 51	-77.32	331 35	0.43	161.26		
2110.00	5 75	143.81	2089.60	140 31	140.31	-76.44	331 42	0.69	159.78		
2125 00	5.78	143 67	2104.53	139.09	139.09	-75.55	331 49	0 24	158.29		
2140.00	5.70	142.67	2119.45	137.89	137.89	-74.65	331.57	0 88	156.81		
2155.00	5.64	141.62	2134.38	136.72	136.72	-73.75	331.66	0 78	155.34		
2170.00	5.60	141.25	2149.31	135.58	135.58	-72.83	331.76	0 35	153.90		
2185.00	5.58	141.74	2164.24	134.43	134.43	-71.92	331.85	0 34	152.46		
2200.00	5 61	142.39	2179.16	133.28	133 28	-71.02	331.95	0.46	151 02		
2215.00	5 67	142.93	2194.09	132.11	132.11	-70.13	332.04	0.54	149.56		
2230.00	5.69	141.85	2209 02	130.93	130 93	-69.22	332.14	0.72	148.10		
2245.00	5.64	141.07	2223.94	129.77	129.77	-68.30	332 24	0.59	146 65		
2260 00	5 58	141.12	2238.87	128.63	128.63	-67.38	332.35	0.40	145.21		
2275.00	5.58	141.77	2253 80	127.49	127 49	-66.47	332.46	0.43	143 78		
2290 00	5.61	142.55	2268.73	126.33	126 33	-65.57	332 57	0 54	142.34		
2305.00	5.65	142.67	2283.66	125 17	125 17	-64 68	332 67	0 27	140.89		
2320.00	5.75	142.81	2298 58	123.98	123.98	-63.78	332 78	0.72	139.42		
2335.00	5 95	142 07	2313.51	122 77	122.77	-62.84	332.89	1.38	137.92		
2350.00	6 11	140 53	2328.42	121.54	121.54	-61.86	333.03	1.55	136 38		
2365.00	6.20	140.08	2343.34	120.30	120.30	-60.83	333.18	0 66	134 81		
2380.00	6.37	140.12	2358 25	119.04	119.04	-59.78	333.34	1 14	133.21		
2395 00	6.61	139.48	2373.15	117 75	117.75	-58.68	333.51	1 65	131 56		
2410.00	6 80	139 33	2388 05	116.42	116.42	-57 54	333.70	1 32	129.86		
2425.00	6.95	139 31	2402 94	115.06	115.06	-56.37	333.90	0.98	128 13		
2440.00	7.18	138.90	2417 83	113.66	113.66	-55.17	334 11	1 59	126 34		
2455.00	7.50	137 90	2432 70	112.23	112.23	-53 89	334.35	2 30	124 50		



Survey: - - - FINAL GYRO SURVEY									
Survey Date: 8/10/2012									
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft
2470.00	7.80	137.54	2447.57	110.75	110.75	-52.55	334.62	1.99	122.59
2485.00	8.05	137.25	2462.43	109.23	109.23	-51.15	334.91	1.72	120.61
2500.00	8.23	136.74	2477.28	107.68	107.68	-49.70	335.22	1.30	118.59
2515.00	8.30	136.81	2492.12	106.10	106.10	-48.22	335.56	0.46	116.55
2530.00	8.51	136.58	2506.96	104.51	104.51	-46.72	335.91	1.38	114.48
2545.00	8.87	136.73	2521.79	102.86	102.86	-45.16	336.29	2.46	112.34
2560.00	9.27	137.89	2536.60	101.12	101.12	-43.56	336.69	2.91	110.11
2575.00	9.43	137.87	2551.40	99.31	99.31	-41.93	337.11	1.07	107.80
2590.00	9.51	138.22	2566.19	97.48	97.48	-40.28	337.55	0.68	105.47
2605.00	9.56	138.39	2580.99	95.62	95.62	-38.62	338.01	0.33	103.13
2620.00	9.58	138.13	2595.78	93.76	93.76	-36.96	338.48	0.33	100.79
2635.00	9.57	138.43	2610.57	91.90	91.90	-35.30	338.99	0.34	98.45
2650.00	9.51	138.86	2625.36	90.04	90.04	-33.66	339.50	0.61	96.12
2665.00	9.48	139.00	2640.16	88.17	88.17	-32.03	340.03	0.26	93.81
2680.00	9.50	139.07	2654.95	86.30	86.30	-30.41	340.59	0.14	91.51
2695.00	9.45	139.04	2669.75	84.44	84.44	-28.80	341.17	0.32	89.21
2710.00	9.34	139.26	2684.55	82.59	82.59	-27.19	341.77	0.77	86.95
2725.00	9.31	138.94	2699.35	80.75	80.75	-25.60	342.41	0.39	84.71
2740.00	9.31	139.35	2714.15	78.91	78.91	-24.01	343.07	0.45	82.49
2755.00	9.38	139.41	2728.95	77.06	77.06	-22.43	343.77	0.49	80.26
2770.00	9.43	139.25	2743.75	75.20	75.20	-20.83	344.52	0.38	78.04
2785.00	9.44	139.14	2758.55	73.34	73.34	-19.22	345.31	0.14	75.82
2800.00	9.43	138.66	2773.34	71.49	71.49	-17.61	346.16	0.54	73.62
2815.00	9.29	138.81	2788.14	69.66	69.66	-16.00	347.07	0.94	71.47
2830.00	9.13	139.02	2802.95	67.85	67.85	-14.42	348.00	1.09	69.36
2845.00	9.04	139.05	2817.76	66.06	66.06	-12.87	348.98	0.61	67.30
2860.00	8.86	139.44	2832.58	64.29	64.29	-11.34	349.99	1.26	65.28
2875.00	8.69	139.60	2847.40	62.55	62.55	-9.86	351.04	1.13	63.32
2890.00	8.62	140.07	2862.23	60.82	60.82	-8.40	352.14	0.67	61.40
2905.00	8.55	140.32	2877.06	59.10	59.10	-6.97	353.28	0.52	59.51
2920.00	8.56	140.23	2891.90	57.39	57.39	-5.54	354.48	0.12	57.65
2935.00	8.60	140.21	2906.73	55.67	55.67	-4.11	355.78	0.22	55.82
2950.00	8.63	139.75	2921.56	53.95	53.95	-2.66	357.17	0.51	54.01
2965.00	8.60	139.52	2936.39	52.23	52.23	-1.21	358.67	0.30	52.25
2980.00	8.49	139.86	2951.22	50.54	50.54	0.23	0.26	0.81	50.54
2995.00	8.35	140.22	2966.06	48.85	48.85	1.64	1.93	0.97	48.88
3010.00	8.25	140.69	2980.91	47.18	47.18	3.02	3.66	0.81	47.28
3025.00	8.22	140.79	2995.75	45.52	45.52	4.38	5.50	0.24	45.73
3040.00	8.22	141.10	3010.60	43.85	43.85	5.73	7.45	0.29	44.23
3055.00	8.26	141.32	3025.44	42.18	42.18	7.08	9.53	0.35	42.77



Survey: FINAL GYRO SURVEY										
Survey Date: 8/10/2012										
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance	
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft	
3070.00	8.29	141.45	3040.29	40.49	40.49	8.43	11.76	0.25	41.36	
3085.00	8.34	141.27	3055.13	38.80	38.80	9.78	14.15	0.33	40.01	
3100.00	8.34	140.69	3069.97	37.11	37.11	11.15	16.73	0.55	38.75	
3115.00	8.19	140.59	3084.81	35.44	35.44	12.52	19.46	1.01	37.59	
3130.00	8.00	140.86	3099.66	33.80	33.80	13.86	22.29	1.30	36.53	
3145.00	7.92	141.01	3114.52	32.19	32.19	15.16	25.22	0.52	35.59	
3160.00	7.95	141.22	3129.38	30.58	30.58	16.46	28.30	0.27	34.73	
3175.00	7.96	141.29	3144.23	28.96	28.96	17.76	31.52	0.11	33.98	
3190.00	7.93	141.09	3159.09	27.35	27.35	19.06	34.88	0.29	33.33	
3205.00	7.91	141.41	3173.95	25.73	25.73	20.36	38.35	0.31	32.81	
3220.00	7.93	141.62	3188.80	24.12	24.12	21.64	41.91	0.22	32.40	
3235.00	7.85	141.44	3203.66	22.50	22.50	22.92	45.53	0.58	32.12	
3250.00	7.58	141.29	3218.52	20.93	20.93	24.18	49.12	1.82	31.98	
3265.00	7.45	141.35	3233.40	19.40	19.40	25.41	52.64	0.84	31.97	
3280.00	7.36	141.85	3248.27	17.88	17.88	26.61	56.09	0.76	32.06	
3295.00	7.25	141.95	3263.15	16.38	16.38	27.78	59.47	0.72	32.26	
3310.00	7.20	142.09	3278.03	14.90	14.90	28.95	62.77	0.33	32.55	
3325.00	7.20	142.56	3292.91	13.41	13.41	30.09	65.98	0.40	32.95	
3340.00	7.20	142.38	3307.79	11.92	11.92	31.24	69.12	0.16	33.44	
3355.00	7.16	142.67	3322.68	10.43	10.43	32.38	72.15	0.40	34.02	
3370.00	7.04	142.17	3337.56	8.96	8.96	33.51	75.03	0.87	34.69	
3385.00	6.86	142.30	3352.45	7.53	7.53	34.62	77.74	1.22	35.43	
3400.00	6.76	142.71	3367.34	6.11	6.11	35.71	80.28	0.74	36.23	
3415.00	6.71	143.29	3382.24	4.71	4.71	36.76	82.70	0.56	37.06	
3430.00	6.77	143.20	3397.14	3.30	3.30	37.82	85.01	0.38	37.96	
3445.00	6.76	142.77	3412.03	1.89	1.89	38.88	87.22	0.35	38.93	
3460.00	6.66	142.18	3426.93	0.50	0.50	39.95	89.29	0.84	39.95	
3475.00	6.53	142.83	3441.83	-0.87	-0.87	41.00	91.21	1.00	41.01	
3490.00	6.44	143.42	3456.73	-2.22	-2.22	42.01	93.03	0.74	42.07	
3505.00	6.32	143.79	3471.64	-3.56	-3.56	43.00	94.74	0.81	43.15	
3520.00	6.31	144.15	3486.55	-4.90	-4.90	43.97	96.36	0.29	44.25	
3535.00	6.32	143.46	3501.46	-6.23	-6.23	44.95	97.89	0.51	45.38	
3550.00	6.29	143.17	3516.37	-7.55	-7.55	45.93	99.34	0.30	46.55	
3565.00	6.24	143.50	3531.28	-8.86	-8.86	46.91	100.70	0.37	47.74	
3580.00	6.21	143.68	3546.19	-10.17	-10.17	47.88	102.00	0.27	48.94	
3595.00	6.21	144.30	3561.10	-11.49	-11.49	48.83	103.24	0.45	50.16	
3610.00	6.20	144.96	3576.01	-12.81	-12.81	49.77	104.43	0.48	51.39	
3625.00	6.14	145.46	3590.93	-14.13	-14.13	50.69	105.58	0.53	52.62	
3640.00	6.07	145.73	3605.84	-15.45	-15.45	51.59	106.67	0.49	53.85	
3655.00	5.94	146.38	3620.76	-16.75	-16.75	52.46	107.71	1.01	55.07	



