



Reservoir Development

Drilling & Measurements (Extreme Engineering)

6724 Corporation Pkwy Suite 100

Fort Worth, TX 76126

Phone: (817) 717-1820

Fax: (817) 546-7551

January 20, 2014

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

Attention: Kacie Cruz

Re:

CLIENT: Oxy
WELL: Yeso Viking Fed 8
FIELD: Glorieta Yeso
RIG: Savanna 415
COUNTY: Eddy
API NO: 30-015-41468
JOB NO: NM-CIM-0090

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 FST2	Yeso Viking Fed 8 Original Hole	457.00 Ft to 4481.00 Ft	January 5, 2014 to January 9, 2014	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,

Thomas Barker
Field Service Manager

CC: Oxy

Enclosures: [2]

County of Eddy

State of New Mexico

Reservoir Development

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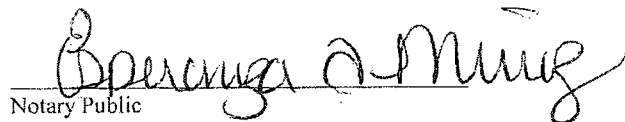
I, Troy Miller certify that; I am employed by Drilling & Measurements (formerly Extreme), a division of Schlumberger Technology Corporation; that I did on the day(s) of January 05, 2014 through January 09, 2014, conduct or supervise the taking of the SlimPulse surveys from a depth of 457.00 feet to a depth of 4481.00 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 Yeso Viking Fed 8 Well (Original Hole) API No. 30-015-41468 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
FST2

Before me, January 23rd 2014, on this day personally appeared Troy Dane 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 January 2014 (year).


Notary Public

OFFICIAL SEAL
ESPERANZA A MUNOZ
NOTARY PUBLIC - STATE OF NEW MEXICO

My Commission Expires: July 12, 2017

Yeso Viking Fed 8 MWD 0' to 4481' Survey Geodetic Report

(Def Survey)

Report Date:	January 09, 2014 - 01:34 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	0.000 ° (Grid North)
Field:	NM, Eddy (NAD83 EZ) 2014	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	OXY (Yeso Viking Fed 8) Savanna 415 / Yeso Viking Fed 8	TVD Reference Datum:	RKB
Well:	Yeso Viking Fed 8	TVD Reference Elevation:	3588,000 ft above Unknown
Borehole:	Original Hole	Seabed / Ground Elevation:	3572,000 ft above Unknown
UWI / APH:	NIA-OXY-0090 / 30-015-41468	Magnetic Declination:	7.729 °
Survey Name:	Yeso Viking Fed 8 MWD 0' to 4481'	Total Gravity Field Strength:	989.5200mgn (9.80665 Based)
Survey Date:	January 09, 2014	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	10.115 ° / 62.770 ft / 2.803 / 0.014	Total Magnetic Field Strength:	48614.063 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.540 °
Location Lat / Long:	N 32° 48' 54.72000", W 104° 14' 50.28000"	Declination Date:	January 09, 2014
Location Grid N/E Y/X:	N 660313.178 ftUS, E 567768.155 ftUS	Magnetic Declination Model:	BGGM 2013
CRS Grid Convergence Angle:	0.0466 °	North Reference:	Grid North
Grid Scale Factor:	0.99990989	Total Cor Mag North → Grid	0.0466 °
Version / Patch:	2.7.998.0	North:	7.6824 °
		Total Cor Mag → Grid North:	Well Head
		Local Coord Referenced To:	

