

Company Information

CAZA

GRAMMA RIDGE 5H

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Well Information

Surface Location

X = 811946.30'

Y = 526264.82'

K.B. = 3702.00'

Declination Corr.

= 6.22 TO GRID

Reference North is Grid North

Grid Convergence is 0.471 degrees East

Map System : North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone

HOBBS OCD

MAY 23 2018

RECEIVED

MD (ft)	Incl.	Azim.	SSDepth (ft)	TVD (ft)	Northings (ft)	Eastings (ft)	GridNorth (ft)	GridEast (ft)	VS (ft)	DLS (-/100ft)
0	0	0	-3702	0	0	0	526264.8	811946.3	0	0
2999.99	0	0	-702.01	2999.99	0	0	526264.8	811946.3	0	0 UNDEFINED (1)
4999.99	0	0	1297.99	4999.99	0	0	526264.8	811946.3	0	0
5099.99	0	0	1397.99	5099.99	0	0	526264.8	811946.3	0	0
5199.99	3	193	1497.94	5199.94	-2.55	-0.59	526262.3	811945.7	-2.52	3
5299.99	6	193	1597.62	5299.62	-10.19	-2.35	526254.6	811943.9	-10.09	3
5399.99	6	193	1697.08	5399.08	-20.38	-4.7	526244.4	811941.6	-20.17	0
5499.99	6	193	1796.53	5498.53	-30.56	-7.06	526234.3	811939.2	-30.25	0
5599.99	6	193	1895.98	5597.98	-40.75	-9.41	526224.1	811936.9	-40.32	0
5699.99	6	193	1995.43	5697.43	-50.93	-11.76	526213.9	811934.5	-50.4	0

5799.99	6	193	2094.88	5796.88	-61.12	-14.11	526203.7	811932.2	-60.48	0
5899.99	6	193	2194.34	5896.34	-71.3	-16.46	526193.5	811929.8	-70.56	0
5999.99	6	193	2293.79	5995.79	-81.49	-18.81	526183.3	811927.5	-80.64	0
6099.99	6	193	2393.24	6095.24	-91.67	-21.16	526173.1	811925.1	-90.72	0
6199.99	6	193	2492.69	6194.69	-101.86	-23.52	526163	811922.8	-100.8	0
6299.99	6	193	2592.14	6294.14	-112.04	-25.87	526152.8	811920.4	-110.88	0
6399.99	6	193	2691.6	6393.6	-122.23	-28.22	526142.6	811918.1	-120.96	0
6499.99	6	193	2791.05	6493.05	-132.41	-30.57	526132.4	811915.7	-131.04	0
6599.99	6	193	2890.5	6592.5	-142.6	-32.92	526122.2	811913.4	-141.11	0
6699.99	6	193	2989.95	6691.95	-152.78	-35.27	526112	811911	-151.19	0
6799.99	6	193	3089.4	6791.4	-162.97	-37.62	526101.8	811908.7	-161.27	0
6899.99	6	193	3188.86	6890.86	-173.15	-39.98	526091.7	811906.3	-171.35	0
6999.99	6	193	3288.31	6990.31	-183.34	-42.33	526081.5	811904	-181.43	0
7099.99	6	193	3387.76	7089.76	-193.52	-44.68	526071.3	811901.6	-191.51	0
7199.99	6	193	3487.21	7189.21	-203.71	-47.03	526061.1	811899.3	-201.59	0
7299.99	6	193	3586.66	7288.66	-213.89	-49.38	526050.9	811896.9	-211.67	0
7399.99	6	193	3686.12	7388.12	-224.08	-51.73	526040.7	811894.6	-221.75	0
7499.98	6	193	3785.57	7487.57	-234.26	-54.08	526030.6	811892.2	-231.83	0
7599.98	6	193	3885.02	7587.02	-244.45	-56.43	526020.4	811889.9	-241.91	0
7699.98	6	193	3984.47	7686.47	-254.63	-58.79	526010.2	811887.5	-251.98	0
7799.98	6	193	4083.92	7785.92	-264.82	-61.14	526000	811885.2	-262.06	0
7899.98	6	193	4183.38	7885.38	-275	-63.49	525989.8	811882.8	-272.14	0
7999.98	6	193	4282.83	7984.83	-285.19	-65.84	525979.6	811880.5	-282.22	0
8099.98	6	193	4382.28	8084.28	-295.37	-68.19	525969.4	811878.1	-292.3	0
8199.98	6	193	4481.73	8183.73	-305.56	-70.54	525959.3	811875.8	-302.38	0
8299.98	6	193	4581.18	8283.18	-315.74	-72.89	525949.1	811873.4	-312.46	0
8399.98	6	193	4680.64	8382.64	-325.93	-75.25	525938.9	811871.1	-322.54	0
8499.98	6	193	4780.09	8482.09	-336.11	-77.6	525928.7	811868.7	-332.62	0
8599.98	6	193	4879.54	8581.54	-346.3	-79.95	525918.5	811866.4	-342.7	0
8699.98	6	193	4978.99	8680.99	-356.48	-82.3	525908.3	811864	-352.77	0
8799.98	6	193	5078.44	8780.44	-366.67	-84.65	525898.2	811861.6	-362.85	0
8899.98	3.001	193	5178.12	8880.12	-374.31	-86.42	525890.5	811859.9	-370.42	3
8999.98	0.001	193	5278.08	8980.08	-376.86	-87.01	525888	811859.3	-372.94	3
9099.98	2.998	358.8	5378.06	9080.06	-376.08	-87.02	525888.7	811859.3	-372.16	3

