



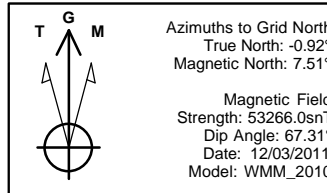
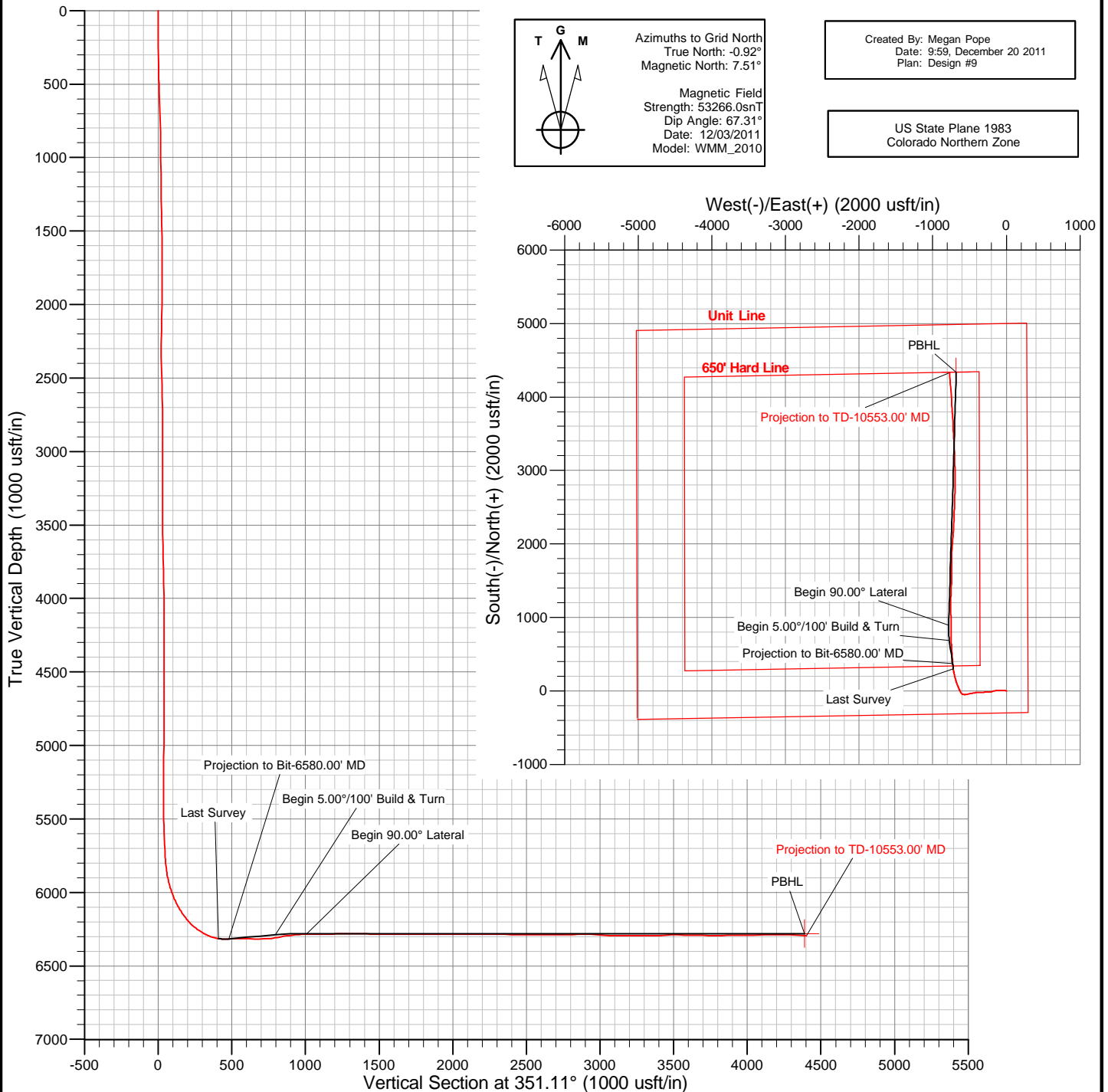
Company: Carrizo Oil & Gas  
 Site: Pergamos  
 Well: 3-44-7-60  
 Project: Weld County, Colorado (NAD83)  
 Rig Name: Xtreme 19



Planning: 936.442.2510 Fax: 936.442.2515  
 Operations: 936.442.2500 Fax: 936.442.2599

#### ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
6512.00	81.30	352.30	6314.91	302.81	-720.62	410.54	0.00	Last Survey
6580.00	95.00	352.30	6317.10	370.00	-729.71	478.33	67.80	Projection to Bit-6580.00' MD
6898.57	95.00	352.30	6289.33	684.50	-772.23	795.62	385.16	Begin 5.00°/100' Build & Turn
7112.12	90.00	1.75	6280.00	897.25	-783.26	1007.52	598.44	Begin 90.00° Lateral
10554.04	90.00	1.75	6280.00	4337.57	-678.35	4390.29	4040.36	PBHL



Created By: Megan Pope  
 Date: 9:59, December 20 2011  
 Plan: Design #9

US State Plane 1983  
 Colorado Northern Zone



## **Carrizo Oil & Gas**

**Weld County, Colorado (NAD83)**

**Pergamos**

**3-44-7-60**

**Wellbore #1**

**Survey: Archer MWD**

## **Standard Survey Report**

**20 December, 2011**

<b>Company:</b>	Carrizo Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well 3-44-7-60
<b>Project:</b>	Weld County, Colorado (NAD83)	<b>TVD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

