Oilfield Services, Central U.S. Land

Schlumberger

Reservoir Development
Drilling & Measurements (Extreme Engineering)
6724 Corporation Pkwy Suite 100
Fort Worth, TX 76126
Phone: (817) 717-1820
Fax: (817) 546-7551

July 23, 2013

Occidental Permian Ltd
5 Greenway Plaza Suite 110
Houston, Texas77046

Attention: Anthony Tschacher

Re:

CLIENT: OXY
WELL: Cedar Canyon 16 SWD 3
FIELD: Delaware
RIG: Savanna 415
COUNTY: Eddy
API NO: 30-015-41327
JOB NO: NM-OXY-0077

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements (formerly Extreme), a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
Troy Miller FST-1	Cedar Canyon 16 SWD 3 Original Hole	176.00 Ft 4347.00 Ft	to	July 12, 2013 July 18, 2013	to	SlimPulse

A plat of the bottom hole location is oriented both to the surface location and to the lease lines (or until line in case of pooling), is attached to the survey report.

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Joey Stewart
Field Service Manager

CC: OXY
Enclosures: [2]
County of Eddy
State of New Mexico

Oilfield Services, Central U.S. Land

Reservoir Development
Drilling & Measurements (Extreme Engineering)
6724 Corporation Pkwy Suite 100
Fort Worth, TX 76126
Phone: (817) 717-1820
Fax: (817) 546-7551

Schlumberger

I, Troy Miller certify that; I am employed by Drilling & Measurements (formerly Extreme), a division of Schlumberger Technology Corporation; that I did on the day(s) of July 12, 2013 through July 18, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 176.00 feet to a depth of 4347.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY for the Cedar Canyon 16 SWD 3 Well (Original Hole) API No. 30-015-41327 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

Troy Miller
FST-1

Before me, Jaclyn D. Fierro, on this day personally appeared Troy Duane Miller, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 23rd day of July, 2013 (year).

Notary Public

my Commission expires July 18, 2015

Cedar Canyon 16 SWD 3 MWD 0' to 4342' Survey Report

(Def Survey)

