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

30-015-44497

Well Reference:
8, 24S, 31E, Eddy NM
N 32.22578 W -103.80098

I, Cen Chen certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 06, 2017 through January 14, 2018, conduct or supervise the taking of the TelePacer surveys from a depth of 9660.00 feet to a depth of 15344.00 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 Patton MDP1 17 Federal 4H Well (Original Hole) API No. 30-015-44497 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
Cen Chen
FE

Subscribed and Sworn to before me this 5th day of February (month) 2018 (yr)

My Commission expires:
12-20-2020

Notary Public (signature)

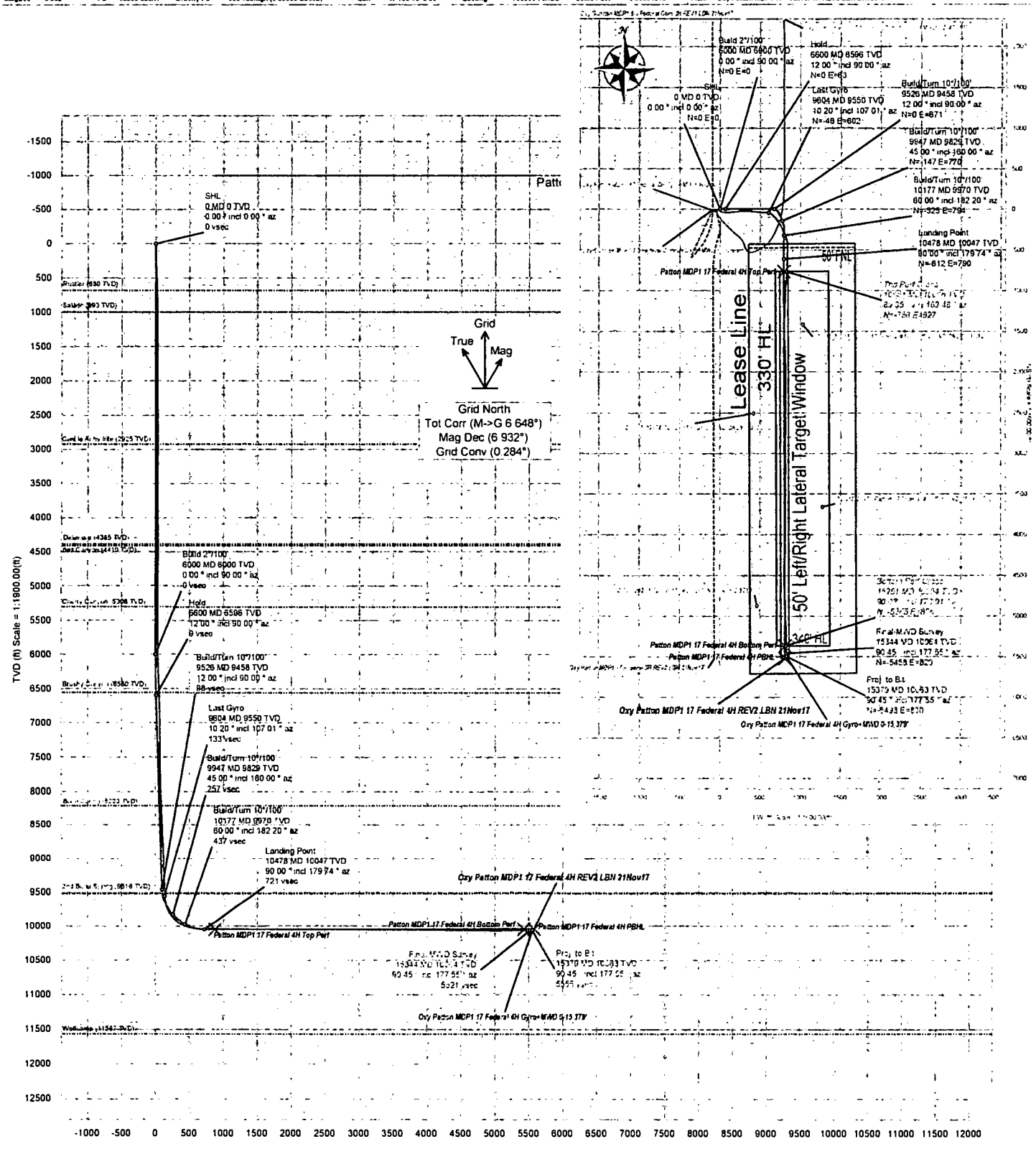
Adams County Colorado
(County State)

