

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

February 19, 2018

Oxy U.S.A Inc

Re:

2. 25S, 29E, Eddy NM
N 32.15547 W -103.96237

CLIENT: Oxy U.S.A Inc
WELL: Corral Fly 02-01 State 24H
FIELD: Pierce Crossing; Bone Spring, East

RIG: H&P 636
COUNTY: Eddy
API NO: 400854400
JOB NO: 18MLD2104

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>
Roseleigh Taylor FE	Corral Fly 02-01 State 24H Original Hole	512.00 Ft to 18867.00 Ft	February 4, 2018 to February 16, 2018	TelePacer SlimPulse

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

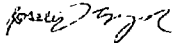
Mike Stephens
Field Service Manager

Schlumberger Drilling and Measurements
Drilling Group
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7220 W I-H 20
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Well Reference:
2, 25S, 29E, Eddy NM
N 32.15547 W -103.96237

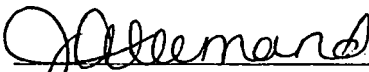
I, Roseleigh Taylor certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 04, 2018 through February 16, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 512.00 feet to a depth of 18867.00 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 U.S.A Inc for the Corral Fly 02-01 State 24H Well (Original Hole) API No. 30-015-44510 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 
Roseleigh Taylor
FE

Subscribed and Sworn to before me this 15th day of March (month) 2018 (yr)

My Commission expires:

12-20-2020


Notary Public

Adams County Colorado
(County State)

(signature) JENNIFER ALLEMAND
Notary Public
State of Colorado
Notary ID # 20164047962
My Commission Expires 12-20-2020

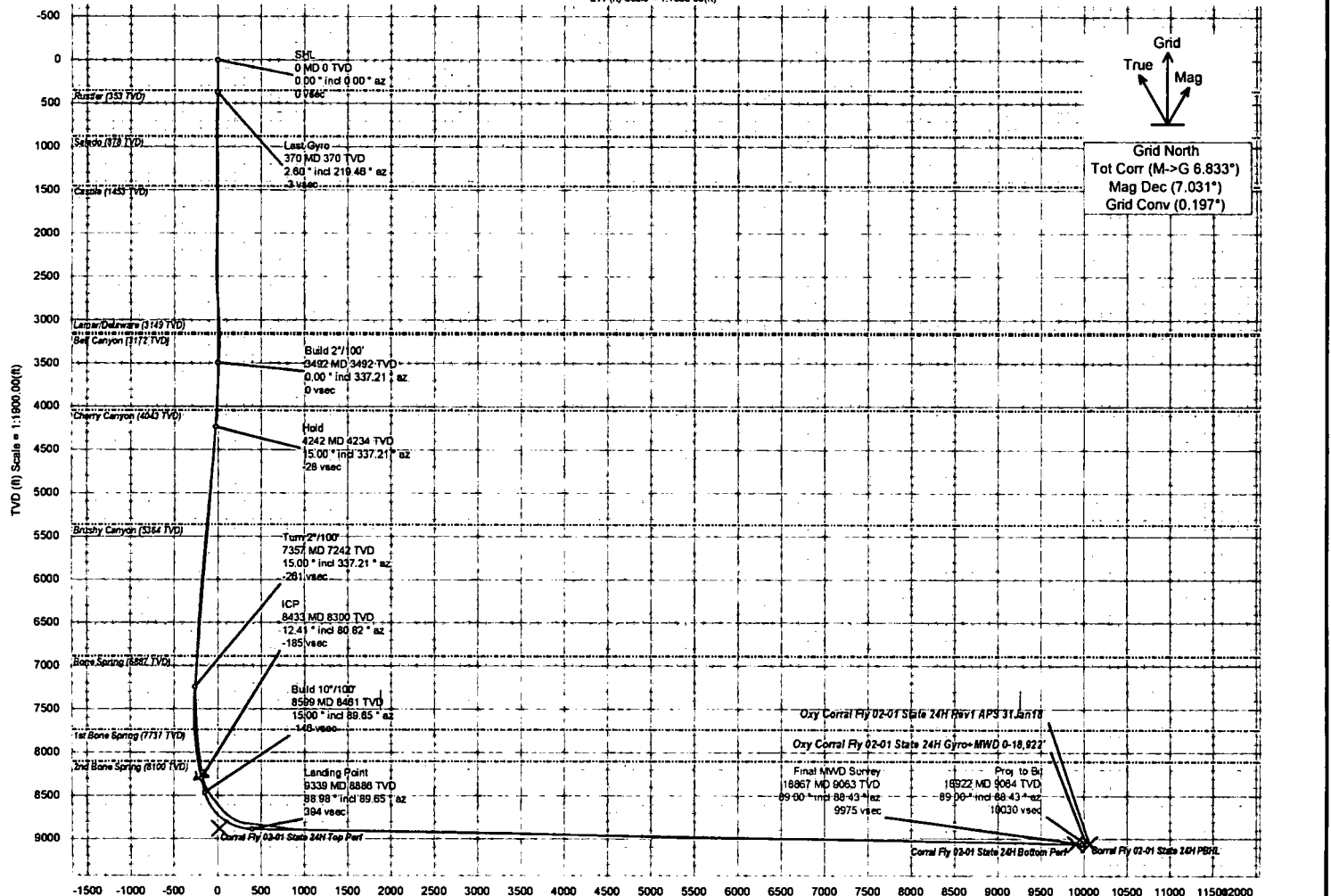
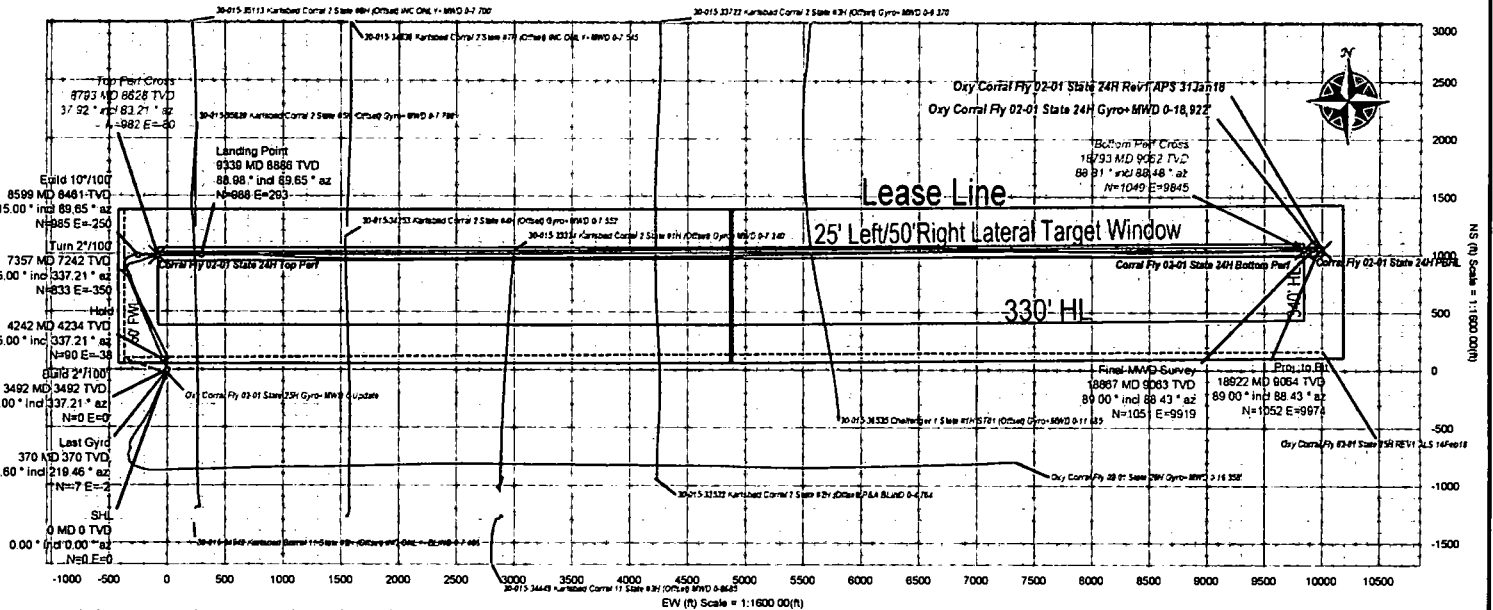
Schlumberger

