

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

30-015-44631

April 1, 2018

RECEIVED

OXY USA INC.
P. O. BOX 50250
MIDLAND TX 79710

MAR 18 2019

DISTRICT II-ARTESIA O.C.D.

Re:

1, 25S, 29E, EDDY NM
N 32.16550 W -103.94178

CLIENT: OXY USA INC.
WELL: Corral Canyon 36-25 Federal Com 21H
FIELD: EDDY COUNTY (NAD 83)

RIG: H&P 635
COUNTY: Eddy County
API NO: 30-015-44631-0000
JOB NO: 18MLD1546

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, 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>
Ejiro Ederewhevbe FS	Corral Canyon 36-25 Federal Com 21H Original Hole	689.00 Ft to 20676.00 Ft	February 28, 2018 to March 16, 2018	TelePacer SlimPulse

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

CODY NELMS
Field Service Manager

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

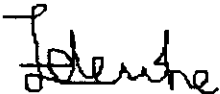
Schlumberger

Well Reference:

1, 25S, 29E, EDDY NM
N 32.16550 W -103.94178

I, Ejiro Ederewhevbe certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 28, 2018 through March 16, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 689.00 feet to a depth of 20676.00 feet referenced to driller's depth; 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 USA INC. for the Corral Canyon 36-25 Federal Com 21H Well (Original Hole) API No. 30-015-44631-0000 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.

By
Ejiro Ederewhevbe
FS



Subscribed and Sworn to before me this _____ day of _____ (month) _____ (yr)

My Commission expires:

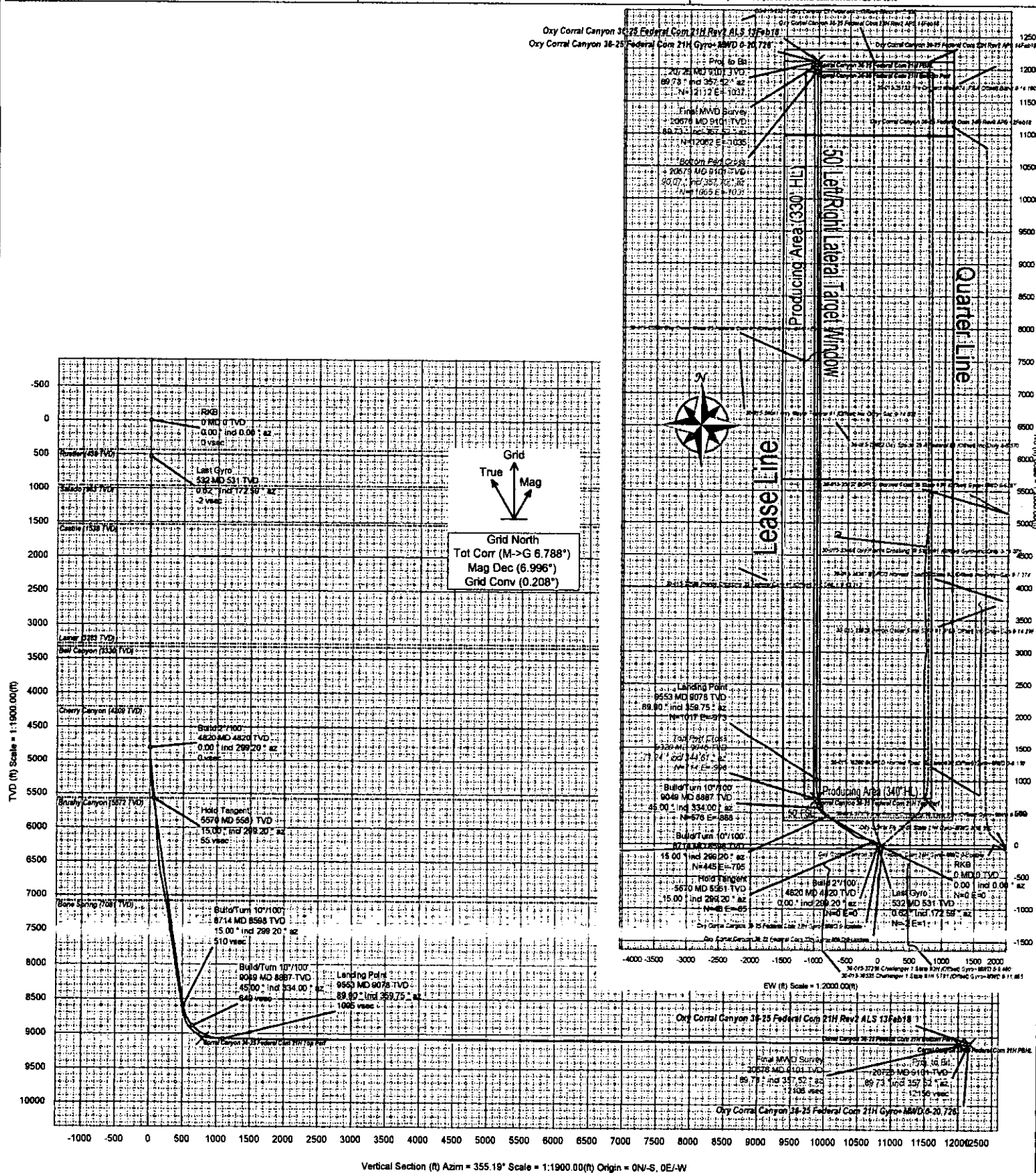
Notary Public

(signature)

(County State)



Gravity & Magnetic Parameters				Surface Location				NADE3 New Mexico State Plans, Eastern Zone, US Feet		Miscellaneous	
Model:	GMAGNET 2118	Op:	59.83°	Date:	04-Mar-2018					Day Central Canyon	
MagDec:	6.594°	Fr:	6264.9573mT	Gravity PS:	946.451mgs (K.00055 Reduced)	Lat:	N 32 0 55.88	Northings:	424164.47015	Grid Conv:	6.28851°
						Long:	W 183 54 30.38	Easting:	693407.58915	State Plane:	6.0002259
										Blk: 36-25 Federal Conv	
										2118	
										Sheet: 36-25 Federal Conv 36-25 Federal Conv 2118 North ALA 134648 18	



Oxy Corral Canyon 36-25 Federal Com 21H Gyro+MWD 0-20,726' Survey

Geodetic Report

(Def Survey)



