

30-015-40533

NM-OXY-0019 Roo 22 State 11 MWD 0' to 4796' Survey Report
(Def Survey)



Report Date: October 26, 2012 - 01:01 PM
 Client: OXY
 Field: Eddy (NAD27) 2011
 Structure / Slot: OXY (Roo 22 State 11) Sivanna 415 / Roo 22 State 11
 Well: Roo 22 State 11
 Borehole: Original Hole
 UWI / API#: Unknown / 30-015-40533
 Survey Name: Roo 22 State 11 MWD 0' to 4796'
 Survey Date: October 26, 2012
 Tool / AHD / DDI / ERD Ratio: 13.886" / 67.480 ft / 2.972 / 0.014
 Coordinate Reference System: NAD27 Universal Transverse Mercator, Zone 13 North, US Feet
 Location Lat / Long: N 32° 49' 4.44000", W 103° 16' 26.40000"
 Location Grid N/E Y/X: N 11910735.085 RUS, E 2170533.113 RUS
 CRS Grid Convergence Angle: 0.93584436"
 Grid Scale Factor: 0.99992193

Survey / DLS Computation: Minimum Curvature / Ludinski
 Vertical Section Azimuth: 0.000" (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3633.000 ft above Unknown
 Seabed / Ground Elevation: 3617.000 ft above Unknown
 Magnetic Declination: 7.929"
 Total Field Strength: 48865.260 nT
 Magnetic Dip Angle: 60.710"
 Declination Date: October 26, 2012
 Magnetic Declination Model: BGGM 2011
 North Reference: Grid North
 Grid Convergence Used: 0.091"
 Total Corr Mag North->Grid North: 7.838"
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	11910735.89	2170532.11	N 32 49 4.44	W 103 16 26 49
Begin MWD Surveys	99.00	1.01	101.71	96.00	-0.17	-0.17	0.83	1.05	11916735.72	2170533.94	N 32 49 4.44	W 103 16 26 36
	189.00	1.10	101.69	186.98	-0.53	-0.53	2.58	0.19	11915735.36	2170535.89	N 32 49 4.43	W 103 16 26 37
	377.00	1.41	101.70	376.93	-1.40	-1.40	6.75	0.12	11916734.50	2170539.87	N 32 49 4.43	W 103 16 26 32
	488.00	1.15	26.27	487.91	-0.84	-0.84	8.60	1.44	11910735.25	2170541.71	N 32 49 4.43	W 103 16 26 30
	608.00	0.70	33.68	607.89	1.09	1.09	9.59	0.42	11916736.98	2170542.67	N 32 49 4.45	W 103 16 26 29
	730.00	0.22	25.11	728.89	1.92	1.92	10.07	0.40	11916737.81	2170543.18	N 32 49 4.46	W 103 16 26 26
	853.00	0.22	10.30	852.89	2.36	2.36	10.21	0.05	11916738.26	2170543.33	N 32 49 4.46	W 103 16 26 28
	946.00	0.40	353.39	945.88	2.85	2.85	10.21	0.22	11915733.75	2170543.32	N 32 49 4.47	W 103 16 26 28
	1090.00	0.62	196.90	1089.88	2.62	2.62	9.92	0.69	11916738.51	2170543.04	N 32 49 4.46	W 103 16 26 28
	1219.00	0.79	169.59	1218.87	1.07	1.07	9.57	0.15	11916736.97	2170542.59	N 32 49 4.45	W 103 16 26 29
	1435.00	1.01	188.59	1434.85	-2.28	-2.28	9.04	0.10	11916733.62	2170542.15	N 32 49 4.42	W 103 16 26 29
	1652.00	1.41	198.79	1651.89	-6.70	-6.70	7.93	0.21	11916729.20	2170541.01	N 32 49 4.37	W 103 16 26 31
	1859.00	1.32	60.61	1858.77	-7.92	-7.92	9.14	1.23	11916727.98	2170542.25	N 32 49 4.36	W 103 16 26 29
	2031.00	1.19	199.90	2030.76	-8.64	-8.64	10.34	1.36	11916727.26	2170543.45	N 32 49 4.35	W 103 16 26 28
	2217.00	1.61	207.18	2216.72	-11.94	-11.94	9.03	0.14	11916723.95	2170543.14	N 32 49 4.32	W 103 16 26 30
	2380.00	1.10	203.80	2379.89	-14.82	-14.82	7.66	0.06	11916721.06	2170540.77	N 32 49 4.29	W 103 16 26 31
	2520.00	1.19	206.08	2519.87	-17.17	-17.17	6.95	0.08	11916718.72	2170539.98	N 32 49 4.27	W 103 16 26 33
	2694.00	1.32	211.00	2693.52	-20.51	-20.51	4.74	0.10	11916715.36	2170537.85	N 32 49 4.24	W 103 16 26 35
	2800.00	1.22	217.35	2800.58	-24.11	-24.11	2.31	0.09	11916711.79	2170535.42	N 32 49 4.20	W 103 16 26 38
	3016.00	1.01	221.29	3015.55	-26.01	-26.01	0.76	0.16	11916709.85	2170533.97	N 32 49 4.16	W 103 16 26 40
	3111.00	1.19	202.79	3110.53	-27.55	-27.55	-0.17	0.42	11916708.35	2170532.94	N 32 49 4.17	W 103 16 26 41
	3241.00	1.10	203.80	3240.51	-29.93	-29.93	-1.25	0.07	11916705.95	2170531.91	N 32 49 4.14	W 103 16 26 42
	3414.00	0.70	208.50	3413.49	-32.38	-32.38	-2.37	0.25	11916703.52	2170530.74	N 32 49 4.12	W 103 16 26 43
	3585.00	0.70	206.92	3584.47	-34.23	-34.23	-3.35	0.01	11916701.67	2170529.77	N 32 49 4.10	W 103 16 26 45
	3757.00	0.70	204.59	3756.46	-36.12	-36.12	-4.26	0.02	11916699.76	2170528.85	N 32 49 4.08	W 103 16 26 46
	3932.00	0.31	210.70	3931.45	-37.50	-37.50	-4.94	0.22	11916698.40	2170528.17	N 32 49 4.07	W 103 16 26 47
	3975.00	0.31	208.01	3974.45	-37.70	-37.70	-5.06	0.03	11916698.19	2170528.05	N 32 49 4.07	W 103 16 26 47
	4149.00	0.40	211.09	4148.45	-38.64	-38.64	-5.59	0.06	11916697.26	2170527.52	N 32 49 4.06	W 103 16 26 47
	4323.00	0.40	191.03	4322.45	-38.76	-38.76	-6.02	0.06	11916696.14	2170527.09	N 32 49 4.05	W 103 16 26 48
	4537.00	0.41	196.30	4536.44	-41.22	-41.22	-6.38	0.02	11916694.97	2170526.73	N 32 49 4.03	W 103 16 26 48
	4737.00	0.48	172.68	4736.43	-42.74	-42.74	-6.47	0.10	11916693.16	2170526.04	N 32 49 4.02	W 103 16 26 48
End MWD Surveys	4796.00	0.47	170.46	4795.43	-43.23	-43.23	-6.49	0.04	11916692.67	2170526.71	N 32 49 4.01	W 103 16 26 48

