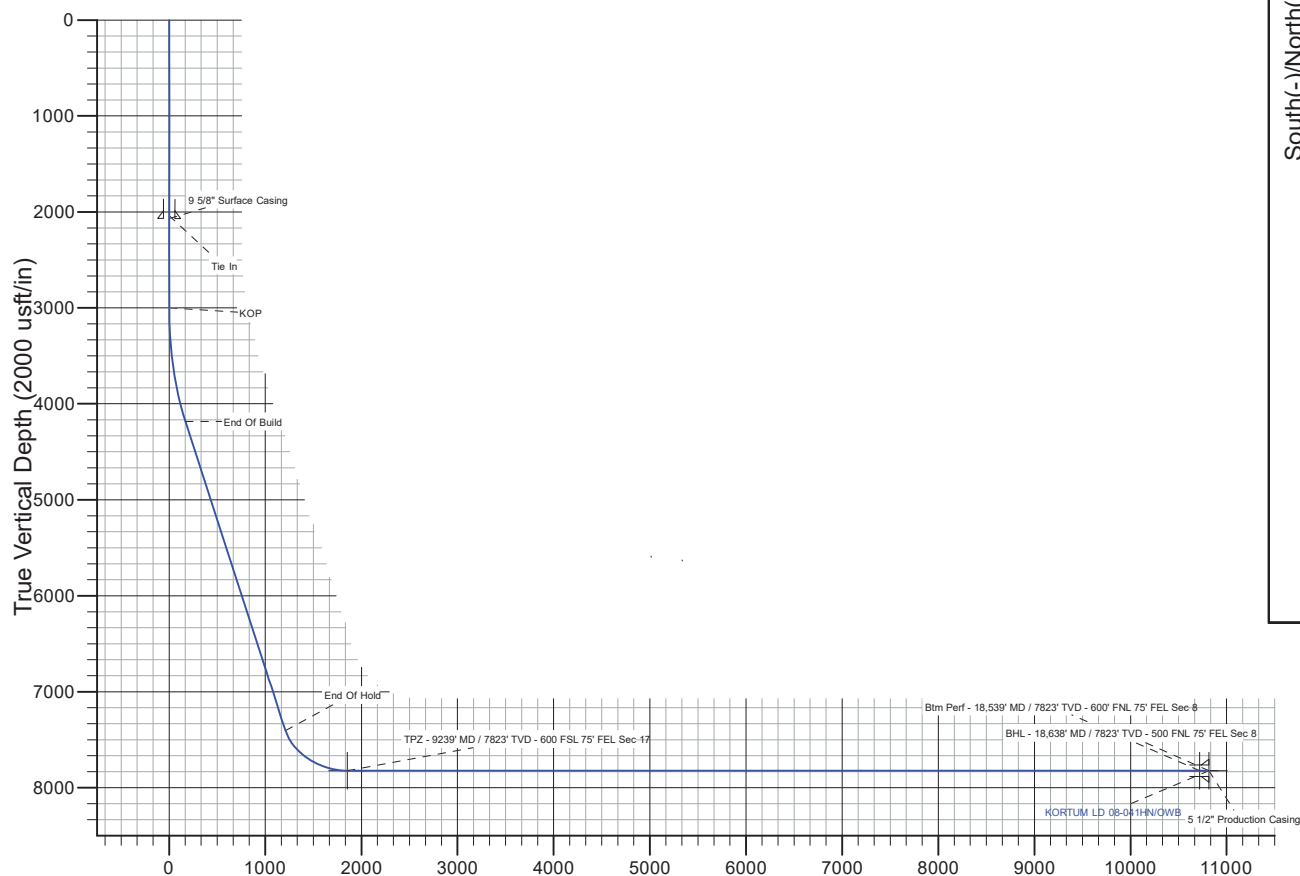




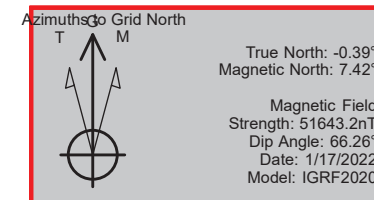
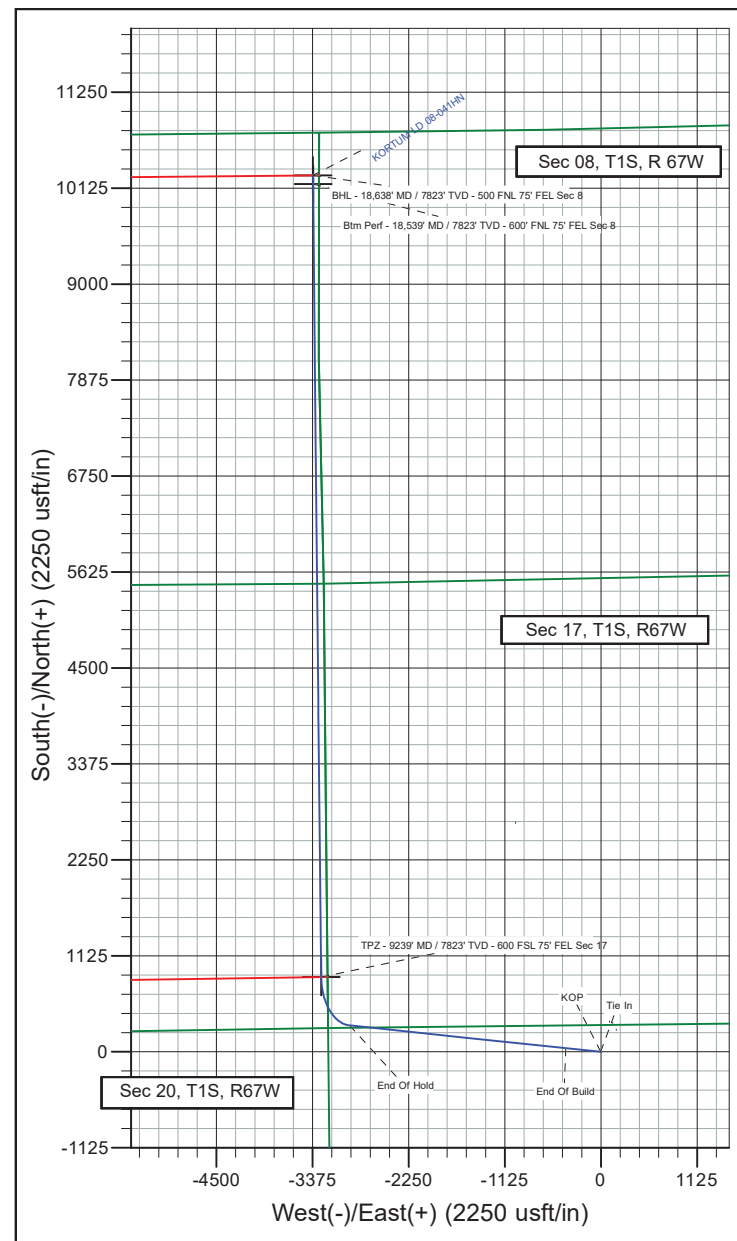
Project: ADAMS COUNTY  
 Site: Kortum Pad  
 Well: KORTUM LD 08-041HN  
 Wellbore: OWB  
 Design: PLAN #2  
 Lat: 39.956741  
 Long: -104.891808  
 GL: 5192.0  
 KB: RKB 20' @ 5212.0usft  
 API: 05.001.10479

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
2040.0	0.1	216.2	2040.0	0.4	-1.8	0.00	0.0	0.9	Tie In
2120.0	0.1	216.2	2120.0	0.2	-1.9	0.00	0.0	0.8	
2124.3	0.0	0.0	2124.3	0.2	-1.9	3.00	180.0	0.8	
3000.0	0.0	0.0	3000.0	0.2	-1.9	0.00	0.0	0.8	KOP
4276.5	38.3	276.0	4183.5	43.3	-410.5	3.00	276.0	169.0	End Of Build
8380.3	38.3	276.0	7404.4	309.6	-2939.7	0.00	0.0	1210.1	End Of Hold
9239.3	90.0	359.4	7823.0	877.6	-3274.1	10.00	84.8	1853.9	TPZ - 9239' MD / 7823' TVD - 600' FSL 75' FEL Sec 17
18538.9	90.0	359.5	7823.0	10176.7	-3368.3	0.00	90.010719.6		Btm Perf - 18,539' MD / 7823' TVD - 600' FNL 75' FEL Sec 8
18638.7	90.0	359.5	7823.0	10276.5	-3369.3	0.00	0.010814.7		BHL - 18,638' MD / 7823' TVD - 500' FNL 75' FEL Sec 8



Vertical Section at 341.8° (2000 usft/in)



