Schlumberger

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

October 9, 2013

Occidental Permian Ltd
5 Greenway Plaza Suite 110
Houston, Texas77046

Attension: Kacie Cruz

Re:

CLIENT:	OXY
WELL:	Piglet 21 State 23
FIELD:	Glorieta Yeso
RIG:	Savanna 415
COUNTY:	Eddy
API NO:	30-015-41173
JOB NO:	NM-OXY-0085

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-2	Piglet 21 State 23 Original Hole	220.00 Ft to 4793.00 Ft	September 18, 2013 to September 25, 2013	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

Joey Stewart
Field Service Manager

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

Oilfield Services Continuous Line

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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 September 18, 2013 through September 25, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 220.00 feet to a depth of 4793.00 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 Piglet 21 State 23 Well (Original Hole) API No. 30-015-41173 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-2

Before me, October 8th, 2013, on this day personally appeared Troy Diane 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 8th day of October, (year).

Esperanza A Munoz
Notary Public

OFFICIAL SEAL
ESPERANZA A MUNOZ
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: July 12, 2017

Piglet 21 State 23 MWD 0' to 4793' Survey Geodetic Report

(Def Survey)

Report Date:	September 27, 2013 - 11:17 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	0.000 ° (Grid North)
Field:	NM, Eddy (NAD83 EZ) 2012	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	OXY (Piglet 21 State 23) Savanna 415 / Piglet 21 State 23	**TVD Reference Datum:**	RKB
Well:	Piglet 21 State 23	**TVD Reference Elevation:**	3649.000 ft above Unknown
Borehole:	Original Hole	**Seabed / Ground Elevation:**	3635.000 ft above Unknown
UWI / API#:	NM-OXY-0085 / 30-015-41173	**Magnetic Declination:**	7.732 °
Survey Name:	Piglet 21 State 23 MWD 0' to 4793'	**Total Gravity Field Strength:**	998.5222mgn (9.80665 Based)
Survey Date:	September 27, 2013	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	10.378 ° / 79.485 ft / 2.916 / 0.017	**Total Magnetic Field Strength:**	48855.906 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.561 °
Location Lat / Long:	N 32° 48' 56.16000", W 104° 10' 37.20000"	**Declination Date:**	September 27, 2013
Location Grid N/E Y/X:	N 660483.459 ftUS, E 589365.109 ftUS	**Magnetic Declination Model:**	BGGM 2013
CRS Grid Convergence Angle:	0.0847 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991173	**Grid Convergence Used:**	0.0847 °
Version / Patch:	2.7.998.0	**Total Corr Mag North->Grid North:**	7.6473 °
		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	660483.46	589365.11	N 32 48 56.16	W 104 10 37.20
Begin MWD Surveys	220.00	2.20	256.70	219.95	-0.97	-0.97	-4.11	1.00	660482.49	589361.00	N 32 48 56.15	W 104 10 37.25
	469.00	2.29	248.01	468.76	-3.93	-3.93	-13.37	0.14	660479.53	589351.74	N 32 48 56.12	W 104 10 37.36
	652.00	1.49	239.79	651.65	-6.50	-6.50	-18.82	0.46	660476.96	589346.29	N 32 48 56.10	W 104 10 37.42
	836.00	1.01	233.11	835.61	-8.68	-8.68	-22.18	0.27	660474.78	589342.93	N 32 48 56.07	W 104 10 37.46
	1018.00	0.62	220.72	1017.59	-10.39	-10.39	-24.11	0.23	660473.07	589341.00	N 32 48 56.06	W 104 10 37.48
	1191.00	0.88	162.40	1190.58	-12.36	-12.36	-24.32	0.44	660471.10	589340.79	N 32 48 56.04	W 104 10 37.49
	1364.00	0.70	193.60	1363.56	-14.66	-14.66	-24.17	0.27	660468.81	589340.95	N 32 48 56.02	W 104 10 37.48
	1535.00	0.79	206.61	1534.55	-16.72	-16.72	-24.94	0.11	660466.74	589340.17	N 32 48 55.99	W 104 10 37.49
	1709.00	1.19	215.22	1708.52	-19.27	-19.27	-26.52	0.24	660464.19	589338.59	N 32 48 55.97	W 104 10 37.51
	1882.00	1.01	203.80	1881.49	-22.14	-22.14	-28.17	0.16	660461.33	589336.94	N 32 48 55.94	W 104 10 37.53
	2055.00	1.01	212.98	2054.46	-24.81	-24.81	-29.62	0.09	660458.65	589335.50	N 32 48 55.91	W 104 10 37.55
	2228.00	0.79	215.09	2227.44	-27.06	-27.06	-31.13	0.13	660456.40	589333.98	N 32 48 55.89	W 104 10 37.57
	2401.00	0.70	213.68	2400.43	-28.92	-28.92	-32.40	0.05	660454.54	589332.71	N 32 48 55.87	W 104 10 37.58
	2574.00	0.62	206.70	2573.42	-30.64	-30.64	-33.41	0.07	660452.83	589331.70	N 32 48 55.86	W 104 10 37.59
	2746.00	0.62	214.19	2745.41	-32.24	-32.24	-34.35	0.05	660451.23	589330.76	N 32 48 55.84	W 104 10 37.60
	2920.00	0.40	194.00	2919.40	-33.61	-33.61	-35.03	0.16	660449.86	589330.09	N 32 48 55.83	W 104 10 37.61
	3092.00	0.31	167.32	3091.40	-34.64	-34.64	-35.07	0.11	660448.82	589330.04	N 32 48 55.82	W 104 10 37.61
	3265.00	0.40	160.69	3264.39	-35.67	-35.67	-34.77	0.06	660447.79	589330.35	N 32 48 55.81	W 104 10 37.61
	3439.00	0.70	166.62	3438.39	-37.28	-37.28	-34.32	0.18	660446.19	589330.79	N 32 48 55.79	W 104 10 37.60
	3611.00	1.10	175.41	3610.36	-39.94	-39.94	-33.94	0.25	660443.52	589331.17	N 32 48 55.77	W 104 10 37.60
	3784.00	1.01	186.49	3783.33	-43.08	-43.08	-33.46	0.11	660440.38	589331.66	N 32 48 55.73	W 104 10 37.59
	3956.00	1.10	171.50	3955.31	-46.19	-46.19	-32.86	0.07	660437.28	589332.25	N 32 48 55.70	W 104 10 37.59
	4130.00	1.32	156.11	4129.27	-49.67	-49.67	-31.80	0.22	660433.79	589333.31	N 32 48 55.67	W 104 10 37.57
	4304.00	1.01	164.11	4303.23	-52.98	-52.98	-30.57	0.20	660430.48	589334.54	N 32 48 55.64	W 104 10 37.56
	4518.00	0.88	168.99	4517.20	-56.41	-56.41	-29.74	0.07	660427.06	589335.37	N 32 48 55.60	W 104 10 37.55
	4691.00	0.62	189.29	4690.19	-58.63	-58.63	-29.63	0.21	660424.83	589335.48	N 32 48 55.58	W 104 10 37.55
End MWD Surveys	4793.00	0.31	157.08	4792.18	-59.43	-59.43	-29.62	0.39	660424.03	589335.50	N 32 48 55.57	W 104 10 37.55

Survey Type: Def Survey

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	14.000	Act Stns	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Piglet 21 State 23 MWD 0' to 4793'
	1	14.000	4793.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Hole / Piglet 21 State 23 MWD 0' to 4793'