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Survey Company: MS Energy Services
MWD Surveyor Name: Michael Pullin
Survey Type: MWD
Operating Company: Murchison Oil & Gas Inc.
Well Name & Number: Jawbone State 2H
API Number: 30-015-43984
Surveyed Depths: 416' – 11,932' MD

Dates Performed: 01/26/2017 – 02/11/2017
Location: Eddy County, NM

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Energy Services; that I am authorized and qualified to make this report and that I have reviewed this report and find it conforms to the principles and procedures as set forth by MS Energy Services.

Digitally signed by: _____
Title: MWD Field Specialist
Date: 2017-03-28
Email: mpullin@msenergyservices.com

NM OIL CONSERVATION
ARTESIA DISTRICT

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SURVEY CALCULATION PROGRAM

3/2/17 11:46



V08.04.02

Company: Murchison Oil & Gas Inc.

Well Name: Jawbone State 2H

Location: Eddy County, NM

Rig: Nabors M55

Job Number: DDMO-170122

API #: 30-015-43984

Magnetic Declination: 7.34

REFERENCED TO GRID NORTH

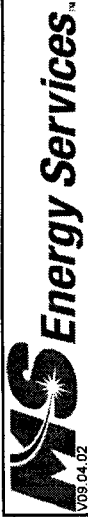
Vertical Section Azimuth: 182.92

Proposed Direction: 182.92

Survey Calculation Method: Minimum Curvature

#	Depth Feet	Inc		Azim Degrees	TVD Feet	N/S		Surface Vert Sec	E/W		Distance	Closure		DLS/ 100	BUR/ 100'
		MD				INC	AZM		TVD	N/S		EW	VS		
PTB:		11,985			92.3		180.2		7200.02		-4847.39		-250.35		4853.84

TIE IN	276	0.40	28.30	276.00	1.27	0.47	0.85	2.46	0.85	2.56	1.35	20.31	0.18	0.14
1	416	0.60	11.50	415.99	2.42	0.85	0.50	-2.46	0.50	2.56	2.56	19.32	0.86	0.56
2	506	1.10	329.00	505.99	3.62	0.50	-0.86	-3.64	-0.86	3.65	3.65	7.81	0.82	0.82
3	604	1.90	327.40	603.95	5.80	-0.86	-2.54	-5.74	-2.54	5.86	5.86	351.53	0.16	0.10
4	700	2.00	330.70	699.90	8.60	-2.54	-4.00	-8.46	-4.00	8.96	8.96	343.54	0.32	-0.32
5	795	1.70	332.60	794.85	11.29	-4.00	-5.50	-11.08	-5.50	11.98	11.98	340.50	0.79	-0.42
6	890	1.30	308.10	889.81	13.21	-5.50	-7.12	-12.91	-7.12	14.31	14.31	337.41	0.49	-0.32
7	985	1.00	290.00	984.79	14.16	-7.12	-8.79	-13.78	-8.79	15.85	15.85	333.29	0.11	0.10
8	1,081	1.10	288.10	1080.78	14.73	-8.79	-10.02	-14.26	-10.02	17.15	17.15	329.19	0.65	-0.63
