

Company Information

CAZA  
 FOREHAND RANCH 22-21 STATE COM 1H  
 FOREHAND RANCH 22-21 STATE COM 1H  
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**NM OIL CONSERVATION  
 ARTESIA DISTRICT**

**MAR 15 2018**

**RECEIVED**

Well Information

Surface Location  
 X = 591717.94'  
 Y = 470771.05'  
 K.B. = 3162.00'  
 Declination Corr.  
 = 6.95 TO GRID

Reference North is Grid North  
 Grid Convergence is 0.087 degrees East  
 Map System : North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone

MD (ft)	Incl.	Azim.	SSDepth (ft)	TVD (ft)	Northings (ft)	Eastings (ft)	GridNorth (ft)	GridEast (ft)	VS (ft)	DLS (-/100ft)
0	0	0	-3162	0	0	0	470771.1	591717.9	0	0
1000	0	0.005	-2162	1000	0	0	470771.1	591717.9	0	0 UNDEFINED (1)
2000	0	0.005	-1162	2000	0	0	470771.1	591717.9	0	0
2999.99	0	0.005	-162.01	2999.99	0	0	470771.1	591717.9	0	0
3499.99	0	0.005	337.99	3499.99	0	0	470771.1	591717.9	0	0
3799.99	0	40	637.99	3799.99	0	0	470771.1	591717.9	0	0
3899.99	3	40	737.95	3899.95	2	1.68	470773.1	591719.6	-1.71	3
3999.99	3.375	40	837.79	3999.79	6.26	5.26	470777.3	591723.2	-5.36	0.38
4099.99	3.75	40	937.6	4099.6	11.02	9.25	470782.1	591727.2	-9.43	0.37
4199.99	4.125	40	1037.36	4199.36	16.28	13.66	470787.3	591731.6	-13.92	0.37
4299.99	4.5	40	1137.08	4299.08	22.04	18.5	470793.1	591736.4	-18.85	0.37
4399.99	4.875	40	1236.74	4398.74	28.3	23.75	470799.4	591741.7	-24.2	0.37
4499.99	5.25	40	1336.35	4498.35	35.06	29.42	470806.1	591747.4	-29.98	0.37
4599.99	5.625	40	1435.9	4597.9	42.32	35.51	470813.4	591753.5	-36.18	0.37
4699.99	6	40	1535.39	4697.39	50.08	42.02	470821.1	591760	-42.82	0.37
4799.99	6	40	1634.84	4796.84	58.09	48.74	470829.1	591766.7	-49.66	0
4899.99	6	40	1734.29	4896.29	66.1	55.46	470837.1	591773.4	-56.51	0
4999.99	6	40	1833.74	4995.74	74.1	62.18	470845.2	591780.1	-63.35	0
5099.99	6	40	1933.2	5095.2	82.11	68.9	470853.2	591786.8	-70.2	0
5199.99	6	40	2032.65	5194.65	90.12	75.62	470861.2	591793.6	-77.05	0
5299.99	6	40	2132.1	5294.1	98.13	82.34	470869.2	591800.3	-83.89	0
5399.99	6	40	2231.55	5393.55	106.13	89.06	470877.2	591807	-90.74	0
5499.99	6	40	2331	5493	114.14	95.77	470885.2	591813.7	-97.58	0
5599.99	6	40	2430.46	5592.46	122.15	102.49	470893.2	591820.4	-104.43	0
5699.99	6	40	2529.91	5691.91	130.15	109.21	470901.2	591827.2	-111.28	0
5799.99	6	40	2629.36	5791.36	138.16	115.93	470909.2	591833.9	-118.12	0
5899.99	6	40	2728.81	5890.81	146.17	122.65	470917.2	591840.6	-124.97	0
5999.99	6	40	2828.26	5990.26	154.18	129.37	470925.2	591847.3	-131.81	0
6099.99	6	40	2927.72	6089.72	162.18	136.09	470933.2	591854	-138.66	0
6199.99	6	40	3027.17	6189.17	170.19	142.81	470941.2	591860.7	-145.51	0
6299.99	6	40	3126.62	6288.62	178.2	149.53	470949.3	591867.5	-152.35	0
6399.99	6	40	3226.07	6388.07	186.21	156.25	470957.3	591874.2	-159.2	0
6499.99	6	40	3325.52	6487.52	194.21	162.96	470965.3	591880.9	-166.04	0
6599.99	6	40	3424.98	6586.98	202.22	169.68	470973.3	591887.6	-172.89	0
6699.99	6	40	3524.43	6686.43	210.23	176.4	470981.3	591894.3	-179.74	0

