

30015 40761

OCCIDENTAL PERMIAN LTD.

North Seven Rivers
Eddy County, NM (Grid North)
Osage "18" Fee C Com #1H
VH - Job #320414-K-560

Survey: drop Gyro

SDI Survey Report

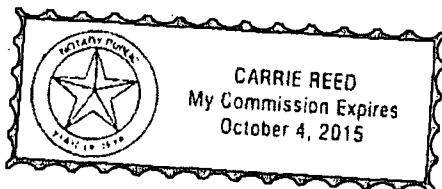
This survey is correct to the best of my knowledge and is supported by actual field data.

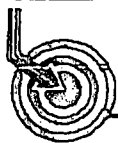
[Signature]

Notarized this date 30th of May, 2014.

[Signature]

Notary Signature
County of Midland
State of Texas





Scientific Drilling

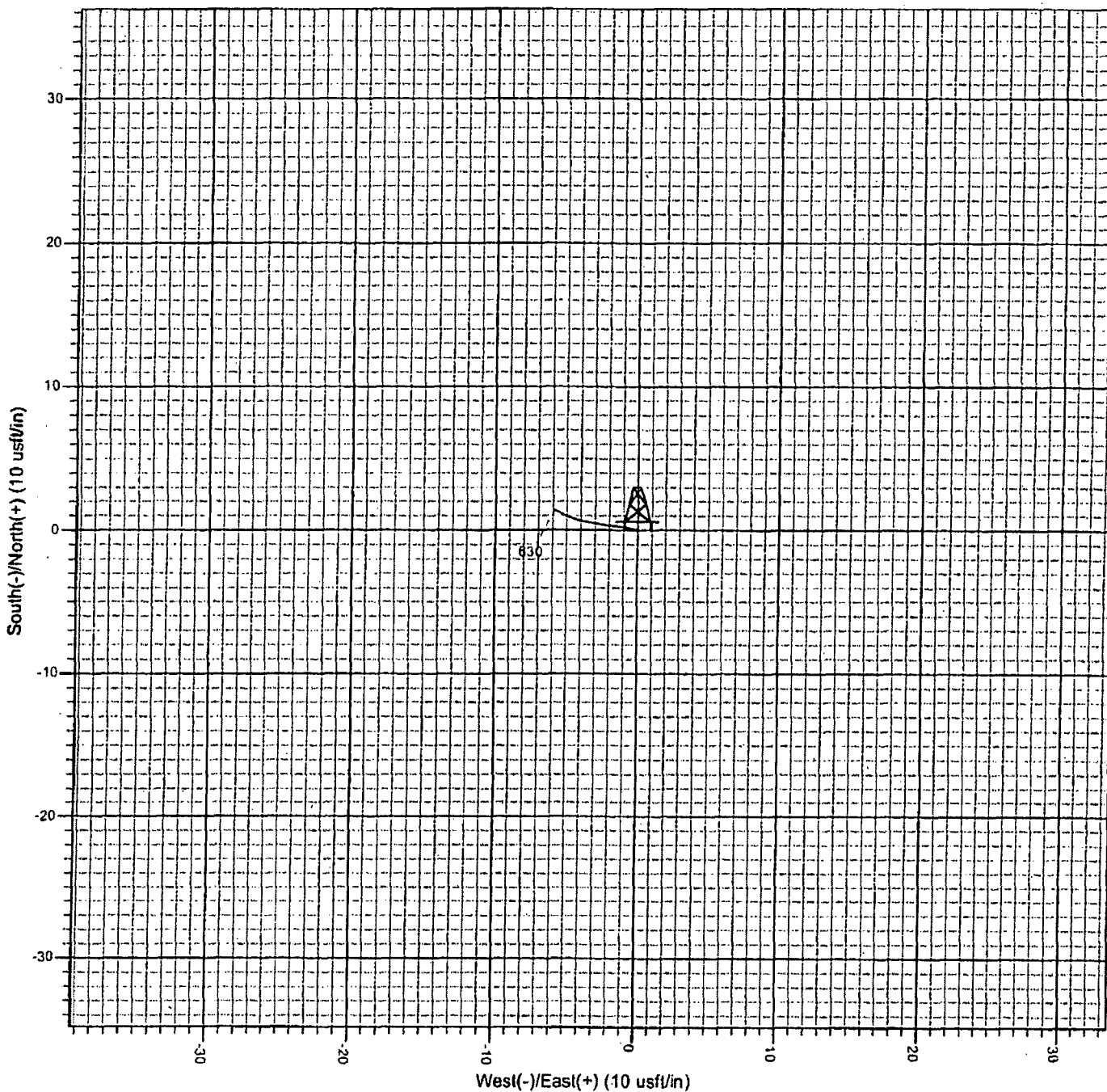
Project: North Seven Rivers
Eddy County, NM (Grid North)
Well: Osage "18" Fee C Com #1H
Wellbore: VH - Job #320414-K-560
Design: VH - Job #320414-K-560