9199.98	12.998	358.8	5476.97	9178.97	-362.18	-87.31	525902.6	811859	-358.27	10
9299.98	22.998	358.8	5571.95	9273.95	-331.33	-87.96	525933.5	811858.3	-327.41	10
9399.98	32.998	358.8	5660.14	9362.14	-284.46	-88.94	525980.4	811857.4	-280.54	10
9499.98	42.998	358.8	5738.84	9440.84	-222.99	-90.23	526041.8	811856.1	-219.07	10
9599.98	52.998	358.8	5805.67	9507.67	-148.78	-91.78	526116	811854.5	-144.86	10
9699.98	62.998	358.8	5858.6	9560.6	-64.11	-93.56	526200.7	811852.7	-60.19	10
9799.98	72.998	358.8	5896.01	9598.01	28.47	-95.5	526293.3	811850.8	32.39	10
9899.98	82.852	358.8	5916.82	9618.82	126.14	-97.54	526391	811848.8	130.06	9.85
9999.98	90.18	358.8	5921.42	9623.42	225.92	-99.63	526490.7	811846.7	229.84	7.33
10099.98	90.18	358.8	5921.11	9623.11	325.9	-101.73	526590.7	811844.6	329.82	0
10199.98	90.18	358.8	5920.79	9622.79	425.87	-103.82	526690.7	811842.5	429.8	0
10299.98	90.18	358.8	5920.48	9622.48	525.85	-105.91	526790.7	811840.4	529.78	0
10399.98	90.18	358.8	5920.17	9622.17	625.83	-108.01	526890.6	811838.3	629.76	0
10499.98	90.18	358.8	5919.85	9621.85	725.8	-110.1	526990.6	811836.2	729.73	0
10599.98	90.18	358.8	5919.54	9621.54	825.78	-112.2	527090.6	811834.1	829.71	0
10699.98	90.18	358.8	5919.22	9621.22	925.76	-114.29	527190.6	811832	929.69	0
10799.98	90.18	358.8	5918.91	9620.91	1025.74	-116.39	527290.6	811829.9	1029.67	0
10899.98	90.18	358.8	5918.6	9620.6	1125.71	-118.48	527390.5	811827.8	1129.65	0
10999.98	90.18	358.8	5918.28	9620.28	1225.69	-120.57	527490.5	811825.7	1229.63	0
11099.98	90.18	358.8	5917.97	9619.97	1325.67	-122.67	527590.5	811823.6	1329.61	0
11199.98	90.18	358.8	5917.65	9619.65	1425.65	-124.76	527690.5	811821.5	1429.58	0
11299.98	90.18	358.8	5917.34	9619.34	1525.62	-126.86	527790.4	811819.4	1529.56	0
11399.98	90.18	358.8	5917.03	9619.03	1625.6	-128.95	527890.4	811817.3	1629.54	0
11499.98	90.18	358.8	5916.71	9618.71	1725.58	-131.05	527990.4	811815.3	1729.52	0
11599.98	90.18	358.8	5916.4	9618.4	1825.56	-133.14	528090.4	811813.2	1829.5	0
11699.98	90.18	358.8	5916.08	9618.08	1925.53	-135.23	528190.3	811811.1	1929.48	0
11799.98	90.18	358.8	5915.77	9617.77	2025.51	-137.33	528290.3	811809	2029.46	0
11899.98	90.18	358.8	5915.45	9617.45	2125.49	-139.42	528390.3	811806.9	2129.43	0
11999.98	90.18	358.8	5915.14	9617.14	2225.47	-141.52	528490.3	811804.8	2229.41	0
12099.98	90.18	358.8	5914.83	9616.83	2325.44	-143.61	528590.3	811802.7	2329.39	0
12199.98	90.18	358.8	5914.51	9616.51	2425.42	-145.7	528690.2	811800.6	2429.37	0
12299.98	90.18	358.8	5914.2	9616.2	2525.4	-147.8	528790.2	811798.5	2529.35	0
12399.98	90.18	358.8	5913.88	9615.88	2625.38	-149.89	528890.2	811796.4	2629.33	0
12499.97	90.18	358.8	5913.57	9615.57	2725.35	-151.99	528990.2	811794.3	2729.31	0

