



Cimarex Energy Co.

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May 2, 2018

State of New Mexico
Oil Conservation Division – District 1
1625 N. French Drive
Hobbs, New Mexico 88240

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Re: Request for Oil Allowable Exception
Hallertau 5 Federal 7H – 30-025-43911
Lea County, NM

Dear Sir/Madam:

Cimarex Energy Co. respectfully requests an exception to NMOCD Rule 19.50.20.9 regarding oil allowable. Cimarex requests permission to produce the project area assigned to Hallertau 5 Federal 7H well above top depth bracket allowable to allow greater load recovery during flowback after frac stimulation.

Thank you for your consideration of this request. Please feel free to contact me if you need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Patricia Holland".

Patricia Holland
Regulatory Analyst
918-560-7081

Cimarex Hallertau 5 Federal #7H MWD Final Survey Geodetic Report

(Def Survey)

Report Date:	December 03, 2017 - 03:37 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	359.464 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Hallertau 5 Federal #7H / Cimarex Hallertau 5 Federal #7H	TVD Reference Datum:	RKB
Well:	Cimarex Hallertau 5 Federal #7H	TVD Reference Elevation:	3295.900 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3271.900 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.822 °
Survey Name:	Cimarex Hallertau 5 Federal #7H MWD Final	Total Gravity Field Strength:	998.688mgm (9.80665 Based)
Survey Date:	November 10, 2012	Gravity Model:	DOX
Tort / AHD / DDI / ERD Ratio:	211.454 ° / 5266.989 ft / 6.190 / 0.443	Total Magnetic Field Strength:	47903.524 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.732 °
Location Lat / Long:	N 32° 3' 56.93788", W 103° 42' 0.03221"	Declination Date:	November 29, 2017
Location Grid N/E Y/X:	N 388257.090 ftUS, E 737521.890 ftUS	Magnetic Declination Model:	HDGM 2017
CRS Grid Convergence Angle:	0.3362 °	North Reference:	Grid North
Grid Scale Factor:	0.99995317	Grid Convergence Used:	0.3362 °
Version / Patch:	2.10.565.0	Total Corr Mag North->Grid North:	6.4858 °
		Local Coord Referenced To:	Structure Reference Point