WELL DETAILS: Osage "18" Fee C Com #1H

Mean Sea Level (System)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	570237.39	439519.08	32° 34' 3.131 N	104° 31' 46.758 W	



PROJECT DETAILS: North Seven Rivers	SITE DETAILS: Eddy County, NM (Grid North)
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 34' 1.817 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 104° 31' 14.394 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.0
Zone: New Mexico East 3001	Convergence: -0.10
System Datum: Mean Sea Level	Local North: Grid



Weatherford International Ltd.

WFT Survey Report X&Y's



Weatherford

Company: Occidental Permian Ltd.	Date: 5/1/2014	Time: 08:36:52	Page: 1
Field: Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: Osage 18 Fee C Com #1H	Grid North:
Site: Osage 18 Fee C Com #1H	Vertical (TVD) Reference:	SITE 3592.9	
Well: Osage 18 Fee C Com #1H	Section (VS) Reference:	Well (0.00N,0.00E,0.91Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

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

Site: Osage 18 Fee C Com #1H

Site Position:	Northing:	570237.00 ft	Latitude:	32 34 3.127 N
From: Map	Easting:	439519.10 ft	Longitude:	104 31 46.758 W
Position Uncertainty:	0.00 ft		North Reference:	Grid
Ground Level:	3576.40 ft		Grid Convergence:	-0.11 deg

Well: Osage 18 Fee C Com #1H				Slot Name:		
Well Position:	+N-S	0.00 ft	Northing:	570237.00 ft	Latitude:	32 34 3.127 N
	+E-W	0.00 ft	Easting :	439519.10 ft	Longitude:	104 31 46.758 W
Position Uncertainty:		0.00 ft				

Wellpath: 1	Drilled From:	Surface
Current Datum: SITE	Tie-on Depth:	0.00 ft
Magnetic Data: 12/18/2013	Above System Datum:	Mean Sea Level
Field Strength: 48491 nT	Declination:	7.74 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle:	80.28 deg
	+N-S	
	ft	Direction
		deg
0.00	0.00	0.00
		0.91

Survey Program for Definitive Wellpath	Version: 1
Date: 5/1/2014	Validated: No
Actual From To Survey	Toolcode Tool Name
0.00 630.00 Gyro (0.00-630.00)	NS-GYRO-MS North sensing gyrocompassing m
630.00 8865.00 MWD (630.00-8865.00)	MWD MWD - Standard

