

JUL 03 2018

30-015-44062

SURVEY REPORT



Job #: 181370
Well: Mad River 13 State 5H ST01
Target Formation: Wolf Camp
County & State: Eddy New Mexico

RECEIVED
North Type: Grid
Total Correction: 7.01°
Target TVD:
Vertical Section Azm: 266.85°

SURVEY DATA

Date	No.	MD	INC	AZM	C.L	TVD	VS	N/-S	E/-W	DLS	BHA
4/26/18	Tie In	660.00	0.88	121.49	0	659.99	0.33	0.09	-0.34	0.00	Surface
4/27/18	1	770.00	0.92	22.49	110	769.98	-0.74	0.46	0.72	1.24	2
4/27/18	2	865.00	0.66	118.20	95	864.98	-1.54	0.91	1.49	1.25	2
4/27/18	3	960.00	1.85	177.97	95	959.95	-1.98	-0.88	2.03	1.71	2
4/27/18	4	1055.00	3.30	193.88	95	1054.86	-1.15	-5.07	1.43	1.69	2
4/27/18	5	1151.00	4.26	193.61	96	1150.65	0.69	-11.22	-0.07	1.00	2
4/27/18	6	1246.00	4.00	196.42	95	1245.40	2.82	-17.82	-1.84	0.35	2
4/27/18	7	1341.00	3.63	199.68	95	1340.19	5.10	-23.83	-3.79	0.45	2
4/27/18	8	1437.00	3.47	203.37	96	1436.01	7.57	-29.36	-5.97	0.29	2
4/27/18	9	1533.00	3.96	194.32	96	1531.80	9.86	-35.24	-7.94	0.79	2
4/27/18	10	1628.00	3.89	186.14	95	1626.58	11.37	-41.62	-9.10	0.59	2
4/27/18	11	1722.00	3.67	171.73	94	1720.38	11.62	-47.77	-9.00	1.03	2
4/27/18	12	1817.00	5.14	172.17	95	1815.10	11.00	-55.00	-7.99	1.55	2
4/27/18	13	1912.00	5.38	176.47	95	1909.70	10.62	-63.66	-7.13	0.49	2
4/28/18	14	2005.00	5.63	166.01	93	2002.27	9.73	-72.43	-5.76	1.11	2
4/28/18	15	2101.00	5.87	164.87	96	2097.79	7.83	-81.74	-3.34	0.28	2
4/28/18	16	2196.00	5.56	169.00	95	2192.32	6.19	-90.95	-1.20	0.54	2
4/28/18	17	2292.00	5.63	191.59	96	2287.87	6.75	-100.13	-1.25	2.28	2
4/28/18	18	2387.00	5.43	197.74	95	2382.43	9.54	-108.98	-3.56	0.66	2
4/28/18	19	2481.00	4.75	199.06	94	2476.06	12.60	-116.89	-6.19	0.73	2
4/28/18	20	2577.00	4.75	197.66	96	2571.73	15.51	-124.44	-8.69	0.12	2
4/28/18	21	2672.00	5.23	171.11	95	2666.38	16.48	-132.46	-9.21	2.46	2
4/28/18	22	2768.00	5.14	168.92	96	2761.99	15.45	-141.00	-7.71	0.23	2
4/28/18	23	2864.00	4.90	170.50	96	2857.62	14.40	-149.27	-6.21	0.29	2
4/28/18	24	2959.00	3.89	156.00	95	2952.34	12.81	-156.21	-4.23	1.57	2
4/28/18	25	3054.00	3.38	150.72	95	3047.15	10.43	-161.60	-1.55	0.64	2
4/28/18	26	3149.00	3.14	152.74	95	3142.00	8.13	-166.36	1.01	0.28	2
4/28/18	27	3245.00	3.12	152.92	96	3237.85	6.00	-171.02	3.41	0.02	2
4/28/18	28	3340.00	3.05	153.01	95	3332.72	3.93	-175.57	5.73	0.07	2
4/28/18	29	3436.00	3.49	150.63	96	3428.56	1.60	-180.40	8.32	0.48	2
4/28/18	30	3531.00	3.96	152.57	95	3523.36	-1.02	-185.83	11.25	0.51	2
4/28/18	31	3627.00	3.49	147.47	96	3619.15	-3.82	-191.23	14.35	0.60	2
4/28/18	32	3712.00	3.27	148.44	85	3704.01	-6.24	-195.48	17.01	0.27	2
4/28/18	33	3816.00	3.03	147.21	104	3807.85	-9.01	-200.32	20.05	0.24	2
4/28/18	34	3911.00	2.92	150.72	95	3902.72	-11.32	-204.54	22.60	0.22	2
4/28/18	35	4007.00	3.74	146.50	96	3998.56	-13.98	-209.28	25.52	0.89	2
4/28/18	36	4102.00	4.02	145.01	95	4093.34	-17.30	-214.60	29.14	0.31	2
4/28/18	37	4197.00	3.96	145.62	95	4188.11	-20.76	-220.03	32.90	0.08	2
4/28/18	38	4290.00	3.58	143.69	93	4280.91	-24.01	-225.02	36.43	0.43	2
4/28/18	39	4386.00	3.25	149.67	96	4376.74	-26.90	-229.79	39.58	0.51	2
4/29/18	40	4481.00	3.27	145.54	95	4471.59	-29.53	-234.34	42.48	0.25	2
4/29/18	41	4576.00	2.83	154.85	95	4566.45	-31.82	-238.70	45.01	0.70	2
4/29/18	42	4671.00	3.54	149.58	95	4661.30	-34.04	-243.35	47.49	0.81	2
4/29/18	43	4765.00	3.49	152.30	94	4755.13	-36.56	-248.39	50.29	0.19	2
4/29/18	44	4861.00	3.21	147.82	96	4850.96	-39.08	-253.25	53.08	0.40	2
4/29/18	45	4956.00	3.14	150.90	95	4945.82	-41.51	-257.78	55.76	0.19	2
4/29/18	46	5051.00	2.94	151.34	95	5040.68	-43.70	-262.19	58.19	0.21	2
4/29/18	47	5147.00	3.56	154.59	96	5136.53	-45.89	-267.04	60.65	0.67	2
4/29/18	48	5242.00	3.65	160.21	95	5231.34	-47.87	-272.55	62.94	0.38	2
4/29/18	49	5337.00	4.02	164.61	95	5326.13	-49.44	-278.60	64.85	0.50	2