JENNIFER ALLEMAND
Notary Public
State of Colorado
Notary ID # 20164047961
My Commission Expires 12-20-2020

Schlumberger OXY

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Patton MDP1 17 Federal 4H	NM Eddy County (NAD 83)	Oxy Patton MDP1 17 Federal 4H

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet					Miscellaneous			
Model:	HDGM 2017	Dip:	59 883°	Date	02-Jan-2018	Lat	N 32 13 32 61	Northing	446280 6ftUS	Grid Conv:	0 2839°	Slot	Oxy Patton MDP1 17 Federal 4H	TVD Ref	RKB=26 5(3567 2ft above MSL)
MagDec	6 932°	FS	48059 68nT	Gravity FS	998 428mgn (9 80665 Based)	Lon	W 103 48 3 62	Easting	705956 76ftUS	Scale Fact	0 99994813	Plan	Oxy Patton MDP1 17 Federal 4H REV2 LBN 21Nov17		



Schlumberger

Oxy Patton MDP1 17 Federal 4H Gyro+MWD 0-15,379' Survey Geodetic Report

(Def Survey)

Report Date:	January 14, 2018 - 03 05 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	171 630 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0 000 ft, 0 000 ft
Structure / Slot:	Oxy Patton MDP1 17 Federal 4H / Oxy Patton MDP1 17 Federal 4H	**TVD Reference Datum:**	RKB=26 5'
Well:	Oxy Patton MDP1 17 Federal 4H	**TVD Reference Elevation:**	3567 200 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3540 700 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6 932 °
Survey Name:	Oxy Patton MDP1 17 Federal 4H Gyro+MWD 0-15,379'	**Total Gravity Field Strength:**	998 4279mgn (9 80665 Based)
Survey Date:	January 02, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	207 445 ° / 6188 099 ft / 6 293 / 0 615	**Total Magnetic Field Strength:**	48059 686 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59 983 °
Location Lat / Long:	N 32° 13' 32 81021", W 103° 48' 3 51963"	**Declination Date:**	January 02, 2018
Location Grid N/E Y/X:	N 446280 600 ftUS, E 705956 760 ftUS	**Magnetic Declination Model:**	HDGM 2017
CRS Grid Convergence Angle:	0 2839 °	**North Reference:**	Grid North
Grid Scale Factor:	0 99994013	**Grid Convergence Used:**	0 2839 °
Version / Patch:	2 10 696 0	**Total Corr Mag North->Grid North:**	6 6480 °
		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 ° ' ")
SHL	0 00	0 00	0 00	0 00	0 00	0 00	0 00	N/A	446280 60	705956 76	N 32 13 32 81	W 103 48 3 52
	26 60	0 00	0 00	26 60	0 00	0 00	0 00	0 00	446280 60	705956 76	N 32 13 32 81	W 103 48 3 52
	84 67	0 93	52 29	84 67	-0 23	0 29	0 37	1 60	446280 89	705957 13	N 32 13 32 81	W 103 48 3 52
	179 04	0 48	203 64	179 03	-0 27	0 39	0 82	1 45	446280 99	705957 58	N 32 13 32 81	W 103 48 3 51
