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

30-015-44704

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 11 2018
RECEIVED

August 23, 2018

OXY USA Inc.

Re:

2, 25S, 29E, Eddy NM
32.16462 103.95960

CLIENT: OXY USA Inc.
WELL: Corral Fly 35-26 Federal Com 231H
FIELD: Pierce Crossing Bone Spring

RIG: H&P 636
COUNTY: Eddy
API NO: 30-015-44704
JOB NO: 18MLD1152

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.

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
Thomas Wetmore FS	Corral Fly 35-26 Federal Com 231H Original Hole	477.00 Ft 19431.00 Ft	to	May 1, 2018 June 12, 2018	to	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

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:
2, 25S, 29E, Eddy NM
32.16462 103.95960

I, Thomas Wetmore certify that: I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of May 01, 2018 through June 12, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 477.00 feet to a depth of 19431.00 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 Fly 35-26 Federal Com 23H Well (Original Hole) API No. 30-015-44704 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
T. Wetmore
FS

Subscribed and Sworn to before me this 23rd day of August (month) 2018 (yr)

My Commission expires:

2-16-2022

D. Adams
Notary Public (signature)

Adams County Colorado
(County State)

DONNA ADAMS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20184007893
MY COMMISSION EXPIRES FEBRUARY 16, 2022

Schlumberger

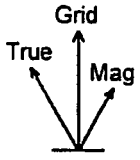
OXY

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Corral Fly 35-26 Federal Com 23H	NM Eddy County (NAD 83)	Oxy Corral Fly 35-26 Federal Com 23H

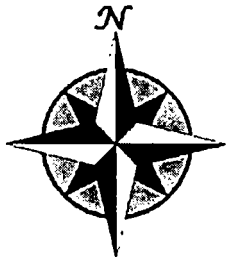
Gravity & Magnetic Parameters

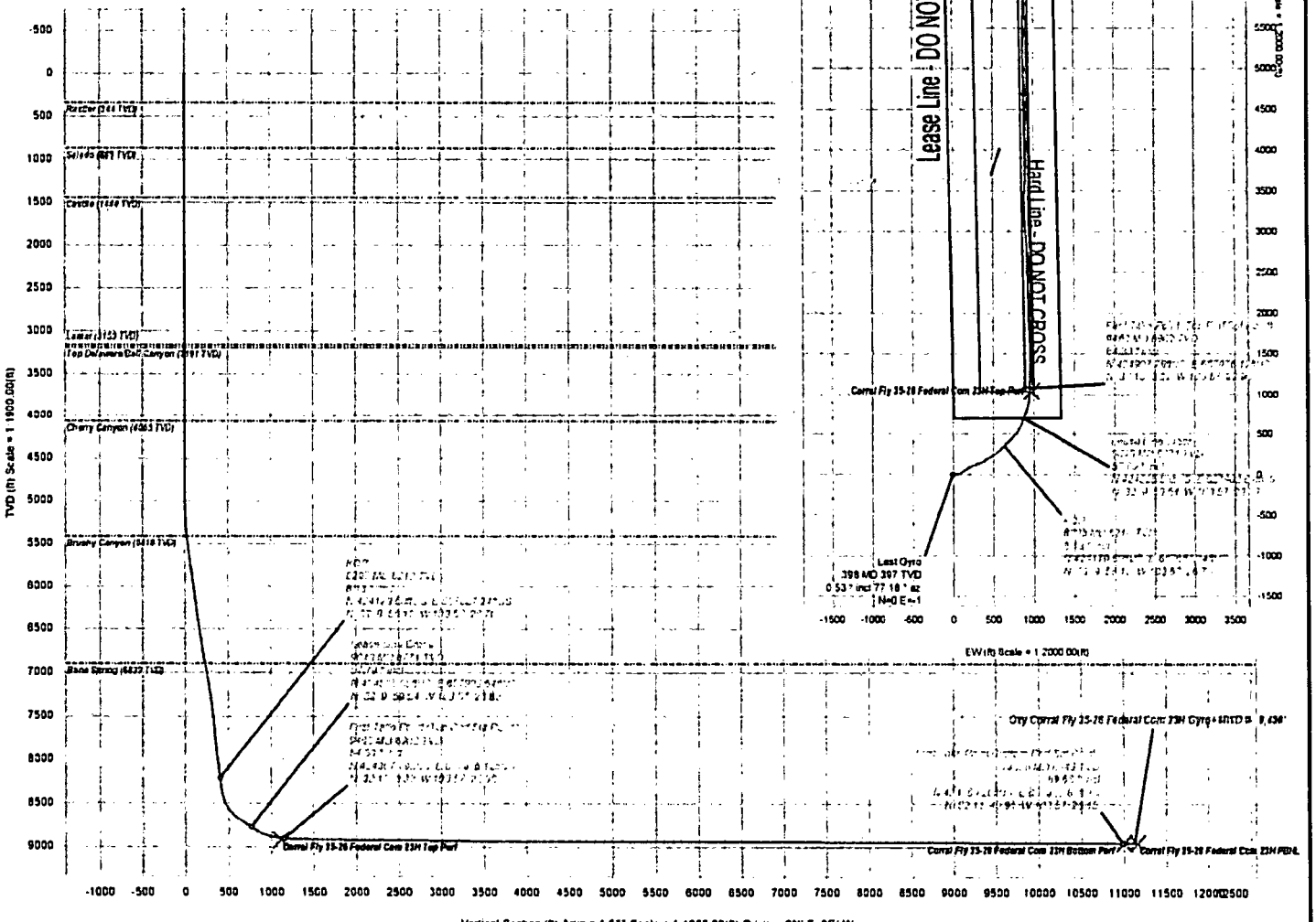
Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet