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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 ° ' '')
Cimarex Hallertau 5 Federal #7H - SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	388257.09	737521.89	N 32 3 56.94	W 103 42 0.03
	215.00	0.40	10.72	215.00	0.74	0.74	0.14	0.19	388257.83	737522.03	N 32 3 56.95	W 103 42 0.03
	306.00	0.40	13.42	306.00	1.36	1.36	0.27	0.02	388258.45	737522.16	N 32 3 56.95	W 103 42 0.03
	397.00	0.30	16.92	396.99	1.89	1.90	0.42	0.11	388258.99	737522.31	N 32 3 56.96	W 103 42 0.03
	487.00	0.22	129.22	486.99	2.01	2.01	0.62	0.48	388259.10	737522.51	N 32 3 56.96	W 103 42 0.02
	578.00	0.71	130.42	577.99	1.52	1.54	1.18	0.54	388258.63	737523.07	N 32 3 56.95	W 103 42 0.02
	668.00	1.28	123.62	667.98	0.59	0.62	2.44	0.65	388257.71	737524.33	N 32 3 56.94	W 103 42 0.00
	759.00	1.59	125.82	758.95	-0.72	-0.68	4.31	0.35	388256.41	737526.20	N 32 3 56.93	W 103 41 59.98
	849.00	1.59	125.42	848.91	-2.20	-2.14	6.34	0.01	388254.95	737528.23	N 32 3 56.92	W 103 41 59.96
	939.00	1.68	126.42	938.88	-3.72	-3.65	8.42	0.10	388253.44	737530.31	N 32 3 56.90	W 103 41 59.93
	998.00	1.68	119.20	997.85	-4.67	-4.58	9.87	0.36	388252.51	737531.76	N 32 3 56.89	W 103 41 59.92
	1120.00	1.75	111.68	1119.80	-6.28	-6.14	13.17	0.19	388250.95	737535.06	N 32 3 56.88	W 103 41 59.88
	1215.00	1.77	120.46	1214.75	-7.57	-7.42	15.78	0.28	388249.67	737537.67	N 32 3 56.86	W 103 41 59.85
	1310.00	1.79	110.27	1309.71	-8.85	-8.68	18.44	0.33	388248.41	737540.32	N 32 3 56.85	W 103 41 59.82
	1405.00	1.68	108.95	1404.66	-9.84	-9.65	21.14	0.12	388247.45	737543.03	N 32 3 56.84	W 103 41 59.79
	1500.00	1.76	110.56	1499.62	-10.83	-10.61	23.83	0.10	388246.48	737545.72	N 32 3 56.83	W 103 41 59.76
	1593.00	1.92	112.16	1592.57	-11.95	-11.70	26.61	0.18	388245.39	737548.50	N 32 3 56.82	W 103 41 59.72
	1687.00	1.97	110.94	1686.52	-13.15	-12.87	29.57	0.07	388244.22	737551.46	N 32 3 56.81	W 103 41 59.69
	1782.00	2.15	111.20	1781.46	-14.40	-14.10	32.76	0.19	388242.99	737554.65	N 32 3 56.80	W 103 41 59.65
	1876.00	1.32	102.62	1875.41	-15.30	-14.97	35.46	0.92	388242.12	737557.35	N 32 3 56.79	W 103 41 59.62
	1970.00	0.92	90.46	1969.39	-15.56	-15.22	37.27	0.49	388241.88	737559.16	N 32 3 56.79	W 103 41 59.60
	2064.00	1.25	89.83	2063.38	-15.58	-15.22	39.05	0.35	388241.87	737560.94	N 32 3 56.79	W 103 41 59.58
	2159.00	1.62	91.31	2158.35	-15.63	-15.25	41.43	0.39	388241.84	737563.32	N 32 3 56.78	W 103 41 59.55
	2254.00	1.84	89.72	2253.30	-15.68	-15.27	44.30	0.24	388241.82	737566.19	N 32 3 56.78	W 103 41 59.52
	2348.00	1.80	90.38	2347.26	-15.71	-15.27	47.28	0.05	388241.82	737569.17	N 32 3 56.78	W 103 41 59.48
	2443.00	1.66	89.20	2442.21	-15.73	-15.26	50.15	0.15	388241.83	737572.04	N 32 3 56.78	W 103 41 59.45
	2538.00	1.43	92.55	2535.18	-15.79	-15.30	52.66	0.27	388241.80	737574.55	N 32 3 56.78	W 103 41 59.42
	2631.00	1.08	87.57	2630.16	-15.82	-15.31	54.74	0.39	388241.78	737576.62	N 32 3 56.78	W 103 41 59.40
	2726.00	0.90	73.06	2725.14	-15.58	-15.05	56.35	0.32	388242.04	737578.23	N 32 3 56.79	W 103 41 59.38
	2820.00	0.56	82.82	2819.14	-15.32	-14.78	57.51	0.38	388242.31	737579.39	N 32 3 56.79	W 103 41 59.36
	2913.00	0.55	91.58	2912.13	-15.28	-14.74	58.40	0.09	388242.35	737580.29	N 32 3 56.79	W 103 41 59.35