	273 16	1 76	213 89	273 13	1 13	-1 17	-0 14	1 37	446279 43	705956 62	N 32 13 32 80	W 103 48 3 52
	367 63	2 28	210 26	367 55	3 67	-3 99	-1 90	0 57	446276 61	705954 86	N 32 13 32 77	W 103 48 3 54
	462 11	2 43	207 92	461 95	6 76	-7 39	-3 78	0 19	446273 21	705952 98	N 32 13 32 74	W 103 48 3 56
	554 63	2 40	204 87	554 38	9 96	-10 88	-5 52	0 14	446269 72	705951 24	N 32 13 32 70	W 103 48 3 58
	647 09	2 56	200 49	646 76	13 39	-14 57	-7 05	0 27	446266 03	705949 71	N 32 13 32 67	W 103 48 3 60
	739 61	2 46	191 00	739 19	17 07	-18 45	-8 16	0 46	446262 15	705948 60	N 32 13 32 63	W 103 48 3 62
	832 09	1 11	173 48	831 62	19 84	-21 29	-8 43	1 56	446259 31	705948 33	N 32 13 32 60	W 103 48 3 62
	924 63	0 36	131 82	924 15	20 96	-22 38	-8 12	0 94	446258 23	705948 65	N 32 13 32 59	W 103 48 3 62
	1017 13	0 30	105 40	1016 65	21 28	-22 63	-7 67	0 17	446257 97	705949 10	N 32 13 32 59	W 103 48 3 61
	1109 66	0 29	105 46	1109 18	21 47	-22 76	-7 21	0 01	446257 84	705949 55	N 32 13 32 59	W 103 48 3 60
	1202 16	0 31	130 80	1201 68	21 75	-22 99	-6 79	0 14	446257 62	705949 97	N 32 13 32 58	W 103 48 3 60
	1294 66	0 28	102 07	1294 18	22 02	-23 20	-6 38	0 16	446257 40	705950 38	N 32 13 32 58	W 103 48 3 60
	1387 09	0 29	108 80	1386 61	22 21	-23 32	-5 94	0 04	446257 28	705950 82	N 32 13 32 58	W 103 48 3 59
	1481 65	0 31	134 54	1481 17	22 52	-23 58	-5 53	0 14	446257 03	705951 23	N 32 13 32 58	W 103 48 3 59
	1576 09	0 32	136 96	1575 61	22 94	-23 95	-5 17	0 02	446256 65	705951 59	N 32 13 32 57	W 103 48 3 58
	1670 66	0 28	346 94	1670 17	22 93	-23 92	-5 04	0 61	446256 69	705951 72	N 32 13 32 57	W 103 48 3 58
	1765 09	0 19	113 14	1764 60	22 78	-23 75	-4 95	0 45	446256 85	705951 81	N 32 13 32 58	W 103 48 3 58
	1859 43	0 19	112 24	1858 94	22 94	-23 87	-4 66	0 00	446256 73	705952 10	N 32 13 32 57	W 103 48 3 58
	1953 93	0 28	349 01	1953 44	22 79	-23 71	-4 56	0 44	446256 90	705952 20	N 32 13 32 58	W 103 48 3 57
	2048 54	0 20	117 18	2048 05	22 66	-23 55	-4 46	0 46	446257 05	705952 31	N 32 13 32 58	W 103 48 3 57
	2142 99	0 13	134 59	2142 50	22 84	-23 71	-4 23	0 09	446256 90	705952 53	N 32 13 32 58	W 103 48 3 57
	2237 34	0 19	120 02	2236 85	23 02	-23 86	-4 02	0 08	446256 74	705952 74	N 32 13 32 57	W 103 48 3 57
	2331 62	0 19	121 37	2331 13	23 22	-24 02	-3 75	0 00	446256 58	705953 01	N 32 13 32 57	W 103 48 3 56
	2425 89	0 18	131 50	2425 40	23 43	-24 20	-3 51	0 04	446256 40	705953 25	N 32 13 32 57	W 103 48 3 56