Miscellaneous



Grid North
Tot Corr (M->G 6.798°)
Mag Dec (6.997°)
Grid Conv (0.199°)





Schlumberger

OXY

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Corral Fly 35-26 Federal Com 23H	NM Eddy County (NAD 83)	Oxy Corral Fly 35-26 Federal Com 23H

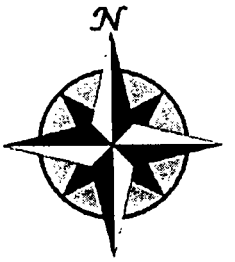
Gravity & Magnetic Parameters

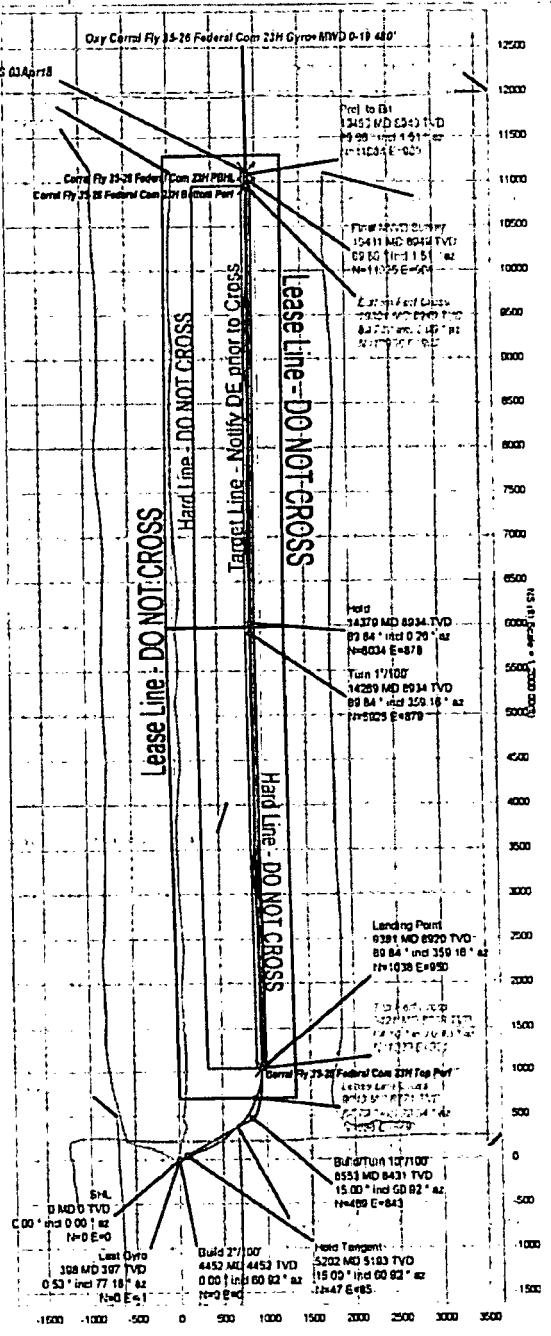
Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet

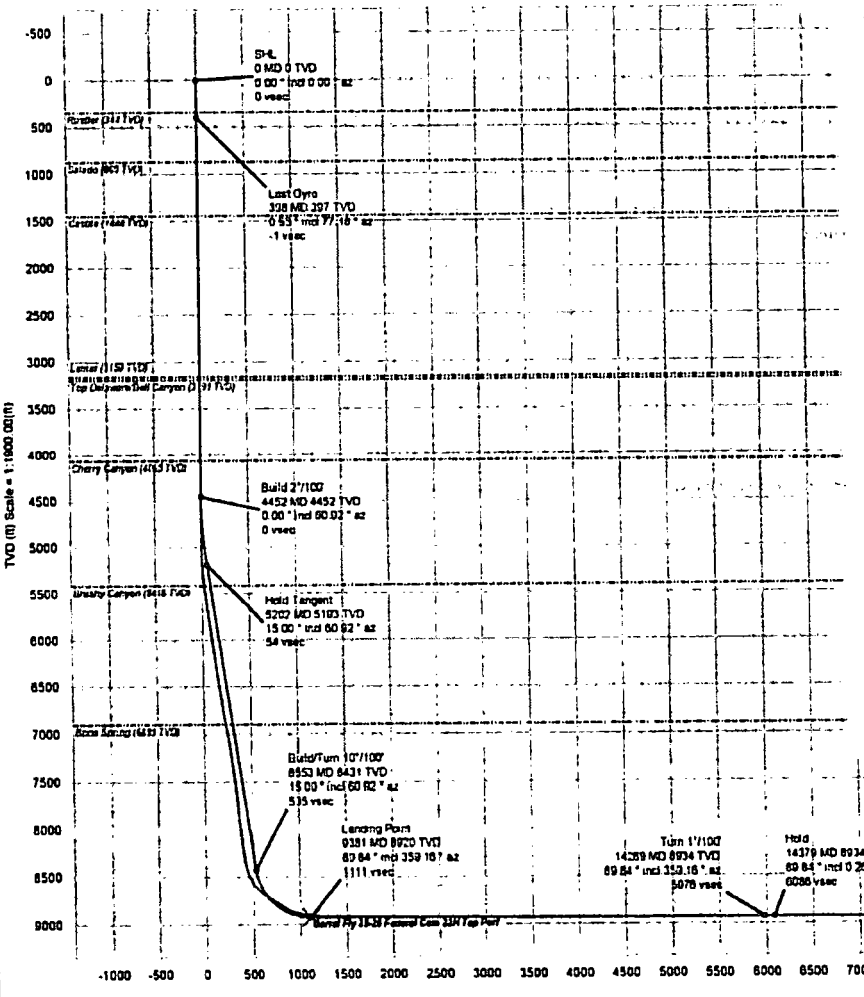
Miscellaneous

Grid
True
Mag

Grid North
Tot Corr (M->G 6.798°)
Mag Dec (6.997°)
Grid Conv (0.199°)







