## 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 (817) 546-7551 Fax:

July 18, 2013

Occidental Permian Ltd 5 Greenway Plaza Suite 110 Houston, Texas77046

Attention: Anthony Tschacher

Re:

CLIENT:

**OXY** Permian

WELL:

ROO 22 State #10

Schlumberger

FIELD: RIG:

Permian Basin Savanna 415

COUNTY: Eddy

API NO:

30-015-40532

JOB NO:

NM-OXY-0066

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	<u>Drainhole Number</u>	Surveyed Depths	<u>Dates Performed</u>	Type of Survey	
Braden Forsberg	ROO 22 State #10	61.00 Ft to	May 3, 2012 to	SlimPulse	
FST-2	Original Hole	4862.00 Ft	May 10, 2013		

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 Monahans District Coordinator

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

JUL 19 2013

**NMOCD ARTESIA** 

## Oilfield Services, Central U.S. Land

Reservoir Development

1

Drilling & Measurements (Extreme Engineering) 6724 Corporation Pkwy Suite 100

Fort Worth, TX 76126 Phone: (817) 717-1820 Fax: (817) 546-7551 Schumberger

I, Braden Forsberg certify that; I am employed by Drilling & Measurements (formerly Extreme), a division of Schlumberger Technolog Corporation; that I did on the day(s) of May 03, 2012 through May 10, 2013, conduct or supervise the taking of the SlimPulse survey from a depth of 61.00 feet to a depth of 4862.00 feet; that the data is true, correct, complete and within the limitations of the tool as so forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make the report; that this survey was conducted at the request of OXY Permian for the ROO 22 State #10 Well (Original Hole) API No. 30-015 40532 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.
Braden Forsberg FST-2
Before me,, on this day personally appeared, 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 day of, (year).
Notary Public

## ROO-22ST #10 MWD 0' to 4862' Survey Report

(Def Survey)

Report Date: Chent: Field: Structure / Slot: Well: Borchole UWI / API#:

May 12, 2013 - 03 02 PM OXY NM, EDDY (NAD27 CZ) 2011

OXY (ROC-22ST #10) SAVALINA 415 / ROC-22ST #10 RDC-22ST #10

Original Hefe

Survey Name: Survey Date: Tort / AHD / ODI / ERD Ratio: Coordinate Reference System: Location Lat / Long: Location Grid N/E Y/X; CRS Grid Convergence Angle:

Original Hole
Univious/1, 20-015-40532
RCQ-225T #16 M/V() 0 16 4862\*
May 12, 2013
7-745 \*\*-7-32,7-03 hr 2, 4C4 + 0,007
NAD27: New Mee'ng State Plane, Central Zone, US Feet
11, 221 135 03 1000, V() 1014\*\*-5 19 29 29:50\*\*
11,006140,277 ftUS, E 114,0253 845 MUS

1 12960538 1 00035947

Survey: DLS Computation: Vertical Section Azimuth: Vertical Section Origin: TVD Reference Datum: TVD Reference Elevation: Seabed / Ground Elevation: Magnetic Declination: Magnetic Dodfination:
Total Field Strength:
Magnetic Dip Angle:
Declination Date:
Magnetic Declination Mode:
Magnetic Declination Mode:
North Roterence:
Orid Convergence Used:
Total Corr May North->Grid
North:

Local Coord Referenced To:

Microson Convalure - Ecoloski 6,000 (15rid North) 6,000 ft 0,000 ft

DKB

3360 600 'Labova Unknows 3360 600 'Labova Unknows 7.867 48683 505 n.T

60 543 May 12 2013 EGGM 2012 Grid North 7.776

•	•			North:								
Grid Scale Factor;	1 000	1 00038947			1.668	Local Coord Referenced To:		ii ilirad				
Comments	NtD.	Incl	Azim Gnd	rvn	VSEC	NS	Hw	OLS	Northing	Fasting	Latitude	Longitude
Culturients	(f)	🗀	(°)	(ft)	(ft)			(7100H)	(ItUS)	:tus	1N(S.113)_	(E/Y/ T)
Surface	0 ú0	0.00	C 00	0.00		0.00	0.00	N/A	365140 78		N 32 48 10 31	
Fast MVVD Survey	61 00	0.08	354.26	61 00	0.04	0.04	0 00	9.13	566140.32		N 32 48 56 31	
	251 00	G 2.2	2.35	251.00	0.54	0.54	0.00	9.07	565140 8.2		N 32 48 50 32	
	441.00	0 40	6 /3	441.00	1.50	1 56	9.06	0.10	566141 84		ry 32 48 50 33 i	
	618 00	8.09	165.07	617.99	211	2 14	0.30	9.24	868112 42	1140254 14	Ñ - 37 48 56 33 T	W 104 9 58 7F
	769 00	0 22	114 12	768 99	1 99	1 99	0.68	0.09	666142.27		N 32 48 50 33	
	918 00	0.22	214 37	917 99	: 64	164	0.78	5.53	66614191	1140254 62	14 32 48 50 13	Vy 104 9 58 75
	1168.00	0.40	171 56	1167 99	0.36	U 38	0.63	911	55614065		N 32 48 50 31	
	138/ 00	0.40	206.37	1386 99	1.06	1 05	341	931	655139.21	1140754,25	N 30 45 50 30 F	V/ 104 9 58 75
	1469 00	0.30	164 88	1468 98	1 53	-1 53	C.34	5 32	93613875	1140254 (8	N 32 48 50 P0	VV 104 9 58 25
	1659,00	0.08	147.03	1658 98	2.15	2.12	0.54	3 12	536139 15	1140754.08	N 12 48 50 Pg 1	U) 194 - 4 19 75
	1349 00	9 40	219.20	1848 98	2.74	-2.71	Q 19	5.20	55513, 53		N 32 48 50 27	
	2939 20	6.70	212.73	2038 97	4.23	-1.23	€ 3€	9.16	566136 94	1140252 99	N 37 48 50 27	V/ 104 9 58 27
	2212 00	0 40	199 24	2211 96	5 69	5 69	1 53	9 19	566134,58		N 32 48 50 25	
	2369 00	0.31	206 50	7368 96	6.59	. ა 59	2.00	0.66	666103.68	1140251 35	11 32 48 50 25	W 10a 9 59 28
	2429 00	0.46	166,66	2428.96	-6 94	6,94	-2.03	941	666133 33		N 32 48 50,24	
	2574.00	6 48	204 87	2573 96	.799	.7 99	2.19	9.70	666132,29		N 32 48 50.23	
	2634 00	0.48	189.66	2633 95	8 46	-3 46	-7 33	0.21	66613: 81		N 32 48 50 23	
	2824 00	0.40	215.20	36.6339	9.79	- <b>9</b> 79	7 35	GH	666130.48		ni 32 48 50 ?1	
	3014 00	0 62	186.06	3013.94	11 35	11 35	3 34	0.18	686128 92	1140250 50	N 32 46 50 RG	W 164 9 58 30
	3704 00	9.62	192.48	3203 93	13 35	13.38	3.67	0.64	556126 99		N 33 18 50 18	
	3329 00	0.48	195.17	3328 97	14.54	14,54	3.96	5.12	666125 73		N 32 48 50 17 :	
	3519.00	0.48	219 05	3518 92	-15 93	-15 93	4,69	0.16	666124 14		N 32 48 50 15	
	3709 00	0.48	241.47	3768,91	-16.97	-16 92	-5.39	0.10	666123 35		N 32 48 50 14	
	3899 00	0.80	220 16	3898 90	18 37	-18 32	.7.44	0.21	6613195	1140246 40	N 37 46 50 13	VI 104 9 58 35
	4939 00	0 40	227.67	4088 <b>5</b> 9	19 75	19.76	2.79	2.31	656120 49		M 3246 SU 12 -	
	4236 00	9.40	197.18	4785 88	-76.90	-00 90	-9 50	5 11	066113 37		N: 30 48 50 N:	
	1322 00	0.48	196.75	4371 88	21.16	21.15	8 58	0.22	666119-11		N 37 48 50 10 -	
	4456 00	9 €2	225 10	4455 BE	-72.71	22.21	10.25	0.73	566113 (6		1 37 48 50 09	
	4652 00	0.22	127.97	4651 87	-22 19	-23 19	10.71	0.35	30 711 666	1140243 13	N 37 48 50.03	W 104 9 58 39
	4716.00	0.31	12.17	4715 87	-23 09	-23 09	10.58	0.71	666117.17		N 32.48 50.08	
Final MVVD Survey	1862 00	0.31	12.17	\$8€1 87	-22.32	-22.32	16.41	0.00	666117.95	1140242 43	N 30 48 50 00 1	W 104 9 58 39

Survey Type:

On! Survey

Survey Firror Model: Survey Program:

ISCWSA Rev 8 \*\*\* 3-D 95 000% Continued 7 7955 states

MO From MD fo EQU Freq Description Survey Fool Type Act Strs Act Strs Act Strs Act Strs SLB MWD STD-Dapto Only SLB MWD STD-Dapto Only SLB MWD STD 0.000

Horchole / Survey Dogmal Hole 7 ROC (225) 310 GWO (3 La 3862 Criginal Hole 7 ROC (225) 310 MWD (3 La 3862 Original Hole 7 ROC (225) 310 MWD (3 La 4862

Fred Tely