OXY



Borehole: Original Borehole Well: Oxy Corral Fly 02-01 State 24H Field: NM Eddy County (NAD 83) Structure: Oxy Corral Fly 02-01 State 24H

Gravity & Magnetic Parameters			Surface Location			Miscellaneous		
Model: HOGM 2017	Dip: 89.924°	Date: 31-Jan-2018	Lat: N 32 9 19.70	Northings: 420483.46105	Grid Conv: 0.1874°	Slot: Oxy Corral Fly 02-01 State 24H	TVD Ref: RKB=26.5'(3062.9ft above MSL)	
MagDec: 7.031°	FS: 48025.132mT	Gravity FS: 898.455mgm (8.80685 Based)	Lon: W 103 57 44.83	Easting: 858137.59105	Scale Fact: 0.8992419	Plan: Oxy Corral Fly 02-01 State 24H Rev1 APS 31-Jan-18		



Vertical Section (ft) Azim = 84.03° Scale = 1:1900.00(ft) Origin = 0N-S, 0E-W



Sectioning

Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18,922' Survey Geodetic Report (Def Survey)

Report Date: February 18, 2018 - 09:07 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Corral Fly 02-01 State 24H / Oxy Corral Fly 02-01 State 24H
Well: Oxy Corral Fly 02-01 State 24H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18,922'
Survey Date: January 31, 2018
Tor / ARD / DDI / ERD Ratio: 251.966° / 11370.112 ft / 6.777 / 1.254
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 9' 19.69604", W 103° 57' 44.53203"
Location Grid NE V/L: N 420453 450 NUS, E 656137 590 NUS
CRS Grid Convergence Angle: 0.1974°
Grid Scale Factor: 0.9992419
Version / Patch: 2.10.706.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 94.026° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RIG-26.5'
TVD Reference Elevation: 3062.500 ft above MSL
Seabed / Ground Elevation: 3026.400 ft above MSL
Magnetic Declination: 7.031°
Total Gravity Field Strength: 998.4552mg (0.8065 Gauss)
Gravity Model: GARM
Total Magnetic Field Strength: 48025.192 nT
Magnetic Dip Angle: 59.924°
Declination Date: January 31, 2018
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.1974°
Total Cor Mag North-Grid: 6.8333°
Local Correl Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (1/1000)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ° '")	Longitude (E/W ° ° '")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	420433.45	656137.59	N 32° 9' 19.70" W 103° 57' 44.53"	
	100.74	0.66	181.09	100.74	-0.07	-0.59	-0.01	0.66	420432.87	656137.58	N 32° 9' 19.69" W 103° 57' 44.53"	
	189.42	1.17	179.16	179.41	-0.22	-2.00	-0.01	0.58	420431.45	656137.58	N 32° 9' 19.68" W 103° 57' 44.53"	
	278.24	1.59	203.19	278.20	-0.90	-4.04	-0.48	0.80	420429.41	656137.11	N 32° 9' 19.63" W 103° 57' 44.54"	
	369.65	2.60	219.46	369.55	-2.89	-6.80	-2.30	1.27	420426.65	656130.95	N 32° 9' 19.63" W 103° 57' 44.56"	
	512.00	2.70	223.20	511.75	-7.83	-11.74	-6.64	0.14	420421.71	656130.95	N 32° 9' 19.55" W 103° 57' 44.61"	
	607.00	2.11	229.36	606.66	-10.86	-14.51	-9.50	0.68	420418.94	656130.95	N 32° 9' 19.55" W 103° 57' 44.61"	
	702.00	1.05	222.48	701.63	-13.65	-16.29	-11.42	1.13	420417.16	656128.09	N 32° 9' 19.54" W 103° 57' 44.67"	
	797.00	0.23	150.80	796.62	-13.63	-17.10	-11.81	1.05	420416.35	656128.09	N 32° 9' 19.53" W 103° 57' 44.67"	
	892.00	0.55	103.58	891.62	-13.12	-17.37	-11.38	0.45	420416.08	656128.09	N 32° 9' 19.52" W 103° 57' 44.67"	
	887.00	0.48	78.20	886.61	-12.30	-17.40	-10.54	0.25	420416.08	656127.05	N 32° 9' 19.52" W 103° 57' 44.66"	
	1082.00	0.78	108.61	1081.61	-11.80	-16.67	-10.12	0.85	420416.08	656127.05	N 32° 9' 19.52" W 103° 57' 44.65"	