	3008.00	0.53	110.64	3007.13	-15.46	-14.90	59.27	0.19	388242.19	737581.16	N 32 3 56.79	W 103 41 59.34
	3103.00	0.52	121.95	3102.12	-15.85	-15.29	60.05	0.11	388241.80	737581.94	N 32 3 56.78	W 103 41 59.34
	3198.00	0.73	136.13	3197.12	-16.52	-15.95	60.83	0.27	388241.14	737582.72	N 32 3 56.78	W 103 41 59.33
	3292.00	0.86	126.18	3291.11	-17.38	-16.80	61.82	0.20	388240.29	737583.71	N 32 3 56.77	W 103 41 59.32
	3386.00	1.19	95.90	3385.09	-17.91	-17.32	63.36	0.66	388239.77	737585.25	N 32 3 56.76	W 103 41 59.30
	3481.00	1.12	91.04	3480.07	-18.05	-17.44	65.27	0.13	388239.66	737587.15	N 32 3 56.76	W 103 41 59.27
	3576.00	1.05	85.73	3575.06	-18.01	-17.39	67.06	0.13	388239.70	737588.95	N 32 3 56.76	W 103 41 59.25
	3670.00	0.97	73.69	3669.04	-17.74	-17.10	68.69	0.24	388239.99	737590.57	N 32 3 56.76	W 103 41 59.24
	3764.00	1.15	81.51	3763.03	-17.39	-16.74	70.38	0.25	388240.35	737592.27	N 32 3 56.77	W 103 41 59.22
	3858.00	2.18	103.40	3856.99	-17.70	-17.01	73.06	1.27	388240.08	737594.94	N 32 3 56.77	W 103 41 59.18
	3952.00	1.51	132.03	3950.94	-18.96	-18.26	75.71	1.19	388238.83	737597.60	N 32 3 56.75	W 103 41 59.15
	4046.00	2.01	155.87	4044.90	-21.31	-20.59	77.31	0.93	388236.50	737599.20	N 32 3 56.73	W 103 41 59.14
	4140.00	3.19	152.40	4138.80	-25.15	-24.41	79.19	1.27	388232.66	737601.08	N 32 3 56.69	W 103 41 59.11
	4235.00	3.70	150.03	4233.63	-30.18	-29.41	81.95	0.56	388227.68	737603.84	N 32 3 56.64	W 103 41 59.08
	4330.00	3.37	144.16	4328.45	-35.12	-34.33	85.12	0.52	388222.76	737607.00	N 32 3 56.59	W 103 41 59.05
	4423.00	3.26	143.40	4421.29	-39.49	-38.67	88.29	0.13	388218.42	737610.18	N 32 3 56.55	W 103 41 59.01
	4517.00	2.96	139.91	4515.15	-43.52	-42.67	91.45	0.38	388214.42	737613.34	N 32 3 56.51	W 103 41 58.97
	4611.00	2.82	137.90	4609.03	-47.13	-46.24	94.56	0.18	388210.85	737616.45	N 32 3 56.47	W 103 41 58.94
	4705.00	2.57	139.15	4702.93	-50.46	-49.55	97.49	0.27	388207.54	737619.38	N 32 3 56.44	W 103 41 58.90
	4800.00	2.45	138.67	4797.84	-53.62	-52.69	100.23	0.13	388204.40	737622.11	N 32 3 56.41	W 103 41 58.87
	4894.00	2.84	138.06	4891.74	-56.89	-55.93	103.11	0.42	388201.16	737624.99	N 32 3 56.38	W 103 41 58.84
	4988.00	2.87	135.62	4885.62	-60.34	-59.34	106.31	0.13	388197.75	737628.20	N 32 3 56.34	W 103 41 58.80
	5082.00	2.84	129.99	5079.56	-63.55	-62.52	109.74	0.30	388194.57	737631.63	N 32 3 56.31	W 103 41 58.76
	5176.00	3.50	130.47	5173.36	-66.94	-65.88	113.71	0.70	388191.21	737635.59	N 32 3 56.28	W 103 41 58.72
	5270.00	3.89	130.99	5267.16	-70.94	-69.83	118.30	0.42	388187.26	737640.18	N 32 3 56.24	W 103 41 58.66
	5364.00	3.68	133.56	5360.96	-75.15	-74.00	122.89	0.29	388183.09	737644.78	N 32 3 56.20	W 103 41 58.61
	5458.00	3.43	130.64	5454.76	-79.10	-77.92	127.21	0.33	388179.18	737649.09	N 32 3 56.16	W 103 41 58.56
	5553.00	3.30	129.58	5549.61	-82.73	-81.51	131.48	0.15	388175.59	737653.36	N 32 3 56.12	W 103 41 58.51
	5647.00	3.16	126.80	5643.46	-86.05	-84.78	135.63	0.22	388172.31	737657.52	N 32 3 56.09	W 103 41 58.46
	5742.00	3.67	128.27	5738.29	-89.54	-88.24	140.12	0.54	388168.86	737662.00	N 32 3 56.06	W 103 41 58.41
	5834.00	4.07	126.52	5830.08	-93.36	-92.00	145.05	0.45	388165.09	737666.94	N 32 3 56.02	W 103 41 58.35
	5928.00	4.13	126.38	5923.84	-97.40	-96.00	150.46	0.06	388161.10	737672.34	N 32 3 55.98	W 103 41 58.29