Survey: FINAL GYRO SURVEY										
Survey Date: 8/10/2012										
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Dogleg Severity 1/100ft	Closure Distance ft	
3670.00	5.74	148.84	3635.68	-18.04	-18.04	53.28	108.70	2.12	56.25	
3685.00	5.49	152.74	3650.61	-19.32	-19.32	54.00	109.68	3.04	57.35	
3700.00	5.25	157.17	3665.55	-20.59	-20.59	54.59	110.66	3.19	58.35	
3715.00	5.19	159.23	3680.48	-21.85	-21.85	55.10	111.63	1.31	59.28	
3730.00	5.14	159.38	3695.42	-23.12	-23.12	55.58	112.58	0.37	60.19	
3745.00	5.00	160.15	3710.36	-24.36	-24.36	56.04	113.49	1.04	61.10	
3760.00	4.89	161.65	3725.31	-25.58	-25.58	56.46	114.37	1.10	61.98	
3775.00	4.86	162.38	3740.25	-26.79	-26.79	56.85	115.23	0.46	62.85	
3790.00	4.87	163.21	3755.20	-28.01	-28.01	57.23	116.08	0.48	63.71	
3805.00	4.93	163.84	3770.14	-29.24	-29.24	57.59	116.91	0.52	64.59	
3820.00	4.97	163.56	3785.09	-30.48	-30.48	57.96	117.74	0.29	65.48	
3835.00	4.96	164.05	3800.03	-31.72	-31.72	58.32	118.55	0.29	66.39	
3850.00	4.84	164.29	3814.98	-32.96	-32.96	58.67	119.33	0.77	67.29	
3865.00	4.55	167.88	3829.93	-34.15	-34.15	58.96	120.08	2.74	68.14	
3880.00	4.18	177.25	3844.88	-35.28	-35.28	59.11	120.83	5.38	68.84	
3895.00	4.02	183.96	3859.85	-36.35	-36.35	59.10	121.59	3.37	69.39	
3910.00	3.97	185.60	3874.81	-37.39	-37.39	59.02	122.35	0.82	69.86	
3925.00	3.96	186.34	3889.77	-38.42	-38.42	58.91	123.11	0.34	70.33	
3940.00	4.01	186.28	3904.74	-39.45	-39.45	58.79	123.86	0.34	70.81	
3955.00	3.97	185.31	3919.70	-40.49	-40.49	58.69	124.60	0.51	71.30	
3970.00	3.91	185.91	3934.67	-41.52	-41.52	58.59	125.32	0.52	71.81	
3985.00	3.92	186.96	3949.63	-42.54	-42.54	58.47	126.03	0.49	72.31	
4000.00	3.97	187.30	3964.59	-43.56	-43.56	58.35	126.75	0.33	72.81	
4015.00	4.03	188.44	3979.56	-44.60	-44.60	58.20	127.46	0.68	73.32	
4030.00	3.94	188.18	3994.52	-45.63	-45.63	58.05	128.17	0.59	73.84	
4045.00	3.74	191.37	4009.49	-46.62	-46.62	57.88	128.85	1.98	74.32	
4060.00	3.53	198.79	4024.46	-47.54	-47.54	57.64	129.51	3.42	74.71	
4075.00	3.35	209.09	4039.43	-48.36	-48.36	57.27	130.17	4.29	74.96	
4090.00	3.31	217.99	4054.41	-49.08	-49.08	56.80	130.83	3.45	75.06	
4105.00	3.28	221.13	4069.38	-49.74	-49.74	56.25	131.49	1.21	75.09	
4120.00	3.14	222.60	4084.36	-50.37	-50.37	55.69	132.13	1.10	75.09	
4135.00	3.06	225.29	4099.34	-50.95	-50.95	55.12	132.75	1.11	75.07	
4150.00	3.08	228.31	4114.31	-51.50	-51.50	54.54	133.36	1.08	75.01	
4165.00	3.13	229.18	4129.29	-52.04	-52.04	53.93	133.98	0.47	74.94	
4180.00	3.19	227.94	4144.27	-52.59	-52.59	53.31	134.61	0.59	74.88	
4195.00	3.18	226.19	4159.25	-53.15	-53.15	52.70	135.25	0.65	74.85	
4210.00	3.14	226.36	4174.22	-53.72	-53.72	52.10	135.88	0.25	74.84	
4225.00	3.15	227.58	4189.20	-54.29	-54.29	51.50	136.51	0.45	74.83	
4240.00	3.28	231.07	4204.18	-54.83	-54.83	50.86	137.15	1.57	74.79	
4255.00	3.50	238.39	4219.15	-55.34	-55.34	50.14	137.82	3.23	74.68	



Survey:		FINAL GYRO SURVEY								
Survey Date:		8/10/2012								
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance	
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft	
4270.00	3.92	247.97	4234.12	-55.78	-55.78	49.27	138.54	4.98	74.42	
4285.00	4.26	252.59	4249.08	-56.13	-56.13	48.27	139.31	3.15	74.03	
4300.00	4.36	253.19	4264.04	-56.47	-56.47	47.19	140.11	0.76	73.59	
4315.00	4.43	253.18	4279.00	-56.80	-56.80	46.09	140.94	0.44	73.15	
4330.00	4.29	252.74	4293.95	-57.13	-57.13	45.00	141.77	0.92	72.73	
4345.00	3.73	253.96	4308.92	-57.43	-57.43	44.00	142.55	3.83	72.35	
4360.00	3.06	256.55	4323.89	-57.66	-57.66	43.14	143.20	4.53	72.01	
4375.00	2.80	258.32	4338.87	-57.83	-57.83	42.39	143.76	1.83	71.70	
4390.00	2.67	259.29	4353.85	-57.97	-57.97	41.69	144.28	0.97	71.40	
4405.00	2.50	260.82	4368.84	-58.09	-58.09	41.02	144.77	1.18	71.11	
4420.00	2.35	260.11	4383.82	-58.19	-58.19	40.39	145.23	1.01	70.84	
4435.00	2.00	260.64	4398.81	-58.29	-58.29	39.83	145.65	2.37	70.60	
4450.00	1.47	266.66	4413.81	-58.34	-58.34	39.38	145.98	3.70	70.39	
4465.00	1.10	275.78	4428.80	-58.34	-58.34	39.05	146.20	2.86	70.20	
4480.00	1.02	284.78	4443.80	-58.29	-58.29	38.77	146.37	1.21	70.01	
4495.00	1.06	286.45	4458.80	-58.21	-58.21	38.51	146.51	0.36	69.80	
4510.00	1.10	279.77	4473.79	-58.15	-58.15	38.24	146.67	0.87	69.59	
4525.00	0.99	277.25	4488.79	-58.11	-58.11	37.97	146.84	0.80	69.41	
4540.00	0.94	285.57	4503.79	-58.06	-58.06	37.72	146.99	0.99	69.24	
4555.00	1.07	284.88	4518.79	-57.99	-57.99	37.46	147.14	0.89	69.04	
4570.00	1.06	281.42	4533.78	-57.93	-57.93	37.19	147.30	0.44	68.84	
4585.00	0.98	283.48	4548.78	-57.87	-57.87	36.93	147.45	0.61	68.65	
4600.00	0.99	287.69	4563.78	-57.80	-57.80	36.68	147.60	0.50	68.46	
4615.00	1.03	287.57	4578.78	-57.72	-57.72	36.43	147.74	0.25	68.26	
4630.00	1.05	285.20	4593.78	-57.64	-57.64	36.17	147.89	0.31	68.05	
4645.00	1.01	280.68	4608.77	-57.58	-57.58	35.91	148.05	0.60	67.86	
4660.00	1.02	278.35	4623.77	-57.54	-57.54	35.65	148.22	0.28	67.69	
4675.00	1.03	281.57	4638.77	-57.49	-57.49	35.38	148.39	0.39	67.51	
4690.00	1.11	282.13	4653.77	-57.44	-57.44	35.11	148.56	0.54	67.32	
4705.00	1.11	277.11	4668.76	-57.39	-57.39	34.82	148.75	0.65	67.13	
4720.00	1.07	274.98	4683.76	-57.36	-57.36	34.54	148.94	0.40	66.95	
4735.00	1.00	278.50	4698.76	-57.33	-57.33	34.27	149.13	0.64	66.79	
4750.00	0.96	283.31	4713.76	-57.28	-57.28	34.02	149.29	0.60	66.62	
4765.00	1.03	282.53	4728.75	-57.22	-57.22	33.77	149.45	0.44	66.44	
4780.00	1.11	279.02	4743.75	-57.17	-57.17	33.49	149.64	0.70	66.26	
4795.00	1.12	276.66	4758.75	-57.13	-57.13	33.20	149.83	0.32	66.08	
4810.00	1.03	277.39	4773.74	-57.09	-57.09	32.92	150.03	0.59	65.91	
4825.00	0.88	276.31	4788.74	-57.06	-57.06	32.67	150.21	1.00	65.76	
4840.00	1.03	279.50	4803.74	-57.03	-57.03	32.43	150.38	1.01	65.60	
4855.00	1.11	274.17	4818.74	-57.00	-57.00	32.15	150.57	0.86	65.44	