	1177.00	1.46	3.16	1176.59	-11.80	-14.82	-10.02	0.72	420418.63	656127.05	N 32° 9' 19.55" W 103° 57' 44.65"	
	1222.00	1.85	7.42	1221.55	-10.96	-12.09	-9.76	0.43	420418.63	656127.05	N 32° 9' 19.55" W 103° 57' 44.65"	
	1386.00	2.87	356.62	1385.45	-10.29	-7.31	-9.58	1.03	420418.63	656127.05	N 32° 9' 19.55" W 103° 57' 44.65"	
	1480.00	3.65	5.13	1479.29	-9.51	-1.89	-9.36	0.82	420418.63	656127.05	N 32° 9' 19.55" W 103° 57' 44.65"	
	1575.00	4.08	6.78	1574.08	-8.18	-4.47	-8.69	0.47	420418.63	656127.05	N 32° 9' 19.55" W 103° 57' 44.65"	
	1765.00	4.70	349.12	1763.58	-7.35	-18.83	-12.16	0.78	420512.28	656128.23	N 32° 9' 19.74" W 103° 57' 44.63"	
	1860.00	4.30	342.60	1858.23	-8.39	-26.05	-11.75	0.68	420512.28	656128.23	N 32° 9' 19.88" W 103° 57' 44.64"	
	1931.00	4.01	341.36	1929.05	-9.46	-30.94	-12.75	0.43	420514.39	656128.84	N 32° 9' 19.95" W 103° 57' 44.68"	
	2025.00	3.81	342.73	2022.63	-10.80	-37.04	-16.72	0.23	420514.39	656128.84	N 32° 9' 20.05" W 103° 57' 44.70"	
	2120.00	3.71	340.06	2117.62	-12.16	-42.94	-18.72	0.21	420514.39	656128.84	N 32° 9' 20.12" W 103° 57' 44.72"	
	2215.00	3.85	339.37	2212.42	-13.71	-48.82	-18.69	0.15	420514.39	656128.84	N 32° 9' 20.12" W 103° 57' 44.72"	
	2310.00	4.30	337.13	2307.16	-15.55	-55.08	-21.40	0.50	420514.39	656128.84	N 32° 9' 20.12" W 103° 57' 44.72"	
	2405.00	3.39	343.31	2401.86	-17.11	-61.06	-23.59	1.05	420514.39	656128.84	N 32° 9' 20.24" W 103° 57' 44.78"	
	2500.00	2.96	13.26	2496.62	-16.82	-66.13	-23.83	1.78	420514.39	656128.84	N 32° 9' 20.30" W 103° 57' 44.80"	
	2550.00	4.08	38.99	2591.65	-13.62	-71.15	-21.14	2.01	420514.39	656128.84	N 32° 9' 20.35" W 103° 57' 44.81"	
	2689.00	5.03	47.07	2685.35	-7.97	-86.55	-16.02	1.22	420514.39	656128.84	N 32° 9' 20.40" W 103° 57' 44.78"	
	2764.00	5.00	59.78	2779.99	-0.86	-71.47	-9.39	1.17	420514.39	656128.84	N 32° 9' 20.45" W 103° 57' 44.72"	
	2903.00	4.16	62.72	2898.61	7.89	-86.06	-1.08	0.73	420514.39	656128.84	N 32° 9' 20.55" W 103° 57' 44.64"	
	2973.00	3.54	57.06	2968.45	12.18	-88.40	-2.99	1.04	420514.39	656128.84	N 32° 9' 20.55" W 103° 57' 44.64"	
	3068.00	2.47	31.04	3063.32	16.02	-91.75	6.51	1.80	420514.39	656128.84	N 32° 9' 20.57" W 103° 57' 44.49"	
	3163.00	2.28	6.38	3158.24	17.86	-95.98	7.78	1.09	420514.39	656128.84	N 32° 9' 20.60" W 103° 57' 44.45"	
	3258.00	3.23	340.86	3253.14	17.46	-99.79	7.11	1.61	420514.39	656128.84	N 32° 9' 20.68" W 103° 57' 44.45"	
	3353.00	4.28	334.22	3347.93	15.64	-105.51	4.89	1.19	420514.39	656128.84	N 32° 9' 20.74" W 103° 57' 44.45"	
	3448.00	5.37	334.22	3342.59	12.53	-121.49	0.82	1.25	420514.39	656128.84	N 32° 9' 20.81" W 103° 57' 44.42"	
	3543.00	6.67	331.51	3537.07	8.50	-121.13	-4.13	1.41	420514.39	656128.84	N 32° 9' 20.81" W 103° 57' 44.42"	
	3638.00	7.27	333.02	3537.07	4.23	-131.34	-9.49	0.66	420514.39	656128.84	N 32° 9' 21.00" W 103° 57' 44.59"	
	3733.00	8.13	333.51	3719.42	-0.28	-142.71	-15.21	0.91	420514.39	656128.84	N 32° 9' 21.11" W 103° 57' 44.70"	
	3828.00	9.19	335.19	3816.51	-15.61	-155.61	-21.39	1.15	420514.39	656128.84	N 32° 9' 21.24" W 103° 57' 44.77"	
	4018.00	10.29	334.09	4006.88	-15.77	-184.64	-35.18	0.59	420514.39	656128.84	N 32° 9' 21.32" W 103° 57' 44.77"	
	4113.00	10.15	333.25	4100.18	-21.63	-189.75	-42.55	0.22	420514.39	656128.84	N 32° 9' 21.32" W 103° 57' 44.77"	