Survey

MD	Incl	Azim	TVD	N/S	E/W	DLS	VS	MapN	MapE	Comment
ft	deg	deg	ft	ft	ft	deg/100ft	ft	ft	ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	570237.00	439519.10	
109.36	0.75	282.18	109.36	0.15	-0.70	0.69	0.14	570237.15	439518.40	
199.71	0.46	271.90	199.70	0.29	-1.84	0.34	0.26	570237.29	439517.46	
288.31	0.43	277.52	288.30	0.34	-2.33	0.06	0.31	570237.34	439516.77	
374.92	0.67	280.39	374.91	0.48	-3.15	0.28	0.43	570237.48	439515.95	
460.36	0.66	282.47	460.34	0.67	-4.12	0.03	0.61	570237.67	439514.98	
543.34	0.58	292.10	543.31	0.93	-4.97	0.16	0.86	570237.93	439514.13	
630.00	0.71	303.58	629.87	1.40	-5.83	0.21	1.30	570238.40	439513.27	TieOn Gyro SD
760.00	0.81	315.65	759.96	2.50	-7.14	0.14	2.39	570239.50	439511.96	First Svy
895.00	0.92	312.95	894.94	3.92	-8.60	0.09	3.78	570240.92	439510.50	
1030.00	0.77	312.99	1029.93	5.28	-10.06	0.11	5.12	570242.28	439509.04	
1165.00	0.83	308.63	1164.91	6.51	-11.48	0.06	6.32	570243.51	439507.62	
1300.00	0.92	310.17	1299.90	7.82	-13.08	0.07	7.61	570244.82	439506.02	
1435.00	0.87	306.95	1434.88	9.13	-14.72	0.05	8.90	570246.13	439504.38	
1570.00	0.92	304.66	1569.87	10.36	-16.43	0.05	10.10	570247.36	439502.67	
1704.00	0.88	307.76	1703.85	11.60	-18.13	0.05	11.32	570248.60	439500.97	
1839.00	0.89	305.84	1838.83	12.85	-19.80	0.02	12.54	570249.85	439499.30	
1974.00	0.82	305.09	1973.82	14.02	-21.44	0.05	13.68	570251.02	439497.66	
2019.00	0.93	302.40	2018.81	14.40	-22.01	0.26	14.05	570251.40	439497.09	
2064.00	1.55	344.71	2063.80	15.19	-22.48	2.37	14.83	570252.19	439496.62	
2108.00	6.03	0.43	2107.70	18.07	-22.62	10.36	17.71	570255.07	439496.48	
2153.00	11.38	1.17	2152.16	24.88	-22.51	11.89	24.52	570261.88	439496.59	
2198.00	16.73	1.00	2195.80	35.80	-22.31	11.89	35.44	570272.80	439496.79	
2243.00	22.03	1.96	2238.23	50.72	-21.91	11.80	50.37	570287.72	439497.19	



Weatherford International Ltd.