Vertical Section (ft) Azim = 4.63° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W

Schlumberger

Oxy Corral Fly 35-26 Federal Com 23H Gyro+MWD 0-19,480' Survey
Geodetic Report
(Def Survey)

Report Date:	June 12, 2018 - 09:33 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	4.634 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Corral Fly 35-26 Federal Com 23H / Oxy Corral Fly 35-26 Federal Com 23H	**TVD Reference Datum:**	RKB=26.5'
Well:	Oxy Corral Fly 35-26 Federal Com 23H	**TVD Reference Elevation:**	3045.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3018.500 ft above MSL
UWI / API#:	Unknown / 30-015-44704	**Magnetic Declination:**	6.997 °
Survey Name:	Oxy Corral Fly 35-26 Federal Com 23H Gyro+MWD 0-19,480'	**Total Gravity Field Strength:**	998.4574mgn (9.80665 Based)
Survey Date:	June 05, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	294.228 ° / 11585.409 ft / 6.870 / 1.295	**Total Magnetic Field Strength:**	47989.582 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.923 °
Location Lat / Long:	N 32° 9' 52.65997", W 103° 57' 34.07695"	**Declination Date:**	June 05, 2018
Location Grid N/E Y/X:	N 423827.570 ftUS, E 657024.770 ftUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	0.1990 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99992442	**Grid Convergence Used:**	0.1990 °
Version / Patch:	2.10.720.0	**Total Corr Mag North->Grid North:**	6.7982 °
		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 ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	423827.57	657024.77	N 32 9 52.66	W 103 57 34.08
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	423827.57	657024.77	N 32 9 52.66	W 103 57 34.08
	99.20	0.27	242.64	99.20	-0.09	-0.08	-0.15	0.37	423827.49	657024.62	N 32 9 52.66	W 103 57 34.08
	133.00	0.40	247.65	133.00	-0.19	-0.16	-0.33	0.39	423827.41	657024.44	N 32 9 52.66	W 103 57 34.08
	219.50	0.40	229.72	219.50	-0.54	-0.47	-0.84	0.14	423827.10	657023.93	N 32 9 52.66	W 103 57 34.09
	310.20	0.06	349.39	310.20	-0.71	-0.63	-1.09	0.48	423826.94	657023.68	N 32 9 52.65	W 103 57 34.09
Last Gyro	397.50	0.53	77.18	397.50	-0.55	-0.49	-0.71	0.61	423827.08	657024.06	N 32 9 52.66	W 103 57 34.09
	477.00	0.77	74.61	476.99	-0.26	-0.27	0.17	0.30	423827.30	657024.04	N 32 9 52.66	W 103 57 34.08
	537.00	0.58	74.14	536.99	-0.01	-0.08	0.85	0.32	423827.49	657025.62	N 32 9 52.66	W 103 57 34.07
	627.00	0.01	304.00	626.98	0.15	0.05	1.28	0.65	423827.62	657026.05	N 32 9 52.66	W 103 57 34.06
	806.00	0.02	171.50	805.98	0.13	0.03	1.27	0.02	423827.60	657026.04	N 32 9 52.66	W 103 57 34.06
	986.00	0.04	214.47	985.98	0.04	-0.06	1.24	0.02	423827.51	657026.01	N 32 9 52.66	W 103 57 34.06
	1077.00	0.01	135.30	1076.98	0.01	-0.09	1.23	0.04	423827.48	657026.00	N 32 9 52.66	W 103 57 34.06
	1169.00	0.05	50.24	1168.98	0.03	-0.07	1.26	0.05	423827.50	657026.03	N 32 9 52.66	W 103 57 34.06
	1260.00	0.05	101.52	1259.98	0.06	-0.05	1.33	0.05	423827.52	657026.10	N 32 9 52.66	W 103 57 34.06
	1355.00	0.05	166.81	1354.98	0.01	-0.10	1.38	0.06	423827.47	657026.15	N 32 9 52.66	W 103 57 34.06
	1449.00	0.05	93.20	1448.98	-0.03	-0.14	1.43	0.06	423827.43	657026.20	N 32 9 52.60	W 103 57 34.06
	1545.00	0.03	161.82	1544.98	-0.05	-0.17	1.48	0.05	423827.40	657026.25	N 32 9 52.66	W 103 57 34.06
	1639.00	0.09	313.09	1638.98	-0.02	-0.14	1.44	0.12	423827.43	657026.21	N 32 9 52.66	W 103 57 34.06
	1735.00	0.04	267.72	1734.98	0.02	-0.09	1.35	0.07	423827.48	657026.12	N 32 9 52.66	W 103 57 34.06
	1830.00	0.08	241.22	1829.98	-0.02	-0.12	1.26	0.05	423827.45	657026.03	N 32 9 52.66	W 103 57 34.06
	1925.00	0.02	270.12	1924.98	-0.06	-0.16	1.18	0.07	423827.41	657025.95	N 32 9 52.66	W 103 57 34.06
	2019.00	0.06	4.80	2018.98	-0.01	-0.11	1.17	0.07	423827.46	657025.94	N 32 9 52.66	W 103 57 34.06
	2114.00	0.07	153.25	2113.98	-0.01	-0.11	1.20	0.13	423827.46	657025.97	N 32 9 52.66	W 103 57 34.06
	2209.00	0.13	183.49	2208.98	-0.17	-0.27	1.22	0.08	423827.30	657025.99	N 32 9 52.66	W 103 57 34.06
	2304.00	0.05	276.14	2303.98	-0.28	-0.37	1.17	0.15	423827.20	657025.94	N 32 9 52.66	W 103 57 34.06
	2399.00	0.07	243.48	2398.98	-0.30	-0.39	1.08	0.04	423827.18	657025.85	N 32 9 52.66	W 103 57 34.06
	2494.00	0.06	14.40	2493.98	-0.29	-0.37	1.04	0.12	423827.20	657025.81	N 32 9 52.66	W 103 57 34.06