	4207.00	10.95	333.12	4192.59	-27.75	-198.75	-50.41	0.85	420514.39	656128.84	N 32° 9' 21.63" W 103° 57' 45.11"	
	4302.00	11.78	333.18	4285.72	-34.53	-231.81	-58.67	0.87	420725.24	656078.72	N 32° 9' 21.99" W 103° 57' 45.21"	
	4397.00	12.80	4378.54	4378.54	-41.43	-249.80	-67.90	1.08	420725.24	656078.72	N 32° 9' 22.17" W 103° 57' 45.31"	
	4492.00	13.59	333.44	4453.25	-48.39	-269.40	-77.39	0.85	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	4587.00	14.24	333.39	4553.25	-56.79	-289.92	-87.44	0.73	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	4682.00	13.95	333.19	4655.39	-72.88	-310.59	-97.83	0.31	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	4777.00	13.54	333.39	4746.69	-82.94	-330.54	-107.87	0.44	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	4872.00	14.06	333.23	4838.95	-90.90	-350.79	-118.84	0.55	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	4968.00	14.16	333.75	4931.09	-98.02	-371.51	-128.38	0.17	420725.24	656078.72	N 32° 9' 22.57" W 103° 57' 45.42"	
	5061.00	14.49	333.38	5023.13	-97.24	-392.56	-138.65	0.36	420725.24	656078.72	N 32° 9' 23.38" W 103° 57' 46.01"	
	5250.00	14.23	334.12	5208.23	-113.60	-434.60	-159.88	0.17	420725.24	656078.72	N 32° 9' 23.38" W 103° 57' 46.01"	
	5441.00	13.78	333.10	5391.55	-129.80	-476.00	-180.12	0.27	420725.24	656078.72	N 32° 9' 24.01" W 103° 57' 46.37"	
	5535.00	14.29	333.48	5482.74	-137.67	-496.97	-190.36	0.55	420725.24	656078.72	N 32° 9' 24.41" W 103° 57' 46.37"	
	5630.00	13.67	332.83	5574.93	-145.85	-516.85	-200.73	0.67	420725.24	656078.72	N 32° 9' 24.61" W 103° 57' 46.37"	
	5725.00	13.47	333.43	5667.28	-153.80	-536.73	-210.80	0.26	421000.14	655907.87	N 32° 9' 25.01" W 103° 57' 46.95"	
	5815.00	13.89	333.11	5661.11	-168.60	-557.37	-229.93	0.40	421000.14	655907.87	N 32° 9' 25.01" W 103° 57' 46.95"	
	6010.00	13.91	334.68	5944.11	-175.89	-598.12	-239.44	0.36	421000.14	655907.87	N 32° 9' 25.02" W 103° 57' 47.18"	
	6105.00	13.90	335.44	6026.32	-183.31	-618.82	-249.06	0.19	421112.22	655898.17	N 32° 9' 25.62" W 103° 57' 47.29"	
	6295.00	13.98	335.93	6270.73	-197.71	-660.83	-267.91	0.08	421112.22	655898.17	N 32° 9' 25.62" W 103° 57' 47.29"	
	6390.00	13.97	336.92	6312.91	-204.68	-681.56	-277.98	0.25	421112.22	655898.17	N 32° 9' 26.45" W 103° 57' 47.92"	
	6579.00	13.54	340.11	6496.50	-216.65	-723.55	-293.56	0.46	421112.22	655898.17	N 32° 9' 26.45" W 103° 57' 47.92"	
	6674.00	13.94	342.03	6598.78	-221.74	-744.70	-300.87	0.64	421228.09	655930.14	N 32° 9' 27.08" W 103° 57' 48.08"	
	6769.00	13.31	343.68	6691.11	-225.08	-766.08	-307.47	0.78	421228.09	655930.14	N 32° 9' 27.08" W 103° 57' 48.08"	
	6860.00	12.15	343.37	6887.41	-233.74	-806.44	-319.40	0.61	421228.09	655930.14	N 32° 9' 27.08" W 103° 57' 48.08"	
	7054.00	12.09	339.53	6959.51	-238.04	-825.14	-325.68	0.86	421318.52	655911.94	N 32° 9' 27.69" W 103° 57' 48.22"	
	7149.00	7.24	322.91	7146.56	-250.82	-841.21	-333.48	3.47	421318.52	655911.94	N 32° 9' 28.03" W 103° 57' 48.29"	
	7244.00	6.35	330.52	7209.12	-254.26	-862.73	-341.41	2.69	421318.52	655911.94	N 32° 9' 28.15" W 103° 57' 48.47"	
	7339.00	6.17	338.96	7240.93	-255.41	-882.08	-347.01	2.93	421318.52	655911.94	N 32° 9' 28.21" W 103° 57' 48.53"	
	7433.00	5.12	0.76	7334.48	-256.23	-870.99	-348.77	2.52	421318.52	655911.94	N 32° 9' 28.33" W 103° 57' 48.55"	