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6023.00	4.00	125.16	6018.61	-101.39	-99.93	155.92	0.16	388157.16	737677.81	N 32° 35.54' W 103° 41' 58.23"	
	6117.00	3.74	125.46	6112.39	-105.10	-103.60	161.10	0.28	388153.50	737682.98	N 32° 35.50' W 103° 41' 58.17"	
	6211.00	3.47	126.22	6206.20	-108.61	-107.06	165.89	0.29	388150.04	737687.77	N 32° 35.57' W 103° 41' 58.11"	
	6305.00	3.22	125.51	6300.04	-111.86	-110.27	170.34	0.27	388146.82	737692.22	N 32° 35.54' W 103° 41' 58.06"	
	6400.00	3.39	120.64	6394.89	-114.89	-113.25	174.93	0.35	388143.84	737696.81	N 32° 35.51' W 103° 41' 58.01"	
	6494.00	3.43	120.86	6488.72	-117.79	-116.11	179.73	0.04	388140.98	737701.61	N 32° 35.57' W 103° 41' 57.95"	
	6588.00	3.34	122.08	6582.56	-120.73	-119.01	184.46	0.12	388138.09	737706.35	N 32° 35.57' W 103° 41' 57.90"	
	6683.00	3.27	122.01	6677.40	-123.68	-121.92	189.11	0.07	388135.18	737710.99	N 32° 35.52' W 103° 41' 57.84"	
	6776.00	3.12	123.10	6770.25	-126.51	-124.70	193.48	0.17	388132.39	737715.36	N 32° 35.59' W 103° 41' 57.79"	
	6871.00	3.27	131.39	6865.11	-129.75	-127.91	197.67	0.51	388129.19	737719.55	N 32° 35.56' W 103° 41' 57.74"	
	6965.00	3.18	133.70	6958.96	-133.36	-131.48	201.57	0.17	388125.62	737723.45	N 32° 35.53' W 103° 41' 57.70"	
	7060.00	3.11	134.15	7053.81	-137.01	-135.10	205.32	0.08	388122.00	737727.20	N 32° 35.59' W 103° 41' 57.66"	
	7154.00	2.98	132.60	7147.68	-140.47	-138.53	208.95	0.16	388118.57	737730.83	N 32° 35.55' W 103° 41' 57.61"	
	7249.00	2.81	134.94	7242.56	-143.82	-141.84	212.42	0.22	388115.25	737734.30	N 32° 35.52' W 103° 41' 57.57"	
	7343.00	2.57	131.54	7336.46	-146.88	-144.87	215.63	0.31	388112.23	737737.51	N 32° 35.49' W 103° 41' 57.54"	
	7438.00	2.53	132.88	7431.36	-149.75	-147.71	218.76	0.08	388109.39	737740.64	N 32° 35.46' W 103° 41' 57.50"	
	7532.00	2.22	134.56	7525.28	-152.46	-150.40	221.58	0.34	388106.70	737743.45	N 32° 35.44' W 103° 41' 57.47"	
	7625.00	2.10	129.90	7618.22	-154.84	-152.75	224.17	0.23	388104.34	737746.05	N 32° 35.41' W 103° 41' 57.44"	
	7719.00	2.07	132.17	7712.15	-157.11	-155.00	226.75	0.09	388102.10	737748.62	N 32° 35.39' W 103° 41' 57.41"	
	7812.00	2.01	133.64	7805.10	-159.39	-157.25	229.17	0.09	388099.85	737751.05	N 32° 35.37' W 103° 41' 57.38"	
	7906.00	2.00	133.90	7899.04	-161.68	-159.53	231.55	0.01	388097.57	737753.42	N 32° 35.35' W 103° 41' 57.35"	