	2589.00	0.07	326.26	2588.98	-0.19	-0.27	1.02	0.06	423827.30	657025.79	N 32 9 52.66	W 103 57 34.07
	2684.00	0.02	223.44	2683.98	-0.16	-0.24	0.98	0.08	423827.33	657025.75	N 32 9 52.66	W 103 57 34.07
	2779.00	0.07	253.03	2778.98	-0.19	-0.27	0.91	0.06	423827.30	657025.68	N 32 9 52.66	W 103 57 34.07
	2969.00	0.04	89.35	2968.98	-0.23	-0.30	0.86	0.06	423827.27	657025.63	N 32 9 52.66	W 103 57 34.07
	3158.00	0.04	279.51	3157.98	-0.22	-0.29	0.87	0.04	423827.28	657025.64	N 32 9 52.66	W 103 57 34.07
	3348.00	0.04	320.94	3347.98	-0.16	-0.22	0.76	0.01	423827.35	657025.53	N 32 9 52.66	W 103 57 34.07
	3537.00	0.07	207.16	3536.98	-0.07	-0.12	0.61	0.02	423827.45	657025.38	N 32 9 52.66	W 103 57 34.07
	3727.00	0.07	188.30	3726.98	-0.14	-0.18	0.49	0.06	423827.39	657025.26	N 32 9 52.66	W 103 57 34.07
	3917.00	0.04	173.36	3916.98	-0.32	-0.36	0.49	0.02	423827.21	657025.26	N 32 9 52.66	W 103 57 34.07
	4107.00	0.06	277.93	4106.98	-0.38	-0.42	0.39	0.04	423827.15	657025.10	N 32 9 52.66	W 103 57 34.07
	4202.00	0.10	247.07	4201.98	-0.42	-0.44	0.27	0.06	423827.13	657025.04	N 32 9 52.66	W 103 57 34.07
	4297.00	0.07	256.88	4296.98	-0.47	-0.49	0.14	0.03	423827.08	657024.91	N 32 9 52.66	W 103 57 34.08
	4486.00	0.87	133.45	4485.98	-1.41	-1.50	1.07	0.46	423826.07	657025.83	N 32 9 52.65	W 103 57 34.06
	4581.00	1.96	94.19	4580.95	-1.85	-2.11	3.21	1.47	423825.46	657027.98	N 32 9 52.64	W 103 57 34.04
	4676.00	3.20	90.60	4675.85	-1.65	-2.26	7.48	1.32	423825.31	657032.25	N 32 9 52.64	W 103 57 33.99
	4771.00	3.10	88.04	4770.71	-1.19	-2.23	12.70	0.15	423825.34	657037.47	N 32 9 52.64	W 103 57 33.93
	4866.00	3.84	89.08	4865.53	-0.62	-2.12	18.45	0.78	423825.48	657043.22	N 32 9 52.64	W 103 57 33.86
	4961.00	5.00	89.33	4960.25	0.07	-2.02	25.77	1.22	423825.55	657050.54	N 32 9 52.64	W 103 57 33.78
	5150.00	8.52	80.35	5147.91	4.29	0.43	47.82	1.94	423828.00	657072.58	N 32 9 52.66	W 103 57 33.52
	5245.00	9.62	74.53	5241.72	8.76	3.73	62.40	1.51	423831.30	657087.17	N 32 9 52.69	W 103 57 33.35
	5340.00	10.25	68.68	5335.30	15.16	8.92	77.93	1.25	423836.49	657102.69	N 32 9 52.75	W 103 57 33.17
	5435.00	10.71	62.32	5428.72	23.60	16.09	93.62	1.31	423843.66	657118.38	N 32 9 52.82	W 103 57 32.99
	5625.00	12.33	55.05	5614.89	45.97	35.91	125.89	1.14	423863.48	657150.65	N 32 9 53.01	W 103 57 32.61
	5719.00	11.97	54.31	5706.79	58.67	47.35	142.03	0.42	423874.92	657166.79	N 32 9 53.12	W 103 57 32.42
	5909.00	13.34	59.45	5892.17	84.05	69.09	176.91	0.93	423897.55	657201.67	N 32 9 53.35	W 103 57 32.02
	6099.00	16.20	60.10	6075.89	100.35	91.67	220.00	1.75	423919.44	657244.78	N 32 9 53.56	W 103 57 31.51
	6289.00	17.54	70.27	6257.71	133.83	112.28	271.22	0.95	423939.84	657295.97	N 32 9 53.76	W 103 57 30.92
	6479.00	18.44	67.42	6439.42	157.83	132.27	322.99	0.73	423959.80	657347.74	N 32 9 53.96	W 103 57 30.31
	6574.00	17.08	64.34	6530.39	171.12	143.47	347.98	1.15	423971.03	657372.73	N 32 9 54.07	W 103 57 30.02
	6668.00	17.16	61.32	6620.23	185.70	156.11	372.59	0.95	423983.66	657397.33	N 32 9 54.19	W 103 57 29.74
	6858.00	16.74	58.07	6801.98	217.39	184.03	420.41	0.55	424011.59	657445.14	N 32 9 54.47	W 103 57 29.18
	6953.00	16.24	58.01	6893.07	233.47	198.30	443.28	0.53	424025.86	657468.02	N 32 9 54.61	W 103 57 28.91
	7048.00	16.95	58.99	6984.11	249.46	212.47	466.42	0.80	424040.03	657491.15	N 32 9 54.75	W 103 57 28.64
	7237.00	13.51	55.91	7166.45	279.34	239.05	508.33	1.87	424066.60	657533.06	N 32 9 55.01	W 103 57 28.15
	7427.00	11.32	48.95	7352.00	306.57	263.74	540.78	1.39	424091.20	657565.50	N 32 9 55.25	W 103 57 27.78
	7522.00	10.66	42.43	7445.27	320.19	276.35	553.74	1.48	424103.90	657578.46	N 32 9 55.38	W 103 57 27.62
	7616.00	8.87	49.59	7537.90	332.19	287.47	565.12	2.30	424115.01	657589.85	N 32 9 55.49	W 103 57 27.49
	7711.00	7.25	54.87	7631.96	341.20	295.60	575.60	1.87	424123.21	657600.33	N 32 9 55.57	W 103 57 27.37
	7806.00	6.47	52.64	7726.28	348.62	302.36	584.76	0.87	424129.91	657609.48	N 32 9 55.63	W 103 57 27.26
	7901.00	6.86	44.72	7820.64	356.54	309.64	593.01	1.05	424137.19	657617.73	N 32 9 55.70	W 103 57 27.17
	8091.00	9.17	42.60	8008.77	377.16	328.65	611.24	1.23	424156.39	657635.96	N 32 9 55.89	W 103 57 26.95
	8186.00	9.15	40.93	8102.56	389.22	340.13	621.31	0.28	424167.87	657646.03	N 32 9 56.00	W 103 57 26.84
	8295.00	8.13	45.78	8210.33	402.01	352.05	632.51	1.15	424179.60	657657.24	N 32 9 56.12	W 103 57 26.70