MD	Incl	Azin	TWD	VSEC	NS	EW	DLS	North	Easting	Latitude	Longitude
(°)	(°)	(°)	(°)	(°)	(°)	(°)	(°/1000)	(NUS)	(NUS)	(N 2 S)	(E W + 1)
7528.00	4.68	18.49	7429.14	-254.13	878.90	-347.48	1.85	421372.28	655190.13	N 32	9 28.40 W 103.57 48.54
7523.00	4.18	27.05	7523.86	-250.64	885.66	-344.68	0.87	421379.04	655792.94	N 32	9 28.41 W 103.57 48.51
7718.00	4.74	29.71	7618.57	-246.46	885.66	-341.16	0.63	421385.53	655796.46	N 32	9 28.54 W 103.57 48.46
7813.00	4.70	31.43	7713.25	-241.81	889.88	-337.19	0.15	421392.26	655800.43	N 32	9 28.60 W 103.57 48.42
7908.00	5.16	47.99	7807.90	-235.99	905.06	-331.98	1.57	421398.44	655805.63	N 32	9 28.66 W 103.57 48.36
8003.00	6.93	67.38	7902.46	-227.83	909.61	-324.28	2.12	421403.19	655813.34	N 32	9 28.71 W 103.57 48.27
8098.00	5.65	78.12	7996.89	-217.66	912.83	-314.36	1.45	421406.21	655823.25	N 32	9 28.74 W 103.57 48.15
8193.00	7.96	76.66	8091.12	-205.66	915.49	-302.58	1.39	421408.86	655835.03	N 32	9 28.77 W 103.57 48.02
8301.00	7.80	75.23	8198.10	-191.07	915.07	-288.22	0.23	421412.45	655849.40	N 32	9 28.80 W 103.57 47.85
8501.00	21.06	73.62	8301.36	-142.03	932.73	-240.40	6.63	421416.11	655897.20	N 32	9 28.83 W 103.57 47.29
8599.00	36.64	68.53	8476.95	-96.24	948.50	-198.02	4.68	421441.87	655941.39	N 32	9 29.08 W 103.57 46.73
8694.00	40.49	85.51	8551.22	-38.79	968.67	-140.36	4.49	421462.05	655997.24	N 32	9 29.29 W 103.57 46.13
8789.00	37.57	82.89	8625.11	20.36	982.07	-82.29	8.15	421475.44	656055.31	N 32	9 29.45 W 103.57 45.45
8884.00	46.03	89.36	8695.89	83.50	986.05	-19.22	9.99	421479.42	656118.37	N 32	9 29.45 W 103.57 44.72
8979.00	56.13	90.31	8755.50	156.93	986.22	54.69	10.66	421479.54	656192.18	N 32	9 29.45 W 103.57 43.86
9073.00	64.40	90.31	8799.16	239.47	985.77	137.53	13.05	421479.11	656257.21	N 32	9 29.45 W 103.57 42.89
9168.00	84.28	88.12	8821.67	331.09	985.49	229.61	16.69	421480.46	656307.18	N 32	9 29.46 W 103.57 41.82
9222.00	84.28	88.64	8827.13	384.65	988.60	283.31	1.01	421481.98	656420.88	N 32	9 29.47 W 103.57 41.20
9301.00	83.83	87.00	8835.31	463.05	991.59	361.82	2.14	421484.97	656493.39	N 32	9 29.50 W 103.57 40.28
9395.00	82.41	87.39	8846.57	556.23	996.16	455.03	1.57	421489.53	656592.33	N 32	9 29.54 W 103.57 39.20
9488.00	81.82	88.54	8859.33	648.13	999.43	547.09	1.38	421492.80	656684.64	N 32	9 29.57 W 103.57 38.13
9581.00	81.86	91.80	8872.53	739.67	999.42	639.14	3.26	421492.69	656776.68	N 32	9 29.56 W 103.57 37.06
9675.00	83.66	92.69	8884.38	831.99	995.83	732.32	3.59	421489.20	656869.85	N 32	9 29.52 W 103.57 35.97
9768.00	86.59	94.30	8892.28	923.37	993.12	824.80	2.23	421483.55	656962.32	N 32	9 29.47 W 103.57 34.90
9861.00	88.38	94.41	8896.36	1014.77	993.12	917.44	1.93	421476.50	657054.96	N 32	9 29.39 W 103.57 33.82
9954.00	88.07	94.26	8898.96	1106.24	976.09	1010.15	0.76	421469.47	657147.66	N 32	9 29.32 W 103.57 32.74
10048.00	89.07	92.13	8899.96	1199.03	970.86	1103.98	2.27	421464.23	657241.49	N 32	9 29.27 W 103.57 31.65
10141.00	88.18	91.65	8902.19	1291.19	968.31	1196.92	1.54	421461.68	657334.42	N 32	9 29.24 W 103.57 30.57
10234.00	88.28	91.65	8904.25	1383.41	968.15	1289.87	1.37	421459.53	657421.36	N 32	9 29.21 W 103.57 29.49
10288.00	88.28	91.42	8905.43	1476.60	963.63	1383.83	0.24	421457.01	657521.31	N 32	9 29.18 W 103.57 28.40
10421.00	89.21	91.43	8906.66	1568.82	961.32	1476.79	0.08	421454.70	657614.27	N 32	9 29.16 W 103.57 27.32
10514.00	89.10	91.37	8908.03	1661.04	959.05	1569.75	0.13	421452.42	657707.22	N 32	9 29.13 W 103.57 26.23
10607.00	89.00	91.21	8909.57	1753.28	956.95	1662.72	0.20	421450.33	657800.18	N 32	9 29.11 W 103.57 25.15
10702.00	89.14	91.23	8911.11	1847.52	954.93	1757.68	0.15	421448.31	657893.14	N 32	9 29.08 W 103.57 24.05
10797.00	89.38	89.37	8912.34	1941.94	954.49	1852.67	2.05	421447.87	657990.12	N 32	9 29.08 W 103.57 22.94
10882.00	89.34	89.30	8913.40	2096.53	955.60	1947.66	0.08	421446.97	658084.85	N 32	9 29.16 W 103.57 21.84
10987.00	88.90	88.46	8914.86	2131.10	956.57	2042.64	0.47	421449.94	658180.07	N 32	9 29.08 W 103.57 20.73
11082.00	88.14	88.83	8917.02	2225.89	957.98	2137.61	0.79	421451.36	658275.03	N 32	9 29.10 W 103.57 19.63
11177.00	89.14	89.30	8918.99	2320.31	959.53	2232.57	0.84	421452.91	658369.99	N 32	9 29.11 W 103.57 18.52