6799.99	6	40	3623.88	6785.88	218.24	183.12	470989.3	591901.1	-186.58	0
6899.99	6	40	3723.33	6885.33	226.24	189.84	470997.3	591907.8	-193.43	0
6999.99	6	40	3822.78	6984.78	234.25	196.56	471005.3	591914.5	-200.27	0
7099.99	6	40	3922.24	7084.24	242.26	203.28	471013.3	591921.2	-207.12	0
7199.99	6	40	4021.69	7183.69	250.26	210	471021.3	591927.9	-213.96	0
7299.99	6	40	4121.14	7283.14	258.27	216.72	471029.3	591934.7	-220.81	0
7399.99	6	40	4220.59	7382.59	266.28	223.43	471037.3	591941.4	-227.66	0
7499.98	6	40	4320.04	7482.04	274.29	230.15	471045.3	591948.1	-234.5	0
7599.98	6	40	4419.5	7581.5	282.29	236.87	471053.3	591954.8	-241.35	0
7699.98	6	40	4518.95	7680.95	290.3	243.59	471061.4	591961.5	-248.19	0
7799.98	6	40	4618.4	7780.4	298.31	250.31	471069.4	591968.3	-255.04	0
7899.98	6	40	4717.85	7879.85	306.32	257.03	471077.4	591975	-261.89	0
7999.98	6	40	4817.3	7979.3	314.32	263.75	471085.4	591981.7	-268.73	0
8099.98	6	40	4916.76	8078.76	322.33	270.47	471093.4	591988.4	-275.58	0
8199.98	6	40	5016.21	8178.21	330.34	277.19	471101.4	591995.1	-282.42	0
8299.98	6	40	5115.66	8277.66	338.35	283.91	471109.4	592001.8	-289.27	0
8399.98	6	40	5215.11	8377.11	346.35	290.62	471117.4	592008.6	-296.12	0
8499.98	6	40	5314.56	8476.56	354.36	297.34	471125.4	592015.3	-302.96	0
8599.98	6	350.008	5414.08	8576.08	363.52	299.8	471134.6	592017.7	-305.56	5.06
8699.98	5.538	314.228	5513.6	8675.6	372.03	295.43	471143.1	592013.4	-301.33	3.57
8799.98	11.769	292.152	5612.68	8774.68	378.29	283.97	471149.3	592001.9	-289.97	6.95
8899.98	21.766	285.191	5708.3	8870.3	387.45	256.65	471158.5	591974.6	-262.81	10.18
8999.98	31.776	279.755	5797.46	8959.46	397.01	212.7	471168.1	591930.6	-219.01	10.29
9099.98	41.782	275.488	5877.45	9039.45	404.83	153.42	471175.9	591871.4	-159.86	10.32
9199.98	51.789	272.159	5945.83	9107.83	409.54	80.79	471180.6	591798.7	-87.32	10.29
9299.98	61.797	270.397	6000.52	9162.52	411.06	-2.76	471182.1	591715.2	-3.81	10.12
9399.98	71.798	270	6039.87	9201.87	411.19	-94.55	471182.2	591623.4	87.98	10.01
9499.98	81.798	270	6062.68	9224.68	411.19	-191.78	471182.2	591526.2	185.2	10
9599.98	90.65	266.57	6068.31	9230.31	409.07	-291.45	471180.1	591426.5	284.89	9.49
9699.98	90.65	266.57	6067.17	9229.17	403.08	-391.27	471174.1	591326.7	384.79	0
9799.98	90.65	266.57	6066.04	9228.04	397.1	-491.08	471168.2	591226.9	484.68	0
9899.98	90.65	266.57	6064.91	9226.91	391.12	-590.9	471162.2	591127	584.58	0
9999.98	90.65	266.57	6063.77	9225.77	385.14	-690.71	471156.2	591027.2	684.48	0
10099.98	90.65	266.57	6062.64	9224.64	379.15	-790.53	471150.2	590927.4	784.37	0
10199.98	90.65	266.57	6061.5	9223.5	373.17	-890.34	471144.2	590827.6	884.27	0
10299.98	90.65	266.57	6060.37	9222.37	367.19	-990.15	471138.2	590727.8	984.17	0
10399.98	90.65	266.57	6059.23	9221.23	361.21	-1089.97	471132.3	590628	1084.06	0
10499.98	90.65	266.57	6058.1	9220.1	355.22	-1189.78	471126.3	590528.2	1183.96	0
10599.98	90.65	266.57	6056.96	9218.96	349.24	-1289.6	471120.3	590428.3	1283.86	0
10699.98	90.65	266.57	6055.83	9217.83	343.26	-1389.41	471114.3	590328.5	1383.76	0
10799.98	90.65	266.57	6054.7	9216.7	337.28	-1489.23	471108.3	590228.7	1483.65	0
10899.98	90.65	266.57	6053.56	9215.56	331.29	-1589.04	471102.3	590128.9	1583.55	0
10999.98	90.65	266.57	6052.43	9214.43	325.31	-1688.85	471096.4	590029.1	1683.45	0
11099.98	90.65	266.57	6051.29	9213.29	319.33	-1788.67	471090.4	589929.3	1783.34	0
11199.98	90.65	266.57	6050.16	9212.16	313.35	-1888.48	471084.4	589829.5	1883.24	0
11299.98	90.65	266.57	6049.02	9211.02	307.36	-1988.3	471078.4	589729.6	1983.14	0
11399.98	90.65	266.57	6047.89	9209.89	301.38	-2088.11	471072.4	589629.8	2083.03	0
11499.98	90.65	266.57	6046.75	9208.75	295.4	-2187.93	471066.5	589530	2182.93	0
11599.98	90.65	266.57	6045.62	9207.62	289.42	-2287.74	471060.5	589430.2	2282.83	0
11699.98	90.65	266.57	6044.49	9206.49	283.43	-2387.55	471054.5	589330.4	2382.73	0
11799.98	90.65	266.57	6043.35	9205.35	277.45	-2487.37	471048.5	589230.6	2482.62	0
11899.98	90.65	266.57	6042.22	9204.22	271.47	-2587.18	471042.5	589130.8	2582.52	0
11999.98	90.65	266.57	6041.08	9203.08	265.49	-2687	471036.5	589030.9	2682.42	0
12099.98	90.65	266.57	6039.95	9201.95	259.5	-2786.81	471030.6	588931.1	2782.31	0
12199.98	90.65	266.57	6038.81	9200.81	253.52	-2886.62	471024.6	588831.3	2882.21	0
12299.98	90.65	266.57	6037.68	9199.68	247.54	-2986.44	471018.6	588731.5	2982.11	0
12399.98	90.65	266.57	6036.55	9198.55	241.56	-3086.25	471012.6	588631.7	3082	0
12499.97	90.65	266.57	6035.41	9197.41	235.57	-3186.07	471006.6	588531.9	3181.9	0
12599.97	90.65	266.57	6034.28	9196.28	229.59	-3285.88	471000.6	588432.1	3281.8	0