9	1,176	0.50	298.30	1175.77	15.21	-10.02	-10.38	-14.68	-10.38	18.21	18.21	326.63	0.74	-0.21
10	1,271	0.30	178.70	1270.77	15.16	-10.38	-9.96	-14.61	-9.96	18.37	18.37	325.61	0.58	0.21
11	1,366	0.50	94.70	1365.77	14.88	-9.96	-8.88	-14.35	-8.88	17.90	17.90	326.20	0.32	0.32
12	1,461	0.80	94.20	1460.76	14.79	-8.88	-7.15	-14.32	-7.15	17.26	17.26	329.01	0.53	0.53
13	1,556	1.30	91.50	1555.74	14.72	-7.15	-5.14	-14.33	-5.14	16.36	16.36	334.10	0.23	-0.21
14	1,652	1.10	95.90	1651.72	14.59	-5.14	-4.09	-14.31	-4.09	15.47	15.47	340.60	1.00	-0.74
15	1,747	0.40	153.60	1746.71	14.20	-4.09	-4.09	-13.98	-4.09	14.78	14.78	343.95	0.39	0.11
16	1,842	0.50	200.80	1841.71	13.52	-4.09	-4.20	-13.29	-4.20	14.12	14.12	343.18	0.36	0.23
17	1,930	0.70	177.30	1929.71	12.62	-4.20	-3.94	-12.39	-3.94	13.30	13.30	341.61	0.25	-0.21
18	2,027	0.50	164.80	2026.70	11.62	-3.94	-3.93	-11.40	-3.93	12.31	12.31	340.75	0.17	0.10
19	2,123	0.60	178.70	2122.70	10.72	-3.93	-3.84	-10.50	-3.84	11.42	11.42	339.83	0.11	-0.11
20	2,218	0.50	180.50	2217.69	9.80	-3.84	-3.69	-9.59	-3.69	10.56	10.56	338.16	0.15	0.11
21	2,313	0.60	169.20	2312.69	8.90	-3.69	-3.62	-8.69	-3.62	9.69	9.69	336.67	0.05	0.00
22	2,408	0.60	173.30	2407.68	7.92	-3.62	-3.59	-7.72	-3.59	8.74	8.74	335.03	0.12	0.11
23	2,503	0.70	178.80	2502.68	6.84	-3.59	-3.55	-6.65	-3.55	7.74	7.74	332.14	0.42	-0.42
24	2,599	0.30	175.60	2598.67	6.01	-3.55	-3.56	-5.82	-3.56	7.00	7.00	329.16	0.12	0.11
25	2,694	0.40	184.20	2693.67	5.43	-3.56	-3.77	-5.24	-3.77	6.51	6.51	326.51	0.15	0.11
26	2,789	0.50	171.00	2788.67	4.69	-3.77	-3.79	-4.50	-3.79	5.88	5.88	322.86	0.21	-0.11
27	2,884	0.40	193.30	2883.67	3.96	-3.79	-4.09	-3.14	-4.09	5.32	5.32	318.00	0.10	0.00
28	2,979	0.40	207.20	2978.66	3.34	-4.09	-4.34	-2.44	-4.34	5.05	5.05	311.37	0.12	0.11
29	3,074	0.50	200.40	3073.66	2.66	-4.34	-4.79	-1.64	-4.79	4.87	4.87	303.01	0.04	0.00
30	3,169	0.50	195.70	3168.66	1.87	-4.79	-5.50	-0.75	-5.50	4.73	4.73	293.27	0.30	0.21
31	3,264	0.70	215.10	3263.65	0.99	-5.50	-6.22	0.20	-6.22	4.89	4.89	281.72	0.07	0.00
32	3,359	0.70	220.60	3358.65	0.08	-6.22		1.15		5.50	5.50	270.82	0.06	0.00
33	3,454	0.70	215.90	3453.64	-0.83					6.27	6.27	262.38		