WFT Survey Report X&Y's



Weatherford

Company: Occidental Permian Ltd. Date: 5/1/2014 Time: 08:38:52 Page: 2
 Field: Eddy Co. NM (Nad 27) Co-ordinate(NE) Reference: Well: Osage 18 Fee C Com #1H Grid North
 Site: Osage 18 Fee C Com #1H Vertical (TVD) Reference: SITE 3592.9
 Well: Osage 18 Fee C Com #1H Section (VS) Reference: Well (0.00N, 0.00E, 0.91Az)
 Wellpath: 1 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
2287.00	26.86	4.03	2278.28	68.90	-20.93	11.15	68.56	570305.90	439498.17	
2332.00	31.64	6.02	2317.53	90.79	-18.97	10.84	90.48	570327.79	439500.13	
2377.00	36.57	7.00	2354.78	115.85	-16.10	11.02	115.58	570352.85	439503.00	
2422.00	41.02	5.58	2389.84	143.87	-13.03	10.08	143.64	570380.87	439508.07	
2467.00	46.40	5.09	2422.36	174.82	-10.15	11.98	174.63	570411.82	439508.95	
2511.00	51.54	4.18	2451.24	207.89	-7.47	11.79	207.74	570444.89	439511.63	
2556.00	57.08	3.52	2477.48	244.34	-5.03	12.37	244.23	570481.34	439514.07	
2601.00	62.89	1.80	2500.05	283.21	-3.24	12.90	283.12	570520.21	439515.86	
2646.00	68.38	1.39	2518.68	324.13	-2.10	12.67	324.06	570561.13	439517.00	
2691.00	74.35	1.38	2533.05	368.74	-1.07	13.27	368.68	570603.74	439518.03	
2736.00	79.80	1.30	2543.11	410.57	-0.05	12.11	410.52	570647.57	439519.05	
2781.00	88.11	1.09	2548.63	455.20	0.88	14.03	455.16	570692.20	439519.98	
2824.00	89.47	1.45	2550.29	498.15	1.83	7.86	498.12	570735.15	439520.93	
2914.00	91.98	1.98	2549.15	588.10	4.53	2.85	588.10	570825.10	439523.63	
3004.00	92.38	2.77	2545.72	677.98	8.25	0.98	678.00	570914.96	439527.35	
3094.00	90.84	2.43	2543.19	767.82	12.33	1.75	767.82	571004.82	439531.43	
3184.00	90.16	1.29	2542.41	857.77	15.26	1.47	857.91	571094.77	439534.36	
3274.00	90.19	1.40	2542.13	947.75	17.37	0.13	947.90	571184.75	439536.47	
3364.00	90.40	359.82	2541.67	1037.74	18.33	1.77	1037.90	571274.74	439537.43	
3454.00	90.87	0.10	2540.83	1127.73	18.26	0.43	1127.88	571364.73	439537.36	
3544.00	91.12	359.91	2539.43	1217.72	18.27	0.54	1217.86	571454.72	439537.37	
3634.00	91.00	359.85	2537.76	1307.71	18.08	0.15	1307.83	571544.71	439537.18	
3724.00	90.88	359.80	2536.28	1397.69	17.81	0.14	1397.80	571634.69	439536.91	
3814.00	90.79	359.44	2534.97	1487.68	17.21	0.41	1487.77	571724.68	439536.31	
3904.00	90.65	359.27	2533.84	1577.67	16.20	0.24	1577.73	571814.67	439535.30	
3994.00	90.25	0.72	2533.13	1667.66	16.19	1.67	1667.71	571904.66	439535.29	
4084.00	90.21	0.60	2532.77	1757.66	17.23	0.14	1757.71	571994.66	439536.33	
4174.00	89.65	359.81	2532.88	1847.66	17.55	1.08	1847.70	572084.66	439536.65	
4264.00	89.35	0.66	2533.67	1937.65	17.92	1.00	1937.69	572174.65	439537.02	
4354.00	89.14	0.44	2534.85	2027.64	18.78	0.34	2027.68	572264.84	439537.88	
4444.00	90.09	1.05	2535.46	2117.63	19.95	1.25	2117.88	572354.63	439539.05	
4534.00	89.58	0.79	2535.72	2207.61	21.40	0.64	2207.68	572444.61	439540.50	
4624.00	89.16	0.49	2536.71	2297.60	22.40	0.57	2297.67	572534.60	439541.50	
4714.00	89.26	0.58	2537.95	2387.59	23.24	0.15	2387.66	572624.59	439542.34	
4804.00	89.02	0.46	2539.30	2477.58	24.06	0.30	2477.65	572714.58	439543.16	
4895.00	88.84	0.89	2541.00	2568.55	25.13	0.51	2568.63	572805.55	439544.23	
4986.00	90.54	1.10	2541.49	2659.54	26.71	1.88	2659.62	572896.54	439545.81	
5077.00	90.63	1.54	2540.56	2750.51	28.81	0.49	2750.62	572987.51	439547.91	
5167.00	90.16	2.06	2539.94	2840.46	31.63	0.78	2840.60	573077.46	439550.73	
5272.00	89.81	2.82	2539.97	2945.36	36.10	0.80	2945.57	573182.36	439555.20	
5362.00	90.42	1.89	2539.79	3035.29	39.80	1.24	3035.54	573272.29	439558.90	
5452.00	91.93	0.75	2537.94	3125.24	41.88	2.10	3125.51	573362.24	439560.98	
5542.00	91.91	0.43	2534.93	3215.18	42.80	0.36	3215.46	573452.18	439561.90	
5632.00	91.54	0.25	2532.22	3305.14	43.34	0.46	3305.41	573542.14	439562.44	
5722.00	91.10	0.29	2530.15	3395.12	43.76	0.49	3395.38	573632.12	439562.86	
5812.00	90.96	359.65	2528.53	3485.10	43.71	0.73	3485.36	573722.10	439562.81	
5901.00	91.05	0.83	2526.97	3574.09	43.93	1.11	3574.33	573811.09	439563.03	
5991.00	90.53	1.09	2525.73	3664.07	45.28	0.77	3664.32	573901.07	439564.38	
6081.00	90.09	0.50	2525.24	3754.06	46.53	0.82	3754.32	573991.06	439565.63	
6171.00	91.49	1.52	2524.00	3844.03	48.12	1.92	3844.31	574081.03	439567.22	
6261.00	91.56	1.71	2521.60	3933.98	50.65	0.22	3934.27	574170.96	439569.75	
6351.00	91.35	2.05	2519.32	4023.89	53.60	0.44	4024.23	574260.89	439572.70	