	2520 35	0 19	122 28	2519 86	23 64	-24 38	-3 26	0 03	446256 22	705953 50	N 32 13 32 57	W 103 48 3 56
	2614 73	0 19	359 46	2614 24	23 59	-24 31	-3 13	0 35	446256 29	705953 63	N 32 13 32 57	W 103 48 3 56
	2709 03	0 20	1 69	2708 54	23 27	-23 99	-3 13	0 01	446256 62	705953 63	N 32 13 32 57	W 103 48 3 56
	2803 41	0 09	68 35	2802 92	23 10	-23 79	-3 06	0 19	446256 81	705953 70	N 32 13 32 57	W 103 48 3 56
	2897 82	0 36	240 64	2897 33	23 18	-23 91	-3 25	0 48	446256 69	705953 51	N 32 13 32 57	W 103 48 3 56
	2992 36	0 43	202 26	2991 87	23 60	-24 39	-3 64	0 28	446256 22	705953 12	N 32 13 32 57	W 103 48 3 56
	3086 83	0 25	16 50	3086 34	23 71	-24 52	-3 71	0 72	446256 09	705953 05	N 32 13 32 57	W 103 48 3 56
	3181 11	0 28	9 04	3180 62	23 31	-24 09	-3 62	0 05	446256 51	705953 14	N 32 13 32 57	W 103 48 3 56
	3275 64	0 44	292 50	3275 14	22 90	-23 72	-3 92	0 49	446256 88	705952 84	N 32 13 32 58	W 103 48 3 57
	3369 99	0 46	251 98	3369 49	22 78	-23 70	-4 61	0 33	446256 90	705952 15	N 32 13 32 58	W 103 48 3 57
	3464 48	0 28	233 65	3463 98	22 95	-23 96	-5 16	0 23	446256 64	705951 60	N 32 13 32 57	W 103 48 3 58
	3558 87	0 30	239 79	3558 37	23 15	-24 22	-5 56	0 04	446256 38	705951 20	N 32 13 32 57	W 103 48 3 59
	3653 31	0 34	148 56	3652 81	23 50	-24 58	-5 63	0 49	446256 02	705951 13	N 32 13 32 57	W 103 48 3 59
	3747 61	0 29	106 57	3747 11	23 86	-24 89	-5 25	0 24	446255 71	705951 51	N 32 13 32 56	W 103 48 3 58
	3842 08	0 31	119 00	3841 57	24 11	-25 08	-4 80	0 07	446255 52	705951 96	N 32 13 32 56	W 103 48 3 58
	3936 33	0 34	145 93	3935 82	24 52	-25 44	-4 42	0 16	446255 17	705952 34	N 32 13 32 56	W 103 48 3 57
	4030 51	0 34	145 00	4030 00	25 02	-25 90	-4 10	0 01	446254 71	705952 66	N 32 13 32 55	W 103 48 3 57
	4124 86	0 33	152 52	4124 35	25 53	-26 37	-3 82	0 05	446254 24	705952 94	N 32 13 32 55	W 103 48 3 57
	4219 12	0 40	149 81	4218 61	26 09	-26 89	-3 53	0 08	446253 71	705953 23	N 32 13 32 54	W 103 48 3 56
	4313 49	0 26	127 17	4312 98	26 55	-27 31	-3 19	0 20	446253 30	705953 57	N 32 13 32 54	W 103 48 3 56
	4407 84	0 24	110 31	4407 33	26 80	-27 50	-2 83	0 08	446253 10	705953 93	N 32 13 32 54	W 103 48 3 55
	4502 26	0 23	33 89	4501 74	26 75	-27 42	-2 54	0 31	446253 19	705954 22	N 32 13 32 54	W 103 48 3 55
	4596 79	0 28	8 64	4596 27	26 39	-27 03	-2 40	0 13	446253 57	705954 36	N 32 13 32 54	W 103 48 3 55
	4691 12	0 17	29 23	4690 60	26 06	-26 68	-2 30	0 14	446253 92	705954 46	N 32 13 32 55	W 103 48 3 55
	4785 68	0 34	298 69	4785 16	25 78	-26 42	-2 48	0 40	446254 18	705954 28	N 32 13 32 55	W 103 48 3 55