SURVEY DATA

Date	No.	MD	INC	AZM	C.L	TVD	VS	N/-S	E/-W	DLS	BHA
4/29/18	50	5433.00	3.78	166.45	96	5421.91	-50.73	-284.92	66.48	0.28	2
4/29/18	51	5528.00	4.26	161.79	95	5516.67	-52.21	-291.32	68.32	0.61	2
4/29/18	52	5623.00	4.79	160.04	95	5611.38	-54.27	-298.40	70.78	0.58	2
4/29/18	53	5719.00	4.70	164.52	96	5707.05	-56.27	-305.96	73.19	0.40	2
4/29/18	54	5814.00	4.50	165.66	95	5801.74	-57.83	-313.32	75.16	0.23	2
4/30/18	55	5909.00	4.26	170.15	95	5896.46	-58.96	-320.41	76.68	0.44	2
4/30/18	56	6005.00	3.01	166.01	96	5992.27	-59.85	-326.37	77.90	1.33	3
4/30/18	57	6100.00	2.62	159.42	95	6087.15	-60.97	-330.82	79.27	0.53	3
4/30/18	58	6196.00	2.09	157.05	96	6183.07	-62.22	-334.49	80.72	0.56	3
5/1/18	59	6291.00	2.44	162.85	95	6278.00	-63.30	-338.01	81.99	0.44	3
5/1/18	60	6387.00	2.53	169.44	96	6373.91	-64.06	-342.05	82.98	0.31	3
5/1/18	61	6481.00	1.98	166.01	94	6467.84	-64.64	-345.66	83.76	0.60	3
5/1/18	62	6576.00	0.90	155.20	95	6562.80	-65.22	-347.93	84.47	1.17	3
5/1/18	63	6671.00	0.97	152.83	95	6657.79	-65.82	-349.33	85.15	0.08	3
5/1/18	64	6766.00	1.12	154.41	95	6752.78	-66.50	-350.88	85.92	0.16	3
5/1/18	65	6861.00	1.32	188.16	95	6847.76	-66.64	-352.80	86.16	0.77	3
5/1/18	66	6955.00	1.25	191.15	94	6941.73	-66.18	-354.88	85.81	0.10	3
5/1/18	67	7050.00	1.19	195.37	95	7036.71	-65.61	-356.85	85.35	0.11	3
5/3/18	68	7146.00	1.78	195.81	96	7132.68	-64.81	-359.24	84.68	0.61	4
5/3/18	69	7241.00	1.89	185.96	95	7227.63	-64.08	-362.22	84.11	0.35	4
5/3/18	70	7336.00	2.00	187.63	95	7322.57	-63.52	-365.42	83.73	0.13	4
5/3/18	71	7431.00	2.02	182.10	95	7417.52	-63.06	-368.74	83.45	0.21	4
5/3/18	72	7524.00	2.18	177.88	93	7510.45	-62.88	-372.14	83.45	0.24	4
5/3/18	73	7620.00	2.53	180.16	96	7606.37	-62.72	-376.09	83.52	0.38	4
5/3/18	74	7715.00	2.44	183.94	95	7701.28	-62.35	-380.20	83.37	0.20	4
5/3/18	75	7810.00	2.51	183.24	95	7796.20	-61.87	-384.29	83.11	0.08	4
5/3/18	76	7858.00	2.42	182.54	48	7844.15	-61.65	-386.36	83.01	0.20	4
5/6/18	77	7939.00	2.42	184.82	81	7925.08	-61.25	-389.77	82.79	0.12	5