	8001.00	1.84	137.60	7993.98	-163.98	-161.80	233.77	0.21	388095.30	737755.65	N 32° 35.32' W 103° 41' 57.33"	
	8096.00	1.68	143.87	8088.94	-166.25	-164.05	235.62	0.26	388093.05	737757.50	N 32° 35.30' W 103° 41' 57.31"	
	8191.00	1.55	144.34	8183.90	-168.43	-166.22	237.19	0.14	388090.88	737759.07	N 32° 35.28' W 103° 41' 57.29"	
	8286.00	1.47	147.88	8278.87	-170.52	-168.30	238.59	0.13	388088.80	737760.46	N 32° 35.26' W 103° 41' 57.27"	
	8381.00	1.31	152.23	8373.84	-172.52	-170.29	239.74	0.20	388086.81	737761.62	N 32° 35.24' W 103° 41' 57.26"	
	8474.00	1.13	155.34	8466.82	-174.31	-172.06	240.62	0.21	388085.03	737762.50	N 32° 35.22' W 103° 41' 57.25"	
	8569.00	0.92	161.34	8561.80	-175.89	-173.64	241.25	0.25	388083.46	737763.13	N 32° 35.21' W 103° 41' 57.24"	
	8664.00	0.70	150.32	8656.79	-177.12	-174.86	241.78	0.28	388082.23	737763.66	N 32° 35.19' W 103° 41' 57.23"	
	8757.00	0.38	278.66	8749.79	-177.57	-175.31	241.76	1.06	388081.79	737763.64	N 32° 35.19' W 103° 41' 57.23"	
	8851.00	1.14	291.53	8843.78	-177.16	-174.92	240.58	0.82	388082.18	737762.46	N 32° 35.19' W 103° 41' 57.25"	
	8946.00	1.63	290.35	8938.76	-176.33	-174.10	238.44	0.52	388082.99	737760.31	N 32° 35.20' W 103° 41' 57.27"	
	9042.00	1.47	276.72	9034.72	-175.69	-173.49	235.93	0.42	388083.61	737757.61	N 32° 35.21' W 103° 41' 57.30"	
	9136.00	1.28	277.18	9128.69	-175.39	-173.21	233.69	0.20	388083.89	737755.57	N 32° 35.21' W 103° 41' 57.33"	
	9233.00	1.11	273.90	9225.67	-175.17	-173.01	231.68	0.19	388084.08	737753.56	N 32° 35.21' W 103° 41' 57.35"	
	9328.00	0.96	269.10	9320.66	-175.11	-172.96	229.97	0.18	388084.13	737751.85	N 32° 35.21' W 103° 41' 57.37"	
	9423.00	0.84	245.65	9415.64	-175.43	-173.30	228.46	0.41	388083.80	737750.34	N 32° 35.21' W 103° 41' 57.39"	
	9517.00	1.10	256.75	9509.63	-175.94	-173.82	226.88	0.27	388083.28	737748.76	N 32° 35.20' W 103° 41' 57.41"	
	9611.00	1.28	248.78	9603.61	-176.51	-174.41	225.02	0.26	388082.69	737746.90	N 32° 35.20' W 103° 41' 57.43"	
	9707.00	1.52	254.28	9699.58	-177.22	-175.14	222.80	0.29	388081.96	737744.68	N 32° 35.19' W 103° 41' 57.46"	
	9801.00	1.77	249.30	9793.54	-176.05	-175.99	220.24	0.31	388081.11	737742.12	N 32° 35.18' W 103° 41' 57.48"	
	9896.00	1.69	246.53	9888.50	-175.10	-177.07	217.58	0.12	388080.03	737739.46	N 32° 35.17' W 103° 41' 57.52"	
	9990.00	1.21	249.19	9982.47	-175.98	-177.97	215.38	0.52	388079.12	737737.26	N 32° 35.16' W 103° 41' 57.54"	