Survey Type: Def Survey

Survey Error Model: ISOWSA 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	16.000	Act Stns	SLB_MWD-STD-Depth Only	Original Hole / Roo 22 State 11 MWD 0' to 4796'
		16.000	16.000	Act Stns	SLB_MWD-STD-Depth Only	Original Hole / Roo 22 State 11 MWD 0' to 4796'
		16.000	4796.000	Act Stns	SLB_MWD-STD	Original Hole / Roo 22 State 11 MWD 0' to 4796'



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

January 9, 2013

Occidental Permian Ltd
5 Greenway Plaza Suite 110
Houston, Texas 77046

Attention: Anthony T Tschacher

Re:

CLIENT: OXY Permian
WELL: Roo 22 State T1
FIELD: YESO
RIG: Savanna 415
COUNTY: Eddy
API NO: 30-015-40533
JOB NO: NM-OXY-0019

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.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Troy Miller FST	Roo 22 State T1 Original Hole	96.00 Ft to 4796.00 Ft	October 20, 2012 to October 25, 2012	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,

Scott Haymond
Field Service Manager

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

Reservoir Development

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

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 October 20, 2012 through October 25, 2012, conduct or supervise the taking of the SlimPulse surveys from a depth of 96.00 feet to a depth of 4796.00 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 Permian for the Roo 22 State 11 Well (Original Hole) API No. 30-015-40533 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.

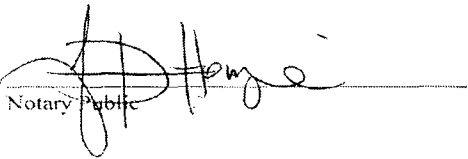


01/09/10

Troy Miller
EST

Before me, Troy Miller on this day personally appeared Troy 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 09 day of January (year) 2013



Notary Public