5/6/18	78	8033.00	2.11	182.19	94	8019.00	-60.81	-393.47	82.56	0.35	5
5/6/18	79	8128.00	0.48	209.70	95	8113.98	-60.43	-395.57	82.29	1.79	5
5/6/18	80	8223.00	1.91	8.43	95	8208.96	-60.53	-394.35	82.33	2.49	5
5/6/18	81	8318.00	1.89	16.25	95	8303.91	-61.37	-391.28	83.00	0.27	5
5/6/18	82	8413.00	1.65	21.70	95	8398.87	-62.47	-388.50	83.94	0.31	5
5/6/18	83	8508.00	1.10	8.43	95	8493.84	-63.23	-386.33	84.58	0.67	5
5/6/18	84	8603.00	0.64	3.33	95	8588.83	-63.47	-384.90	84.75	0.49	5
5/6/18	85	8698.00	0.90	51.32	95	8683.82	-64.14	-383.90	85.36	0.71	5
5/6/18	86	8793.00	1.10	78.91	95	8778.81	-65.65	-383.26	86.84	0.54	5
5/6/18	87	8888.00	1.14	99.83	95	8873.79	-67.47	-383.25	88.66	0.43	5
5/6/18	88	8982.00	1.10	108.27	94	8967.77	-69.22	-383.69	90.44	0.18	5
5/7/18	89	9076.00	1.34	106.86	94	9061.75	-71.09	-384.29	92.35	0.26	5
5/7/18	90	9171.00	0.73	41.74	95	9156.74	-72.56	-384.16	93.82	1.29	5
5/7/18	91	9267.00	0.57	40.24	96	9252.73	-73.32	-383.34	94.53	0.17	5
5/7/18	92	9362.00	0.33	109.59	95	9347.73	-73.90	-383.07	95.09	0.58	5
5/7/18	93	9457.00	0.53	96.14	95	9442.72	-74.59	-383.21	95.79	0.23	5
5/7/18	94	9552.00	0.62	97.20	95	9537.72	-75.53	-383.32	96.74	0.10	5
5/7/18	95	9647.00	0.66	130.33	95	9632.71	-76.43	-383.74	97.66	0.39	5
5/8/18	96	9667.00	0.70	166.28	20	9652.71	-76.53	-383.93	97.78	2.11	6
5/19/18	97	9743.00	4.97	313.76	76	9728.63	-74.37	-382.11	95.51	7.33	11
5/20/18	98	9787.00	9.15	315.83	44	9772.28	-70.77	-378.28	91.69	9.52	11
5/20/18	99	9838.00	14.22	312.92	51	9822.21	-63.76	-371.10	84.28	10.01	11
5/20/18	100	9883.00	18.23	303.80	45	9865.42	-54.29	-363.41	74.37	10.53	11
5/20/18	101	9933.00	22.64	297.88	50	9912.26	-39.79	-354.56	59.36	9.73	11
5/20/18	102	9978.00	26.72	291.60	45	9953.15	-23.17	-346.78	42.29	10.77	11
5/20/18	103	10028.00	31.09	287.27	50	9996.92	-0.85	-338.80	19.50	9.69	11
5/20/18	104	10073.00	35.26	284.41	45	10034.58	22.44	-332.12	-4.19	9.90	11
5/20/18	105	10123.00	39.54	281.91	50	10074.29	51.58	-325.24	-33.76	9.08	11