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 ° ' ")
	8473.00	15.69	49.84	8384.37	428.48	376.39	659.97	4.27	424200.93	657684.69	N 32 9 56.38	W 103 57 26.38
	8569.00	27.56	46.63	8473.46	454.22	400.10	686.13	12.42	424227.64	657710.85	N 32 9 56.60	W 103 57 26.08
	8664.00	39.26	48.12	8552.62	493.21	436.15	723.90	12.32	424263.69	657748.62	N 32 9 56.95	W 103 57 25.64
	8759.00	52.60	41.20	8618.57	548.29	485.02	770.65	14.52	424313.15	657795.36	N 32 9 57.44	W 103 57 25.09
	8853.00	58.84	28.44	8671.64	613.34	549.32	814.57	13.02	424378.85	657839.27	N 32 9 58.07	W 103 57 24.58
	8948.00	58.03	21.41	8720.77	689.55	623.01	848.81	6.34	424450.53	657873.51	N 32 9 58.80	W 103 57 24.18
	9043.00	57.79	22.34	8770.01	766.79	698.00	878.94	1.48	424525.58	657903.64	N 32 9 59.54	W 103 57 23.82
	9139.00	50.28	19.62	8820.72	845.30	774.51	908.23	2.87	424602.02	657932.93	N 32 10 0.29	W 103 57 23.48
	9234.00	70.47	12.93	8861.03	929.45	856.94	932.06	13.39	424684.45	657956.78	N 32 10 1.11	W 103 57 23.20
	9328.00	80.22	5.43	8884.82	1019.93	948.56	946.41	12.92	424774.06	657971.11	N 32 10 1.99	W 103 57 23.03
	9423.00	84.18	0.34	8897.72	1113.96	1040.51	951.12	6.75	424868.00	657975.82	N 32 10 2.92	W 103 57 22.97
	9460.00	84.21	0.51	8901.46	1150.87	1077.32	951.40	0.46	424904.81	657976.09	N 32 10 3.29	W 103 57 22.97
	9553.00	87.04	2.25	8908.55	1243.23	1170.01	953.63	3.57	424997.49	657978.33	N 32 10 4.20	W 103 57 22.94
	9646.00	89.20	3.50	8911.60	1336.13	1262.84	958.30	2.68	425090.31	657982.99	N 32 10 5.12	W 103 57 22.88
	9740.00	88.93	1.57	8913.14	1430.05	1356.73	962.45	2.07	425184.19	657987.15	N 32 10 6.05	W 103 57 22.83
	9833.00	89.03	0.11	8914.79	1522.83	1449.70	963.82	1.57	425277.16	657988.51	N 32 10 6.97	W 103 57 22.81
	9926.00	89.07	358.67	8916.34	1615.43	1542.68	962.83	1.55	425370.13	657987.52	N 32 10 7.89	W 103 57 22.81
	10020.00	89.27	358.94	8917.70	1708.75	1636.60	959.23	1.85	425464.04	657983.92	N 32 10 8.82	W 103 57 22.85
	10113.00	88.83	355.73	8919.24	1800.76	1729.39	953.28	1.38	425556.83	657977.98	N 32 10 9.74	W 103 57 22.92
	10207.00	89.24	354.91	8920.82	1893.51	1823.06	945.61	0.98	425650.49	657970.31	N 32 10 10.67	W 103 57 23.00
	10300.00	89.51	357.69	8921.84	1985.51	1915.86	939.61	3.00	425743.28	657964.31	N 32 10 11.59	W 103 57 23.07
	10393.00	89.72	359.12	8922.46	2077.95	2009.82	937.02	1.55	425836.23	657961.72	N 32 10 12.51	W 103 57 23.09
	10487.00	89.48	359.79	8923.12	2171.57	2102.81	936.13	0.76	425930.21	657960.83	N 32 10 13.44	W 103 57 23.10
	10580.00	90.06	358.42	8923.49	2264.13	2195.79	934.68	1.60	426023.19	657959.38	N 32 10 14.36	W 103 57 23.11
	10674.00	90.27	357.56	8923.22	2357.50	2289.73	931.38	0.94	426117.13	657956.08	N 32 10 15.29	W 103 57 23.15
	10767.00	89.44	358.53	8923.48	2449.88	2382.68	928.21	1.37	426210.06	657952.91	N 32 10 16.20	W 103 57 23.18
	10860.00	89.79	359.35	8924.08	2542.42	2475.66	926.49	0.98	426303.04	657951.19	N 32 10 17.13	W 103 57 23.20
	10954.00	89.62	359.28	8924.57	2636.01	2569.65	925.38	0.20	426397.02	657950.06	N 32 10 18.06	W 103 57 23.21
	11047.00	89.58	358.34	8925.21	2728.53	2662.63	923.43	1.01	426489.99	657948.13	N 32 10 18.98	W 103 57 23.23
	11142.00	89.51	356.79	8925.97	2822.80	2757.54	919.40	1.63	426584.89	657944.10	N 32 10 19.91	W 103 57 23.27
	11237.00	89.20	356.10	8927.04	2916.83	2852.35	913.51	0.80	426679.69	657938.21	N 32 10 20.85	W 103 57 23.33
	11332.00	89.44	356.48	8928.17	3010.82	2947.14	907.38	0.47	426774.48	657932.08	N 32 10 21.79	W 103 57 23.40
	11427.00	89.03	355.82	8929.43	3104.74	3041.91	900.82	1.00	426869.24	657925.52	N 32 10 22.73	W 103 57 23.47
	11522.00	89.27	355.56	8930.84	3198.55	3136.61	893.51	0.26	426963.04	657918.21	N 32 10 23.67	W 103 57 23.55
