

Oilfield Services, Central U.S. Group
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-10
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

30-015-44774

Well Reference:
35, 23S, 31E, EDDY NM
-32.26785 -103.74863

I, LESLIE BULLARD certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of March 27, 2018 through April 12, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 4352.00 feet to a depth of 15056.00 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 CAL-MON MDPI 35 FED 4H Well (Original Hole) API No. 30-015-44774 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 Leslie Bullard
LESLIE BULLARD
FS

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

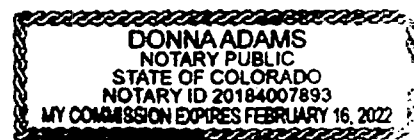
My Commission expires:

2-16-2022

Donna Adams
Notary Public

(signature)

Adams County Colorado
(County State)



RECEIVED

SEP 12 2018

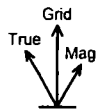
DISTRICT II-ARTESIA O.C.D.

Schlumberger

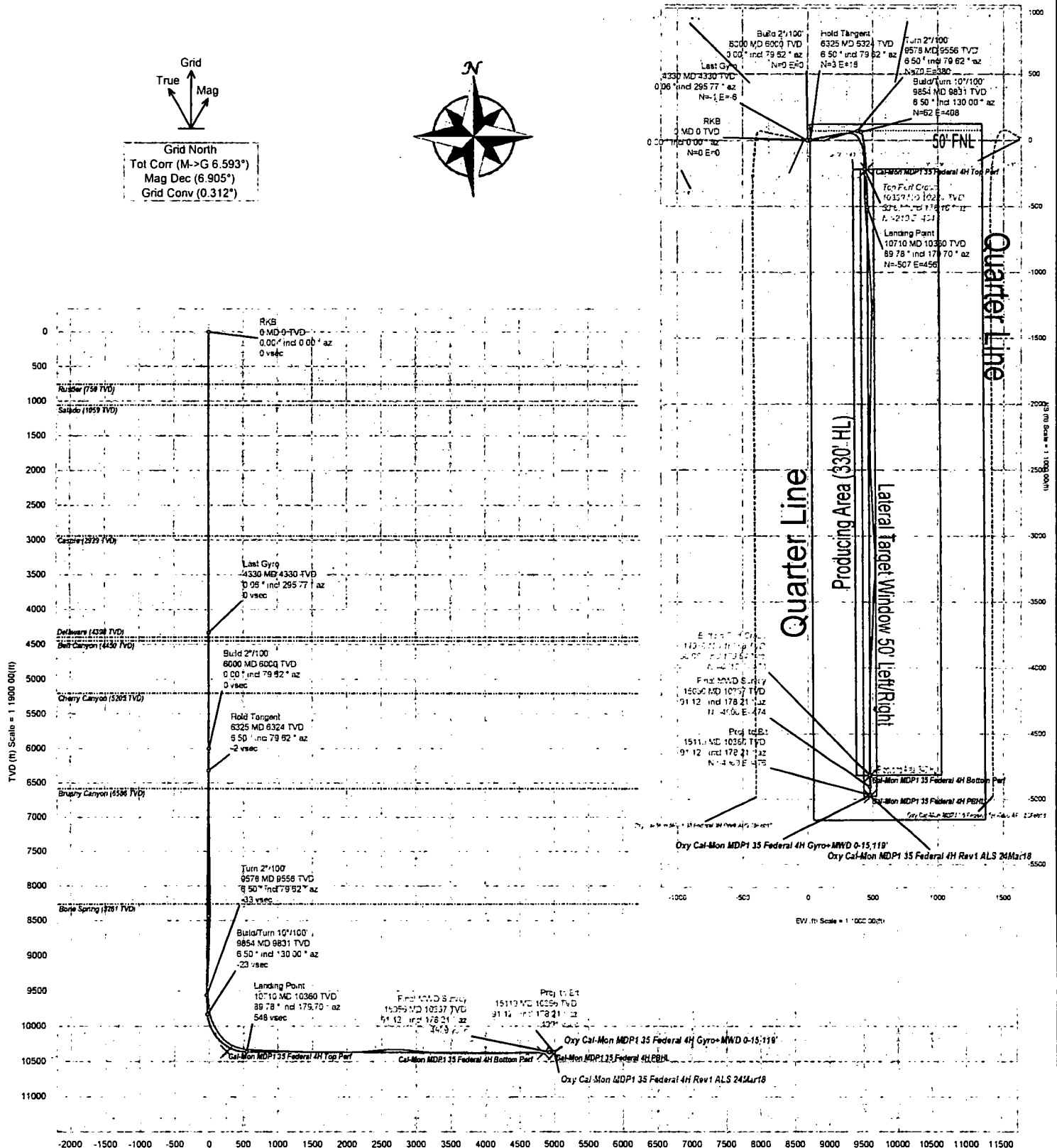
OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Cal-Mon MDP1 35 Federal 4H	NM Eddy County (NAD 83)	Oxy Cal-Mon MDP1 35 Federal 4H
Gravity & Magnetic Parameters			
Model: HGM 2018	Date: 23-Mar-2018	Surface Location: NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous: Oxy Cal-Mon MDP1 35 Federal 4H Rev1 ALS 24Mar18
MagDec: 6.905°	FS: 48070.09nT	Lat: N 32 16 4 27	Plan: Oxy Cal-Mon MDP1 35 Federal 4H Rev1 ALS 24Mar18
	Gravity FS: 998.444mgal (9.80665 Based)	Longitude: W 103 44 55.08	
		Northing: 451970.07m	
		Easting: 722959.88m	
		Grid Conv: 0.3122°	
		Scale Fact: 0.9999465	