SURVEY DATA											
Date	No.	MD	INC	AZM	C.L	TVD	VS	N/-S	E/-W	DLS	BHA
5/20/18	106	10168.00	44.68	279.55	45	10107.66	80.87	-319.65	-63.40	11.95	11
5/20/18	107	10218.00	49.88	278.81	50	10141.57	116.74	-313.81	-99.65	10.46	11
5/20/18	108	10263.00	54.59	276.73	45	10169.13	151.66	-309.02	-134.89	11.09	11
5/21/18	109	10312.00	58.80	275.41	49	10196.03	192.08	-304.70	-175.60	8.88	11
5/22/18	110	10363.00	64.08	274.47	51	10220.40	236.41	-300.85	-220.21	10.48	12
5/22/18	111	10408.00	70.48	269.81	45	10237.78	277.71	-299.34	-261.66	17.13	12
5/22/18	112	10453.00	78.64	265.96	45	10249.75	321.03	-300.97	-304.95	19.92	12
5/22/18	113	10500.00	86.69	265.61	47	10255.75	367.60	-304.40	-351.41	17.14	13
5/23/18	114	10547.00	87.25	265.63	47	10258.23	414.52	-307.98	-398.20	1.19	13
5/23/18	115	10643.00	88.65	268.35	96	10261.67	510.45	-313.02	-494.00	3.18	13
5/23/18	116	10738.00	92.81	271.37	95	10260.46	605.28	-313.25	-588.96	5.41	13
5/23/18	117	10834.00	93.37	271.52	96	10255.28	700.83	-310.83	-684.79	0.60	13
5/23/18	118	10930.00	92.47	272.77	96	10250.39	796.30	-307.24	-780.59	1.60	13
5/23/18	119	11025.00	90.73	273.61	95	10247.74	890.67	-301.96	-875.40	2.03	13
5/23/18	120	11120.00	89.10	274.54	95	10247.88	984.91	-295.21	-970.16	1.98	13
5/23/18	121	11214.00	88.88	274.38	94	10249.54	1078.07	-287.90	-1063.86	0.29	13
5/23/18	122	11309.00	89.05	274.57	95	10251.25	1172.22	-280.49	-1158.55	0.27	13
5/23/18	123	11404.00	89.72	275.04	95	10252.27	1266.30	-272.53	-1253.21	0.86	13
5/23/18	124	11500.00	89.78	275.71	96	10252.69	1361.23	-263.54	-1348.79	0.70	13
5/23/18	125	11595.00	87.47	275.47	95	10254.97	1455.10	-254.29	-1443.31	2.44	13
5/24/18	126	11690.00	89.33	275.05	95	10257.63	1549.04	-245.58	-1537.86	2.01	13
5/24/18	127	11785.00	92.75	276.43	95	10255.90	1642.86	-236.09	-1632.36	3.88	13
5/24/18	128	11880.00	89.55	273.93	95	10253.99	1736.82	-227.51	-1726.93	4.27	13
5/24/18	129	11975.00	90.17	273.12	95	10254.23	1831.18	-221.67	-1821.75	1.07	13
5/24/18	130	12070.00	91.63	272.15	95	10252.73	1925.68	-217.31	-1916.63	1.85	13
5/25/18	131	12165.00	88.99	270.34	95	10252.22	2020.38	-215.24	-2011.60	3.37	14
5/25/18	132	12259.00	89.33	270.22	94	10253.60	2114.21	-214.78	-2105.58	0.38	14
5/25/18	133	12354.00	89.16	270.08	95	10254.85	2209.04	-214.53	-2200.58	0.23	14