Weatherford International Ltd.
WFT Survey Report X&Y's



Weatherford

Company: Occidental Permian Ltd. Date: 5/1/2014 Time: 06:38:52 Page: 3
Field: Eddy Co, NM (Nad 27) Co-ordinate(NE) Reference: Well: Osage 18 Fee C Com #1H Grid North
Site: Osage 18 Fee C Com #1H Vertical (TVD) Reference: SITE 3592.9
Well: Osage 18 Fee C Com #1H Section (VS) Reference: Well (0.00N, 0.00E, 0.91Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

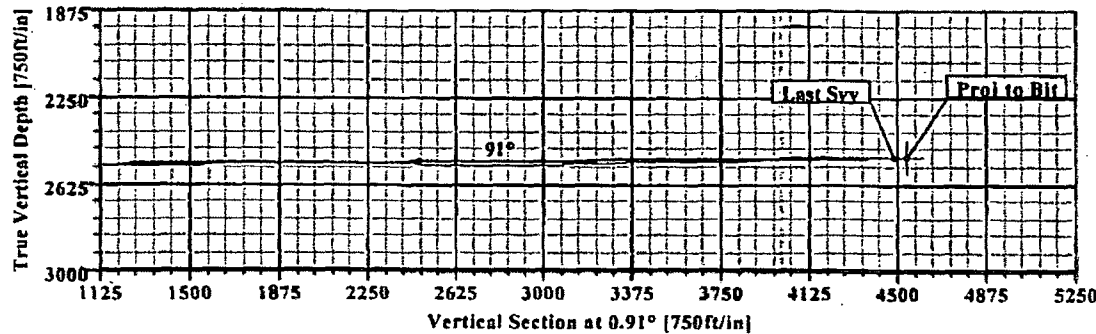
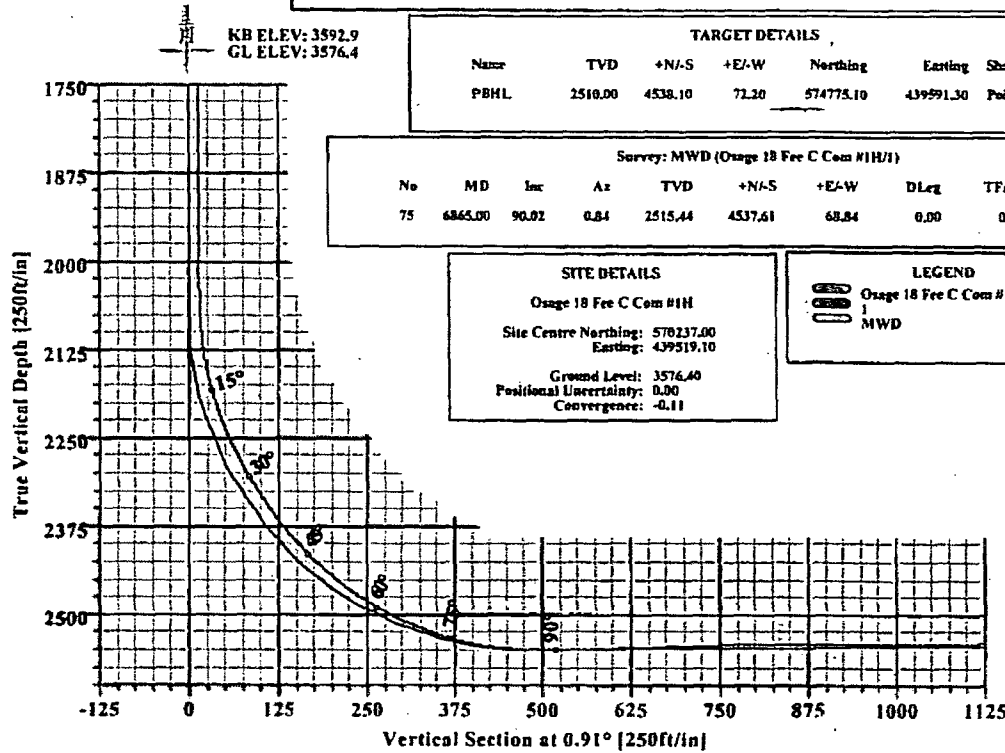
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
6441.00	90.96	2.35	2517.50	4113.80	57.08	0.55	4114.19	574350.80	439576.16	
6530.00	90.11	2.36	2518.67	4202.72	60.71	0.96	4203.15	574439.72	439579.81	
6620.00	90.56	1.61	2516.15	4292.66	63.83	0.97	4293.14	574529.66	439582.93	
6710.00	90.14	1.33	2515.60	4382.63	66.14	0.56	4383.13	574619.63	439585.24	
6810.00	90.02	0.84	2515.46	4482.61	68.03	0.50	4483.13	574719.61	439587.13	Last Svy
6865.00	90.02	0.84	2515.44	4537.61	68.84	0.00	4538.13	574774.61	439587.94	Proj to Bit