Survey:		FINAL GYRO SURVEY							
Survey Date:		8/10/2012							
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	°/100ft	ft
4870.00	1.02	274.60	4833.74	-56.97	-56.97	31.87	150.78	0.61	65.28
4885.00	1.00	278.10	4848.73	-56.95	-56.95	31.61	150.97	0.42	65.13
4900.00	1.07	276.88	4863.73	-56.91	-56.91	31.34	151.16	0.48	64.97
4915.00	1.05	272.91	4878.73	-56.89	-56.89	31.06	151.36	0.50	64.82
4930.00	0.99	268.04	4893.73	-56.88	-56.88	30.80	151.57	0.71	64.69
4945.00	1.00	266.43	4908.72	-56.90	-56.90	30.54	151.78	0.20	64.57
4960.00	1.10	267.66	4923.72	-56.91	-56.91	30.26	152.00	0.67	64.46
4975.00	1.14	270.02	4938.72	-56.92	-56.92	29.97	152.23	0.40	64.32
4990.00	1.27	262.62	4953.71	-56.94	-56.94	29.65	152.49	1.38	64.20
5005.00	1.08	267.47	4968.71	-56.97	-56.97	29.35	152.74	1.46	64.08
5020.00	1.00	265.88	4983.71	-56.98	-56.98	29.07	152.97	0.55	63.97
5035.00	0.98	258.93	4998.71	-57.02	-57.02	28.82	153.19	0.81	63.88
5050.00	1.02	263.35	5013.70	-57.06	-57.06	28.56	153.41	0.57	63.80
5065.00	1.13	261.79	5028.70	-57.09	-57.09	28.28	153.65	0.73	63.71
5080.00	1.16	257.41	5043.70	-57.15	-57.15	27.99	153.91	0.62	63.63
5095.00	1.07	256.46	5058.70	-57.21	-57.21	27.70	154.16	0.57	63.57
5110.00	0.97	257.94	5073.69	-57.27	-57.27	27.44	154.40	0.70	63.51
5125.00	0.98	265.41	5088.69	-57.31	-57.31	27.19	154.62	0.85	63.43
5140.00	1.10	268.90	5103.69	-57.32	-57.32	26.91	154.85	0.91	63.33
5155.00	1.14	264.33	5118.69	-57.34	-57.34	26.62	155.10	0.64	63.22
5170.00	1.13	255.15	5133.68	-57.39	-57.39	26.33	155.36	1.21	63.14
5185.00	1.06	253.26	5148.68	-57.47	-57.47	26.06	155.61	0.52	63.10
5200.00	1.07	259.42	5163.68	-57.53	-57.53	25.78	155.86	0.77	63.05
5215.00	1.09	259.54	5178.68	-57.59	-57.59	25.51	156.11	0.12	62.98
5230.00	1.07	256.80	5193.67	-57.64	-57.64	25.23	156.36	0.38	62.92
5245.00	1.02	263.21	5208.67	-57.69	-57.69	24.96	156.60	0.84	62.86
5260.00	0.96	256.59	5223.67	-57.74	-57.74	24.71	156.83	0.84	62.80
5275.00	0.91	258.16	5238.67	-57.79	-57.79	24.47	157.05	0.39	62.76
5290.00	0.73	265.37	5253.66	-57.82	-57.82	24.26	157.24	1.36	62.70
5305.00	0.43	278.16	5268.66	-57.82	-57.82	24.10	157.37	2.17	62.65
5320.00	0.24	319.68	5283.66	-57.79	-57.79	24.03	157.42	2.00	62.59
5335.00	0.22	9.03	5298.66	-57.74	-57.74	24.01	157.42	1.27	62.53
5350.00	0.23	36.06	5313.66	-57.69	-57.69	24.03	157.38	0.71	62.49
5365.00	0.43	36.16	5328.66	-57.62	-57.62	24.09	157.31	1.30	62.45
5380.00	0.65	45.08	5343.66	-57.51	-57.51	24.18	157.20	1.59	62.39
5395.00	0.90	60.59	5358.66	-57.39	-57.39	24.34	157.02	2.17	62.34
5410.00	1.11	68.12	5373.66	-57.28	-57.28	24.58	156.77	1.61	62.33
5425.00	1.15	65.92	5388.66	-57.16	-57.16	24.85	156.50	0.42	62.33
5440.00	1.19	64.24	5403.65	-57.04	-57.04	25.13	156.22	0.32	62.33
5455.00	1.27	68.35	5418.65	-56.91	-56.91	25.43	155.93	0.80	62.33



Survey:		FINAL GYRO SURVEY							
Survey Date:		8/10/2012							
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft
5470.00	1.31	71.05	5433.65	-56.79	-56.79	25.74	155.62	0.50	62.35
5485.00	1.40	72.08	5448.64	-56.68	-56.68	26.08	155.29	0.61	62.39
5500.00	1.39	65.10	5463.64	-56.54	-56.54	26.42	154.96	1.13	62.41
5515.00	1.31	63.80	5478.63	-56.39	-56.39	26.74	154.63	0.56	62.41
5530.00	1.26	63.13	5493.63	-56.24	-56.24	27.04	154.32	0.34	62.40
5545.00	1.21	63.66	5508.63	-56.10	-56.10	27.33	154.03	0.32	62.40
5560.00	1.14	60.34	5523.62	-55.95	-55.95	27.60	153.74	0.69	62.39
5575.00	1.05	52.95	5538.62	-55.80	-55.80	27.84	153.48	1.10	62.36
5590.00	1.00	49.76	5553.62	-55.63	-55.63	28.05	153.24	0.50	62.30
5605.00	0.97	52.95	5568.61	-55.47	-55.47	28.25	153.01	0.43	62.25
5620.00	1.04	54.06	5583.61	-55.31	-55.31	28.46	152.77	0.47	62.20
5635.00	1.15	50.81	5598.61	-55.14	-55.14	28.69	152.51	0.89	62.15
5650.00	1.15	49.47	5613.61	-54.94	-54.94	28.92	152.24	0.18	62.09
5665.00	1.05	44.60	5628.60	-54.75	-54.75	29.13	151.98	0.89	62.01
5680.00	0.97	49.01	5643.60	-54.57	-54.57	29.32	151.75	0.76	61.95
5695.00	1.04	47.22	5658.60	-54.39	-54.39	29.52	151.51	0.51	61.88
5710.00	1.01	40.43	5673.60	-54.20	-54.20	29.70	151.28	0.84	61.80
5725.00	0.92	39.97	5688.59	-54.01	-54.01	29.87	151.06	0.59	61.71
5740.00	0.87	42.68	5703.59	-53.83	-53.83	30.02	150.85	0.41	61.63
5755.00	0.80	31.58	5718.59	-53.66	-53.66	30.15	150.67	1.19	61.55
5770.00	0.77	23.20	5733.59	-53.48	-53.48	30.25	150.51	0.78	61.44
5785.00	0.85	24.74	5748.59	-53.28	-53.28	30.33	150.35	0.55	61.31
5800.00	0.89	16.61	5763.59	-53.07	-53.07	30.41	150.19	0.86	61.17
5815.00	0.78	0.29	5778.59	-52.86	-52.86	30.45	150.06	1.73	61.00
5830.00	0.74	356.71	5793.58	-52.66	-52.66	30.44	149.97	0.43	60.82
5845.00	0.83	347.72	5808.58	-52.46	-52.46	30.41	149.90	1.00	60.63
5860.00	0.78	348.70	5823.58	-52.25	-52.25	30.37	149.83	0.31	60.43
5875.00	0.79	347.16	5838.58	-52.05	-52.05	30.33	149.77	0.14	60.24
5890.00	0.89	348.88	5853.58	-51.83	-51.83	30.28	149.71	0.70	60.03
5905.00	0.94	349.28	5868.58	-51.60	-51.60	30.24	149.63	0.35	59.80
5920.00	1.00	342.96	5883.57	-51.35	-51.35	30.17	149.56	0.82	59.56
5935.00	1.05	343.25	5898.57	-51.10	-51.10	30.10	149.50	0.34	59.30
5950.00	1.04	347.46	5913.57	-50.83	-50.83	30.03	149.43	0.52	59.04
5965.00	1.16	348.54	5928.57	-50.55	-50.55	29.97	149.34	0.83	58.76
5980.00	1.30	347.19	5943.56	-50.23	-50.23	29.90	149.24	0.95	58.46
5995.00	1.48	347.90	5958.56	-49.88	-49.88	29.82	149.13	1.20	58.11
6010.00	1.51	347.74	5973.55	-49.50	-49.50	29.74	149.00	0.17	57.74
6025.00	1.46	347.39	5988.55	-49.12	-49.12	29.65	148.88	0.28	57.38
6040.00	1.62	350.60	6003.54	-48.72	-48.72	29.58	148.74	1.18	57.00
6055.00	1.69	349.10	6018.54	-48.30	-48.30	29.50	148.58	0.53	56.59