Header Information	measured depth (ft)	inclination (°)	azimuth (°)	true vertical depth (ft)	northing +N/-S (ft)	easting +E/-W (ft)
Operator Name	98	0.0	31.3	98	0.0	0.0
Great Western Oil & Gas Company LLC	185	0.3	53.6	185	0.2	0.2
Operator Number	274	0.3	80.0	274	0.4	0.7
10110	365	0.3	82.0	365	0.5	1.1
Well Name and Number	455	0.3	57.1	455	0.6	1.5
Kortum LD 08-041HN	545	0.6	73.5	545	0.9	2.1
API Number (if available)	635	0.1	39.0	635	1.1	2.6
05.001.10479	725	0.6	277.9	725	1.2	2.2
Location: QQ SEC TWP RGE	815	0.6	295.8	815	1.5	1.3
NWNE 21 1S 67W	904	0.5	293.4	904	1.8	0.6
Citing Type: Planned or Actual	994	0.5	277.9	994	2.1	-0.2
Planned	1084	0.4	258.9	1084	2.0	-0.9
Deviation Indicator	1174	0.2	303.5	1174	2.1	-1.4
Horizontal ▼	1264	0.4	259.5	1264	2.1	-1.9
North Reference	1354	0.1	29.3	1354	2.1	-2.1
True ▼	1444	0.3	42.4	1444	2.3	-2.0
Grid Type	1534	0.0	313.1	1534	2.5	-1.8
▼	1624	0.3	178.1	1624	2.3	-1.9
	1714	0.5	175.8	1714	1.7	-1.8
	1804	0.3	175.3	1804	1.1	-1.8
	1894	0.2	156.2	1894	0.7	-1.7
	1985	0.1	216.2	1985	0.5	-1.7
	2040	0.1	216.2	2040	0.4	-1.8
	2100	0.1	216.2	2100	0.3	-1.8
	2120	0.1	216.2	2120	0.2	-1.9
	2124	0.0	0.0	2124	0.2	-1.9
	2200	0.0	0.0	2200	0.2	-1.9
	2300	0.0	0.0	2300	0.2	-1.9
	2400	0.0	0.0	2400	0.2	-1.9

2500	0.0	0.0	2500	0.2	-1.9
2600	0.0	0.0	2600	0.2	-1.9
2700	0.0	0.0	2700	0.2	-1.9
2800	0.0	0.0	2800	0.2	-1.9
2900	0.0	0.0	2900	0.2	-1.9
3000	0.0	0.0	3000	0.2	-1.9
3100	3.0	276.0	3100	0.5	-4.5
3200	6.0	276.0	3200	1.3	-12.3
3300	9.0	276.0	3299	2.7	-25.2
3400	12.0	276.0	3397	4.6	-43.4
3500	15.0	276.0	3494	7.0	-66.6
3600	18.0	276.0	3590	10.0	-94.8
3700	21.0	276.0	3684	13.5	-128.0
3800	24.0	276.0	3777	17.5	-166.1
3900	27.0	276.0	3867	22.0	-208.9
4000	30.0	276.0	3955	27.0	-256.3
4100	33.0	276.0	4040	32.5	-308.3
4200	36.0	276.0	4123	38.4	-364.6
4277	38.3	276.0	4184	43.3	-410.5
4300	38.3	276.0	4202	44.8	-425.0
4400	38.3	276.0	4280	51.3	-486.6
4500	38.3	276.0	4359	57.8	-548.3
4600	38.3	276.0	4437	64.3	-609.9
4700	38.3	276.0	4516	70.8	-671.5
4800	38.3	276.0	4594	77.2	-733.2
4900	38.3	276.0	4673	83.7	-794.8
5000	38.3	276.0	4751	90.2	-856.4
5100	38.3	276.0	4830	96.7	-918.0
5200	38.3	276.0	4908	103.2	-979.7
5300	38.3	276.0	4987	109.7	-1,041.3
5400	38.3	276.0	5065	116.2	-1,102.9
5500	38.3	276.0	5144	122.7	-1,164.6
5600	38.3	276.0	5222	129.2	-1,226.2
5700	38.3	276.0	5301	135.7	-1,287.8