Comments	MD (ft)	Incl (°)	Azlm 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	660313.18	567768.15	N 32 48 54.72	W 104 14 50.28
Begin MWD Surveys	457.00	1.32	128.78	456.96	-3.30	-3.30	4.10	0.29	660309.88	567772.26	N 32 48 54.69	W 104 14 50.23
	700.00	0.70	138.50	699.92	-8.16	-6.16	7.27	0.25	660307.02	567775.42	N 32 48 54.66	W 104 14 50.19
	901.00	0.62	108.97	900.91	-7.45	-7.45	9.10	0.17	660305.73	567772.26	N 32 48 54.65	W 104 14 50.17
	1112.00	0.40	63.70	1111.90	-7.52	-7.52	10.84	0.21	660305.66	567778.99	N 32 48 54.65	W 104 14 50.15
	1285.00	0.22	12.28	1284.80	-6.92	-6.92	11.45	0.18	660306.25	567779.90	N 32 48 54.65	W 104 14 50.15
	1479.00	0.31	347.10	1478.90	-6.05	-6.05	11.41	0.07	660307.13	567778.57	N 32 48 54.66	W 104 14 50.15
	1660.00	0.40	358.09	1659.89	-4.94	-4.94	11.28	0.08	660308.24	567778.44	N 32 48 54.67	W 104 14 50.15
	1788.00	0.70	334.89	1786.89	-3.80	-3.80	10.94	0.29	660309.35	567779.09	N 32 48 54.68	W 104 14 50.15
	1954.00	0.68	342.58	1953.87	-1.64	-1.64	10.12	0.12	660311.53	567778.27	N 32 48 54.70	W 104 14 50.16
	2127.00	1.10	283.73	2126.85	0.02	0.02	8.11	0.57	660313.20	567778.26	N 32 48 54.72	W 104 14 50.18
	2300.00	0.70	339.59	2299.83	1.40	1.40	6.13	0.53	660314.58	567774.28	N 32 48 54.73	W 104 14 50.21
	2495.00	1.10	340.78	2494.81	4.29	4.29	5.09	0.21	660317.46	567773.25	N 32 48 54.76	W 104 14 50.22
	2688.00	1.10	340.29	2687.77	7.42	7.42	3.99	0.01	660320.60	567772.14	N 32 48 54.79	W 104 14 50.23
	2840.00	1.01	349.70	2839.74	10.46	10.46	3.16	0.11	660323.64	567771.31	N 32 48 54.82	W 104 14 50.24
	3033.00	1.19	2.00	3032.71	14.14	14.14	2.93	0.15	660327.32	567771.08	N 32 48 54.86	W 104 14 50.25
	3186.00	2.00	9.47	3185.65	18.36	18.36	3.42	0.55	660331.54	567771.57	N 32 48 54.90	W 104 14 50.24
	3402.00	0.89	10.39	3401.58	23.71	23.71	4.34	0.52	660336.89	567772.49	N 32 48 54.95	W 104 14 50.23
	3531.00	1.01	4.68	3530.56	25.82	25.82	4.61	0.12	660338.99	567772.77	N 32 48 54.98	W 104 14 50.23
	3704.00	0.88	340.91	3703.54	20.59	20.59	4.30	0.24	660341.77	567772.46	N 32 48 55.00	W 104 14 50.23
	3877.00	0.70	347.81	3876.52	30.88	30.88	3.54	0.12	660344.06	567771.80	N 32 48 55.03	W 104 14 50.24
	4050.00	0.62	321.18	4049.51	32.64	32.64	2.83	0.18	660345.82	567770.99	N 32 48 55.04	W 104 14 50.25
	4222.00	0.70	317.57	4221.50	34.14	34.14	1.54	0.05	660347.32	567769.70	N 32 48 55.06	W 104 14 50.26
	4438.00	0.79	313.71	4437.48	36.15	36.15	-0.43	0.05	660349.32	567767.73	N 32 48 55.08	W 104 14 50.28
End MWD Surveys	4481.00	0.70	301.49	4480.48	36.49	36.49	-0.86	0.42	660349.66	567767.29	N 32 48 55.08	W 104 14 50.29

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	16.000	Act Stns	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Yeso Viking Fed 8 MWD 0' to 4481'
	1	16.000	457.000	1/98.425	30.000	30.000	SLB_MWD-STD	Original Hole / Yeso Viking Fed 8 MWD 0' to 4481'
	1	457.000	4481.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Hole / Yeso Viking Fed 8 MWD 0' to 4481'

Occidental Oil & Gas Corp – Permian Primary – North NM/Terrell RMT

Well: Yeso Viking Federal #8

API: 30-015-41468

State: New Mexico

County: Eddy

T17S R27E, Sec 23

1046' FSL & 2160' FEL

Field: Empire

TD: 4,513'

PBTD: 4,4470'

KB: 3,579' ASL

Casing Size:

Grade/Weight:

Depth:

Cement:

8-5/8"

J-55 STC/ 24#

405'

210 sx, 54 sx circ'd to surf

5-1/2"

L-80 BTC / 17#

4,520'

760 sx, 138 sx circ'd to surf

Surf Csg: 8-5/8" 24# J-55 STC
Cement: 210 sx, 54 sx circ'd to surf

Surf Csg @ 405'

KB: 3,579' ASL

Proposed Perforation Intervals

1a)	4406	-	4414.13
1b)	4262	-	4268.13
2a)	4108	-	4116.13
2b)	3978	-	3984.13
3a)	3480	-	3488.13
3b)	3444	-	3450.13
4a)	3328	-	3336.13
4b)	3296	-	3302.13
5a)	3220	-	3228.13
5b)	3182	-	3188.13

Prod Csg: 5-1/2" 17# L-80 BTC
Cement: 760 sx, 138 sx circ'd to surf

PBTD @ 4,470'

Prod Csg @ 4,520'

TD @ 4,520'