Grid North
Tot Corr (M->G 6.593°)
Mag Dec (6.905°)
Grid Conv (0.312°)



Vertical Section (ft) Azm = 174.50° Scale = 1 1900 00(ft) Ogn = 0N/S, 0E/W

Oxy Cal-Mon MDP1 35 Federal 4H Gyro+MWD 0-15,119' Survey Geodetic Report

(Def Survey)



Report Date: April 13, 2018 - 08:41 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cal-Mon MDP1 35 Federal 4H / Oxy Cal-Mon MDP1 35 Federal 4H
 Well: Oxy Cal-Mon MDP1 35 Federal 4H
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-015-44774
 Survey Name: Oxy Cal-Mon MDP1 35 Federal 4H Gyro+MWD 0-15,119'
 Survey Date: March 23, 2018
 Tort / AHD / DOI / ERD Ratio: 196.016' / 5429.715 ft / 6.190 / 0.523
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 16' 4.27021", W 103° 44' 55.08145"
 Location Grid N/E Y/X: N 461670.400 NUS, E 722059.860 NUS
 CRS Grid Convergence Angle: 0.3122 °
 Grid Scale Factor: 0.9999465
 Version / Patch: 2 10.715.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 174.495 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3488.900 ft above MSL
 Seabed / Ground Elevation: 3462.300 ft above MSL
 Magnetic Declination: 6.905 °
 Total Gravity Field Strength: 998.4459mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48070.690 nT
 Magnetic Dip Angle: 60.021 °
 Declination Date: March 23, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.3122 °
 Total Corr Mag North->Grid North: 6.5926 °
 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	461670.40	722059.86	N 32 16 4.27	W 103 44 55.08
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461670.40	722059.86	N 32 16 4.27	W 103 44 55.08
	100.00	0.15	62.07	100.00	-0.04	0.05	0.09	0.20	461670.45	722059.94	N 32 16 4.27	W 103 44 55.08
	200.00	0.09	196.67	200.00	-0.01	0.03	0.18	0.22	461670.43	722060.04	N 32 16 4.27	W 103 44 55.08
	300.00	0.17	280.03	300.00	0.02	-0.02	0.01	0.18	461670.38	722059.87	N 32 16 4.27	W 103 44 55.08
	400.00	0.25	258.34	400.00	0.00	-0.04	-0.35	0.11	461670.36	722059.51	N 32 16 4.27	W 103 44 55.09
	500.00	0.31	245.32	500.00	0.12	-0.19	-0.81	0.09	461670.21	722059.05	N 32 16 4.27	W 103 44 55.09
	600.00	0.65	263.26	599.99	0.22	-0.37	-1.62	0.37	461670.03	722058.24	N 32 16 4.27	W 103 44 55.10