12599.97	90.18	358.8	5913.26	9615.26	2825.33	-154.08	529090.1	811792.2	2829.28	0
12699.97	90.18	358.8	5912.94	9614.94	2925.31	-156.18	529190.1	811790.1	2929.26	0
12799.97	90.18	358.8	5912.63	9614.63	3025.28	-158.27	529290.1	811788	3029.24	0
12899.97	90.18	358.8	5912.31	9614.31	3125.26	-160.36	529390.1	811785.9	3129.22	0
12999.97	90.18	358.8	5912	9614	3225.24	-162.46	529490.1	811783.8	3229.2	0
13099.97	90.18	358.8	5911.68	9613.68	3325.22	-164.55	529590	811781.7	3329.18	0
13199.97	90.18	358.8	5911.37	9613.37	3425.19	-166.65	529690	811779.7	3429.15	0
13299.97	90.18	358.8	5911.06	9613.06	3525.17	-168.74	529790	811777.6	3529.13	0
13399.97	90.18	358.8	5910.74	9612.74	3625.15	-170.84	529890	811775.5	3629.11	0
13499.97	90.18	358.8	5910.43	9612.43	3725.13	-172.93	529989.9	811773.4	3729.09	0
13599.97	90.18	358.8	5910.11	9612.11	3825.1	-175.02	530089.9	811771.3	3829.07	0
13699.97	90.18	358.8	5909.8	9611.8	3925.08	-177.12	530189.9	811769.2	3929.05	0
13799.97	90.18	358.8	5909.49	9611.49	4025.06	-179.21	530289.9	811767.1	4029.03	0
13899.97	90.18	358.8	5909.17	9611.17	4125.04	-181.31	530389.9	811765	4129	0
13999.97	90.18	358.8	5908.86	9610.86	4225.01	-183.4	530489.8	811762.9	4228.98	0
14099.97	90.18	358.8	5908.54	9610.54	4324.99	-185.5	530589.8	811760.8	4328.96	0
14199.97	90.18	358.8	5908.23	9610.23	4424.97	-187.59	530689.8	811758.7	4428.94	0
14299.97	90.18	358.8	5907.91	9609.91	4524.95	-189.68	530789.8	811756.6	4528.92	0
14399.97	90.18	358.8	5907.6	9609.6	4624.92	-191.78	530889.7	811754.5	4628.9	0
14424	90.18	358.8	5907.52	9609.52	4648.95	-192.28	530913.8	811754	4652.92	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 Well.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 357.632– (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.
Grid Convergence at Surface is 0.471–.

Based upon Minimum Curvature type calculations, at a Measured Depth of 14424.00ft.,
the Bottom Hole Displacement is 4652.92ft., in the Direction of 357.632 – (Grid).

Project: Gramma Ridge 5H
Site: Gramma Ridge 5H
Well: Gramma Ridge 5H
Wellbore: Gramma Ridge 5H
Design: Gramma Ridge 5H



Azimuths to Grid North
True North: -0.47°
Magnetic North: 6.22°

Magnetic Field
Strength: 48064.7snT
Dip Angle: 60.23°
Date: 05/18/2018
Model: IGRF2010

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Gramma Ridge 5H, Grid North
Vertical (TVD) Reference: WELL @ 3702.0usft (Original Well Elev)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: WELL @ 3702.0usft (Original Well Elev)
Calculation Method: Minimum Curvature