5800	38.3	276.0	5379	142.1	-1,349.4
5900	38.3	276.0	5458	148.6	-1,411.1
6000	38.3	276.0	5536	155.1	-1,472.7
6100	38.3	276.0	5615	161.6	-1,534.3
6200	38.3	276.0	5693	168.1	-1,596.0
6300	38.3	276.0	5772	174.6	-1,657.6
6400	38.3	276.0	5850	181.1	-1,719.2
6500	38.3	276.0	5929	187.6	-1,780.8
6600	38.3	276.0	6007	194.1	-1,842.5
6700	38.3	276.0	6086	200.6	-1,904.1
6800	38.3	276.0	6164	207.1	-1,965.7
6900	38.3	276.0	6243	213.5	-2,027.4
7000	38.3	276.0	6321	220.0	-2,089.0
7100	38.3	276.0	6400	226.5	-2,150.6
7200	38.3	276.0	6478	233.0	-2,212.2
7300	38.3	276.0	6557	239.5	-2,273.9
7400	38.3	276.0	6635	246.0	-2,335.5
7500	38.3	276.0	6713	252.5	-2,397.1
7600	38.3	276.0	6792	259.0	-2,458.8
7700	38.3	276.0	6870	265.5	-2,520.4
7800	38.3	276.0	6949	272.0	-2,582.0
7900	38.3	276.0	7027	278.5	-2,643.6
8000	38.3	276.0	7106	284.9	-2,705.3
8100	38.3	276.0	7184	291.4	-2,766.9
8200	38.3	276.0	7263	297.9	-2,828.5
8300	38.3	276.0	7341	304.4	-2,890.2
8380	38.3	276.0	7404	309.6	-2,939.7
8400	38.5	279.2	7420	311.2	-2,951.8
8450	39.4	287.0	7459	318.4	-2,982.3
8500	40.9	294.4	7497	329.8	-3,012.5
8550	42.8	301.4	7534	345.4	-3,041.9
8600	45.0	307.8	7570	365.0	-3,070.4
8650	47.6	313.7	7605	388.7	-3,097.7
8700	50.5	319.1	7638	416.0	-3,123.7

8750	53.6	324.1	7668	446.9	-3,148.2
8800	56.9	328.7	7697	481.1	-3,170.9
8850	60.4	332.9	7723	518.4	-3,191.7
8900	63.9	336.8	7746	558.4	-3,210.4
8950	67.6	340.5	7767	600.9	-3,227.0
9000	71.4	344.1	7784	645.5	-3,241.2
9050	75.2	347.4	7799	691.9	-3,253.0
9100	79.1	350.7	7810	739.7	-3,262.2
9150	83.0	353.8	7818	788.6	-3,268.8
9200	86.9	357.0	7822	838.3	-3,272.8
9239	90.0	359.4	7823	877.6	-3,274.1
9300	90.0	359.4	7823	938.2	-3,274.7
9400	90.0	359.4	7823	1,038.2	-3,275.8
9500	90.0	359.4	7823	1,138.2	-3,276.9
9600	90.0	359.4	7823	1,238.2	-3,277.9
9700	90.0	359.4	7823	1,338.2	-3,279.0
9800	90.0	359.4	7823	1,438.2	-3,280.1
9900	90.0	359.4	7823	1,538.2	-3,281.1
10000	90.0	359.4	7823	1,638.2	-3,282.2
10100	90.0	359.4	7823	1,738.2	-3,283.3
10200	90.0	359.4	7823	1,838.2	-3,284.3
10300	90.0	359.4	7823	1,938.2	-3,285.4
10400	90.0	359.4	7823	2,038.2	-3,286.5
10500	90.0	359.4	7823	2,138.2	-3,287.5
10600	90.0	359.4	7823	2,238.2	-3,288.6
10700	90.0	359.4	7823	2,338.2	-3,289.6
10800	90.0	359.4	7823	2,438.1	-3,290.7
10900	90.0	359.4	7823	2,538.1	-3,291.7
11000	90.0	359.4	7823	2,638.1	-3,292.8
11100	90.0	359.4	7823	2,738.1	-3,293.8
11200	90.0	359.4	7823	2,838.1	-3,294.9
11300	90.0	359.4	7823	2,938.1	-3,295.9
11400	90.0	359.4	7823	3,038.1	-3,297.0
11500	90.0	359.4	7823	3,138.1	-3,298.0