	700.00	0.85	267.60	699.99	0.19	-0.47	-2.92	0.21	461669.93	722058.94	N 32 16 4.27	W 103 44 55.12
	800.00	0.87	282.19	799.97	-0.08	-0.34	-4.41	0.22	461670.06	722055.45	N 32 16 4.27	W 103 44 55.13
	900.00	0.41	282.94	899.97	-0.43	-0.10	-5.50	0.46	461670.30	722054.36	N 32 16 4.27	W 103 44 55.15
	1000.00	0.10	157.10	999.97	-0.46	-0.10	-5.81	0.48	461670.30	722054.05	N 32 16 4.27	W 103 44 55.15
	1100.00	0.04	144.44	1099.97	-0.34	-0.21	-5.76	0.06	461670.19	722054.10	N 32 16 4.27	W 103 44 55.15
	1200.00	0.04	28.01	1199.97	-0.34	-0.21	-5.72	0.07	461670.19	722054.14	N 32 16 4.27	W 103 44 55.15
	1300.00	0.04	34.46	1299.97	-0.40	-0.15	-5.68	0.00	461670.25	722054.18	N 32 16 4.27	W 103 44 55.15
	1400.00	0.08	161.99	1399.97	-0.36	-0.19	-5.64	0.11	461670.21	722054.22	N 32 16 4.27	W 103 44 55.15
	1500.00	0.04	129.91	1499.97	-0.26	-0.27	-5.60	0.05	461670.13	722054.27	N 32 16 4.27	W 103 44 55.15
	1600.00	0.03	215.89	1599.97	-0.22	-0.32	-5.58	0.05	461670.08	722054.28	N 32 16 4.27	W 103 44 55.15
	1700.00	0.04	349.48	1699.97	-0.23	-0.30	-5.61	0.06	461670.10	722054.25	N 32 16 4.27	W 103 44 55.15
	1800.00	0.02	276.96	1799.97	-0.27	-0.27	-5.63	0.04	461670.13	722054.23	N 32 16 4.27	W 103 44 55.15
	1900.00	0.04	241.12	1899.97	-0.26	-0.28	-5.68	0.03	461670.12	722054.18	N 32 16 4.27	W 103 44 55.15
	2000.00	0.02	175.21	1999.97	-0.23	-0.32	-5.71	0.04	461670.08	722054.15	N 32 16 4.27	W 103 44 55.15
	2100.00	0.05	138.65	2099.97	-0.18	-0.37	-5.68	0.04	461670.03	722054.18	N 32 16 4.27	W 103 44 55.15
	2200.00	0.08	182.39	2199.97	-0.07	-0.47	-5.65	0.06	461669.93	722054.21	N 32 16 4.27	W 103 44 55.15
	2300.00	0.06	272.34	2299.97	-0.01	-0.54	-5.71	0.10	461669.86	722054.16	N 32 16 4.27	W 103 44 55.15
	2400.00	0.04	301.96	2399.97	-0.04	-0.52	-5.79	0.03	461669.88	722054.07	N 32 16 4.27	W 103 44 55.15
	2500.00	0.04	314.69	2499.97	-0.09	-0.47	-5.84	0.01	461669.93	722054.02	N 32 16 4.27	W 103 44 55.15
	2600.00	0.03	112.99	2599.97	-0.10	-0.46	-5.84	0.07	461669.94	722054.02	N 32 16 4.27	W 103 44 55.15
	2700.00	0.04	9.56	2699.97	-0.12	-0.44	-5.81	0.06	461669.96	722054.05	N 32 16 4.27	W 103 44 55.15
	2800.00	0.05	202.06	2799.97	-0.12	-0.44	-5.82	0.09	461669.96	722054.04	N 32 16 4.27	W 103 44 55.15