	11617.00	89.17	357.98	8932.14	3292.64	3231.45	888.16	2.55	427058.77	657912.86	N 32 10 24.61	W 103 57 23.61
	11712.00	89.86	0.99	8932.94	3387.24	3326.43	887.31	3.25	427153.74	657912.01	N 32 10 25.54	W 103 57 23.62
	11807.00	89.65	3.27	8933.35	3482.15	3421.35	890.84	2.41	427248.66	657915.54	N 32 10 26.48	W 103 57 23.57
	11902.00	89.82	2.91	8933.79	3577.11	3516.22	895.96	0.42	427343.51	657920.66	N 32 10 27.42	W 103 57 23.51
	11997.00	90.10	2.84	8933.85	3672.06	3611.10	900.72	0.30	427438.39	657925.42	N 32 10 28.36	W 103 57 23.45
	12092.00	90.20	1.83	8933.60	3766.99	3706.02	904.59	1.07	427533.30	657929.29	N 32 10 29.30	W 103 57 23.40
	12187.00	89.27	0.05	8934.04	3861.78	3801.00	906.15	2.11	427628.27	657930.85	N 32 10 30.24	W 103 57 23.38
	12282.00	90.13	359.08	8934.54	3956.41	3895.99	906.43	1.36	427723.26	657930.13	N 32 10 31.18	W 103 57 23.39
	12377.00	89.89	358.74	8934.53	4050.93	3990.97	903.62	0.44	427818.23	657928.32	N 32 10 32.12	W 103 57 23.40
	12472.00	90.34	358.50	8934.33	4145.41	4085.95	901.34	0.54	427913.20	657926.04	N 32 10 33.06	W 103 57 23.43
	12567.00	89.31	359.38	8934.62	4239.94	4180.93	899.58	1.43	428008.17	657924.28	N 32 10 34.00	W 103 57 23.44
	12662.00	90.27	359.52	8934.87	4334.56	4275.92	898.67	1.02	428103.16	657923.37	N 32 10 34.94	W 103 57 23.45
	12757.00	90.03	358.99	8934.72	4429.13	4370.91	897.43	0.61	428198.14	657922.13	N 32 10 35.88	W 103 57 23.46
	12852.00	89.79	359.18	8934.87	4523.68	4465.90	896.90	0.31	428293.12	657920.60	N 32 10 36.82	W 103 57 23.47
	12947.00	89.14	358.75	8935.76	4618.21	4560.88	894.17	0.81	428388.09	657918.87	N 32 10 37.76	W 103 57 23.49
	13042.00	90.51	359.51	8936.05	4712.77	4655.86	892.72	1.65	428483.07	657917.42	N 32 10 38.70	W 103 57 23.50
	13137.00	90.13	358.83	8935.52	4807.34	4750.85	891.35	0.82	428578.05	657916.05	N 32 10 39.64	W 103 57 23.51
	13232.00	89.51	357.80	8935.82	4901.76	4845.81	888.55	1.27	428673.00	657913.25	N 32 10 40.58	W 103 57 23.54
	13327.00	89.86	358.15	8936.34	4996.11	4940.75	885.20	0.52	428767.93	657909.90	N 32 10 41.52	W 103 57 23.58
	13422.00	89.75	357.57	8936.66	5090.45	5035.68	881.65	0.62	428862.86	657906.35	N 32 10 42.46	W 103 57 23.62
	13517.00	89.14	358.63	8937.58	5184.83	5130.62	878.50	1.29	428957.79	657903.20	N 32 10 43.40	W 103 57 23.65
	13611.00	90.06	358.76	8938.24	5278.32	5224.59	876.38	0.99	429051.76	657901.08	N 32 10 44.33	W 103 57 23.67
	13707.00	90.13	359.17	8938.08	5373.85	5320.58	874.63	0.43	429147.74	657899.33	N 32 10 45.28	W 103 57 23.69
	13802.00	90.34	0.68	8937.69	5468.52	5415.57	874.50	1.60	429242.72	657899.20	N 32 10 46.22	W 103 57 23.68
	13897.00	90.51	1.44	8936.99	5563.34	5510.55	876.26	0.82	429337.70	657900.96	N 32 10 47.16	W 103 57 23.68
	13992.00	90.61	1.52	8936.08	5658.19	5605.52	878.71	0.13	429432.65	657903.41	N 32 10 48.10	W 103 57 23.63
	14087.00	89.96	1.33	8935.59	5753.04	5700.49	881.07	0.71	429527.61	657905.78	N 32 10 49.04	W 103 57 23.60
	14182.00	90.17	1.84	8935.48	5847.90	5795.45	883.70	0.58	429622.57	657908.40	N 32 10 49.98	W 103 57 23.56
	14278.00	89.96	2.02	8935.37	5941.80	5880.40	886.87	0.29	429718.51	657911.57	N 32 10 50.91	W 103 57 23.52
	14371.00	90.65	1.52	8934.87	6036.68	5984.35	889.80	0.90	429811.46	657914.50	N 32 10 51.85	W 103 57 23.48
	14468.00	90.24	0.32	8934.13	6131.47	6079.33	891.33	1.33	429906.43	657916.03	N 32 10 52.79	W 103 57 23.46
	14561.00	90.03	359.17	8933.90	6226.12	6174.33	890.90	1.23	430001.42	657915.61	N 32 10 53.73	W 103 57 23.46
	14656.00	89.93	358.05	8933.94	6320.60	6269.30	888.60	1.18	430096.38	657913.30	N 32 10 54.67	W 103 57 23.48