Survey:		FINAL GYRO SURVEY								
Survey Date:		8/10/2012								
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance	
ft	deg	deg	ft	ft	ft	ft	deg	"/100ft	ft	
6070.00	1.61	347.22	6033.53	-47.87	-47.87	29.41	148.43	0.64	56.19	
6085.00	1.67	348.34	6048.52	-47.46	-47.46	29.32	148.29	0.45	55.78	
6100.00	1.68	346.17	6063.52	-47.03	-47.03	29.23	148.14	0.43	55.37	
6115.00	1.57	347.45	6078.51	-46.62	-46.62	29.13	148.00	0.80	54.97	
6130.00	1.40	349.15	6093.51	-46.23	-46.23	29.05	147.86	1.13	54.60	
6145.00	1.09	349.99	6108.50	-45.91	-45.91	28.99	147.73	2.07	54.30	
6160.00	0.93	357.76	6123.50	-45.65	-45.65	28.96	147.61	1.40	54.06	
6175.00	0.74	0.02	6138.50	-45.43	-45.43	28.96	147.49	1.27	53.87	
6190.00	0.55	13.68	6153.50	-45.26	-45.26	28.97	147.38	1.66	53.74	
6205.00	0.55	24.01	6168.50	-45.13	-45.13	29.02	147.26	0.66	53.65	
6220.00	0.56	23.02	6183.50	-45.00	-45.00	29.08	147.13	0.09	53.57	
6235.00	0.70	25.85	6198.50	-44.85	-44.85	29.15	146.98	0.95	53.49	
6250.00	0.66	44.66	6213.50	-44.70	-44.70	29.25	146.81	1.49	53.42	
6265.00	0.71	102.39	6228.49	-44.66	-44.66	29.40	146.65	4.43	53.47	
6280.00	0.84	120.36	6243.49	-44.74	-44.74	29.58	146.52	1.81	53.63	
6295.00	0.85	126.06	6258.49	-44.86	-44.86	29.77	146.43	0.57	53.84	
6310.00	0.95	126.16	6273.49	-45.00	-45.00	29.96	146.34	0.62	54.06	
6325.00	0.88	112.59	6288.49	-45.11	-45.11	30.16	146.23	1.51	54.27	
6340.00	0.83	111.06	6303.49	-45.20	-45.20	30.37	146.10	0.36	54.45	
6355.00	0.81	110.26	6318.48	-45.27	-45.27	30.57	145.97	0.13	54.63	
6370.00	0.82	107.98	6333.48	-45.34	-45.34	30.77	145.84	0.22	54.80	
6385.00	0.84	112.78	6348.48	-45.42	-45.42	30.98	145.71	0.49	54.98	
6400.00	0.79	119.88	6363.48	-45.51	-45.51	31.17	145.60	0.75	55.16	
6415.00	0.80	115.15	6378.48	-45.61	-45.61	31.35	145.49	0.45	55.35	
6430.00	0.76	100.20	6393.48	-45.67	-45.67	31.55	145.37	1.39	55.51	
6445.00	0.66	94.49	6408.48	-45.70	-45.70	31.73	145.23	0.78	55.63	
6460.00	0.62	88.84	6423.47	-45.70	-45.70	31.90	145.09	0.50	55.73	
6475.00	0.65	77.66	6438.47	-45.68	-45.68	32.06	144.94	0.85	55.81	
6490.00	0.63	79.84	6453.47	-45.65	-45.65	32.23	144.78	0.20	55.88	
6505.00	0.66	87.10	6468.47	-45.63	-45.63	32.40	144.63	0.58	55.96	
6520.00	0.68	83.16	6483.47	-45.61	-45.61	32.57	144.47	0.34	56.05	
6535.00	0.70	78.74	6498.47	-45.59	-45.59	32.75	144.31	0.38	56.13	
6550.00	0.68	64.91	6513.47	-45.53	-45.53	32.92	144.13	1.12	56.19	
6565.00	0.69	63.50	6528.47	-45.45	-45.45	33.08	143.95	0.13	56.22	
6580.00	0.77	61.76	6543.47	-45.36	-45.36	33.25	143.76	0.57	56.25	
6595.00	0.82	56.76	6558.46	-45.26	-45.26	33.43	143.55	0.54	56.27	
6610.00	0.78	50.25	6573.46	-45.13	-45.13	33.60	143.33	0.64	56.27	
6625.00	0.73	47.86	6588.46	-45.00	-45.00	33.75	143.13	0.43	56.25	
6640.00	0.77	55.82	6603.46	-44.88	-44.88	33.90	142.94	0.74	56.25	
6655.00	0.87	53.43	6618.46	-44.76	-44.76	34.08	142.72	0.71	56.25	



Survey:		FINAL GYRO SURVEY										
Survey Date:		8/10/2012										
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure	Direction	Dogleg	Severity	Closure	Distance
ft	deg	deg	ft	ft	ft	ft		deg		%100ft		ft
6670.00	0.94	47.06	6633.46	-44.61	-44.61	34.26		142.48		0.82		56.24
6685.00	1.10	36.48	6648.46	-44.41	-44.41	34.43		142.21		1.65		56.19
6700.00	1.22	33.88	6663.45	-44.16	-44.16	34.61		141.92		0.87		56.11
6715.00	1.31	34.77	6678.45	-43.89	-43.89	34.79		141.59		0.62		56.01
6730.00	1.33	36.45	6693.44	-43.61	-43.61	35.00		141.25		0.28		55.91
6745.00	1.36	38.47	6708.44	-43.33	-43.33	35.21		140.90		0.38		55.83
6760.00	1.43	38.70	6723.44	-43.04	-43.04	35.44		140.53		0.50		55.75
6775.00	1.53	32.56	6738.43	-42.73	-42.73	35.66		140.15		1.23		55.65
6790.00	1.54	29.70	6753.43	-42.38	-42.38	35.87		139.76		0.51		55.52
6805.00	1.42	29.97	6768.42	-42.05	-42.05	36.06		139.38		0.79		55.39
6820.00	1.32	28.56	6783.42	-41.73	-41.73	36.24		139.03		0.67		55.27
6835.00	1.27	28.09	6798.41	-41.44	-41.44	36.40		138.70		0.34		55.15
6850.00	1.22	29.42	6813.41	-41.15	-41.15	36.56		138.38		0.42		55.04
6865.00	1.29	27.68	6828.41	-40.86	-40.86	36.71		138.06		0.53		54.93
6880.00	1.37	22.89	6843.40	-40.55	-40.55	36.86		137.73		0.94		54.80
6895.00	1.35	18.53	6858.40	-40.21	-40.21	36.99		137.39		0.71		54.64
6910.00	1.28	18.32	6873.39	-39.89	-39.89	37.10		137.08		0.45		54.47
6925.00	1.22	16.92	6888.39	-39.57	-39.57	37.19		136.78		0.49		54.31
6940.00	1.18	13.12	6903.39	-39.27	-39.27	37.28		136.49		0.59		54.15
6955.00	1.16	13.62	6918.38	-38.97	-38.97	37.35		136.22		0.14		53.98
6970.00	1.19	12.78	6933.38	-38.67	-38.67	37.42		135.95		0.22		53.81
6985.00	1.28	12.32	6948.38	-38.36	-38.36	37.49		135.66		0.61		53.64
7000.00	1.40	10.55	6963.37	-38.02	-38.02	37.56		135.35		0.87		53.44
7015.00	1.43	10.36	6978.37	-37.65	-37.65	37.62		135.02		0.20		53.23
7030.00	1.56	9.07	6993.36	-37.26	-37.26	37.69		134.67		0.87		53.00
7045.00	1.47	8.79	7008.36	-36.87	-36.87	37.75		134.32		0.58		52.77
7060.00	1.39	9.11	7023.35	-36.50	-36.50	37.81		133.99		0.54		52.55
7075.00	1.34	9.73	7038.35	-36.15	-36.15	37.87		133.67		0.38		52.35
7090.00	1.04	11.96	7053.35	-35.84	-35.84	37.93		133.38		1.97		52.18
7105.00	0.58	43.95	7068.34	-35.65	-35.65	38.01		133.17		4.21		52.11
7120.00	0.99	136.65	7083.34	-35.69	-35.69	38.15		133.10		7.79		52.24
7135.00	2.18	160.51	7098.34	-36.06	-36.06	38.33		133.25		8.94		52.63
7150.00	3.44	171.23	7113.32	-36.77	-36.77	38.50		133.69		9.07		53.24
7165.00	4.86	175.97	7128.28	-37.85	-37.85	38.61		134.43		9.71		54.07
7180.00	6.40	178.29	7143.21	-39.32	-39.32	38.68		135.47		10.36		55.16
7195.00	7.75	178.89	7158.09	-41.17	-41.17	38.72		136.75		9.05		56.52
7210.00	9.20	179.30	7172.93	-43.38	-43.38	38.76		138.22		9.63		58.17
7225.00	10.81	179.25	7187.70	-45.98	-45.98	38.79		139.85		10.74		60.16
7240.00	12.32	178.85	7202.39	-48.99	-48.99	38.84		141.59		10.10		62.52
7255.00	13.69	178.36	7217.01	-52.36	-52.36	38.93		143.37		9.16		65.25