Report Date: March 16, 2018 - 09:43 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Corral Canyon 36-25 Federal Com 21H / Oxy Corral Canyon 36-25 Federal Com 21H
 Well: Oxy Corral Canyon 36-25 Federal Com 21H
 Borehole: Original Borehole
 UTM / API#: Unknown / 36-015-44631
 Survey Name: Oxy Corral Canyon 36-25 Federal Com 21H Gyro+MWD 0-20,726'
 Survey Date: March 06, 2018
 Tort / AHD / DDI / ERD Ratio: 273.263' / 12892.053 ft / 6.897 / 1.394
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 9' 55.80132" W 103° 56' 30.39180"
 Location Grid N/E Y/X: N 424164.470 NUS, E 662497.636 NUS
 CRS Grid Convergence Angle: 0.2085°
 Grid Scale Factor: 0.9999259
 Version / Patch: 2.10.706.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 355.186° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3138.000 ft above MSL
 Seabed / Ground Elevation: 3111.500 ft above MSL
 Magnetic Declination: 6.996°
 Total Gravity Field Strength: 988.4505mgm (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48016.973 nT
 Magnetic Dip Angle: 59.930°
 Declination Date: March 06, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.2085°
 Total Corr Mag North→Grid North: 6.7880°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	424164.47	662497.64	N 32° 9' 55.80" W 103° 56' 30.39"	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	424164.47	662497.64	N 32° 9' 55.80" W 103° 56' 30.39"	
	109.50	0.49	65.84	109.50	0.12	0.15	0.32	0.59	424164.82	662497.96	N 32° 9' 55.80" W 103° 56' 30.39"	
	161.50	0.21	70.26	161.50	0.22	0.27	0.62	0.54	424164.74	662498.25	N 32° 9' 55.80" W 103° 56' 30.38"	
	250.50	0.24	148.88	250.50	0.09	0.16	0.87	0.32	424164.83	662498.50	N 32° 9' 55.80" W 103° 56' 30.38"	
	341.50	0.15	116.71	341.50	-0.14	-0.05	1.07	0.15	424164.42	662498.71	N 32° 9' 55.80" W 103° 56' 30.38"	
	435.50	0.72	168.63	435.49	-0.79	-0.69	1.30	0.68	424163.78	662498.93	N 32° 9' 55.79" W 103° 56' 30.38"	
Last Gyro	531.50	0.62	172.59	531.49	-1.91	-1.79	1.48	0.11	424162.68	662499.12	N 32° 9' 55.78" W 103° 56' 30.37"	
	689.00	0.00	235.65	688.98	-2.78	-2.64	1.59	0.39	424161.83	662499.23	N 32° 9' 55.78" W 103° 56' 30.37"	
	804.00	0.08	281.21	803.98	-2.75	-2.63	1.53	0.05	424161.84	662499.17	N 32° 9' 55.78" W 103° 56' 30.37"	
	988.00	0.33	234.62	987.98	-2.99	-2.91	1.01	0.16	424161.56	662498.64	N 32° 9' 55.77" W 103° 56' 30.38"	
	1054.00	0.18	219.60	1053.98	-3.18	-3.10	0.79	0.25	424161.37	662498.42	N 32° 9' 55.77" W 103° 56' 30.38"	
	1147.00	0.18	169.81	1146.98	-3.41	-3.38	0.72	0.16	424161.11	662498.36	N 32° 9' 55.77" W 103° 56' 30.38"	
	1241.00	0.06	48.77	1240.98	-3.53	-3.47	0.78	0.23	424161.00	662498.42	N 32° 9' 55.77" W 103° 56' 30.38"	
	1361.00	0.06	208.29	1360.98	-3.54	-3.49	0.80	0.10	424160.98	662498.44	N 32° 9' 55.77" W 103° 56' 30.38"	
	1453.00	0.17	228.54	1452.98	-3.66	-3.62	0.67	0.13	424160.85	662498.31	N 32° 9' 55.77" W 103° 56' 30.38"	
	1546.00	0.00	237.99	1545.98	-3.75	-3.71	0.57	0.18	424160.76	662498.21	N 32° 9' 55.76" W 103° 56' 30.39"	