11600	90.0	359.4	7823	3,238.1	-3,299.1
11700	90.0	359.4	7823	3,338.1	-3,300.1
11800	90.0	359.4	7823	3,438.1	-3,301.1
11900	90.0	359.4	7823	3,538.1	-3,302.2
12000	90.0	359.4	7823	3,638.1	-3,303.2
12100	90.0	359.4	7823	3,738.1	-3,304.3
12200	90.0	359.4	7823	3,838.1	-3,305.3
12300	90.0	359.4	7823	3,938.1	-3,306.3
12400	90.0	359.4	7823	4,038.1	-3,307.4
12500	90.0	359.4	7823	4,138.1	-3,308.4
12600	90.0	359.4	7823	4,238.1	-3,309.4
12700	90.0	359.4	7823	4,338.0	-3,310.4
12800	90.0	359.4	7823	4,438.0	-3,311.5
12900	90.0	359.4	7823	4,538.0	-3,312.5
13000	90.0	359.4	7823	4,638.0	-3,313.5
13100	90.0	359.4	7823	4,738.0	-3,314.6
13200	90.0	359.4	7823	4,838.0	-3,315.6
13300	90.0	359.4	7823	4,938.0	-3,316.6
13400	90.0	359.4	7823	5,038.0	-3,317.6
13500	90.0	359.4	7823	5,138.0	-3,318.6
13600	90.0	359.4	7823	5,238.0	-3,319.7
13700	90.0	359.4	7823	5,338.0	-3,320.7
13800	90.0	359.4	7823	5,438.0	-3,321.7
13900	90.0	359.4	7823	5,538.0	-3,322.7
14000	90.0	359.4	7823	5,638.0	-3,323.7
14100	90.0	359.4	7823	5,738.0	-3,324.7
14200	90.0	359.4	7823	5,838.0	-3,325.7
14300	90.0	359.4	7823	5,938.0	-3,326.7
14400	90.0	359.4	7823	6,038.0	-3,327.7
14500	90.0	359.4	7823	6,138.0	-3,328.8
14600	90.0	359.4	7823	6,237.9	-3,329.8
14700	90.0	359.4	7823	6,337.9	-3,330.8
14800	90.0	359.4	7823	6,437.9	-3,331.8
14900	90.0	359.4	7823	6,537.9	-3,332.8

15000	90.0	359.4	7823	6,637.9	-3,333.8
15100	90.0	359.4	7823	6,737.9	-3,334.8
15200	90.0	359.4	7823	6,837.9	-3,335.8
15300	90.0	359.4	7823	6,937.9	-3,336.8
15400	90.0	359.4	7823	7,037.9	-3,337.7
15500	90.0	359.4	7823	7,137.9	-3,338.7
15600	90.0	359.4	7823	7,237.9	-3,339.7
15700	90.0	359.4	7823	7,337.9	-3,340.7
15800	90.0	359.4	7823	7,437.9	-3,341.7
15900	90.0	359.4	7823	7,537.9	-3,342.7
16000	90.0	359.4	7823	7,637.9	-3,343.7
16100	90.0	359.4	7823	7,737.9	-3,344.7
16200	90.0	359.4	7823	7,837.9	-3,345.7
16300	90.0	359.4	7823	7,937.9	-3,346.6
16400	90.0	359.4	7823	8,037.9	-3,347.6
16500	90.0	359.4	7823	8,137.9	-3,348.6
16600	90.0	359.4	7823	8,237.8	-3,349.6
16700	90.0	359.4	7823	8,337.8	-3,350.6
16800	90.0	359.4	7823	8,437.8	-3,351.5
16900	90.0	359.4	7823	8,537.8	-3,352.5
17000	90.0	359.4	7823	8,637.8	-3,353.5
17100	90.0	359.4	7823	8,737.8	-3,354.5
17200	90.0	359.4	7823	8,837.8	-3,355.4
17300	90.0	359.4	7823	8,937.8	-3,356.4
17400	90.0	359.4	7823	9,037.8	-3,357.4
17500	90.0	359.4	7823	9,137.8	-3,358.3
17600	90.0	359.4	7823	9,237.8	-3,359.3
17700	90.0	359.4	7823	9,337.8	-3,360.3
17800	90.0	359.4	7823	9,437.8	-3,361.2
17900	90.0	359.4	7823	9,537.8	-3,362.2
18000	90.0	359.5	7823	9,637.8	-3,363.2
18100	90.0	359.5	7823	9,737.8	-3,364.1
18200	90.0	359.5	7823	9,837.8	-3,365.1
18300	90.0	359.5	7823	9,937.8	-3,366.0

[illegible]