Survey:		FINAL GYRO SURVEY							
Survey Date:		8/10/2012							
MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	%100ft	ft
7270.00	15.10	177.45	7231.54	-56.09	-56.09	39.06	145.15	9.54	68.35
7285.00	16.39	176.49	7245.97	-60.16	-60.16	39.28	146.86	8.78	71.85
7300.00	17.73	175.11	7260.31	-64.55	-64.55	39.61	148.47	9.31	75.73
7315.00	18.96	174.18	7274.55	-69.25	-69.25	40.05	149.96	8.45	79.99
7330.00	20.13	173.58	7288.69	-74.24	-74.24	40.58	151.34	7.89	84.61
7345.00	21.50	173.01	7302.71	-79.53	-79.53	41.21	152.61	9.19	89.57
7360.00	22.70	172.70	7316.60	-85.13	-85.13	41.91	153.79	8.07	94.89
7375.00	23.79	172.64	7330.39	-91.00	-91.00	42.66	154.88	7.29	100.51
7390.00	24.96	172.73	7344.05	-97.14	-97.14	43.45	155.90	7.77	106.42
7405.00	26.24	172.96	7357.58	-103.57	-103.57	44.26	156.86	8.56	112.63
7420.00	27.41	173.13	7370.96	-110.29	-110.29	45.08	157.77	7.80	119.15
7435.00	28.44	173.26	7384.22	-117.27	-117.27	45.91	158.62	6.89	125.93
7450.00	29.43	173.42	7397.34	-124.47	-124.47	46.75	159.41	6.64	132.96
7465.00	30.46	173.56	7410.34	-131.91	-131.91	47.60	160.16	6.89	140.24
7480.00	31.60	173.55	7423.19	-139.60	-139.60	48.47	160.85	7.57	147.77
7495.00	32.58	173.22	7435.90	-147.51	-147.51	49.39	161.49	6.64	155.56
7510.00	33.44	172.78	7448.48	-155.62	-155.62	50.38	162.06	5.98	163.58
7525.00	34.34	172.55	7460.93	-163.92	-163.92	51.45	162.57	6.02	171.80
7540.00	35.33	172.38	7473.24	-172.41	-172.41	52.57	163.04	6.68	180.25
7555.00	36.39	172.29	7485.40	-181.12	-181.12	53.75	163.47	7.06	188.93
7570.00	37.34	172.42	7497.40	-190.04	-190.04	54.94	163.87	6.35	197.82
7585.00	38.17	172.70	7509.26	-199.15	-199.15	56.13	164.26	5.62	206.91
7600.00	38.90	173.09	7520.99	-208.42	-208.42	57.29	164.63	5.16	216.15
7615.00	39.57	173.45	7532.61	-217.84	-217.84	58.40	164.99	4.66	225.53
7630.00	40.33	173.83	7544.11	-227.41	-227.41	59.47	165.35	5.32	235.06
7645.00	41.22	174.23	7555.47	-237.16	-237.16	60.49	165.69	6.19	244.75
7660.00	42.15	174.60	7566.67	-247.08	-247.08	61.46	166.03	6.44	254.61
7675.00	43.09	175.02	7577.71	-257.20	-257.20	62.37	166.37	6.56	264.65
7690.00	44.05	175.28	7588.58	-267.50	-267.50	63.25	166.70	6.49	274.88
7705.00	45.00	175.43	7599.27	-277.98	-277.98	64.10	167.02	6.34	285.28
7720.00	45.83	175.39	7609.80	-288.63	-288.63	64.95	167.32	5.54	295.85
7735.00	46.58	175.24	7620.18	-299.42	-299.42	65.84	167.60	5.08	306.58
7750.00	47.41	175.07	7630.42	-310.35	-310.35	66.76	167.86	5.56	317.45
7765.00	48.36	174.80	7640.47	-321.44	-321.44	67.75	168.10	6.49	328.50
7780.00	49.36	174.47	7650.34	-332.68	-332.68	68.80	168.32	6.86	339.72
7795.00	50.40	174.28	7660.01	-344.10	-344.10	69.93	168.51	7.01	351.13
7810.00	51.55	174.22	7669.46	-355.69	-355.69	71.10	168.70	7.68	362.73
7825.00	52.99	174.32	7678.63	-367.50	-367.50	72.28	168.87	9.61	374.54
7840.00	54.43	174.56	7687.51	-379.53	-379.53	73.45	169.05	9.68	386.57
7855.00	55.57	174.71	7696.12	-391.76	-391.76	74.60	169.22	7.64	398.80



Survey: FINAL GYRO SURVEY

Survey Date: 8/10/2012

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Dogleg Severity	Closure Distance
ft	deg	deg	ft	ft	ft	ft	deg	/100ft	ft
7870.00	56.98	174.81	7704.45	-404.18	-404.18	75.74	169.39	9.41	411.22
7885.00	58.53	174.89	7712.45	-416.82	-416.82	76.88	169.55	10.38	423.85
7892.00	58.95	174.95	7716.08	-422.78	-422.78	77.41	169.62	5.99	429.81



Weatherford®

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

Occidental Permian Ltd.
5 Greenway Plaza Suite 110
Houston Tx 77046

Date: July 31, 2012

Attention: Anar Khalilov

Re: Occidental Permian Ltd
Well: Peaches 19 Fed Com #1H
Eddy County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

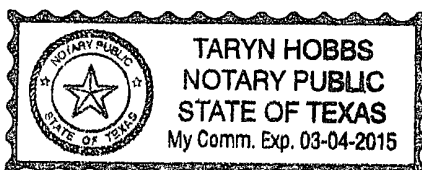
<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Justin Nguyen MWD Supervisor	1H	7081.00' MD 12075.00' MD	7/02/2012 7/30/2012	Measurement While Drilling

A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesus Aguilar
MWD Coordinator

On this, the 31st day of July, 2012, before me a notary public, the undersigned officer, personally appeared Jesus Aguilar, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford

Company: Occidental Permian Ltd.		Date: 7/31/2012		Time: 09:04:09		Page: 1	
Field: Eddy Co. NM (Nad 27)		Co-ordinate(NE) Reference: Well: 1H; Grid North		Vertical (TVD) Reference: SITE 3223.2			
Site: Peaches 19 Fed #1H		Section (VS) Reference: Well (0.00N, 0.00E, 174.74Azi)		Survey Calculation Method: Minimum Curvature		Db: Sybase	
Wellpath: Lateral							

Survey:		Start Date:	
Company:		Engineer:	
Tool:		Tied-to:	

Field: Eddy Co, NM (Nad 27)			
Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Eastern Zone	
Geo Datum: NAD27 (Clarke 1866)		Coordinate System: Well Centre	
Sys Datum: Mean Sea Level		Geomagnetic Model: IGRF2010	

Site: Peaches 19 Fed #1H					
Site Position:		Northing: 407998.90 ft		Latitude: 32 7 17 981 N	
From: Map		Easting: 532656.30 ft		Longitude: 104 13 40 257 W	
Position Uncertainty: 0.00 ft				North Reference: Grid	
Ground Level: 3199.20 ft				Grid Convergence: 0.06 deg	

Well: 1H		Slot Name:	
Well Position: +N/-S 0.00 ft		Northing: 407998.90 ft	
+E/-W 0.00 ft		Easting: 532656.30 ft	
Position Uncertainty: 0.00 ft			

Wellpath: Lateral		Drilled From: Pilot	
Current Datum: SITE		Tie-on Depth: 7020.00 ft	
Magnetic Data: 7/18/2012		Above System Datum: Mean Sea Level	
Field Strength: 48397 nT		Declination: 7.74 deg	
Vertical Section: Depth From (TVD)		Mag Dip Angle: 59.95 deg	
ft		+N/-S ft	
0.00		0.00	
		+E/-W ft	
		0.00	
		Direction deg	
		174.74	