Annotation

MD ft	TVD ft	
630.00	629.97	Tie On Gyro SDI
760.00	759.96	First Svy
6810.00	2515.46	Last Svy
6865.00	2515.44	Proj to Bit



Osage 18 Fee C Com 1H
Eddy Co., NM



SECTION DETAILS										
Sec	MD	Inc	Ad	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2072.56	0.00	0.00	2072.56	0.00	0.00	0.00	0.00	0.00	
3	2817.27	90.56	0.91	2550.00	482.11	7.67	12.00	0.91	482.17	
4	6883.97	90.56	0.91	2510.00	4538.10	72.20	0.00	0.00	4538.67	PBHL

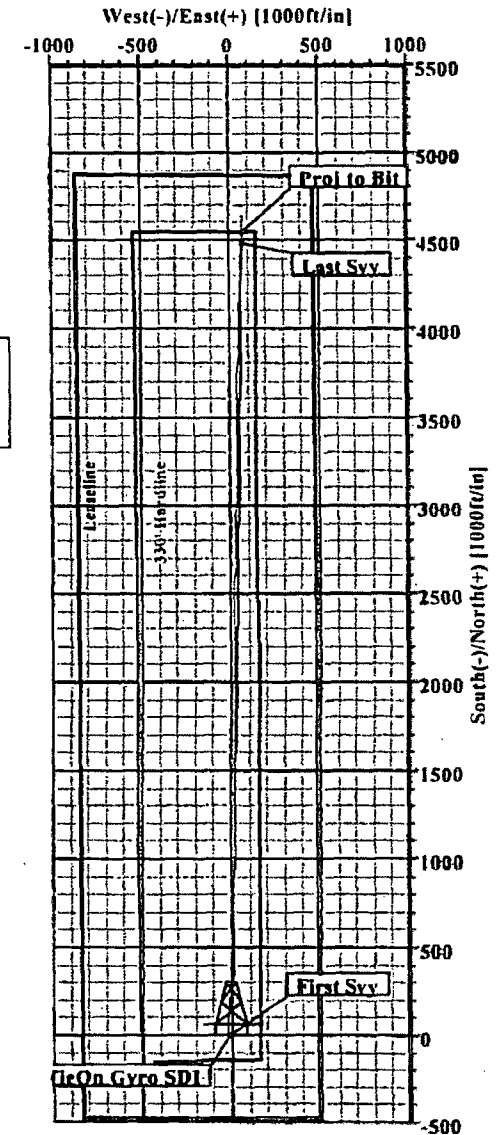
WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Osage 18 Fee C Com #1H	0.00	0.00	570237.00	439519.10	32°34'03.127N	104°31'46.750W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	2510.00	4538.10	72.20	574775.10	439591.30	Point

Survey: MWD (Osage 18 Fee C Com #1H/1)										
No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
75	6865.00	90.02	0.84	2515.44	4537.61	68.84	0.00	0.00	4538.13	

SITE DETAILS	
Osage 18 Fee C Com #1H	
Site Centre Northing:	570237.00
Easting:	439519.10
Ground Level:	3576.40
Positional Uncertainty:	0.00
Convergence:	-0.11