	4880 12	0 46	296 79	4879 60	25 39	-26 12	-3 06	0 13	446254 48	705953 70	N 32 13 32 55	W 103 48 3 56
	4974 42	0 32	316 32	4973 90	24 96	-25 76	-3 58	0 20	446254 85	705953 18	N 32 13 32 56	W 103 48 3 56
	5068 82	0 36	294 81	5068 30	24 58	-25 44	-4 03	0 14	446255 16	705952 73	N 32 13 32 56	W 103 48 3 57
	5163 20	0 35	295 77	5162 67	24 26	-25 19	-4 56	0 01	446255 41	705952 20	N 32 13 32 56	W 103 48 3 57
	5257 78	0 36	290 82	5257 25	23 95	-24 96	-5 10	0 03	446255 64	705951 66	N 32 13 32 56	W 103 48 3 58
	5351 98	0 37	292 69	5351 45	23 65	-24 74	-5 66	0 02	446255 86	705951 10	N 32 13 32 57	W 103 48 3 59
	5446 53	0 35	134 34	5446 00	23 72	-24 82	-5 73	0 75	446255 78	705951 03	N 32 13 32 56	W 103 48 3 59
	5541 03	0 36	132 05	5540 50	24 18	-25 22	-5 30	0 02	446255 38	705951 46	N 32 13 32 56	W 103 48 3 58
	5635 52	0 36	138 78	5634 99	24 66	-25 64	-4 89	0 04	446254 96	705951 87	N 32 13 32 56	W 103 48 3 58
	5729 80	0 35	132 19	5729 26	25 13	-26 06	-4 48	0 04	446254 54	705952 28	N 32 13 32 55	W 103 48 3 57
	5824 37	0 34	102 13	5823 83	25 45	-26 31	-3 99	0 19	446254 29	705952 77	N 32 13 32 55	W 103 48 3 57
	5918 54	0 35	122 81	5918 00	25 74	-26 53	-3 48	0 13	446254 07	705953 28	N 32 13 32 55	W 103 48 3 56
	6013 00	1 68	104 07	6012 44	26 46	-27 02	-1 89	1 43	446253 58	705954 87	N 32 13 32 54	W 103 48 3 54
	6107 47	3 49	104 75	6106 81	28 12	-28 09	2 23	1 92	446252 51	705958 99	N 32 13 32 53	W 103 48 3 50
	6201 80	5 49	104 79	6200 85	31 02	-29 97	9 37	2 12	446250 63	705966 13	N 32 13 32 51	W 103 48 3 41
	6296 23	7 21	102 93	6294 70	34 95	-32 45	19 52	1 83	446248 15	705976 28	N 32 13 32 49	W 103 48 3 29
	6390 56	9 07	101 75	6388 07	39 66	-35 29	32 57	1 98	446245 31	705989 32	N 32 13 32 46	W 103 48 3 14
	6484 90	10 49	96 99	6481 04	44 49	-37 85	48 37	1 73	446242 75	706005 13	N 32 13 32 43	W 103 48 2 96
	6579 40	10 80	93 75	6573 92	48 63	-39 48	65 75	0 71	446241 13	706022 50	N 32 13 32 42	W 103 48 2 76
	6673 92	10 79	93 80	6666 76	52 35	-40 64	83 41	0 01	446239 96	706040 17	N 32 13 32 40	W 103 48 2 55
	6768 22	10 77	88 64	6759 40	55 29	-41 02	101 03	1 02	446239 58	706057 78	N 32 13 32 40	W 103 48 2 35
	6862 69	10 68	83 00	6852 22	56 57	-39 74	118 54	1 11	446240 86	706075 29	N 32 13 32 41	W 103 48 2 14
	6957 08	10 76	83 41	6944 97	57 06	-37 66	135 97	0 12	446242 94	706092 73	N 32 13 32 43	W 103 48 1 94
	7051 66	10 68	83 75	7037 90	57 65	-35 70	153 46	0 11	446244 91	706110 21	N 32 13 32 45	W 103 48 1 74