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
87.10	0.54	307.17	87.10	0.25	-0.33	0.62	-0.28	407999.15	532655.97	
177.27	0.72	332.31	177.26	1.01	-0.93	0.36	-1.09	407999.91	532655.37	
267.44	1.17	341.04	267.42	2.38	-1.49	0.52	-2.51	408001.28	532654.81	
358.68	2.16	337.81	358.62	4.85	-2.44	1.09	-5.06	408003.75	532653.86	
451.38	4.29	340.31	451.17	9.73	-4.27	2.30	-10.08	408008.63	532652.03	
542.08	6.97	337.21	541.42	18.00	-7.55	2.97	-18.62	408016.90	532648.75	
636.54	7.17	335.41	635.17	28.65	-12.22	0.32	-29.65	408027.55	532644.08	
731.09	9.43	336.50	728.72	41.12	-17.76	2.40	-42.57	408040.02	532638.54	
825.30	12.47	335.94	821.20	57.49	-24.99	3.23	-59.54	408056.39	532631.31	
920.19	15.51	332.76	913.27	78.13	-34.98	3.30	-81.00	408077.03	532621.32	
1023.00	15.48	331.29	1012.34	102.38	-47.86	0.38	-106.34	408101.28	532608.44	
1054.00	15.47	331.39	1042.22	109.64	-51.83	0.09	-113.93	408108.54	532604.47	
1149.00	12.88	325.99	1134.32	129.54	-63.82	3.06	-134.85	408128.44	532592.48	
1243.00	10.87	322.76	1226.31	145.29	-75.04	2.25	-151.55	408144.19	532581.26	
1338.00	8.68	319.80	1319.92	157.89	-85.09	2.36	-165.03	408156.79	532571.21	
1432.00	6.61	320.34	1413.08	167.48	-93.12	2.20	-175.31	408166.38	532563.18	
1527.00	2.92	313.74	1507.74	173.36	-98.36	3.92	-181.65	408172.26	532557.94	
1622.00	1.14	299.07	1602.68	175.50	-100.94	1.94	-184.01	408174.40	532555.36	
1716.00	2.05	149.10	1696.66	174.51	-100.89	3.29	-183.02	408173.41	532555.41	
1811.00	4.54	141.44	1791.49	170.11	-97.68	2.66	-178.35	408169.01	532558.62	
1861.00	6.14	141.34	1841.28	166.47	-94.77	3.20	-174.46	408165.37	532561.53	
1975.00	6.75	142.01	1954.55	156.43	-86.84	0.54	-163.73	408155.33	532569.46	
2006.00	6.25	142.68	1985.36	153.65	-84.69	1.63	-160.77	408152.55	532571.61	



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford

Company:	Occidental Permian Ltd.	Date:	7/31/2012	Time:	09:04:09	Page:	2
Field:	Eddy Co. NM (Nad 27)	Co-ordinate(NE) Reference:	Well: 1H Grid North				
Site:	Peaches 19 Fed #1H	Vertical (TVD) Reference:	SITE 3223.2				
Well:	1H	Section (VS) Reference:	Well (0.00N 0.00E 174 74Azi)				
Wellpath:	Lateral	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
2101.00	5.72	140.48	2079.84	145.89	-78.55	0.61	-152.48	408144.79	532577.75	
2195.00	5.66	141.27	2173.37	138.66	-72.67	0.10	-144.74	408137.56	532583.63	
2290.00	5.56	141.12	2267.92	131.42	-66.85	0.11	-137.00	408130.32	532589.45	
2385.00	6.48	137.71	2362.39	123.87	-60.35	1.04	-128.89	408122.77	532595.95	
2479.00	7.99	135.04	2455.64	115.33	-52.16	1.65	-119.62	408114.23	532604.14	
2574.00	9.59	135.99	2549.53	104.96	-42.00	1.69	-108.37	408103.86	532614.30	
2668.00	9.58	136.79	2642.21	93.63	-31.20	0.14	-96.10	408092.53	532625.10	
2763.00	9.46	137.94	2735.90	82.07	-20.56	0.24	-83.61	408080.97	532635.74	
2858.00	9.09	138.28	2829.66	70.67	-10.34	0.39	-71.32	408069.57	532645.96	
2952.00	8.45	138.16	2922.56	59.99	-0.79	0.68	-59.81	408058.89	532655.51	
3047.00	8.26	138.97	3016.55	49.64	8.35	0.24	-48.66	408048.54	532664.65	
3142.00	8.15	140.00	3110.58	39.33	17.15	0.19	-37.59	408038.23	532673.45	
3236.00	7.74	139.83	3203.68	29.39	25.52	0.44	-26.93	408028.29	532681.82	
3331.00	7.18	141.32	3297.88	19.87	33.36	0.62	-16.73	408018.77	532689.66	
3426.00	6.87	140.64	3392.16	10.84	40.67	0.34	-7.07	408009.74	532696.97	
3520.00	6.43	141.81	3485.53	2.36	47.49	0.49	2.01	408001.26	532703.79	
3615.00	6.20	142.98	3579.95	-5.92	53.87	0.28	10.83	407992.98	532710.17	
3710.00	5.21	156.29	3674.49	-13.97	58.69	1.73	19.29	407984.93	532714.99	
3804.00	5.07	160.90	3768.11	-21.80	61.77	0.46	27.37	407977.10	532718.07	
3899.00	4.09	181.84	3862.81	-29.15	63.03	2.02	34.81	407969.75	532719.33	
3994.00	3.91	185.24	3957.58	-35.76	62.63	0.31	41.35	407963.14	532718.93	
4088.00	3.26	212.69	4051.40	-41.20	60.89	1.93	46.61	407957.70	532717.19	
4183.00	3.13	224.98	4146.25	-45.31	57.60	0.73	50.40	407953.59	532713.90	
4277.00	4.19	247.61	4240.07	-48.44	52.61	1.89	53.05	407950.46	532708.91	
4372.00	2.88	257.45	4334.88	-50.28	47.07	1.51	54.38	407948.62	532703.37	
4466.00	1.16	284.48	4428.82	-50.55	43.84	2.04	54.36	407948.35	532700.14	
4561.00	0.95	290.51	4523.81	-50.04	42.18	0.25	53.69	407948.86	532698.48	
4656.00	1.06	279.38	4618.79	-49.62	40.57	0.24	53.13	407949.28	532696.87	
4750.00	1.06	281.58	4712.78	-49.30	38.86	0.04	52.65	407949.60	532695.16	
4845.00	1.10	273.66	4807.76	-49.07	37.09	0.16	52.26	407949.83	532693.39	
4939.00	0.98	274.28	4901.74	-48.95	35.39	0.13	51.99	407949.95	532691.69	
5034.00	1.05	265.83	4996.73	-48.95	33.71	0.17	51.83	407949.95	532690.01	
5129.00	1.07	257.14	5091.71	-49.21	31.98	0.17	51.94	407949.69	532688.28	
5223.00	1.04	253.09	5185.70	-49.65	30.31	0.09	52.22	407949.25	532686.61	
5318.00	0.30	324.64	5280.69	-49.70	29.34	1.04	52.18	407949.20	532685.64	
5412.00	1.14	62.88	5374.69	-49.08	30.03	1.30	51.62	407949.82	532686.33	
5507.00	1.39	70.38	5469.66	-48.26	31.95	0.32	50.98	407950.64	532688.25	
5601.00	1.06	52.57	5563.64	-47.35	33.72	0.53	50.24	407951.55	532690.02	
5696.00	1.04	42.91	5658.63	-46.18	35.00	0.19	49.20	407952.72	532691.30	
5790.00	0.63	7.77	5752.62	-45.04	35.65	0.68	48.12	407953.86	532691.95	
5885.00	0.88	352.54	5847.61	-43.80	35.63	0.34	46.89	407955.10	532691.93	
5979.00	1.35	346.11	5941.59	-42.01	35.27	0.52	45.07	407956.89	532691.57	
6074.00	1.84	349.90	6036.55	-39.42	34.73	0.53	42.44	407959.48	532691.03	
6169.00	0.65	8.74	6131.53	-37.39	34.55	1.31	40.40	407961.51	532690.85	
6263.00	0.78	119.12	6225.52	-37.17	35.19	1.25	40.24	407961.73	532691.49	
6358.00	0.92	112.52	6320.51	-37.78	36.46	0.18	40.96	407961.12	532692.76	
6453.00	0.73	88.54	6415.50	-38.06	37.77	0.41	41.36	407960.84	532694.07	
6547.00	0.60	69.29	6509.50	-37.87	38.83	0.27	41.27	407961.03	532695.13	
6642.00	0.85	48.75	6604.49	-37.23	39.82	0.38	40.72	407961.67	532696.12	
6736.00	1.57	34.07	6698.47	-35.70	41.07	0.83	39.32	407963.20	532697.37	
6831.00	1.32	31.87	6793.44	-33.69	42.37	0.27	37.44	407965.21	532698.67	
6926.00	1.16	13.25	6888.42	-31.83	43.17	0.45	35.65	407967.07	532699.47	