11272.00	90.48	89.74	8919.25	2414.87	960.13	2327.57	1.48	421453.70	658464.97	N 32	9 29.12 W 103.57 17.43
11366.00	89.59	89.19	8919.25	2508.44	961.39	2421.56	1.10	421454.56	658554.96	N 32	9 29.12 W 103.57 16.33
11461.00	89.35	89.03	8920.13	2603.06	962.65	2516.54	0.32	421456.02	658645.91	N 32	9 29.13 W 103.57 15.22
11556.00	89.24	89.10	8921.29	2697.69	962.58	2611.52	0.14	421457.57	658738.91	N 32	9 29.15 W 103.57 14.12
11651.00	88.76	89.13	8922.95	2792.30	965.67	2706.50	0.51	421459.94	658843.88	N 32	9 29.16 W 103.57 13.01
11746.00	89.04	89.47	8924.78	2886.88	967.48	2801.47	0.46	421460.20	658938.85	N 32	9 29.16 W 103.57 11.91
11841.00	89.41	89.74	8926.06	2961.42	967.85	2896.46	0.88	421460.68	659033.83	N 32	9 29.17 W 103.57 10.80
11936.00	89.24	90.54	8927.18	3075.87	967.25	2991.45	0.46	421460.92	659128.81	N 32	9 29.16 W 103.57 9.70
12031.00	88.55	89.03	8929.01	3170.37	967.60	3086.43	1.75	421460.98	659223.78	N 32	9 29.16 W 103.57 8.59
12126.00	90.00	90.68	8930.21	3264.87	967.94	3181.42	2.31	421461.22	659314.76	N 32	9 29.16 W 103.57 7.49
12220.00	88.52	89.82	8931.43	3358.30	967.43	3275.15	1.82	421460.81	659412.74	N 32	9 29.16 W 103.57 6.39
12315.00	87.90	89.05	8934.24	3452.83	968.37	3370.36	1.04	421461.75	659507.68	N 32	9 29.16 W 103.57 5.29
12410.00	88.24	89.40	8937.60	3547.38	969.60	3465.29	0.57	421462.97	659602.61	N 32	9 29.17 W 103.57 4.18
12504.00	88.24	89.36	8940.48	3640.92	971.48	3559.24	0.12	421463.93	659695.56	N 32	9 29.18 W 103.57 3.09
12599.00	88.52	89.53	8943.17	3735.46	971.56	3654.20	0.34	421464.85	659791.51	N 32	9 29.18 W 103.57 1.99
12694.00	88.55	89.47	8945.60	3830.00	972.31	3749.17	0.07	421465.68	659886.46	N 32	9 29.19 W 103.57 0.88
12789.00	88.93	90.54	8947.69	3924.45	972.20	3844.14	1.19	421465.62	659981.43	N 32	9 29.18 W 103.56 59.78
12884.00	88.25	90.00	8950.02	4018.66	971.85	3939.11	0.91	421465.27	660076.39	N 32	9 29.16 W 103.56 58.67
12979.00	88.11	88.74	8953.04	4113.40	972.92	4034.06	1.37	421466.29	660171.33	N 32	9 29.16 W 103.56 57.57
13074.00	88.21	88.25	8956.09	4208.07	975.44	4128.97	0.50	421468.81	660266.24	N 32	9 29.20 W 103.56 56.46
13169.00	89.04	89.59	8958.37	4302.69	977.23	4223.93	1.66	421470.60	660361.19	N 32	9 29.22 W 103.56 55.36
13264.00	88.11	88.59	8960.73	4397.29	978.43	4318.88	1.44	421472.11	660456.14	N 32	9 29.23 W 103.56 54.25
13359.00	88.21	88.67	8963.78	4491.81	981.00	4413.81	0.13	421474.38	660551.05	N 32	9 29.25 W 103.56 53.15
13454.00	89.35	90.34	8965.81	4586.47	981.82	4508.78	2.19	421475.20	660646.01	N 32	9 29.25 W 103.56 52.05
13549.00	88.45	89.53	8967.43	4680.92	981.60	4603.76	0.82	421476.97	660740.99	N 32	9 29.25 W 103.56 50.94
13644.00	88.45	88.55	8969.80	4775.49	982.86	4698.72	1.47	421478.23	660835.94	N 32	9 29.26 W 103.56 49.84
13739.00	88.31	88.68	8972.48	4870.15	985.16	4793.65	0.20	421478.53	660930.87	N 32	9 29.26 W 103.56 48.73
13834.00	88.30	87.81	8975.26	4964.65	988.06	4888.57	0.92	421481.44	661025.78	N 32	9 29.30 W 103.56 47.63
13929.00	88.55	88.80	8977.54	5059.56	990.87	4983.50	1.19	421484.25	661120.70	N 32	9 29.33 W 103.56 46.52
14024.00	88.66	88.30	8979.56	5154.24	993.28	5078.15	0.58	421486.65	661215.64	N 32	9 29.35 W 103.56 45.42
14119.00	88.59	88.19	8981.84	5248.98	996.19	5173.37	0.14	421489.66	661310.56	N 32	9 29.37 W 103.56 44.31
14213.00	89.62	89.77	8984.31	5342.59	997.86	5267.94	2.01	421491.23	661404.52	N 32	9 29.39 W 103.56 43.22
14308.00	89.31	88.93	8984.19	5437.17	998.94	5362.33	0.94	421492.31	661498.50	N 32	9 29.39 W 103.56 42.12
14403.00	89.55	88.85	8985.14	5531.83	1000.78	5457.31	0.27	421494.15	661594.47	N 32	9 29.41 W 103.56 41.01
14498.00	89.52	88.87	8985.91	5625.49	1002.67	5552.29	0.04	421496.04	661689.45	N 32	9 29.42 W 103.56 39.91
14592.00	89.38	88.67	8986.61	5720.16	1004.68	5646.26	0.28	421498.06	661783.41	N 32	9 29.44 W 103.56 38.81
14687.00	89.45	88.66	8987.78	5814.84	1006.80	5741.23	0.07	421500.27	661878.37	N 32	9 29.46 W 103.56 37.71
14782.00	89.24	88.43	8988.67	5909.34	1009.31	5836.19	0.33	421502.68	661973.33	N 32	9 29.46 W 103.56 36.60
14877.00	89.28	88.54	8990.10	6004.25	1011.82	5930.15	0.12	421505.19	662068.24	N 32	9 29.50 W 103.56 35.50
14972.00	89.38	88.									