	1638.00	0.08	172.97	1637.98	-3.81	-3.78	0.58	0.09	424160.69	662498.22	N 32° 9' 55.76" W 103° 56' 30.39"	
	1733.00	0.18	206.97	1732.98	-4.00	-3.97	0.52	0.13	424160.50	662498.16	N 32° 9' 55.76" W 103° 56' 30.39"	
	1827.00	0.17	186.57	1826.98	-4.27	-4.24	0.44	0.09	424160.23	662498.07	N 32° 9' 55.76" W 103° 56' 30.39"	
	1912.00	0.11	146.44	1911.98	-4.46	-4.44	0.47	0.13	424160.03	662498.07	N 32° 9' 55.76" W 103° 56' 30.39"	
	1991.00	0.12	118.20	1990.98	-4.57	-4.54	0.58	0.07	424159.93	662498.22	N 32° 9' 55.76" W 103° 56' 30.39"	
	2086.00	0.11	204.78	2085.98	-4.71	-4.67	0.63	0.17	424159.80	662498.27	N 32° 9' 55.76" W 103° 56' 30.38"	
	2180.00	0.08	284.85	2179.98	-4.76	-4.74	0.53	0.13	424159.71	662498.17	N 32° 9' 55.75" W 103° 56' 30.39"	
	2275.00	0.12	245.27	2274.98	-4.77	-4.76	0.38	0.08	424159.71	662498.01	N 32° 9' 55.75" W 103° 56' 30.39"	
	2369.00	0.06	328.38	2368.98	-4.76	-4.76	0.26	0.14	424159.71	662497.90	N 32° 9' 55.75" W 103° 56' 30.39"	
	2464.00	0.06	234.59	2463.98	-4.75	-4.75	0.19	0.09	424159.72	662497.83	N 32° 9' 55.75" W 103° 56' 30.39"	
	2559.00	0.11	242.98	2558.98	-4.80	-4.82	0.07	0.05	424159.65	662497.71	N 32° 9' 55.75" W 103° 56' 30.39"	
	2653.00	0.12	210.80	2652.98	-4.92	-4.94	-0.06	0.07	424159.53	662497.58	N 32° 9' 55.75" W 103° 56' 30.39"	
	2748.00	0.06	313.12	2747.98	-4.96	-4.99	-0.15	0.15	424159.48	662497.49	N 32° 9' 55.75" W 103° 56' 30.39"	
	2842.00	0.11	212.35	2841.98	-5.00	-5.04	-0.23	0.14	424159.44	662497.41	N 32° 9' 55.75" W 103° 56' 30.39"	
	2937.00	0.18	192.77	2936.98	-5.21	-5.28	-0.31	0.09	424159.21	662497.32	N 32° 9' 55.75" W 103° 56' 30.40"	
	3031.00	0.18	194.36	3030.98	-5.48	-5.53	-0.38	0.02	424158.94	662497.26	N 32° 9' 55.75" W 103° 56' 30.40"	
	3126.00	0.16	239.63	3125.98	-5.66	-5.72	-0.52	0.13	424158.75	662497.11	N 32° 9' 55.74" W 103° 56' 30.40"	
	3220.00	0.06	318.75	3219.98	-5.68	-5.75	-0.87	0.17	424158.72	662496.97	N 32° 9' 55.74" W 103° 56' 30.40"	
	3314.00	0.12	165.36	3313.98	-5.73	-5.81	-0.88	0.19	424158.66	662496.96	N 32° 9' 55.74" W 103° 56' 30.40"	
	3409.00	0.12	239.01	3408.98	-5.88	-5.96	-0.74	0.15	424158.51	662496.90	N 32° 9' 55.74" W 103° 56' 30.40"	
	3503.00	0.06	275.73	3502.98	-5.91	-6.01	-0.87	0.09	424158.47	662496.76	N 32° 9' 55.74" W 103° 56' 30.40"	
	3598.00	0.08	97.32	3597.98	-5.92	-6.01	-0.85	0.15	424158.46	662496.78	N 32° 9' 55.74" W 103° 56' 30.40"	
	3707.00	0.08	288.95	3706.98	-5.90	-5.99	-0.85	0.15	424158.46	662496.78	N 32° 9' 55.74" W 103° 56' 30.40"	
	3812.00	0.08	85.75	3811.98	-5.87	-5.96	-0.85	0.16	424158.51	662496.79	N 32° 9' 55.74" W 103° 56' 30.40"	
	3881.00	0.08	3.60	3880.98	-5.83	-5.91	-0.80	0.15	424158.56	662496.84	N 32° 9' 55.74" W 103° 56' 30.40"	
	4001.00	0.08	327.48	4000.98	-5.67	-5.76	-0.84	0.04	424158.71	662496.84	N 32° 9' 55.74" W 103° 56' 30.40"	
	4070.00	0.12	169.29	4069.98	-5.70	-5.79	-0.85	0.28	424158.68	662496.79	N 32° 9' 55.74" W 103° 56' 30.40"	
	4164.00	0.08	112.20	4163.98	-5.83	-5.91	-0.77	0.11	424158.56	662496.87	N 32° 9' 55.74" W 103° 56' 30.40"	