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 ° ' ")
	7146 02	10 56	83 79	7130 64	58 30	-33 81	170 74	0 13	446246 79	706127 49	N 32 13 32 47	W 103 48 1 53
	7240 52	10 55	83 56	7223 54	58 92	-31 90	187 95	0 05	446248 70	706144 70	N 32 13 32 49	W 103 48 1 33
	7334 84	10 67	83 44	7316 25	59 49	-29 94	205 20	0 13	446250 67	706161 95	N 32 13 32 50	W 103 48 1 13
	7429 13	10.62	83 98	7408 91	60 12	-28 03	222 52	0 12	446252.57	706179 26	N 32 13 32 52	W 103 48 0 93
	7523 45	10 59	84 92	7501 62	60 97	-26 35	239 79	0 19	446254 25	706196 54	N 32 13 32 54	W 103 48 0 73
	7617 98	10 69	84 98	7594 53	61 99	-24 81	257 18	0 11	446255 79	706213 92	N 32 13 32 55	W 103 48 0 53
	7712 44	10 25	85 61	7687 42	63 08	-23 40	274 29	0 48	446257 20	706231 03	N 32 13 32 57	W 103 48 0 33
	7806 85	10 47	88 27	7780 29	64 66	-22 50	291 23	0 56	446258 10	706247 98	N 32 13 32 57	W 103 48 0 13
	7901 37	10 69	88 15	7873 20	66 64	-21 96	308 58	0 23	446258 64	706265 32	N 32 13 32 58	W 103 47 59 93
	7995 92	9 78	91 46	7966 25	69 01	-21 88	325 37	1 15	446258 72	706282 11	N 32 13 32 58	W 103 47 59 73
	8090 37	9 95	97 14	8059 30	72 56	-23 10	341 49	1 05	446257 50	706298 23	N 32 13 32 56	W 103 47 59 55
	8184 77	10 34	96 26	8152 23	76 88	-25 04	358 00	0 44	446255 57	706314 74	N 32 13 32 54	W 103 47 59 35
	8279 31	10 29	94 75	8245 24	80 94	-26 66	374 85	0 29	446253 94	706331 59	N 32 13 32 53	W 103 47 59 16
	8373 84	9 96	95 56	8338 30	84.83	-28.15	391 40	0 38	446252 45	706348 14	N 32 13 32 51	W 103 47 58 97
	8468 25	9.19	95 39	8431 39	88 59	-29 65	407 04	0 82	446250 95	706363 77	N 32 13 32 50	W 103 47 58 78
	8562 71	9 79	95 76	8524 56	92 34	-31 17	422 54	0 64	446249 44	706379 27	N 32 13 32 48	W 103 47 58 60
	8657 23	10 56	95 46	8617 59	96 37	-32 80	439 15	0 82	446247 81	706395 89	N 32 13 32 46	W 103 47 58 41
	8751 57	10 51	98 73	8710 34	100 97	-34 92	456 26	0 64	446245 68	706413 00	N 32 13 32 44	W 103 47 58 21
	8846 09	10.54	97 01	8803 27	105 80	-37 29	473 36	0 33	446243 31	706430 10	N 32 13 32 42	W 103 47 58 01
	8940 41	10 48	96 22	8896 01	110 25	-39 27	490 45	0 17	446241 33	706447 18	N 32 13 32 40	W 103 47 57.81
	9034 93	10 32	95 78	8988 97	114 48	-41 05	507 42	0 19	446239 55	706464 15	N 32 13 32 38	W 103 47 57 62
	9129 42	10.21	93 96	9081 95	118 34	-42 49	524 20	0 36	446238 12	706480 93	N 32 13 32 36	W 103 47 57 42
	9223 79	8 19	91 40	9175 10	121 27	-43 23	539 26	2 18	446237 38	706495 99	N 32 13 32 36	W 103 47 57 24
	9318 12	11 00	91 78	9268 10	123 99	-43 67	554 98	2.98	446236 93	706511 70	N 32 13 32 35	W 103 47 57 06
	9412 64	9 93	89 84	9361 05	126 75	-43 93	572 14	1 19	446236 67	706528 87	N 32 13 32 35	W 103 47 56 86
	9507 20	8 22	87 00	9454 42	128 54	-43 55	587 05	1 87	446237 05	706543.77	N 32 13 32.35	W 103 47 56 69
Last Gyro	9603 81	10 20	107 01	9549 81	132 86	-45 69	602 13	3 87	446234.91	706558 85	N 32 13 32 33	W 103 47 56 51
	9660 00	13 30	108 20	9604 81	137 88	-49 17	613 03	5 53	446231 43	706569 75	N 32 13 32 29	W 103 47 56 39