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford®

Company:	Occidental Permian Ltd.	Date:	7/31/2012	Time:	09:04:09	Page:	3
Field:	Eddy Co. NM (Nad 27)	Co-ordinate(N/E) Reference:	Well: 1H Grid North				
Site:	Peaches 19 Fed #1H	Vertical (TVD) Reference:	SITE: 3223 2				
Well:	1H	Section (VS) Reference:	Well (0:00N:0:00E:174-74Azi)				
Wellpath:	Lateral	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
7020.00	1.34	7.97	6982.39	-29.81	43.54	0.23	33.68	407969.09	532699.84	Tie on Pilot Sv
7081.00	1.16	10.35	7043.38	-28.50	43.75	0.31	32.39	407970.40	532700.05	First Wft Svy
7097.00	0.70	58.57	7059.38	-28.29	43.86	5.43	32.19	407970.61	532700.16	
7129.00	2.26	153.22	7091.37	-28.75	44.31	7.56	32.69	407970.15	532700.61	
7160.00	5.07	174.25	7122.30	-30.66	44.73	9.90	34.63	407968.24	532701.03	
7192.00	8.10	177.57	7154.09	-34.32	44.96	9.54	38.30	407964.58	532701.26	
7223.00	11.07	178.51	7184.65	-39.48	45.13	9.59	43.45	407959.42	532701.43	
7255.00	14.37	178.54	7215.86	-46.52	45.32	10.31	50.48	407952.38	532701.62	
7286.00	17.06	175.82	7245.70	-54.90	45.75	8.99	58.87	407944.00	532702.05	
7318.00	19.54	173.63	7276.08	-64.91	46.68	8.04	68.91	407933.99	532702.98	
7349.00	22.20	172.44	7305.05	-75.87	48.03	8.69	79.95	407923.03	532704.33	
7381.00	24.91	172.33	7334.38	-88.54	49.72	8.47	92.73	407910.36	532706.02	
7412.00	27.05	172.81	7362.24	-102.01	51.48	6.94	106.29	407896.89	532707.78	
7444.00	29.84	173.41	7390.38	-117.14	53.30	8.76	121.53	407881.76	532709.60	
7476.00	31.55	173.15	7417.89	-133.36	55.21	5.36	137.86	407865.54	532711.51	
7507.00	33.63	171.93	7444.01	-149.91	57.39	7.04	154.54	407848.99	532713.69	
7539.00	35.83	171.95	7470.31	-167.96	59.94	6.88	172.75	407830.94	532716.24	
7570.00	37.84	172.11	7495.12	-186.37	62.52	6.49	191.31	407812.53	532718.82	
7602.00	38.91	172.68	7520.20	-206.06	65.15	3.52	211.16	407792.84	532721.45	
7633.00	40.88	173.84	7543.99	-225.80	67.48	6.79	231.04	407773.10	532723.78	
7665.00	43.17	174.61	7567.76	-247.11	69.63	7.34	252.46	407751.79	532725.93	
7696.00	44.74	175.44	7590.07	-268.55	71.49	5.39	273.97	407730.35	532727.79	
7728.00	46.78	174.52	7612.40	-291.38	73.50	6.70	296.89	407707.52	532729.80	
7760.00	48.29	174.06	7634.00	-314.87	75.85	4.84	320.50	407684.03	532732.15	
7791.00	50.54	173.55	7654.17	-338.28	78.39	7.36	344.04	407660.62	532734.69	
7822.00	53.59	172.97	7673.22	-362.55	81.26	9.95	368.48	407636.35	532737.56	
7854.00	56.15	174.12	7691.64	-388.56	84.20	8.52	394.64	407610.34	532740.50	
7885.00	59.03	174.49	7708.25	-414.60	86.80	9.34	420.81	407584.30	532743.10	
7917.00	61.87	174.45	7724.03	-442.30	89.48	8.88	448.64	407556.60	532745.78	
7948.00	64.62	175.06	7737.98	-469.86	92.01	9.04	476.32	407529.04	532748.31	
7980.00	67.44	175.39	7750.98	-499.00	94.44	8.86	505.56	407499.90	532750.74	
8012.00	69.44	176.14	7762.74	-528.68	96.64	6.62	535.31	407470.22	532752.94	
8043.00	71.94	175.81	7772.99	-557.86	98.69	8.13	564.56	407441.04	532754.99	
8075.00	74.90	176.33	7782.12	-588.45	100.79	9.38	595.21	407410.45	532757.09	
8106.00	78.16	176.83	7789.34	-618.54	102.59	10.63	625.34	407380.36	532758.89	
8138.00	79.73	176.94	7795.48	-649.90	104.30	4.92	656.73	407349.00	532760.60	
8169.00	81.57	176.53	7800.51	-680.44	106.04	6.08	687.29	407318.46	532762.34	
8201.00	83.27	175.94	7804.74	-712.09	108.12	5.62	719.00	407286.81	532764.42	
8232.00	85.17	175.98	7807.86	-742.85	110.29	6.13	749.84	407256.05	532766.59	
8264.00	86.29	176.25	7810.24	-774.69	112.46	3.60	781.74	407224.21	532768.76	
8358.00	88.67	175.05	7814.37	-868.32	119.58	2.83	875.63	407130.58	532775.88	
8453.00	89.30	174.70	7816.06	-962.92	128.06	0.76	970.61	407035.98	532784.36	
8548.00	90.28	174.49	7816.40	-1057.50	137.01	1.05	1065.61	406941.40	532793.31	
8642.00	90.49	175.35	7815.77	-1151.13	145.34	0.94	1159.60	406847.77	532801.64	
8737.00	89.51	175.58	7815.77	-1245.83	152.85	1.06	1254.60	406753.07	532809.15	
8832.00	90.35	175.19	7815.89	-1340.52	160.49	0.97	1349.59	406658.38	532816.79	
8927.00	89.44	174.81	7816.06	-1435.16	168.77	1.04	1444.59	406563.74	532825.07	
9021.00	90.28	174.45	7816.29	-1528.74	177.57	0.97	1538.58	406470.16	532833.87	
9116.00	89.16	174.90	7816.76	-1623.33	186.38	1.27	1633.58	406375.57	532842.68	
9211.00	90.21	174.91	7817.28	-1717.95	194.82	1.11	1728.58	406280.95	532851.12	
9306.00	90.21	175.10	7816.93	-1812.59	203.09	0.20	1823.58	406186.31	532859.39	
9400.00	88.74	175.12	7817.79	-1906.24	211.10	1.56	1917.57	406092.66	532867.40	
9495.00	89.51	174.82	7819.24	-2000.86	219.43	0.87	2012.56	405998.04	532875.73	



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford

Company:	Occidental Permian Ltd.	Date:	7/31/2012	Time:	09:04:09	Page:	4
Field:	Eddy Co. NM (Nad:27)	Co-ordinate(NE) Reference:	Well 1H Gnd North				
Site:	Peaches 19 Fed #1H	Vertical (TVD) Reference:	SITE 3223.2				
Well:	1H	Section (VS) Reference:	Well (0.00N,0.00E,174.74Azi)				
Wellpath:	Lateral	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
9590.00	90.35	175.03	7819.36	-2095.49	227.84	0.91	2107.55	405903.41	532884.14	
9684.00	88.81	175.45	7820.05	-2189.16	235.64	1.70	2201.55	405809.74	532891.94	
9778.00	89.51	174.78	7821.43	-2282.81	243.64	1.03	2295.53	405716.09	532899.94	
9873.00	90.42	174.03	7821.48	-2377.35	252.90	1.24	2390.53	405621.55	532909.20	
9967.00	89.51	173.58	7821.54	-2470.80	263.04	1.08	2484.51	405528.10	532919.34	
10062.00	90.21	173.59	7821.77	-2565.21	273.66	0.74	2579.49	405433.69	532929.96	
10156.00	91.12	173.50	7820.68	-2658.61	284.23	0.97	2673.47	405340.29	532940.53	
10251.00	91.75	173.66	7818.30	-2752.98	294.85	0.68	2768.42	405245.92	532951.15	
10346.00	90.77	174.20	7816.21	-2847.42	304.89	1.18	2863.38	405151.48	532961.19	
10440.00	89.86	174.89	7815.70	-2940.99	313.82	1.21	2957.38	405057.91	532970.12	
10535.00	89.86	175.20	7815.93	-3035.64	322.03	0.33	3052.38	404963.26	532978.33	
10630.00	88.95	174.73	7816.92	-3130.27	330.37	1.08	3147.37	404868.63	532986.67	
10724.00	89.58	174.36	7818.12	-3223.83	339.30	0.78	3241.36	404775.07	532995.60	
10819.00	89.44	173.90	7818.93	-3318.33	349.02	0.51	3336.35	404680.57	533005.32	
10914.00	88.81	175.09	7820.38	-3412.88	358.13	1.42	3431.34	404586.02	533014.43	
11009.00	89.79	175.08	7821.55	-3507.52	366.27	1.03	3526.33	404491.38	533022.57	
11103.00	90.70	174.77	7821.14	-3601.15	374.58	1.02	3620.33	404397.75	533030.88	
11198.00	90.00	175.32	7820.56	-3695.79	382.79	0.94	3715.32	404303.11	533039.09	
11292.00	89.16	175.95	7821.25	-3789.52	389.94	1.12	3809.31	404209.38	533046.24	
11387.00	90.00	175.68	7821.95	-3884.26	396.87	0.93	3904.29	404114.64	533053.17	
11482.00	89.58	176.75	7822.30	-3979.05	403.15	1.21	3999.25	404019.85	533059.45	
11576.00	90.28	176.68	7822.41	-4072.90	408.53	0.75	4093.20	403926.00	533064.83	
11671.00	89.72	177.16	7822.41	-4167.76	413.64	0.78	4188.13	403831.14	533069.94	
11766.00	90.56	177.34	7822.18	-4262.65	418.19	0.90	4283.03	403736.25	533074.49	
11860.00	89.51	176.87	7822.12	-4356.53	422.94	1.22	4376.95	403642.37	533079.24	
11955.00	90.35	176.57	7822.24	-4451.37	428.38	0.94	4471.90	403547.53	533084.68	
12050.00	91.19	176.33	7820.96	-4546.18	434.26	0.92	4566.84	403452.72	533090.56	
12075.00	91.54	176.24	7820.37	-4571.12	435.88	1.45	4591.83	403427.78	533092.18	Last Wft Svy
12137.00	91.54	176.24	7818.70	-4632.96	439.94	0.00	4653.78	403365.94	533096.24	Proj. to Bit