5/25/18	134	12449.00	88.71	269.19	95	10256.62	2303.91	-215.14	-2295.56	1.05	14
5/25/18	135	12544.00	88.65	269.04	95	10258.80	2398.81	-216.61	-2390.52	0.17	14
5/25/18	136	12638.00	89.10	268.44	94	10260.65	2492.74	-218.67	-2484.48	0.80	14
5/25/18	137	12734.00	89.27	267.54	96	10262.02	2588.71	-222.04	-2580.41	0.95	14
5/26/18	138	12829.00	91.35	269.40	95	10261.50	2683.66	-224.58	-2675.36	2.94	14
5/26/18	139	12924.00	91.80	269.98	95	10258.89	2778.51	-225.09	-2770.33	0.77	14
5/26/18	140	13020.00	89.94	268.84	96	10257.43	2874.40	-226.08	-2866.30	2.27	14
5/26/18	141	13114.00	91.52	270.64	94	10256.24	2968.26	-226.51	-2960.29	2.55	14
5/26/18	142	13209.00	95.45	272.78	95	10250.46	3062.72	-223.68	-3055.05	4.71	14
5/27/18	143	13304.00	91.23	272.50	95	10244.93	3157.06	-219.31	-3149.76	4.45	14
5/28/18	144	13382.00	92.75	273.53	78	10242.22	3234.55	-215.21	-3227.60	2.35	15
5/28/18	145	13477.00	92.69	273.66	95	10237.71	3328.79	-209.26	-3322.31	0.15	15
5/28/18	146	13573.00	89.44	272.84	96	10235.93	3424.16	-203.82	-3418.13	3.49	15
5/28/18	147	13668.00	88.82	271.32	95	10237.37	3518.75	-200.38	-3513.05	1.73	15
5/28/18	148	13763.00	89.10	270.06	95	10239.09	3613.52	-199.23	-3608.03	1.36	15
5/28/18	149	13858.00	90.39	269.85	95	10239.52	3708.38	-199.31	-3703.02	1.38	15
5/28/18	150	13953.00	89.55	269.56	95	10239.57	3803.26	-199.80	-3798.02	0.94	15
5/28/18	151	14048.00	90.34	269.86	95	10239.66	3898.14	-200.28	-3893.02	0.89	15
5/29/18	152	14143.00	90.90	269.58	95	10238.63	3993.02	-200.74	-3988.01	0.66	15
5/29/18	153	14237.00	93.03	268.86	94	10235.41	4086.87	-202.02	-4081.94	2.39	15
5/29/18	154	14333.00	90.84	268.60	96	10232.16	4182.76	-204.15	-4177.86	2.30	15
5/29/18	155	14428.00	90.45	268.04	95	10231.10	4277.72	-206.93	-4272.81	0.72	15
5/29/18	156	14523.00	91.63	266.89	95	10229.37	4372.70	-211.13	-4367.70	1.73	15
5/29/18	157	14617.00	91.80	267.19	94	10226.56	4466.66	-215.98	-4461.53	0.37	15
5/30/18	158	14712.00	92.02	266.88	95	10223.39	4561.60	-220.89	-4556.35	0.40	15
5/30/18	159	14807.00	96.13	267.75	95	10216.64	4656.34	-225.33	-4650.98	4.42	15
5/30/18	160	14902.00	94.50	268.58	95	10207.84	4750.90	-228.36	-4745.52	1.92	15
5/30/18	161	14997.00	89.05	267.95	95	10204.90	4845.79	-231.24	-4840.40	5.77	15

[illegible]

Steve Morris