SURVEY CALCULATION PROGRAM

3/2/17 11:46

Company:	Murchison Oil & Gas Inc.
Well Name:	Jawbone State 2H
Location:	Eddy County, NM
Rig:	Nabors M55
Job Number:	DDMO-170122
API #:	30-015-43984

ATTACHED IS A REQUEST FOR PROPOSALS FOR THE
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037

Proposed Direction:	182.92
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD		INC		AZM		TVD		N/S		EW		VS	
	Depth Feet	Inc Degrees	Azim Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure		DLS/ 100'	BUR/ 100'			
								Distance	Azm					
#	11,985			92.3	180.2	7200.02	-4847.39	-250.35				4853.84		
34	3,549	0.80	223.80	3548.63	-1.78	-7.02	2.14	7.24	255.76	0.15	0.11			
35	3,645	0.80	225.40	3644.62	-2.74	-7.96	3.14	8.42	251.03	0.02	0.00			
36	3,740	0.70	214.00	3739.61	-3.68	-8.76	4.12	9.50	247.19	0.19	-0.11			
37	3,835	0.70	215.40	3834.61	-4.64	-9.42	5.11	10.50	243.79	0.02	0.00			
38	3,930	0.80	220.60	3929.60	-5.61	-10.18	6.12	11.63	241.14	0.13	0.11			
39	4,025	0.80	224.80	4024.59	-6.59	-11.08	7.14	12.89	239.27	0.06	0.00			
40	4,121	1.00	218.10	4120.58	-7.72	-12.07	8.33	14.33	237.39	0.24	0.21			
41	4,216	0.80	218.10	4215.56	-8.90	-12.99	9.55	15.75	235.60	0.21	-0.21			
42	4,311	0.80	206.10	4310.56	-10.01	-13.69	10.70	16.96	233.82	0.18	0.00			
43	4,406	1.00	209.30	4405.54	-11.33	-14.39	12.05	18.32	231.78	0.22	0.21			
44	4,501	1.20	213.50	4500.53	-12.88	-15.35	13.65	20.04	229.98	0.23	0.21			
45	4,596	1.10	212.90	4595.51	-14.48	-16.39	15.30	21.87	228.54	0.11	-0.11			
46	4,692	1.00	195.30	4691.49	-16.06	-17.11	16.91	23.47	226.81	0.35	-0.10			
47	4,787	1.10	206.80	4786.48	-17.67	-17.74	18.56	25.04	225.11	0.24	0.11			
48	4,882	2.70	30.10	4881.45	-16.55	-17.03	17.40	23.75	225.81	4.00	1.68			
49	4,977	2.40	26.50	4976.35	-12.84	-15.02	13.59	19.76	229.48	0.36	-0.32			
50	5,072	2.20	23.10	5071.28	-9.38	-13.42	10.05	16.37	235.05	0.25	-0.21			
51	5,168	1.80	17.00	5167.22	-6.24	-12.25	6.86	13.75	243.00	0.47	-0.42			
52	5,263	1.60	11.50	5262.18	-3.52	-11.55	4.10	12.08	253.07	0.27	-0.21			
53	5,359	1.40	9.10	5358.14	-1.04	-11.10	1.61	11.15	264.62	0.22	-0.21			
54	5,454	1.30	7.90	5453.12	1.17	-10.77	-0.62	10.83	276.19	0.11	-0.11			
55	5,549	1.10	7.20	5548.10	3.14	-10.51	-2.60	10.97	286.64	0.21	-0.21			
56	5,645	3.40	334.00	5644.02	6.61	-11.64	-6.01	13.39	299.61	2.66	2.40			
57	5,740	4.30	336.50	5738.80	12.41	-14.29	-11.67	18.93	310.97	0.96	0.95			
58	5,842	5.80	336.40	5840.41	20.64	-17.88	-19.70	27.31	319.10	1.47	1.47			
59	5,932	8.70	325.00	5929.68	30.39	-23.61	-29.15	38.48	322.16	3.58	3.22			
60	6,023	10.50	324.20	6019.40	42.75	-32.41	-41.05	53.65	322.84	1.98	1.98			
61	6,113	11.60	328.20	6107.73	57.09	-41.97	-54.88	70.86	323.68	1.49	1.22			
62	6,204	13.40	332.40	6196.58	74.22	-51.68	-71.49	90.44	325.15	2.21	1.98			
63	6,295	14.70	329.50	6284.85	93.51	-62.43	-90.21	112.43	326.27	1.62	1.43			
64	6,413	17.20	331.50	6398.30	121.75	-78.35	-117.60	144.78	327.24	2.17	2.12			
65	6,509	14.20	323.80	6490.72	143.73	-92.08	-138.85	170.70	327.35	3.80	-3.13			
66	6,556	11.70	297.40	6536.56	150.58	-99.73	-145.31	180.61	326.48	13.52	-5.32			
67	6,604	13.70	266.00	6583.44	152.43	-109.73	-146.64	187.82	324.25	14.77	4.17			



SURVEY CALCULATION PROGRAM

3/2/17 11:46

Company:	Murchison Oil & Gas Inc.
Well Name:	Jawbone State 2H
Location:	Eddy County, NM
Rig:	Nabors M55
Job Number:	DDMO-170122
API #:	30-015-43984

Magnetic Declination: 7.34

REFERENCED TO GRID NORTH

Proposed Direction: 182.92

182.92

Vertical Section Azimuth: Minimum Curvature

Survey Calculation Method:

PTB:	MD	11,985	INC	92.3	Azm	247.20	TVD	Feet	NS	Feet	EW	Feet	Surface	Vert Sec	Distance	Closure	Azm	EW	VS
									180.2									-250.35	4853.84