	2900.00	0.03	194.52	2899.97	-0.06	-0.51	-5.85	0.02	461669.89	722054.01	N 32 16 4.27	W 103 44 55.15
	3000.00	0.04	199.68	2999.97	0.00	-0.57	-5.86	0.01	461669.83	722054.00	N 32 16 4.27	W 103 44 55.15
	3100.00	0.05	142.33	3099.97	0.07	-0.63	-5.85	0.04	461669.77	722054.01	N 32 16 4.27	W 103 44 55.15
	3200.00	0.05	134.78	3199.97	0.14	-0.70	-5.79	0.01	461669.70	722054.07	N 32 16 4.27	W 103 44 55.15
	3300.00	0.07	260.14	3299.97	0.18	-0.74	-5.82	0.11	461669.66	722054.04	N 32 16 4.27	W 103 44 55.15
	3400.00	0.07	191.63	3399.97	0.24	-0.81	-5.89	0.08	461669.59	722053.97	N 32 16 4.26	W 103 44 55.15
	3500.00	0.04	147.22	3499.97	0.33	-0.90	-5.89	0.05	461669.50	722053.97	N 32 16 4.26	W 103 44 55.15
	3600.00	0.04	111.97	3599.97	0.38	-0.94	-5.84	0.02	461669.46	722054.02	N 32 16 4.26	W 103 44 55.15
	3700.00	0.05	59.97	3699.97	0.38	-0.93	-5.77	0.04	461669.47	722054.09	N 32 16 4.26	W 103 44 55.15
	3800.00	0.04	310.80	3799.97	0.33	-0.89	-5.75	0.07	461669.51	722054.11	N 32 16 4.26	W 103 44 55.15
	3900.00	0.05	72.09	3899.97	0.30	-0.85	-5.74	0.08	461669.55	722054.12	N 32 16 4.26	W 103 44 55.15
	4000.00	0.05	43.30	3999.97	0.26	-0.81	-5.67	0.02	461669.59	722054.19	N 32 16 4.26	W 103 44 55.15
	4100.00	0.08	53.94	4099.97	0.19	-0.73	-5.58	0.03	461669.67	722054.28	N 32 16 4.27	W 103 44 55.15
	4200.00	0.06	336.91	4199.97	0.11	-0.64	-5.55	0.09	461669.76	722054.32	N 32 16 4.27	W 103 44 55.15
	4300.00	0.05	317.09	4299.97	0.03	-0.56	-5.60	0.02	461669.84	722054.26	N 32 16 4.27	W 103 44 55.15
	4330.00	0.06	295.77	4329.97	0.01	-0.55	-5.62	0.08	461669.85	722054.24	N 32 16 4.27	W 103 44 55.15
	4352.00	0.08	150.62	4351.97	0.01	-0.56	-5.62	0.61	461669.84	722054.24	N 32 16 4.27	W 103 44 55.15
	4540.00	0.11	257.34	4539.97	0.16	-0.71	-5.73	0.08	461669.69	722054.13	N 32 16 4.27	W 103 44 55.15
	4635.00	0.13	269.72	4634.97	0.16	-0.73	-5.93	0.03	461669.67	722053.93	N 32 16 4.27	W 103 44 55.15
	4823.00	0.11	112.51	4822.97	0.22	-0.80	-5.98	0.13	461669.60	722053.88	N 32 16 4.26	W 103 44 55.15
	5012.00	0.00	146.64	5011.97	0.31	-0.87	-5.81	0.06	461669.53	722054.05	N 32 16 4.26	W 103 44 55.15
	5201.00	0.13	187.39	5200.97	0.52	-1.08	-5.84	0.07	461669.32	722054.02	N 32 16 4.26	W 103 44 55.15