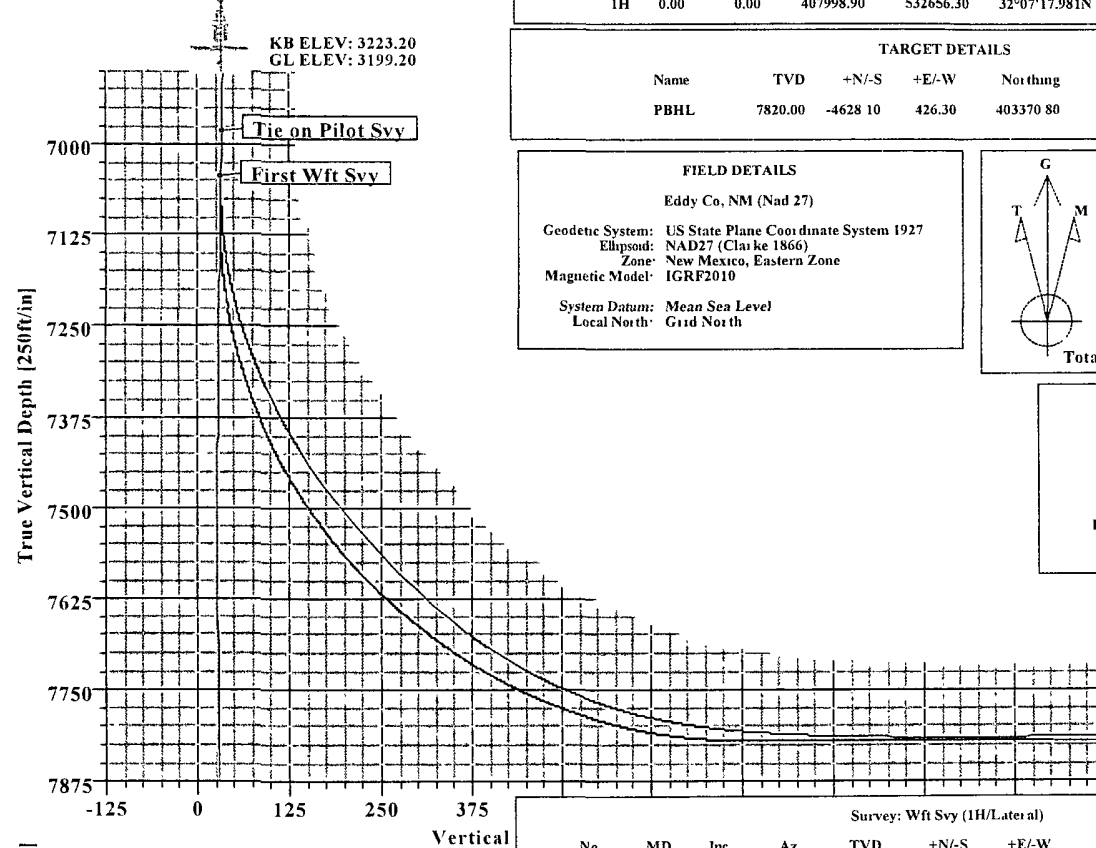
Annotation

MD ft	TVD ft	
7020.00	6982.39	Tie on Pilot Svy
7081.00	7043.38	First Wft Svy
12075.00	7820.37	Last Wft Svy
12137.00	7818.70	Proj. to Bit



Occidental Permian Ltd.

Peaches 19 Fed #1H
Eddy Co, New Mexico



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7115.00	1.07	9.45	7077.37	-27.84	43.84	0.00	0.00	31.74	
2	7150.15	0.99	3.04	7112.52	-27.21	43.91	0.40	232.05	31.12	
3	7161.65	2.02	175.25	7124.02	-27.32	43.93	26.09	174.77	31.23	
4	7166.65	2.02	175.25	7129.01	-27.49	43.95	0.00	0.00	31.40	
5	8266.44	90.00	175.25	7820.00	-740.79	103.23	8.00	0.00	747.13	
6	12167.15	90.00	175.25	7820.00	-4628.10	426.30	0.00	0.00	4647.69	PBHL

WELL DETAILS

Name+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
1H 0.00	0.00	407998.90	532656.30	32°07'17.981N	104°13'40.257W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	7820.00	-4628.10	426.30	403370.80	533082.60	Point

FIELD DETAILS

Eddy Co, NM (Nad 27)

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North



Azimuths to Grid North
True North: -0.06°
Magnetic North: 7.69°

Magnetic Field
Strength: 4839 nT
Dip Angle: 59.95°
Date: 7/18/2012
Model: IGRF2010

Total Correction to Grid North: 7.69°

SITE DETAILS

Peaches 19 Fed #1H

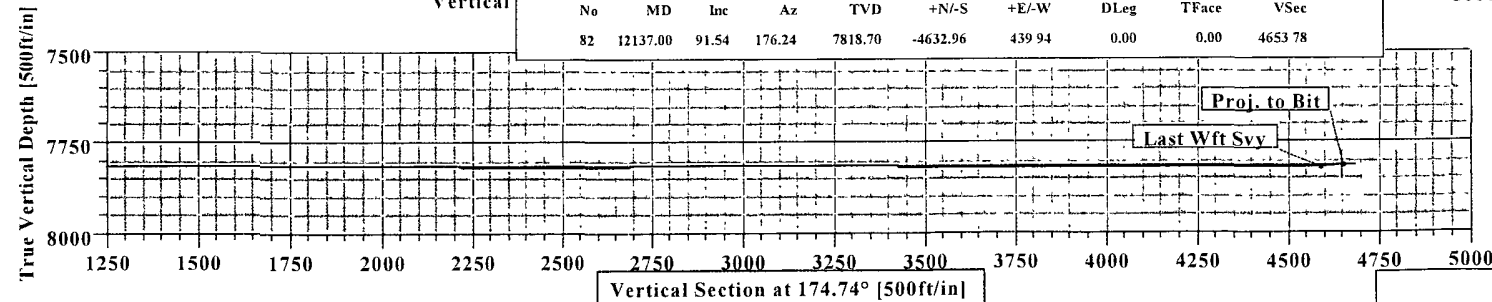
Site Centre Northing: 407998.90
Easting: 532656.30

Ground Level: 3199.20
Positional Uncertainty: 0.00
Convergence: 0.06

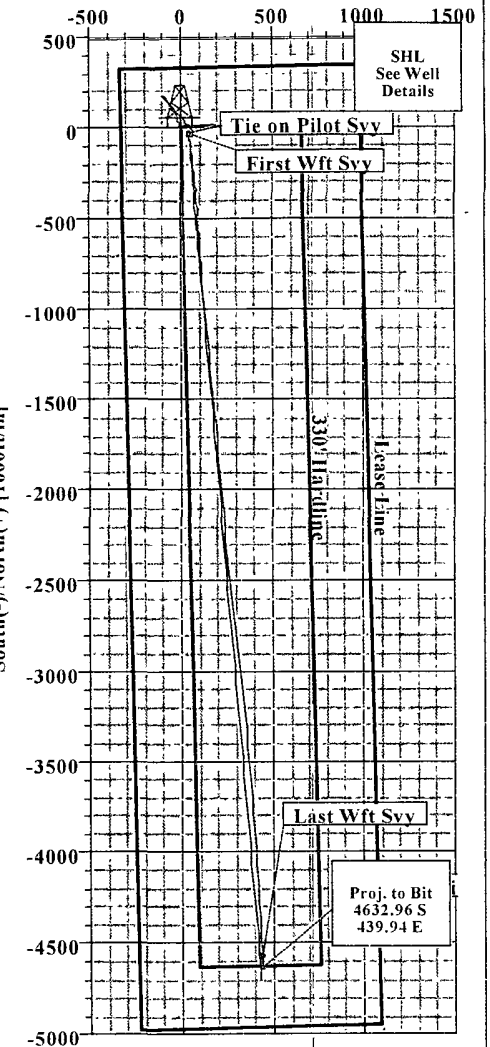


Survey: Wft Svy (1H/Lateral)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
82	12137.00	91.54	176.24	7818.70	-4632.96	439.94	0.00	0.00	4653.78



West(-)/East(+) [1000ft/in]



LEGEND

- 1H, Lateral, Plan #6
- 1H (Pilot)
- Lateral
- Wft Svy

Survey: Wft Svy (1H/Lateral)

Created By: Patrick Rudolph

Date: 7/30/2012