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	NS Feet	EW Feet	Surface Vert Sec	Distance	Closure	Azm	DLS/ 100	BUR/ 100'
68	6,651	16.70	247.20	6628.82	149.42	-121.52	-143.04	192.60	320.88	320.88	12.20	6.38
69	6,699	18.50	233.60	6674.59	142.23	-134.01	-135.21	195.42	316.70	316.70	9.33	3.75
70	6,746	19.20	220.70	6719.09	131.94	-145.06	-124.38	196.08	312.29	312.29	8.97	1.49
71	6,795	20.10	208.20	6765.25	118.40	-154.30	-110.39	194.49	307.50	307.50	8.76	1.84
72	6,842	22.90	201.80	6808.98	102.79	-161.51	-94.43	191.44	302.47	302.47	7.76	5.96
73	6,890	26.60	195.60	6852.57	83.76	-167.87	-75.10	187.61	296.52	296.52	9.41	7.71
74	6,937	29.00	191.70	6894.15	62.46	-173.01	-53.57	183.94	289.85	289.85	6.40	5.11
75	6,985	32.30	187.00	6935.44	38.33	-176.94	-29.26	181.04	282.22	282.22	8.49	6.87
76	7,031	34.00	185.30	6973.96	13.32	-179.62	-4.15	180.12	274.24	274.24	4.21	3.70
77	7,080	37.30	184.80	7013.77	-15.12	-182.13	24.38	182.76	265.25	265.25	6.76	6.73
78	7,127	41.80	185.40	7050.00	-44.92	-184.80	54.28	190.18	256.34	256.34	9.61	9.57
79	7,175	46.00	185.80	7084.58	-78.04	-188.05	87.52	203.60	247.46	247.46	8.77	8.75
80	7,222	51.40	183.20	7115.59	-113.22	-190.79	122.80	221.85	239.31	239.31	12.22	11.49
81	7,270	57.10	181.90	7143.62	-152.12	-192.50	161.73	245.36	231.68	231.68	12.08	11.88
82	7,317	62.10	182.70	7167.40	-192.62	-194.14	202.26	273.48	225.23	225.23	10.74	10.64
83	7,365	67.70	183.80	7187.75	-236.00	-196.61	245.70	307.16	219.80	219.80	11.85	11.67
84	7,412	70.70	183.80	7204.44	-279.83	-199.52	289.63	343.68	215.49	215.49	6.38	6.38
85	7,461	75.40	183.10	7218.72	-326.60	-202.34	336.49	384.20	211.78	211.78	9.69	9.59
86	7,507	79.80	182.10	7228.60	-371.47	-204.37	381.40	423.98	208.82	208.82	9.80	9.57
87	7,556	85.00	181.50	7235.08	-420.00	-205.89	429.94	467.75	206.12	206.12	10.68	10.61
88	7,603	87.70	181.60	7238.07	-466.88	-207.16	476.83	510.78	203.93	203.93	5.75	5.74
89	7,650	88.30	181.20	7239.71	-513.84	-208.31	523.79	554.46	202.07	202.07	1.53	1.28
90	7,745	89.40	180.80	7241.62	-608.81	-209.97	618.71	644.00	199.03	199.03	1.23	1.16
91	7,840	90.10	180.40	7242.03	-703.80	-210.96	713.63	734.74	196.69	196.69	0.85	0.74
92	7,935	91.30	179.90	7240.87	-798.79	-211.21	808.51	826.24	194.81	194.81	1.37	1.26
93	8,030	89.50	180.50	7240.21	-893.78	-211.54	903.40	918.48	193.32	193.32	2.00	-1.89
94	8,126	89.60	181.40	7240.96	-989.77	-213.14	999.34	1012.45	192.15	192.15	0.94	0.10
95	8,219	91.50	181.90	7240.07	-1082.72	-215.81	1092.31	1104.02	191.27	191.27	2.11	2.04
96	8,314	90.60	180.50	7238.33	-1177.68	-217.80	1187.24	1197.65	190.48	190.48	1.75	-0.95
97	8,410	91.70	179.60	7236.40	-1273.66	-217.89	1283.10	1292.16	189.71	189.71	1.48	1.15
98	8,505	89.60	178.80	7235.32	-1368.64	-216.56	1377.89	1385.66	188.99	188.99	2.37	-2.21
99	8,599	90.00	178.50	7235.65	-1462.61	-214.34	1471.63	1478.23	188.34	188.34	0.53	0.43
100	8,695	90.80	178.40	7234.98	-1558.57	-211.75	1567.33	1572.89	187.74	187.74	0.84	0.83
101	8,790	91.40	178.80	7233.16	-1653.52	-209.43	1662.05	1666.73	187.22	187.22	0.76	0.63



SURVEY CALCULATION PROGRAM

3/2/17 11:46

Company: Murchison Oil & Gas Inc.
Well Name: Jawbone State 2H
Location: Eddy County, NM
Rig: Nabors M55
Job Number: DDMO-170122
API #: 30-015-43984