	4258.00	0.08	182.13	4257.98	-5.92	-6.00	-0.71	0.10	424158.47	662496.87	N 32° 9' 55.74" W 103° 56' 30.40"	
	4352.00	0.08	258.02	4351.98	-5.99	-6.06	-0.78	0.10	424158.39	662496.86	N 32° 9' 55.74" W 103° 56' 30.40"	
	4447.00	0.08	308.39	4446.98	-5.96	-6.05	-0.89	0.07	424158.42	662496.82	N 32° 9' 55.74" W 103° 56' 30.40"	
	4541.00	0.08	16.44	4540.98	-5.85	-5.95	-0.93	0.10	424158.52	662496.74	N 32° 9' 55.74" W 103° 56' 30.40"	
	4635.00	0.87	337.48	4634.98	-5.27	-5.38	-1.12	0.85	424159.09	662496.52	N 32° 9' 55.75" W 103° 56' 30.41"	
	4730.00	2.06	335.97	4729.95	-3.12	-3.31	-2.03	1.46	424161.16	662495.61	N 32° 9' 55.77" W 103° 56' 30.42"	
	4824.00	3.13	332.90	4823.85	0.85	0.52	-3.88	1.15	424164.99	662493.75	N 32° 55.81" W 103° 56' 30.44"	
	4918.00	4.27	330.87	4917.65	6.41	5.86	-6.78	1.22	424170.33	662490.88	N 32° 55.86" W 103° 56' 30.47"	
	5013.00	5.53	326.86	5012.30	13.66	12.79	-10.98	1.37	424177.26	662486.66	N 32° 55.93" W 103° 56' 30.52"	
	5107.00	6.51	319.29	5105.78	21.97	20.62	-16.93	1.34	424185.09	662480.70	N 32° 56.01" W 103° 56' 30.59"	
	5199.00	7.68	313.57	5197.08	30.79	28.81	-24.79	1.48	424193.28	662472.85	N 32° 56.09" W 103° 56' 30.68"	
	5388.00	9.07	305.74	5384.06	49.92	46.22	-48.03	0.95	424210.68	662451.81	N 32° 56.26" W 103° 56' 30.93"	
	5483.00	9.48	300.88	5477.82	59.35	54.61	-58.83	0.93	424219.07	662438.82	N 32° 56.34" W 103° 56' 31.07"	
	5577.00	9.71	298.26	5570.51	68.19	62.33	-72.45	0.93	424226.80	662425.19	N 32° 56.42" W 103° 56' 31.23"	
	5671.00	10.34	293.96	5663.08	78.58	69.51	-87.14	1.04	424233.98	662410.50	N 32° 56.49" W 103° 56' 31.40"	
	5765.00	11.24	290.02	5755.41	84.49	76.07	-103.46	1.24	424240.54	662394.18	N 32° 56.56" W 103° 56' 31.59"	
	5954.00	12.82	284.85	5940.26	99.28	87.75	-141.04	1.01	424252.22	662356.61	N 32° 56.67" W 103° 56' 32.03"	
	6049.00	14.10	281.73	6032.65	106.12	92.81	-182.58	1.55	424257.27	662335.09	N 32° 56.73" W 103° 56' 32.28"	
	6143.00	15.45	279.81	6123.54	112.54	97.27	-188.11	1.53	424261.73	662311.54	N 32° 56.77" W 103° 56' 32.65"	
	6237.00	17.03	279.11	6213.79	119.02	101.58	-212.04	1.69	424268.05	662285.61	N 32° 56.81" W 103° 56' 32.85"	
	6331.00	17.35	278.82	6303.59	125.63	105.91	-239.48	0.35	424270.37	662258.17	N 32° 56.86" W 103° 56' 33.17"	
	6426.00	17.11	281.23	6394.33	132.83	110.80	-267.18	0.79	424275.27	662230.47	N 32° 56.91" W 103° 56' 33.50"	
	6520.00	17.27	284.26	6484.13	141.22	116.93	-294.27	0.97	424281.40	662203.39	N 32° 56.97" W 103° 56' 33.81"	
	6614.00	17.07	289.90	6573.95	151.54	125.07	-320.77	1.78	424289.53	662176.89	N 32° 57.05" W 103° 56' 34.12"	
	6709.00	17.03	297.28	6664.78	164.77	138.19	-346.25	2.28	424300.65	662151.42	N 32° 57.16" W 103° 56' 34.41"	
	6803.00	17.27	306.43	6754.62	181.28	150.79	-369.71	2.88	424315.25	662127.95	N 32° 57.31" W 103° 56' 34.69"	
	6898.00	17.27	309.88	6845.34	200.50	168.21	-391.88	1.08	424332.66	662105.79	N 32° 57.48" W 103° 56' 34.94"	
	6992.00	16.88	307.74	6935.20	219.53	185.50	-413.37	0.80				