	5295.00	0.20	24.74	5294.97	0.48	-1.04	-5.78	0.35	461669.36	722054.08	N 32 16 4.26	W 103 44 55.15
	5390.00	0.23	356.59	5389.96	0.15	-0.70	-5.72	0.11	461669.70	722054.14	N 32 16 4.27	W 103 44 55.15
	5484.00	0.22	0.31	5483.96	-0.22	-0.33	-5.73	0.02	461670.07	722054.13	N 32 16 4.27	W 103 44 55.15
	5578.00	0.20	0.65	5577.96	-0.56	0.01	-5.73	0.02	461670.41	722054.13	N 32 16 4.27	W 103 44 55.15
	5673.00	0.13	3.97	5672.96	-0.84	0.29	-5.72	0.07	461670.69	722054.14	N 32 16 4.28	W 103 44 55.15
	5767.00	0.23	342.97	5766.96	-1.13	0.57	-5.77	0.13	461670.97	722054.09	N 32 16 4.28	W 103 44 55.15
	5861.00	0.16	324.36	5860.96	-1.42	0.86	-5.90	0.10	461671.26	722053.96	N 32 16 4.28	W 103 44 55.15
	5956.00	0.17	356.68	5955.96	-1.68	1.11	-5.99	0.10	461671.51	722053.87	N 32 16 4.28	W 103 44 55.15
	6145.00	0.11	23.70	6144.96	-2.12	1.56	-5.93	0.05	461671.96	722053.93	N 32 16 4.29	W 103 44 55.15
	6239.00	0.16	38.38	6238.96	-2.29	1.74	-5.81	0.06	461672.14	722054.05	N 32 16 4.29	W 103 44 55.15
	6334.00	0.08	19.85	6333.96	-2.45	1.91	-5.71	0.09	461672.31	722054.15	N 32 16 4.29	W 103 44 55.15
	6428.00	0.13	324.84	6427.96	-2.60	2.06	-5.75	0.11	461672.46	722054.11	N 32 16 4.29	W 103 44 55.15
	6523.00	0.17	351.95	6522.96	-2.83	2.28	-5.83	0.08	461672.68	722054.03	N 32 16 4.29	W 103 44 55.15
	6617.00	0.08	304.98	6616.96	-3.02	2.46	-5.90	0.14	461672.86	722053.96	N 32 16 4.30	W 103 44 55.15
	6712.00	0.17	109.46	6711.96	-3.00	2.45	-5.82	0.26	461672.85	722054.04	N 32 16 4.30	W 103 44 55.15
	6807.00	0.63	134.54	6806.96	-2.54	2.04	-5.32	0.51	461672.44	722054.54	N 32 16 4.29	W 103 44 55.14
	6901.00	2.72	104.44	6900.91	-1.38	1.12	-2.79	2.34	461671.52	722057.07	N 32 16 4.28	W 103 44 55.11
	6990.00	4.77	97.17	6989.72	0.15	0.13	2.93	2.36	461670.53	722062.79	N 32 16 4.27	W 103 44 55.05
	7089.00	7.07	93.11	7088.18	1.97	-0.71	13.10	2.36	461669.69	722072.96	N 32 16 4.26	W 103 44 54.93
	7183.00	9.11	89.94	7181.24	3.54	-1.02	26.32	2.22	461669.38	722086.18	N 32 16 4.26	W 103 44 54.78
	7270.00	8.11	88.28	7267.26	4.60	-0.83	39.34	1.18	461669.57	722099.20	N 32 16 4.26	W 103 44 54.62
	7469.00	6.24	88.57	7464.70	6.29	-0.14	64.18	0.94	461670.26	722124.04	N 32 16 4.27	W 103 44 54.33