	14751.00	89.65	357.29	8934.29	6414.90	6364.22	884.74	0.85	430191.30	657909.44	N 32 10 55.60	W 103 57 23.53
	14846.00	89.75	356.00	8934.78	6509.07	6459.10	879.92	0.42	430286.17	657904.62	N 32 10 56.54	W 103 57 23.58
	14941.00	89.55	356.30	8935.36	6603.14	6553.93	874.29	0.67	430380.99	657898.99	N 32 10 57.48	W 103 57 23.64
	15038.00	89.72	356.17	8935.97	6697.12	6648.72	868.05	0.23	430475.77	657892.75	N 32 10 58.42	W 103 57 23.71
	15131.00	89.24	355.51	8936.83	6791.00	6743.47	861.16	0.88	430570.51	657885.86	N 32 10 59.36	W 103 57 23.78
	15226.00	89.55	359.02	8937.83	6885.19	6838.34	856.03	3.71	430665.38	657881.33	N 32 11 0.30	W 103 57 23.83
	15321.00	89.82	1.95	8938.36	6979.93	6933.32	857.43	3.10	430760.35	657882.14	N 32 11 1.24	W 103 57 23.82
	15416.00	90.24	2.78	8938.31	7074.86	7028.24	861.35	0.98	430855.26	657886.06	N 32 11 2.18	W 103 57 23.77
	15511.00	90.30	1.98	8937.86	7169.78	7123.16	865.28	0.87	430950.17	657889.98	N 32 11 3.11	W 103 57 23.72
	15607.00	90.03	0.37	8937.58	7265.60	7219.13	867.23	1.68	431046.14	657891.94	N 32 11 4.06	W 103 57 23.69
	15701.00	89.24	359.20	8938.18	7359.28	7313.13	866.88	1.50	431140.13	657891.58	N 32 11 4.99	W 103 57 23.69
	15798.00	89.72	358.87	8939.04	7453.80	7408.11	865.28	0.61	431235.11	657889.98	N 32 11 5.93	W 103 57 23.71
	15891.00	89.41	0.17	8939.76	7548.42	7503.10	864.48	1.41	431330.09	657889.10	N 32 11 6.87	W 103 57 23.71
	15986.00	90.10	1.30	8940.17	7643.20	7598.09	865.70	1.39	431425.07	657890.41	N 32 11 7.81	W 103 57 23.70
	16081.00	89.75	2.55	8940.30	7738.09	7693.04	868.89	1.37	431520.01	657893.60	N 32 11 8.75	W 103 57 23.66
	16176.00	89.93	3.03	8940.56	7833.04	7787.92	873.52	0.54	431614.89	657898.22	N 32 11 9.69	W 103 57 23.60
	16271.00	89.82	3.90	8940.77	7928.02	7882.75	879.26	0.92	431709.71	657903.96	N 32 11 10.63	W 103 57 23.53
	16366.00	89.99	4.58	8940.93	8023.01	7977.49	886.28	0.74	431804.44	657910.98	N 32 11 11.57	W 103 57 23.44
	16461.00	89.72	4.18	8941.17	8118.01	8072.21	893.54	0.51	431899.15	657918.24	N 32 11 12.50	W 103 57 23.35
	16556.00	90.13	3.09	8941.29	8213.00	8167.02	899.56	1.23	431993.95	657924.26	N 32 11 13.44	W 103 57 23.28
	16651.00	90.41	1.66	8940.84	8307.92	8261.93	903.50	1.53	432088.80	657928.20	N 32 11 14.38	W 103 57 23.23
	16746.00	90.13	358.60	8940.39	8402.81	8356.92	903.71	3.23	432183.84	657928.41	N 32 11 15.32	W 103 57 23.22
	16841.00	90.24	355.70	8940.09	8496.79	8451.79	898.99	3.05	432278.70	657923.69	N 32 11 16.26	W 103 57 23.27
	16936.00	90.20	350.14	8939.72	8590.69	8546.55	892.23	0.47	432373.45	657916.93	N 32 11 17.20	W 103 57 23.35
	17031.00	89.44	352.93	8940.02	8684.21	8641.10	883.19	3.47	432468.00	657907.89	N 32 11 18.13	W 103 57 23.45
	17126.00	89.69	353.53	8940.74	8777.33	8735.44	871.99	0.68	432562.33	657896.69	N 32 11 19.07	W 103 57 23.58
	17221.00	89.20	354.50	8941.66	8870.70	8829.91	862.08	1.14	432656.80	657886.78	N 32 11 20.00	W 103 57 23.69
	17316.00	89.31	358.22	8942.90	8964.44	8924.59	854.40	1.81	432751.47	657879.10	N 32 11 20.94	W 103 57 23.77
	17411.00	89.55	2.19	8943.84	9058.97	9019.53	853.08	6.29	432846.40	657877.78	N 32 11 21.88	W 103 57 23.79
	17506.00	88.89	3.45	8945.14	9153.91	9114.41	857.75	1.50	432941.27	657882.46	N 32 11 22.82	W 103 57 23.73
	17601.00	90.27	1.64	8945.83	9248.84	9209.30	861.97	2.40	433036.16	657886.67	N 32 11 23.76	W 103 57 23.67
	17696.00	89.27	359.31	8946.22	9343.58	9304.29	862.76	2.67	433131.14	657887.46	N 32 11 24.70	W 103 57 23.66
	17791.00	89.93	358.71	8946.68	9438.12	9399.28	861.12	0.94	433226.12	657885.82	N 32 11 25.64	W 103 57 23.68
	17886.00	89.55	0.71	8947.31	9532.78	9494.27	860.64	2.14	433321.10	657885.34	N 32 11 26.58	W 103 57 23.68