	10085.00	0.80	254.68	10077.45	-180.50	-178.51	213.81	0.44	388078.59	737735.69	N 32° 35.15' W 103° 41' 57.56"	
	10180.00	0.56	225.70	10172.45	-180.99	-179.01	212.54	0.43	388078.09	737734.71	N 32° 35.15' W 103° 41' 57.58"	
	10275.00	0.66	206.93	10267.44	-181.80	-179.82	211.26	0.23	388077.28	737733.13	N 32° 35.15' W 103° 41' 57.58"	
	10369.00	0.73	214.48	10361.43	-182.77	-180.79	211.57	0.12	388076.30	737733.55	N 32° 35.14' W 103° 41' 57.58"	
	10464.00	0.51	191.28	10456.43	-183.68	-181.71	211.25	0.35	388075.39	737733.13	N 32° 35.13' W 103° 41' 57.59"	
	10559.00	0.66	198.89	10551.42	-184.61	-182.64	210.99	0.18	388074.46	737732.87	N 32° 35.12' W 103° 41' 57.59"	
	10653.00	0.91	212.20	10645.42	-185.74	-183.78	210.41	0.33	388073.32	737732.29	N 32° 35.11' W 103° 41' 57.60"	
	10748.00	1.10	199.51	10740.40	-187.24	-185.28	209.71	0.31	388071.82	737731.59	N 32° 35.09' W 103° 41' 57.61"	
	10842.00	1.26	198.10	10834.38	-188.06	-187.11	209.08	0.17	388069.98	737730.96	N 32° 35.07' W 103° 41' 57.62"	
	10934.00	1.24	202.04	10946.35	-191.35	-189.41	208.25	0.08	388067.69	737730.13	N 32° 35.05' W 103° 41' 57.63"	
	11049.00	0.59	207.19	11041.34	-192.73	-190.80	207.64	0.69	388066.30	737729.52	N 32° 35.04' W 103° 41' 57.63"	
	11142.00	0.73	256.95	11134.34	-193.28	-191.36	206.84	0.61	388065.74	737728.72	N 32° 35.03' W 103° 41' 57.64"	
	11236.00	1.15	254.45	11228.32	-193.66	-191.74	205.35	0.45	388065.36	737727.23	N 32° 35.03' W 103° 41' 57.66"	
	11267.00	0.77	286.81	11259.32	-193.67	-191.77	204.85	2.09	388065.33	737726.73	N 32° 35.03' W 103° 41' 57.66"	
	11299.00	1.34	353.05	11291.31	-193.24	-191.33	204.60	3.90	388065.77	737726.48	N 32° 35.03' W 103° 41' 57.67"	
	11330.00	3.86	10.16	11322.28	-191.85	-189.95	204.74	8.42	388067.15	737726.62	N 32° 35.05' W 103° 41' 57.67"	
	11362.00	6.71	17.23	11354.14	-189.01	-187.10	205.48	9.12	388070.00	737727.36	N 32° 35.07' W 103° 41' 57.66"	
	11394.00	9.37	20.68	11385.82	-184.80	-182.88	206.96	8.44	388074.22	737728.84	N 32° 35.12' W 103° 41' 57.64"	
	11425.00	11.70	24.49	11416.30	-179.60	-177.65	209.15	7.84	388079.44	737731.03	N 32° 35.17' W 103° 41' 57.61"	
	11456.00	14.15	27.51	11446.51	-173.41	-171.43	212.21	8.20	388085.67	737734.08	N 32° 35.23' W 103° 41' 57.58"	
	11488.00	16.99	27.88	11477.34	-165.84	-163.83	216.20	8.88	388093.27	737738.08	N 32° 35.30' W 103° 41' 57.53"	