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7946.00	3.91	93.90	7939.87	11.67	-1.57	105.38	0.23	461668.83	722165.23	N 32 16 4.25 W 103 44 53.95	
	8127.00	3.23	94.06	8120.52	13.52	-2.35	116.62	0.38	461668.05	722176.47	N 32 16 4.24 W 103 44 53.72	
	8169.00	3.21	96.82	8162.45	13.97	-2.57	118.97	0.37	461667.83	722178.82	N 32 16 4.24 W 103 44 53.70	
	8222.00	3.03	96.12	8215.37	14.57	-2.90	121.83	0.35	461667.50	722181.69	N 32 16 4.24 W 103 44 53.66	
	8243.00	2.85	95.31	8236.34	14.78	-3.00	122.91	0.88	461667.40	722182.76	N 32 16 4.24 W 103 44 53.65	
	8432.00	5.08	67.01	8424.90	13.17	-0.19	135.30	1.53	461670.21	722195.15	N 32 16 4.26 W 103 44 53.51	
	8526.00	8.80	63.01	8518.19	9.30	4.69	145.55	3.99	461675.09	722205.40	N 32 16 4.31 W 103 44 53.39	
	8621.00	8.16	68.11	8612.15	4.73	10.50	158.28	1.04	461680.90	722218.13	N 32 16 4.37 W 103 44 53.24	
	8715.00	8.93	75.74	8705.11	1.74	14.78	171.54	1.46	461685.18	722231.39	N 32 16 4.41 W 103 44 53.08	
	8810.00	10.70	73.49	8798.72	-1.06	19.10	187.14	1.91	461689.50	722246.99	N 32 16 4.45 W 103 44 52.90	
	8904.00	8.76	74.74	8891.36	-3.94	23.47	202.42	2.08	461693.87	722262.27	N 32 16 4.49 W 103 44 52.72	
	8999.00	10.14	73.21	8985.07	-6.81	27.79	217.40	1.48	461698.19	722277.25	N 32 16 4.54 W 103 44 52.55	
	9093.00	11.71	71.68	9077.36	-10.54	33.18	234.38	1.70	461703.58	722294.23	N 32 16 4.59 W 103 44 52.35	
	9282.00	12.95	75.10	9262.00	-18.25	44.65	273.06	0.76	461715.05	722332.90	N 32 16 4.70 W 103 44 51.90	
	9376.00	11.41	73.08	9353.88	-21.81	50.07	292.13	1.70	461720.46	722339.47	N 32 16 4.75 W 103 44 51.68	
	9565.00	11.99	95.51	9539.05	-21.76	53.62	329.58	2.41	461724.02	722389.42	N 32 16 4.78 W 103 44 51.24	
	9660.00	12.02	107.44	9631.99	-16.02	49.71	348.84	2.61	461720.11	722408.68	N 32 16 4.75 W 103 44 51.02	
	9754.00	11.05	124.22	9724.12	-6.44	41.71	365.63	3.70	461712.11	722425.47	N 32 16 4.66 W 103 44 50.82	
	9849.00	13.60	138.28	9816.94	8.39	28.25	380.60	4.13	461698.65	722440.44	N 32 16 4.53 W 103 44 50.65	
	9943.00	23.03	150.41	9906.11	34.16	3.95	397.08	10.77	461674.35	722456.91	N 32 16 4.29 W 103 44 50.46	
	10038.00	30.02	157.49	9991.08	73.91	-34.22	415.38	8.06	461636.18	722475.21	N 32 16 3.91 W 103 44 50.25	
	10132.00	32.57	170.45	10071.49	121.70	-80.96	428.59	7.64	461589.45	722488.43	N 32 16 3.45 W 103 44 50.10	
	10226.00	40.08	180.58	10147.23	177.16	-136.30	432.49	10.20	461534.11	722492.33	N 32 16 2.90 W 103 44 50.05	
	10320.00	51.34	177.82	10212.77	244.11	-203.45	433.59	12.16	461466.96	722493.42	N 32 16 2.24 W 103 44 50.04	
	10415.00	63.00	179.34	10264.19	323.59	-283.12	435.49	12.35	461387.30	722495.33	N 32 16 1.45 W 103 44 50.03	
	10509.00	73.16	179.19	10299.24	410.38	-370.20	436.61	10.81	461300.22	722496.45	N 32 16 0.59 W 103 44 50.02	