Report Date:	July 19, 2013 - 08:57 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	0.000 ° (Grid North)
Field:	NM, Eddy (NAD27) 2011	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	OXY (Cedar Canyon 16 SWD 3) Savanna 415 / Cedar Canyon 16 SWD 3	**TVD Reference Datum:**	RKB
Well:	Cedar Canyon 16 SWD 3	**TVD Reference Elevation:**	2941.000 ft above MSL
Borehole:	Original Hole	**Seabed / Ground Elevation:**	2927.000 ft above MSL
UWI / API#:	Unknown / 30-015-41324	**Magnetic Declination:**	7.570 °
Survey Name:	Cedar Canyon 16 SWD 3 MWD 0' to 4342'	**Total Field Strength:**	48327.278 nT
Survey Date:	July 18, 2013	**Magnetic Dip Angle:**	60.013 °
Tort / AHD / DDI / ERD Ratio:	12.388 ° / 95.141 ft / 3.072 / 0.022	**Declination Date:**	July 18, 2013
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Declination Model:**	BGGM 2012
Location Lat / Long:	N 32° 13' 21.72000", W 103° 59' 43.44000"	**North Reference:**	Grid North
Location Grid N/E Y/X:	N 444901.655 ftUS, E 604503.816 ftUS	**Grid Convergence Used:**	0.180 °
CRS Grid Convergence Angle:	0.18019145 °	**Total Corr Mag North->Grid North:**	7.390 °
Grid Scale Factor:	0.9999218	**Local Coord Referenced To:**	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	444901.65	604503.82	N 32 13 21.72	W 103 59 43.44
Begin MWD Surveys	176.00	0.22	94.58	176.00	-0.03	-0.03	0.34	0.13	444901.63	604504.15	N 32 13 21.72	W 103 59 43.44
	333.00	0.48	104.38	333.00	-0.21	-0.21	1.27	0.17	444901.44	604505.09	N 32 13 21.72	W 103 59 43.43
	530.00	0.88	140.28	529.98	-1.58	-1.58	3.04	0.29	444900.07	604506.86	N 32 13 21.70	W 103 59 43.40
	695.00	1.01	136.99	694.96	-3.62	-3.62	4.84	0.09	444898.03	604508.66	N 32 13 21.68	W 103 59 43.38
	788.00	1.10	131.06	787.94	-4.81	-4.81	6.07	0.15	444896.85	604509.89	N 32 13 21.67	W 103 59 43.37
	848.00	1.19	139.89	847.93	-5.66	-5.66	6.91	0.33	444895.99	604510.73	N 32 13 21.66	W 103 59 43.36
	1034.00	1.49	132.90	1033.88	-8.78	-8.78	9.93	0.18	444892.87	604513.74	N 32 13 21.63	W 103 59 43.32
	1192.00	1.58	116.95	1191.83	-11.17	-11.17	13.37	0.28	444890.49	604517.19	N 32 13 21.61	W 103 59 43.28
	1385.00	2.29	84.39	1384.72	-12.00	-12.00	19.58	0.66	444889.66	604523.40	N 32 13 21.60	W 103 59 43.21
	1559.00	2.29	87.55	1558.58	-11.51	-11.51	26.51	0.07	444890.14	604530.33	N 32 13 21.61	W 103 59 43.13
	1659.00	2.29	87.55	1658.50	-11.34	-11.34	30.51	0.00	444890.32	604534.32	N 32 13 21.61	W 103 59 43.09
	1755.00	2.59	84.39	1754.41	-11.05	-11.05	34.58	0.34	444890.61	604538.39	N 32 13 21.61	W 103 59 43.04
	1906.00	2.81	83.99	1905.25	-10.32	-10.32	41.66	0.15	444891.33	604545.47	N 32 13 21.62	W 103 59 42.96
	2101.00	2.59	82.45	2100.03	-9.25	-9.25	50.78	0.12	444892.41	604554.59	N 32 13 21.63	W 103 59 42.85
	2317.00	2.20	83.99	2315.84	-8.17	-8.17	59.74	0.18	444893.49	604563.55	N 32 13 21.64	W 103 59 42.74
	2516.00	1.71	152.46	2514.75	-10.40	-10.40	64.91	1.12	444891.25	604568.72	N 32 13 21.62	W 103 59 42.68
	2646.00	0.88	168.19	2644.71	-13.10	-13.10	66.01	0.69	444888.56	604569.82	N 32 13 21.59	W 103 59 42.67
	2838.00	1.49	272.78	2836.69	-14.42	-14.42	63.82	1.00	444887.23	604567.63	N 32 13 21.58	W 103 59 42.70
	3035.00	0.48	299.06	3033.66	-13.90	-13.90	60.54	0.55	444887.76	604564.35	N 32 13 21.58	W 103 59 42.74
	3165.00	0.40	290.89	3163.65	-13.47	-13.47	59.64	0.08	444888.18	604563.45	N 32 13 21.58	W 103 59 42.75
	3295.00	0.40	290.05	3293.65	-13.15	-13.15	58.79	0.00	444888.50	604562.60	N 32 13 21.59	W 103 59 42.76
	3486.00	0.48	253.05	3484.65	-13.16	-13.16	57.40	0.15	444888.50	604561.21	N 32 13 21.59	W 103 59 42.77
	3655.00	0.70	272.78	3653.64	-13.31	-13.31	55.69	0.18	444888.34	604559.50	N 32 13 21.59	W 103 59 42.79
	3823.00	0.79	292.29	3821.62	-12.83	-12.83	53.60	0.16	444888.83	604557.41	N 32 13 21.59	W 103 59 42.82
	4016.00	0.88	290.97	4014.60	-11.79	-11.79	50.98	0.05	444889.86	604554.79	N 32 13 21.60	W 103 59 42.85
	4215.00	0.88	285.17	4213.58	-10.84	-10.84	48.08	0.04	444890.81	604551.89	N 32 13 21.61	W 103 59 42.88
Final MWD Survey	4347.00	1.10	289.08	4345.56	-10.16	-10.16	45.90	0.17	444891.49	604549.71	N 32 13 21.62	W 103 59 42.91

Survey Type: Def Survey

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

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
	0.000	14.000	Act Stns	SLB_MWD-STD-Depth Only	Original Hole / Cedar Canyon 16 SWD 3 MWD 0' to 4342'
	14.000	14.000	Act Stns	SLB_MWD-STD-Depth Only	Original Hole / Cedar Canyon 16 SWD 3 MWD 0' to 4342'
	14.000	4347.000	Act Stns	SLB_MWD-STD	Original Hole / Cedar Canyon 16 SWD 3 MWD 0' to 4342'