	9755 00	23 73	128 94	9694 86	156 89	-64 65	638 37	12 82	446215 95	706595 09	N 32 13 32.14	W 103 47 56.09
	9849 00	33 96	138 22	9777 13	192 82	-96 22	670 68	11 85	446184 39	706627 40	N 32 13 31 83	W 103 47 55 72
	9943 00	43 33	142.05	9850 48	242 91	-141 34	708 10	10 28	446139 27	706684 81	N 32 13 31.38	W 103 47 55 29
	10038 00	50 75	148 91	9915 22	305 31	-198 66	747 21	9 42	446081 96	706703 93	N 32 13 30 81	W 103 47 54 83
	10132 00	60 21	155 58	9968 47	378 30	-267 17	782 98	11 63	446013 44	706739 69	N 32 13 30 13	W 103 47 54 42
	10227 00	75 43	160 85	10004 25	463 63	-348 66	815 31	16 82	445931 96	706772 02	N 32 13 29 32	W 103 47 54 05
	10321.00	80 94	175 48	10023 59	555 18	-438 44	834 01	16 32	445842 19	706790 71	N 32 13 28 43	W 103 47 53 84
	10416 00	88 09	182.17	10032 67	648 88	-532 87	835 91	10 28	445747 76	706792 62	N 32 13 27 50	W 103 47 53 82
	10470 00	88 88	181 26	10034 10	702.02	-586 83	834 29	2.23	445693 81	706791 00	N 32 13 26 96	W 103 47 53 84
	10569 00	89 50	182 38	10035 50	799 45	-685 77	831 15	1 29	445594 88	706787 86	N 32 13 25 98	W 103 47 53 88
	10758 00	89 16	184 91	10037 71	984 28	-874 35	819 14	1 35	445406 30	706775 85	N 32 13 24 12	W 103 47 54 03
	10852 00	89.21	183 11	10039 05	1076 08	-968 11	812 56	1 92	445312 55	706769 27	N 32 13 23 19	W 103 47 54 12
	10946 00	89 16	182 50	10040 38	1168 29	-1061 99	807 96	0 65	445218 68	706764 67	N 32 13 22 26	W 103 47 54 18
	11135 00	89 05	182 67	10043 33	1353 82	-1250 77	799 44	0 11	445029 90	706756 15	N 32 13 20 39	W 103 47 54 29
	11324 00	89 61	179 98	10045 55	1540 09	-1439 69	795 07	1 45	444841 00	706751 78	N 32 13 18 53	W 103 47 54 35
	11418 00	89 55	180 11	10046 23	1633 08	-1533 69	795 00	0 15	444747 01	706751 71	N 32 13 17 60	W 103 47 54 35
	11607 00	89 27	173 66	10048 18	1821 17	-1722 30	805 26	3 42	444558 41	706761 97	N 32 13 15 73	W 103 47 54 25
	11702 00	89 38	179 86	10049 30	1915 74	-1817 10	810 63	6 53	444463 62	706767 34	N 32 13 14 79	W 103 47 54 19
	11796 00	90 06	179 07	10049 76	2008 86	-1911 09	811 51	1 11	444369 63	706768 22	N 32 13 13 86	W 103 47 54 18
	11985 00	89 89	180 06	10049 84	2196 05	-2100 08	812 94	0 53	444180 65	706769 65	N 32 13 11 99	W 103 47 54 18
	12079 00	89 89	179 99	10050 03	2289 04	-2194 08	812 90	0 07	444086 65	706769 61	N 32 13 11 06	W 103 47 54.18
	12268 00	91 12	180 63	10048 36	2475 87	-2383 07	811 88	0 73	443897 68	706768 59	N 32 13 9 19	W 103 47 54 21
	12457 00	89 78	179 96	10046 88	2662 70	-2572 05	810 90	0 79	443708 71	706767 61	N 32 13 7 32	W 103 47 54 23
	12646 00	89 38	180 14	10048 26	2849 65	-2761 05	810 74	0 23	443519 72	706767 45	N 32 13 5 45	W 103 47 54 24
	12740 00	88 94	180 08	10049 64	2942 62	-2855 04	810 56	0 47	443425 74	706767 27	N 32 13 4 52	W 103 47 54 25
	12835 00	89 10	180 29	10051 26	3036 55	-2950 02	810 25	0 28	443330 76	706766 96	N 32 13 3 58	W 103 47 54 26
	13024 00	90 62	179 42	10051 73	3223 59	-3139 01	810 73	0 93	443141 78	706767 44	N 32 13 1 71	W 103 47 54 26
	13118 00	89 27	180 46	10051 82	3316 60	-3233 01	810 83	1 81	443047 79	706767 54	N 32 13 0 78	W 103 47 54 27