	10604.00	80.54	177.25	10320.84	502.62	-462.60	439.51	8.02	461207.83	722499.34	N 32 15 59.67 W 103 44 49.99	
	10698.00	86.35	175.63	10331.56	595.91	-555.76	445.31	6.41	461114.67	722505.15	N 32 15 58.75 W 103 44 49.93	
	10745.00	88.80	175.29	10334.37	642.82	-602.53	449.03	1.20	461067.91	722508.86	N 32 15 58.29 W 103 44 49.89	
	10851.00	87.48	175.87	10339.66	748.67	-708.08	457.19	0.84	460962.36	722517.02	N 32 15 57.24 W 103 44 49.80	
	10946.00	87.92	176.33	10343.47	843.55	-802.78	463.64	0.67	460867.66	722523.48	N 32 15 56.30 W 103 44 49.73	
	11040.00	87.93	176.05	10346.88	937.45	-896.51	469.88	0.30	460773.94	722529.72	N 32 15 55.38 W 103 44 49.67	
	11135.00	87.98	176.54	10350.27	1032.34	-991.25	476.02	0.52	460679.20	722535.85	N 32 15 54.44 W 103 44 49.60	
	11229.00	88.15	174.94	10353.44	1126.26	-1084.94	483.00	1.71	460585.52	722542.83	N 32 15 53.51 W 103 44 49.53	
	11418.00	88.04	179.88	10359.73	1314.86	-1273.58	491.53	2.61	460396.89	722551.36	N 32 15 51.64 W 103 44 49.44	
	11512.00	88.93	181.79	10362.21	1408.24	-1367.53	490.16	2.24	460302.94	722549.99	N 32 15 50.71 W 103 44 49.46	
	11607.00	88.99	181.14	10363.94	1502.53	-1462.48	487.73	0.69	460208.00	722547.57	N 32 15 49.77 W 103 44 49.49	
	11701.00	89.10	180.65	10365.50	1595.93	-1556.46	486.26	0.53	460114.03	722546.10	N 32 15 48.84 W 103 44 49.52	
	11796.00	89.72	180.82	10366.48	1690.36	-1651.45	485.05	0.68	460019.05	722544.88	N 32 15 47.90 W 103 44 49.54	
	11890.00	90.00	180.80	10366.71	1783.79	-1745.44	483.72	0.30	459925.06	722543.55	N 32 15 46.97 W 103 44 49.56	
	12079.00	90.62	181.32	10365.69	1971.54	-1934.40	480.22	0.43	459736.11	722540.05	N 32 15 45.11 W 103 44 49.61	
	12267.00	91.63	181.00	10362.00	2158.24	-2122.32	476.42	0.56	459548.20	722536.25	N 32 15 43.25 W 103 44 49.67	
	12362.00	93.70	180.53	10357.58	2252.56	-2217.21	475.15	2.23	459453.32	722534.98	N 32 15 42.31 W 103 44 49.69	
	12456.00	96.24	179.93	10349.44	2345.73	-2310.84	474.77	2.78	459359.68	722534.60	N 32 15 41.38 W 103 44 49.70	
	12551.00	95.95	178.83	10339.35	2439.85	-2405.30	475.79	1.19	459265.23	722535.63	N 32 15 40.45 W 103 44 49.69	
	12645.00	94.09	177.86	10331.13	2533.27	-2498.89	478.50	2.23	459171.64	722538.33	N 32 15 39.52 W 103 44 49.67	
	12740.00	91.18	176.85	10326.76	2628.04	-2593.68	482.88	3.24	459076.86	722542.71	N 32 15 38.58 W 103 44 49.62	
	12834.00	87.81	177.12	10327.59	2721.94	-2687.53	487.82	3.60	458983.02	722547.65	N 32 15 37.65 W 103 44 49.57	
	12928.00	85.79	176.83	10332.83	2815.70	-2781.25	492.77	2.17	458889.30	722552.61	N 32 15 36.73 W 103 44 49.52	
	13023.00	84.38	176.40	10340.97	2910.28	-2875.73	498.36	1.55	458794.82	722558.19	N 32 15 35.79 W 103 44 49.46	
	13117.00	84.49	176.54	10350.09	3003.78	-2969.11	504.12	0.19	458701.45	722563.95	N 32 15 34.87 W 103 44 49.40	