	11519.00	19.78	28.92	11506.75	-157.29	-155.23	220.85	9.06	388101.87	737742.73	N 32° 35.39' W 103° 41' 57.48"	
	11550.00	23.01	30.82	11535.61	-147.55	-145.44	226.50	10.66	388111.66	737748.38	N 32° 35.49' W 103° 41' 57.41"	
	11581.00	26.11	32.21	11563.80	-136.63	-134.46	233.24	10.17	388122.64	737755.12	N 32° 35.59' W 103° 41' 57.33"	
	11620.00	29.53	32.70	11598.29	-121.37	-119.10	243.01	8.79	388137.99	737764.89	N 32° 35.75' W 103° 41' 57.22"	
	11652.00	34.02	32.71	11625.49	-107.28	-104.93	252.11	14.03	388152.17	737773.99	N 32° 35.88' W 103° 41' 57.11"	
	11683.00	39.01	33.33	11650.39	-91.92	-89.47	262.16	16.14	388167.62	737784.04	N 32° 35.94' W 103° 41' 56.99"	
	11714.00	43.90	32.97	11673.62	-74.85	-72.29	273.38	15.79	388184.80	737795.26	N 32° 35.62' W 103° 41' 56.86"	
	11746.00	48.24	28.69	11695.82	-55.16	-52.50	285.16	16.63	388204.59	737807.03	N 32° 35.60' W 103° 41' 56.72"	
	11777.00	52.17	23.07	11715.67	-33.84	-31.07	295.51	18.83	388226.02	737817.39	N 32° 35.61' W 103° 41' 56.60"	
	11798.00	54.48	17.79	11728.22	-18.12	-15.30	301.38	22.97	388241.79	737823.25	N 32° 35.67' W 103° 41' 56.53"	
First Taken Point	11839.00	58.49	14.49	11750.85	14.62	17.53	310.85	11.85	388274.62	737832.73	N 32° 35.70' W 103° 41' 56.42"	
	11908.00	65.40	9.53	11783.30	74.01	77.04	323.43	11.85	388334.13	737845.30	N 32° 35.76' W 103° 41' 56.27"	
	11932.00	67.64	8.52	11792.87	95.72							

[illegible]

Borehole:				Well:				Field:				Structure:			
Original Borehole				Cimarex Hallertau 5 Federal #7H				NM Lea County (NAD 83)				Cimarex Hallertau 5 Federal #7H			
Gravity & Magnetic Parameters				Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model: HDGM 2017		Dip: 59.732°		Date: 29-Nov-2017		Lat: N 32 3 56.94		Northing: 388257.09TUS		Grid Conv: 0.3382°		Slot: Cimarex Hallertau		TVD Ref: RKB(3295.9ft above MSL)	
MagDec: 6.822°		F8: 47803.524nT		Gravity F8: 998.689mgn (9.80665 Based)		Lon: W 103 42 0.03		Easting: 737521.89TUS		Scale Fact: 0.99995317		Plan: Cimarex Hallertau 5 Federal #7H MWD Final			

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Cimarex Hallertau 5 Federal #7H - SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First Taken Point	11839.00	58.49	14.49	11750.85	14.62	17.53	310.85	11.85
TD, project to bit	16532.00	88.00	358.86	11885.34	4681.22	4684.31	307.99	1.09