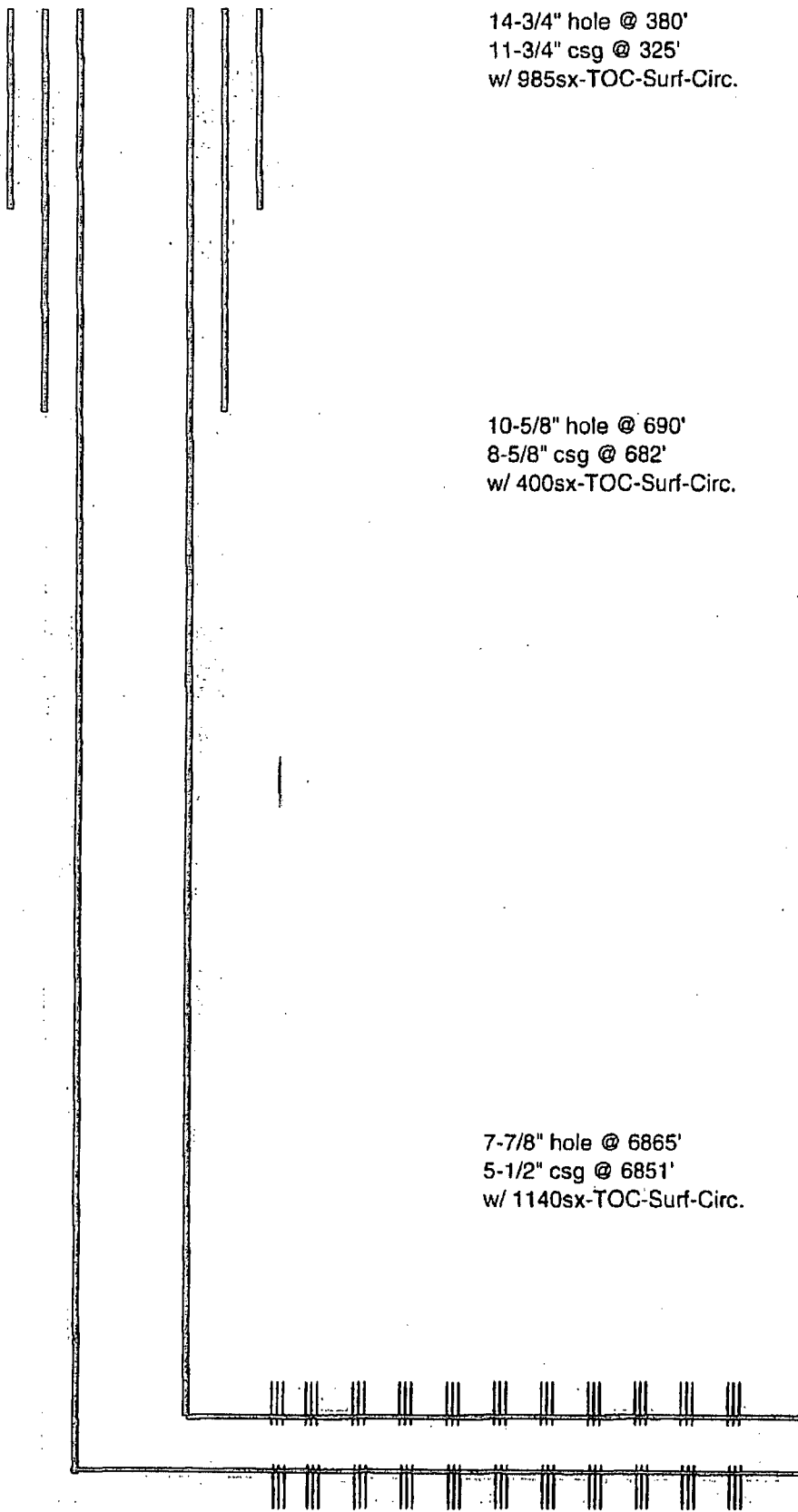
LEGEND	
	Osage 18 Fee C Com #1H, I, Plan #5
	MWD



Weatherford®

Survey: MWD (Osage 18 Fee C Com #1H/1)
Created By: Michael Dill Date: 5/1/2014

OXY USA INC.
Osage 18 Fee C Com 1H
API No. 30-015-40761



14-3/4" hole @ 380'
11-3/4" csg @ 325'
w/ 985sx-TOC-Surf-Circ.

10-5/8" hole @ 690'
8-5/8" csg @ 682'
w/ 400sx-TOC-Surf-Circ.

7-7/8" hole @ 6865'
5-1/2" csg @ 6851'
w/ 1140sx-TOC-Surf-Circ.

Perfs @ 2800-6650'

TD- 6865'M 2515'V