	13212.00	84.55	176.76	10359.16	3098.28	-3063.52	509.65	0.24	458607.05	722569.48	N 32 15 33.93 W 103 44 49.34	
	13310.00	85.90	178.05	10367.32	3195.81	-3161.07	514.07	1.90	458509.50	722573.90	N 32 15 32.97 W 103 44 49.30	
	13405.00	88.48	181.46	10371.98	3290.27	-3255.94	514.47	4.50	458414.64	722574.30	N 32 15 32.03 W 103 44 49.30	
	13499.00	88.82	182.99	10374.19	3383.39	-3349.84	510.82	1.67	458320.75	722570.65	N 32 15 31.10 W 103 44 49.35	
	13594.00	89.05	182.97	10375.96	3477.33	-3444.69	505.89	0.24	458225.90	722565.72	N 32 15 30.16 W 103 44 49.41	
	13688.00	88.99	182.00	10377.57	3570.41	-3538.59	501.81	1.03	458132.01	722561.64	N 32 15 29.23 W 103 44 49.46	
	13783.00	89.83	182.45	10378.54	3664.54	-3633.51	498.12	1.00	458037.09	722557.95	N 32 15 28.29 W 103 44 49.51	
	13877.00	89.78	183.89	10378.86	3757.46	-3727.36	492.92	1.53	457943.24	722552.76	N 32 15 27.36 W 103 44 49.58	
	14062.00	89.27	182.30	10380.40	3940.37	-3912.08	482.94	0.90	457758.54	722542.77	N 32 15 25.54 W 103 44 49.71	
	14254.00	90.62	181.27	10380.58	4130.81	-4100.98	476.96	0.88	457566.65	722536.79	N 32 15 23.64 W 103 44 49.79	
	14349.00	91.29	181.03	10379.00	4225.15	-4198.95	475.05	0.75	457471.69	722534.88	N 32 15 22.70 W 103 44 49.82	
	14443.00	91.96	180.83	10376.33	4318.52	-4292.90	473.52	0.74	457377.74	722533.36	N 32 15 21.77 W 103 44 49.84	
	14538.00	92.92	180.49	10372.29	4412.89	-4387.80	472.43	1.07	457282.84	722532.26	N 32 15 20.83 W 103 44 49.86	
	14585.00	91.51	179.42	10370.47	4459.64	-4434.77	472.47	3.76	457235.88	722532.30	N 32 15 20.36 W 103 44 49.86	
	14680.00	89.55	179.79	10369.59	4554.25	-4529.76	473.12	2.10	457140.90	722532.96	N 32 15 19.42 W 103 44 49.86	
	14774.00	90.56	180.39	10369.50	4647.80	-4623.75	472.98	1.25	457046.90	722532.81	N 32 15 18.49 W 103 44 49.87	
	14869.00	90.73	180.06	10368.43	4742.32	-4718.75	472.60	0.39	456951.92	722532.44	N 32 15 17.55 W 103 44 49.88	
	14963.00	90.00	179.72	10367.83	4835.90	-4812.74	472.78	0.86	456857.92	722532.62	N 32 15 16.62 W 103 44 49.88	
Final MWD Survey	15056.00	91.12	178.21	10366.93	4928.61	-4905.72	474.46	2.02	456764.95	722534.30	N 32 15 15.70 W 103 44 49.87	
Proj. to Bit	15119.00	91.12	178.21	10365.69	4991.47	-4968.68	476.43	0.00	456702.00	722536.26	N 32 15 15.08 W 103 44 49.85	

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 Cal-Mon MDP1 35 Federal 4H Gyro-MWD 0-15,119'
	1	26.500	26.500	Act Sins	30.000	30.000 NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Cal-Mon MDP1 35 Federal 4H Gyro-MWD 0-15,119'
	1	26.500	4330.000	Act Sins	30.000	30.000 NAL_NSG+MSHOT	Original Borehole / Oxy Cal-Mon MDP1 35 Federal 4H Gyro-MWD
	1	4330.000	15119.000	Act Sins	30.000	30.000 NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cal-Mon MDP1 35 Federal 4H Gyro-MWD