	13213 00	89 94	180 96	10052 47	3410 41	-3328 00	809 65	0 88	442952 81	706766 36	N 32 12 59 84	W 103 47 54 29
	13307 00	90 17	180 42	10052 38	3503 24	-3421 99	808 52	0 62	442858 82	706765 23	N 32 12 58 91	W 103 47 54 31
	13401 00	89 16	180.14	10052 93	3596 16	-3515 99	808 06	1 11	442764 83	706764 77	N 32 12 57 98	W 103 47 54 32
	13495 00	89 10	179 98	10054 36	3689 14	-3609 98	807 96	0 18	442670 85	706764 67	N 32 12 57 05	W 103 47 54 32
	13590 00	90 84	180 36	10054 41	3783 08	-3704 97	807 68	1 87	442575 86	706764 39	N 32 12 56 11	W 103 47 54 33
	13684 00	89 61	179 63	10054 04	3876 08	-3798 97	807 69	1 52	442481 87	706764 40	N 32 12 55 18	W 103 47 54 34
	13779.00	89 55	179 22	10054 73	3970 20	-3893 96	808 64	0 44	442386 88	706765 35	N 32 12 54 24	W 103 47 54 33
	13875 00	89 16	180 35	10055 81	4065 22	-3989 95	809 00	1 25	442290 89	706765 71	N 32 12 53 29	W 103 47 54 33
	13970 00	89 66	181 43	10056 79	4158 97	-4084 94	807 53	1 25	442195 92	706764 24	N 32 12 52 35	W 103 47 54 36
	14064 00	89 50	181 19	10057 48	4251 63	-4178 91	805 38	0 31	442101 95	706762 09	N 32 12 51 42	W 103 47 54 39
	14159 00	89 61	181 49	10058 22	4345 27	-4273 88	803 16	0 34	442006 99	706759 87	N 32 12 50 48	W 103 47 54 42
	14253 00	89 50	181 46	10058 95	4437 88	-4367 85	800 74	0 12	441913 03	706757 45	N 32 12 49 55	W 103 47 54 45
	14347 00	89 22	181 24	10060 00	4530 53	-4461 81	798 52	0 38	441819 06	706755 23	N 32 12 48 62	W 103 47 54 48
	14442 00	89 61	179 39	10060 97	4624 43	-4556 80	798 00	1 99	441724 08	706754 71	N 32 12 47 68	W 103 47 54 49
	14536 00	89 05	176 61	10062 07	4717 83	-4650 73	801 28	3 02	441630 16	706757 99	N 32 12 46 75	W 103 47 54 46
	14725 00	89 66	179 06	10064 20	4905 70	-4839 57	808 42	1 34	441441 33	706765 13	N 32 12 44 88	W 103 47 54 39
	14819 00	90 17	179 00	10064 34	4998 91	-4933 55	810 01	0 55	441347 35	706766 72	N 32 12 43 95	W 103 47 54 38
	15009 00	89 94	175 75	10064 15	5187 93	-5123 33	818 71	1 71	441157 59	706775 42	N 32 12 42 07	W 103 47 54 29
	15103 00	90 22	178 29	10064 02	5281 51	-5217 19	823 60	2 72	441063 73	706780 31	N 32 12 41 15	W 103 47 54 23
	15197 00	89 78	179 70	10064 02	5374 73	-5311.18	825 24	1 57	440969 75	706781 95	N 32 12 40 22	W 103 47 54 22
Final MWD Survey	15344 00	90 45	177 55	10063 73	5520 63	-5458 12	828 77	1 53	440822 81	706785 48	N 32 12 38 76	W 103 47 54 19
Proj. to Bit	15379 00	90 45	177 55	10063 45	5555 44	-5493 09	830 27	0 00	440787 85	706786 98	N 32 12 38 42	W 103 47 54 17

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)	(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 Patton MDP1 17 Federal 4H Gyro+MWD 0-15,379'
	1	26 500	26 500	Act Stns	30 000	30 000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 17 Federal 4H Gyro+MWD 0-15,379'
	1	26 500	9603 810	Act Stns	30 000	30 000	NAL_NSG+MSHOT	Original Borehole / Oxy Patton MDP1 17 Federal 4H Gyro+MWD
	1	9603.810	15379.000	Act Stns	30 000	30 000	NAL_MWD_PLUS_0 5_DEG	Original Borehole / Oxy Patton MDP1 17 Federal 4H Gyro+MWD