12699.97	90.65	266.57	6033.14	9195.14	223.61	-3385.7	470994.7	588332.2	3381.7	0
12799.97	90.65	266.57	6032.01	9194.01	217.63	-3485.51	470988.7	588232.4	3481.59	0
12899.97	90.65	266.57	6030.87	9192.87	211.64	-3585.32	470982.7	588132.6	3581.49	0
12999.97	90.65	266.57	6029.74	9191.74	205.66	-3685.14	470976.7	588032.8	3681.39	0
13099.97	90.65	266.57	6028.6	9190.6	199.68	-3784.95	470970.7	587933	3781.28	0
13199.97	90.65	266.57	6027.47	9189.47	193.7	-3884.77	470964.7	587833.2	3881.18	0
13299.97	90.65	266.57	6026.34	9188.34	187.71	-3984.58	470958.8	587733.4	3981.08	0
13399.97	90.65	266.57	6025.2	9187.2	181.73	-4084.4	470952.8	587633.5	4080.97	0
13499.97	90.65	266.57	6024.07	9186.07	175.75	-4184.21	470946.8	587533.7	4180.87	0
13599.97	90.65	266.57	6022.93	9184.93	169.77	-4284.02	470940.8	587433.9	4280.77	0
13699.97	90.65	266.57	6021.8	9183.8	163.78	-4383.84	470934.8	587334.1	4380.67	0
13799.97	90.65	266.57	6020.66	9182.66	157.8	-4483.65	470928.9	587234.3	4480.56	0
13899.97	90.65	266.57	6019.53	9181.53	151.82	-4583.47	470922.9	587134.5	4580.46	0
13999.97	90.65	266.57	6018.39	9180.39	145.84	-4683.28	470916.9	587034.7	4680.36	0
14099.97	90.65	266.57	6017.26	9179.26	139.85	-4783.1	470910.9	586934.8	4780.25	0
14199.97	90.65	266.57	6016.13	9178.13	133.87	-4882.91	470904.9	586835	4880.15	0
14299.97	90.65	266.57	6014.99	9176.99	127.89	-4982.72	470898.9	586735.2	4980.05	0
14399.97	90.65	266.57	6013.86	9175.86	121.91	-5082.54	470893	586635.4	5079.94	0
14499.97	90.65	266.57	6012.72	9174.72	115.92	-5182.35	470887	586535.6	5179.84	0
14599.97	90.65	266.57	6011.59	9173.59	109.94	-5282.17	470881	586435.8	5279.74	0
14699.97	90.65	266.57	6010.45	9172.45	103.96	-5381.98	470875	586336	5379.64	0
14799.97	90.65	266.57	6009.32	9171.32	97.98	-5481.8	470869	586236.1	5479.53	0
14899.97	90.65	266.57	6008.18	9170.18	91.99	-5581.61	470863	586136.3	5579.43	0
14999.97	90.65	266.57	6007.05	9169.05	86.01	-5681.42	470857.1	586036.5	5679.33	0
15099.97	90.65	266.57	6005.92	9167.92	80.03	-5781.24	470851.1	585936.7	5779.22	0
15199.97	90.65	266.57	6004.78	9166.78	74.05	-5881.05	470845.1	585836.9	5879.12	0
15299.97	90.65	266.57	6003.65	9165.65	68.06	-5980.87	470839.1	585737.1	5979.02	0
15399.97	90.65	266.57	6002.51	9164.51	62.08	-6080.68	470833.1	585637.3	6078.92	0
15499.97	90.65	266.57	6001.38	9163.38	56.1	-6180.49	470827.2	585537.4	6178.81	0
15599.97	90.65	266.57	6000.24	9162.24	50.12	-6280.31	470821.2	585437.6	6278.71	0