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	17980.00	89.72	3.63	8947.91	9626.67	9588.19	864.20	3.11	433415.01	657888.90	N 32 11 27.51	W 103 57 23.63
	18171.00	89.65	7.77	8948.06	9817.59	9778.20	883.16	2.17	433605.01	657907.86	N 32 11 29.39	W 103 57 23.40
	18266.00	90.24	7.44	8949.05	9912.48	9872.36	895.73	0.71	433699.17	657920.43	N 32 11 30.32	W 103 57 23.25
	18360.00	90.10	4.93	8948.77	10006.42	9965.81	905.86	2.67	433792.61	657930.56	N 32 11 31.24	W 103 57 23.13
	18455.00	90.10	1.11	8948.61	10101.38	10060.66	910.86	4.02	433887.45	657935.56	N 32 11 32.19	W 103 57 23.07
	18551.00	90.13	355.20	8948.41	10196.71	10156.57	907.77	6.16	433983.35	657932.47	N 32 11 33.13	W 103 57 23.10
	18646.00	89.72	354.78	8948.54	10290.38	10251.20	899.46	0.63	434077.98	657924.16	N 32 11 34.07	W 103 57 23.20
	18740.00	90.89	356.85	8948.04	10383.24	10344.04	892.59	2.55	434171.71	657917.29	N 32 11 34.99	W 103 57 23.27
	18835.00	89.58	357.98	8947.65	10477.48	10439.84	888.30	1.82	434266.60	657913.00	N 32 11 35.93	W 103 57 23.32
	18931.00	89.82	0.11	8948.15	10573.02	10535.82	886.70	2.23	434362.57	657911.40	N 32 11 36.88	W 103 57 23.33
	19025.00	89.79	1.09	8948.47	10666.83	10629.80	888.42	2.00	434456.55	657913.13	N 32 11 37.81	W 103 57 23.31
	19120.00	90.03	2.39	8948.62	10761.74	10724.73	892.05	0.49	434551.47	657916.76	N 32 11 38.75	W 103 57 23.26
	19216.00	90.13	2.48	8948.48	10857.67	10820.64	896.12	0.13	434647.37	657920.82	N 32 11 39.70	W 103 57 23.21
	19311.00	89.58	2.33	8948.73	10952.60	10915.56	900.09	0.59	434742.28	657924.79	N 32 11 40.64	W 103 57 23.16
	19406.00	89.93	1.77	8949.13	11047.50	11010.50	903.48	0.70	434837.21	657928.18	N 32 11 41.58	W 103 57 23.12
Final MWD Survey	19431.00	89.86	1.51	8949.18	11072.48	11035.49	904.20	1.09	434862.20	657928.90	N 32 11 41.83	W 103 57 23.11
Proj. to Bit	19480.00	89.86	1.51	8949.30	11121.39	11084.47	905.49	0.00	434911.18	657930.19	N 32 11 42.31	W 103 57 23.09

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	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Fly 35-26 Federal Com 23H Gyro+MWD 0-19,480'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Fly 35-26 Federal Com 23H Gyro+MWD 0-19,480'
	1	26.500	397.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Corral Fly 35-26 Federal Com 23H
	1	397.500	19480.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Corral Fly 35-26 Federal Com 23H