[illegible]

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	OLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	18786.00	88.73	359.24	9096.60	10220.52	10172.22	-1003.17	0.08	434335.91	661494.55	N 32 11 36.49	W 103 56 41.63
	18975.00	91.24	359.80	9096.65	10408.96	10361.20	-1004.75	1.36	434524.88	661492.96	N 32 11 38.36	W 103 56 41.64
	19069.00	88.73	358.85	9096.67	10502.71	10455.18	-1005.86	2.86	434618.86	661491.86	N 32 11 39.29	W 103 56 41.65
	19257.00	89.07	358.92	9100.28	10690.28	10643.11	-1009.51	0.18	434806.77	661488.20	N 32 11 41.15	W 103 56 41.69
	19447.00	88.68	358.81	9104.04	10879.85	10833.03	-1013.28	0.22	434996.68	661484.44	N 32 11 43.03	W 103 56 41.72
	19636.00	90.89	359.26	9104.78	11068.41	11021.99	-1016.46	1.20	435185.63	661481.25	N 32 11 44.90	W 103 56 41.75
	19825.00	91.44	359.48	9100.84	11256.87	11210.94	-1018.54	0.31	435374.56	661479.18	N 32 11 46.77	W 103 56 41.77
	20014.00	90.31	358.68	9098.06	11445.41	11399.89	-1021.57	0.73	435563.49	661476.14	N 32 11 48.64	W 103 56 41.80
	20204.00	89.62	1.05	9098.17	11634.76	11589.88	-1022.02	1.30	435753.46	661475.69	N 32 11 50.52	W 103 56 41.79
	20392.00	89.93	357.58	9098.91	11822.24	11777.83	-1024.27	1.85	435941.41	661473.45	N 32 11 52.38	W 103 56 41.81
	20487.00	88.90	358.07	9099.88	11917.14	11872.76	-1027.87	1.20	436038.32	661469.84	N 32 11 53.32	W 103 56 41.85
	20581.00	90.10	357.69	9100.70	12011.03	11966.69	-1031.35	1.34	436130.25	661466.37	N 32 11 54.25	W 103 56 41.89
Final MWD	20676.00	89.73	357.52	9100.84	12105.94	12061.60	-1035.32	0.43	436225.16	661462.40	N 32 11 55.19	W 103 56 41.93
Survey Proj. to Bit	20726.00	89.73	357.52	9101.08	12155.90	12111.56	-1037.48	0.00	436275.11	661460.23	N 32 11 55.68	W 103 56 41.95

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 Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000 NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H Gyro+MWD 0-20.726'
	1	26.500	26.500	Act Sns	30.000	30.000 NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H Gyro+MWD 0-20.726'
	1	26.500	531.500	Act Sns	30.000	30.000 NAL_NSG+MSHOT	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H
	1	531.500	3503.000	Act Sns	30.000	30.000 NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H
	1	3503.000	3598.000	Act Sns	30.000	30.000 NAL_MWD_1.0_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H
	1	3598.000	8486.000	Act Sns	30.000	30.000 NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H
	1	8486.000	8652.000	Act Sns	30.000	30.000 NAL_MWD_1.0_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H
	1	8652.000	20726.000	Act Sns	30.000	30.000 NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 21H