15699.97	90.65	266.57	5999.11	9161.11	44.13	-6380.12	470815.2	585337.8	6378.61	0
15799.97	90.65	266.57	5997.97	9159.97	38.15	-6479.94	470809.2	585238	6478.5	0
15899.97	90.65	266.57	5996.84	9158.84	32.17	-6579.75	470803.2	585138.2	6578.4	0
15999.97	90.65	266.57	5995.71	9157.71	26.19	-6679.57	470797.2	585038.4	6678.3	0
16099.97	90.65	266.57	5994.57	9156.57	20.2	-6779.38	470791.3	584938.6	6778.19	0
16199.97	90.65	266.57	5993.44	9155.44	14.22	-6879.19	470785.3	584838.7	6878.09	0
16299.97	90.65	266.57	5992.3	9154.3	8.24	-6979.01	470779.3	584738.9	6977.99	0
16399.97	90.65	266.57	5991.17	9153.17	2.26	-7078.82	470773.3	584639.1	7077.89	0
16499.97	90.65	266.57	5990.03	9152.03	-3.73	-7178.64	470767.3	584539.3	7177.78	0
16599.97	90.65	266.57	5988.9	9150.9	-9.71	-7278.45	470761.3	584439.5	7277.68	0
16699.97	90.65	266.57	5987.76	9149.76	-15.69	-7378.27	470755.4	584339.7	7377.58	0
16799.97	90.65	266.57	5986.63	9148.63	-21.67	-7478.08	470749.4	584239.9	7477.47	0
16899.97	90.65	266.57	5985.5	9147.5	-27.66	-7577.89	470743.4	584140	7577.37	0
16999.97	90.65	266.57	5984.36	9146.36	-33.64	-7677.71	470737.4	584040.2	7677.27	0
17099.97	90.65	266.57	5983.23	9145.23	-39.62	-7777.52	470731.4	583940.4	7777.16	0
17199.97	90.65	266.57	5982.09	9144.09	-45.6	-7877.34	470725.4	583840.6	7877.06	0
17299.97	90.65	266.57	5980.96	9142.96	-51.59	-7977.15	470719.5	583740.8	7976.96	0
17399.97	90.65	266.57	5979.82	9141.82	-57.57	-8076.97	470713.5	583641	8076.86	0
17499.96	90.65	266.57	5978.69	9140.69	-63.55	-8176.78	470707.5	583541.2	8176.75	0
17599.96	90.65	266.57	5977.55	9139.55	-69.53	-8276.59	470701.5	583441.3	8276.65	0
17699.96	90.65	266.57	5976.42	9138.42	-75.52	-8376.41	470695.5	583341.5	8376.55	0
17799.96	90.65	266.57	5975.29	9137.29	-81.5	-8476.22	470689.6	583241.7	8476.44	0
17899.96	90.65	266.57	5974.15	9136.15	-87.48	-8576.04	470683.6	583141.9	8576.34	0
17999.96	90.65	266.57	5973.02	9135.02	-93.46	-8675.85	470677.6	583042.1	8676.24	0
18099.96	90.65	266.57	5971.88	9133.88	-99.45	-8775.67	470671.6	582942.3	8776.13	0
18199.96	90.65	266.57	5970.75	9132.75	-105.43	-8875.48	470665.6	582842.5	8876.03	0
18299.96	90.65	266.57	5969.61	9131.61	-111.41	-8975.29	470659.6	582742.6	8975.93	0
18399.96	90.65	266.57	5968.48	9130.48	-117.39	-9075.11	470653.7	582642.8	9075.83	0
18499.96	90.65	266.57	5967.34	9129.34	-123.38	-9174.92	470647.7	582543	9175.72	0