Magnetic Declination: 7.34

REFERENCED TO GRID NORTH

Proposed Direction: 182.92

Minimum Curvature

Survey Calculation Method:

#	Depth Feet	Inc		Azimuth Degrees	TVD Feet	N/S		E/W Feet	Surface Vert Sec	Distance		Closure		DLS/ 100'	BUR/ 100'
		MD	11,985		INC	AZM	180.2			TVD	7200.02	N/S	-4847.39		
102	8,883	89.80	179.10	7232.18	-1746.50	-207.72	1754.81	186.78	1758.81	186.78	1758.81	186.78	1758.81	1.75	-1.72
103	8,978	90.90	179.60	7231.60	-1841.49	-206.65	1849.63	186.40	1853.05	186.40	1853.05	186.40	1853.05	1.27	1.16
104	9,074	91.90	179.60	7229.26	-1937.46	-205.98	1945.43	186.07	1948.38	186.07	1948.38	186.07	1948.38	1.04	1.04
105	9,169	89.30	180.90	7228.26	-2032.44	-206.39	2040.32	185.80	2042.89	185.80	2042.89	185.80	2042.89	3.06	-2.74
106	9,268	90.30	180.30	7228.61	-2131.43	-207.43	2139.23	185.56	2141.50	185.56	2141.50	185.56	2141.50	1.18	1.01
107	9,363	90.70	180.00	7227.78	-2226.43	-207.68	2234.12	185.33	2236.09	185.33	2236.09	185.33	2236.09	0.53	0.42
108	9,459	91.70	180.00	7225.77	-2322.41	-207.68	2329.97	185.11	2331.67	185.11	2331.67	185.11	2331.67	1.04	1.04
109	9,554	89.40	181.40	7224.86	-2417.39	-208.84	2424.89	184.94	2426.39	184.94	2426.39	184.94	2426.39	2.83	-2.42
110	9,648	90.00	181.50	7225.35	-2511.36	-211.22	2518.85	184.81	2520.22	184.81	2520.22	184.81	2520.22	0.65	0.64
111	9,743	90.80	181.50	7224.69	-2606.32	-213.70	2613.82	184.69	2615.07	184.69	2615.07	184.69	2615.07	0.84	0.84
112	9,839	92.00	181.30	7222.34	-2702.26	-216.05	2709.76	184.57	2710.88	184.57	2710.88	184.57	2710.88	1.27	1.25
113	9,934	91.20	181.90	7219.69	-2797.19	-218.70	2804.69	184.47	2805.72	184.47	2805.72	184.47	2805.72	1.05	-0.84
114	10,029	88.90	181.90	7219.61	-2892.13	-221.85	2899.67	184.39	2900.62	184.39	2900.62	184.39	2900.62	2.42	-2.42
115	10,124	89.90	181.90	7220.60	-2987.07	-225.00	2994.65	184.31	2995.53	184.31	2995.53	184.31	2995.53	1.05	1.05
116	10,219	90.70	181.80	7220.10	-3082.02	-228.06	3089.63	184.23	3090.44	184.23	3090.44	184.23	3090.44	0.85	0.84
117	10,315	91.90	182.00	7217.92	-3177.94	-231.25	3185.59	184.16	3186.34	184.16	3186.34	184.16	3186.34	1.27	1.25
118	10,409	90.00	181.50	7216.37	-3271.88	-234.12	3279.55	184.09	3280.24	184.09	3280.24	184.09	3280.24	2.09	-2.02
119	10,505	91.20	181.80	7215.36	-3367.83	-236.88	3375.52	184.02	3376.15	184.02	3376.15	184.02	3376.15	1.29	1.25
120	10,600	89.00	180.80	7215.19	-3462.80	-239.04	3470.48	183.95	3471.04	183.95	3471.04	183.95	3471.04	2.54	-2.32
121	10,694	89.90	181.00	7216.10	-3556.78	-240.51	3564.41	183.87	3564.90	183.87	3564.90	183.87	3564.90	0.98	0.96
122	10,790	91.00	181.00	7215.34	-3652.76	-242.19	3660.36	183.79	3660.78	183.79	3660.78	183.79	3660.78	1.15	1.15
123	10,885	92.30	180.90	7212.61	-3747.71	-243.76	3755.26	183.72	3755.63	183.72	3755.63	183.72	3755.63	1.37	1.37
124	10,980	90.00	180.20	7210.70	-3842.68	-244.67	3850.15	183.64	3850.46	183.64	3850.46	183.64	3850.46	2.53	-2.42
125	11,075	88.60	180.40	7211.86	-3937.67	-245.17	3945.04	183.56	3945.29	183.56	3945.29	183.56	3945.29	1.49	-1.47
126	11,170	89.80	180.80	7213.19	-4032.65	-246.16	4039.95	183.49	4040.16	183.49	4040.16	183.49	4040.16	1.33	1.26
127	11,266	91.00	180.90	7212.52	-4128.63	-247.59	4135.89	183.43	4136.05	183.43	4136.05	183.43	4136.05	1.25	1.25
128	11,361	89.80	180.40	7211.85	-4223.62	-248.67	4230.81	183.37	4230.94	183.37	4230.94	183.37	4230.94	1.37	-1.26
129	11,457	91.50	180.50	7210.77	-4319.61	-249.42	4326.71	183.30	4326.81	183.30	4326.81	183.30	4326.81	1.77	1.77
130	11,552	89.20	179.80	7210.19	-4414.60	-249.67	4421.59	183.24	4421.66	183.24	4421.66	183.24	4421.66	2.53	-2.42
131	11,647	89.90	180.10	7210.93	-4509.60	-249.59	4516.46	183.17	4516.50	183.17	4516.50	183.17	4516.50	0.80	0.74
132	11,742	91.40	180.00	7209.85	-4604.59	-249.67	4611.33	183.10	4611.35	183.10	4611.35	183.10	4611.35	1.58	1.58
133	11,837	92.80	180.20	7206.37	-4699.52	-249.83	4706.15	183.04	4706.16	183.04	4706.16	183.04	4706.16	1.49	1.47
134	11,932	92.30	180.20	7202.15	-4794.43	-250.17	4800.95	182.99	4800.95	182.99	4800.95	182.99	4800.95	0.53	-0.53