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (1/1000)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S...)	Longitude (E/W...)
	17157.00	90.31	93.14	9028.49	8272.17	1093.13	8210.28	3.46	421516.50	664347.23	N 32° 9' 29.53"	W 103 56' 8.99"
	17252.00	89.31	91.16	9028.80	8266.21	1019.57	8305.21	2.33	421512.94	664442.15	N 32° 9' 29.48"	W 103 56' 7.88"
	17247.00	88.69	90.57	9030.46	8460.52	1018.13	8400.18	0.90	421511.50	664453.12	N 32° 9' 29.47"	W 103 56' 6.78"
	17242.00	88.63	88.78	9032.52	8555.04	1018.67	8495.15	1.89	421512.04	664632.08	N 32° 9' 29.48"	W 103 56' 5.67"
	17537.00	89.79	89.35	9033.66	8649.66	1020.22	8590.13	1.18	421513.59	664727.05	N 32° 9' 29.50"	W 103 56' 4.57"
	17633.00	88.73	88.32	9034.90	8745.31	1022.17	8686.10	1.54	421515.54	664823.01	N 32° 9' 29.50"	W 103 56' 3.45"
	17728.00	88.59	88.54	9037.12	8840.01	1024.77	8781.04	0.27	421518.14	664917.95	N 32° 9' 29.53"	W 103 56' 2.35"
	17823.00	89.52	89.50	9038.69	8934.63	1026.40	8876.01	1.41	421519.77	665012.91	N 32° 9' 29.54"	W 103 56' 1.24"
	17918.00	89.38	90.42	9039.60	9029.12	1026.47	8971.00	0.98	421519.84	665107.90	N 32° 9' 29.54"	W 103 56' 0.14"
	18012.00	88.73	89.02	9041.15	9122.64	1026.92	9159.94	1.64	421520.29	665201.87	N 32° 9' 29.54"	W 103 56' 59.05"
	18107.00	88.69	88.82	9045.89	9217.28	1028.88	9254.87	0.42	421522.25	665296.82	N 32° 9' 29.55"	W 103 55' 57.94"
	18202.00	88.18	88.24	9045.89	9311.96	1031.48	9349.78	0.67	421524.85	665391.74	N 32° 9' 29.57"	W 103 55' 56.84"
	18297.00	89.38	88.24	9046.74	9406.66	1038.03	9444.65	0.21	421527.77	665486.65	N 32° 9' 29.60"	W 103 55' 55.73"
	18392.00	87.42	87.37	9052.22	9501.39	1038.40	9539.52	1.36	421531.40	665581.50	N 32° 9' 29.63"	W 103 55' 54.63"
	18467.00	88.45	88.35	9055.64	9596.12	1041.58	9634.46	1.50	421534.95	665676.37	N 32° 9' 29.66"	W 103 55' 53.52"
	18592.00	88.66	88.88	9058.04	9690.79	1044.04	9729.42	0.41	421537.41	665771.30	N 32° 9' 29.68"	W 103 55' 52.42"
	18677.00	89.21	89.00	9059.80	9785.44	1045.96	9824.38	0.67	421539.33	665866.25	N 32° 9' 29.70"	W 103 55' 51.32"
	18772.00	88.76	88.50	9061.49	9880.10	1048.04	9919.33	0.71	421541.40	665961.21	N 32° 9' 29.72"	W 103 55' 50.21"
Final MWD	18867.00	89.00	88.43	9063.34	9974.80	1050.58	9974.30	0.26	421543.95	666056.15	N 32° 9' 29.74"	W 103 55' 49.11"
Survey Proj. to Bit	18922.00	89.00	88.43	9064.30	10029.63	1052.09		0.00	421545.45	666111.11	N 32° 9' 29.75"	W 103 55' 48.47"

Survey Types:

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	26.500	1/8.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18.922'
	1	26.500	26.500	Act Sins	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18.922'
	1	26.500	369.650	Act Sins	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18.922'
	1	369.650	9222.000	Act Sins	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18.922'
	1	9222.000	18922.000	Act Sins	30.000	30.000	NAL_MWD_HDGM+MS	Original Borehole / Oxy Corral Fly 02-01 State 24H Gyro+MWD 0-18.922'