18599.96	90.65	266.57	5966.21	9128.21	-129.36	-9274.74	470641.7	582443.2	9275.62	0
18699.96	90.65	266.57	5965.08	9127.08	-135.34	-9374.55	470635.7	582343.4	9375.52	0
18799.96	90.65	266.57	5963.94	9125.94	-141.32	-9474.36	470629.7	582243.6	9475.41	0
18899.96	90.65	266.57	5962.81	9124.81	-147.31	-9574.18	470623.7	582143.8	9575.31	0
18999.96	90.65	266.57	5961.67	9123.67	-153.29	-9673.99	470617.8	582043.9	9675.21	0
19026	90.65	266.57	5961.38	9123.38	-154.85	-9699.98	470616.2	582018	9701.22	0

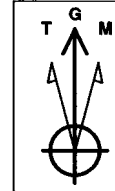
All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.  
Vertical depths are relative to WELL. Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.  
Vertical Section is from Slot and calculated along an Azimuth of 269.085- (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.  
Grid Convergence at Surface is 0.087-.

Based upon Minimum Curvature type calculations, at a Measured Depth of 19026.00ft.,  
the Bottom Hole Displacement is 9701.22ft., in the Direction of 269.085- (Grid).

Project: Forehand Ranch 22-21 State Corr  
 Site: Forehand Ranch 22-21 State Corr  
 Well: Forehand Ranch 22-21 State Corr  
 Wellbore: Forehand Ranch 22-21 State Corr  
 Design: Forehand Ranch 22-21 State Corr



Azimuths to Grid North  
 True North: -0.09°  
 Magnetic North: 6.95°  
 Magnetic Field  
 Strength: 47924.6snT  
 Dip Angle: 59.98°  
 Date: 03/15/2018  
 Model: IGRF2010

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Site Forehand Ranch 22-21 State Com 1H, Grid North  
 Vertical (TVD) Reference: WELL @ 3162.0usft (Original Well Elev)  
 Section (VS) Reference: Slot - (0.0N, 0.0E)  
 Measured Depth Reference: WELL @ 3162.0usft (Original Well Elev)  
 Calculation Method: Minimum Curvature

**NM OIL CONSERVATION  
 ARTESIA DISTRICT**  
**MAR 15 2018**