TELEDRIIFT

P.O.Box 94395 * Oklahoma City, OK 73143-4395 Ph : 405-631-4882

ISSUING AGENCY	CERTIFICATION NUMBER
Teledrift Company	Eddy County NM

State of New Mexico

I, Zack Brown, certify that I am employed by TELEDRIIFT and I did conduct or supervise the taking of survey data started on 14 FEB 17 for the Jawbone State 1H well from a depth of 0' to a depth of 303'. This data is true, correct, complete and within the limitations of the tools as set forth by TELEDRIIFT. I am authorized and qualified to make this report and this survey was conducted at the request of Murchison, for the Jawbone State 1H well in Eddy. I have reviewed this report and find that it conforms to the principles and procedures as set forth by TELEDRIIFT.

NM OIL CONSERVATION
ARTESIAN DISTRICT

APR 08 2017

RECEIVED

NAME: <u>Zack Brown</u>	TITLE: <u>Field Tech</u>
SIGNATURE: <u>[Signature]</u>	

NAME: <u>David Jackson</u>	TITLE: <u>Monitoring Tech</u>
SIGNATURE: <u>[Signature]</u>	

NAME: <u>David Terrill</u>	TITLE: <u>Regional Manager</u>
SIGNATURE: <u>[Signature]</u>	



SURVEY REPORT

Page 1 of 1

PROSHOT-X MWD BY TELEDRIFT
P.O. BOX 94395
OKLAHOMA CITY, OK 73143-4395
TEL: 405-631-4882
FAX: 405-631-8344
WWW.TELEDRIFT.COM

OKLAHOMA DEPARTMENT OF
CONSERVATION
ARTESIAN DISTRICT

APR 03 2017

RECEIVED

ProView Version 7.41
Report created using job file: NaborsM55-26JAN17
Report saved on 26 Jan 2017 11:34
Depth in feet

WELL NAME Jaw Bone 8 #2H
NORTH CORRECTION 7.3°
JOB ID NaborsM55
COMPANY Murchison
CONTRACTOR Nabors M55
START DATE 26 JAN 17
API # 30 015 BBBB
LOCATION Eddy

All azimuths are referenced to true north
and corrected with the north correction above.

SURVEY #	MEAS.DEPTH	SURVEY DEPTH	DATE	TIME	INCLINATION	AZIMUTH
Tie-in	0.0	0.0	26-Jan-17	10:45	00.0	0.0
0003	191.0	164.0	26-Jan-17	11:27	00.4	16.3
0001	256.0	229.0	26-Jan-17	10:47	00.4	25.3
0002	303.0	276.0	26-Jan-17	10:57	00.4	28.3