<b>Project</b>	Weld County, Colorado (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Well	3-44-7-60					
Well Position	+N/-S	0.00 usft	Northing:	1,463,820.17 usft	Latitude:	40° 35' 52.0719 N
	+E/-W	0.00 usft	Easting:	3,397,034.27 usft	Longitude:	104° 4' 12.730 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,935.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	WMM_2010	12/03/11	8.43	67.31	53,266

<b>Design</b>	Surveys				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	351.11	

<b>Survey Program</b>	<b>Date</b>	12/20/11			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
125.00	10,553.00	Archer MWD (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
125.00	0.40	32.30	125.00	0.37	0.23	0.33	0.32	0.32	0.00	
155.00	0.20	72.10	155.00	0.47	0.34	0.42	0.93	-0.67	132.67	
248.00	0.70	319.20	248.00	0.95	0.12	0.92	0.86	0.54	-121.40	
372.00	1.40	303.70	371.97	2.37	-1.63	2.59	0.60	0.56	-12.50	
465.00	3.30	287.90	464.89	3.82	-5.13	4.57	2.14	2.04	-16.99	
557.00	5.80	285.10	556.60	5.85	-12.13	7.65	2.73	2.72	-3.04	
649.00	6.50	278.40	648.07	7.82	-21.77	11.09	1.09	0.76	-7.28	
741.00	6.30	270.70	739.50	8.64	-31.97	13.48	0.96	-0.22	-8.37	
833.00	6.50	269.30	830.92	8.64	-42.23	15.06	0.28	0.22	-1.52	
925.00	6.50	267.90	922.33	8.38	-52.64	16.42	0.17	0.00	-1.52	
1,017.00	6.30	267.20	1,013.76	7.95	-62.88	17.57	0.23	-0.22	-0.76	
1,109.00	6.20	266.10	1,105.21	7.36	-72.88	18.54	0.17	-0.11	-1.20	
1,201.00	6.30	268.20	1,196.66	6.87	-82.88	19.59	0.27	0.11	2.28	
1,293.00	6.70	268.20	1,288.07	6.54	-93.29	20.88	0.43	0.43	0.00	

<b>Company:</b>	Carrizo Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well 3-44-7-60
<b>Project:</b>	Weld County, Colorado (NAD83)	<b>TVD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,377.00	6.70	269.30	1,371.50	6.32	-103.09	22.18	0.15	0.00	1.31	
1,453.00	7.20	269.30	1,446.94	6.21	-112.29	23.49	0.66	0.66	0.00	
1,545.00	6.70	268.60	1,538.26	6.01	-123.42	25.01	0.55	-0.54	-0.76	
1,637.00	6.50	266.50	1,629.65	5.56	-133.98	26.20	0.34	-0.22	-2.28	
1,729.00	6.30	267.90	1,721.08	5.06	-144.22	27.29	0.28	-0.22	1.52	
1,821.00	7.00	256.60	1,812.47	3.57	-154.72	27.44	1.61	0.76	-12.28	
1,913.00	6.70	257.70	1,903.81	1.13	-165.42	26.68	0.36	-0.33	1.20	
2,006.00	6.30	255.20	1,996.21	-1.33	-175.65	25.83	0.53	-0.43	-2.69	
2,098.00	6.00	252.10	2,087.68	-4.09	-185.11	24.56	0.49	-0.33	-3.37	
2,190.00	6.90	254.50	2,179.10	-7.05	-195.01	23.17	1.02	0.98	2.61	
2,282.00	6.50	252.10	2,270.47	-10.13	-205.29	21.72	0.53	-0.43	-2.61	
2,373.00	6.30	269.60	2,360.91	-11.75	-215.18	21.65	2.15	-0.22	19.23	
2,465.00	7.20	273.20	2,452.27	-11.46	-225.99	23.60	1.08	0.98	3.91	
2,557.00	6.90	271.00	2,543.58	-11.04	-237.27	25.76	0.44	-0.33	-2.39	
2,642.00	6.90	270.70	2,627.96	-10.89	-247.48	27.49	0.04	0.00	-0.35	
2,728.00	6.50	269.60	2,713.37	-10.86	-257.51	29.07	0.49	-0.47	-1.28	
2,813.00	6.30	266.80	2,797.85	-11.15	-266.98	30.24	0.44	-0.24	-3.29	
2,898.00	6.00	265.10	2,882.36	-11.79	-276.06	31.01	0.41	-0.35	-2.00	
2,983.00	6.30	260.50	2,966.87	-12.94	-285.09	31.27	0.68	0.35	-5.41	
3,068.00	6.30	258.70	3,051.35	-14.63	-294.26	31.02	0.23	0.00	-2.12	
3,153.00	6.20	258.00	3,135.85	-16.49	-303.33	30.58	0.15	-0.12	-0.82	
3,238.00	5.80	251.40	3,220.38	-18.82	-311.89	29.61	0.94	-0.47	-7.76	
3,323.00	5.80	255.60	3,304.95	-21.26	-320.12	28.47	0.50	0.00	4.94	
3,408.00	6.50	266.10	3,389.46	-22.65	-329.08	28.48	1.56	0.82	12.35	
3,493.00	6.70	270.30	3,473.90	-22.95	-338.84	29.69	0.61	0.24	4.94	
3,578.00	6.70	269.30	3,558.32	-22.99	-348.75	31.18	0.14	0.00	-1.18	
3,663.00	6.90	268.90	3,642.72	-23.15	-358.82	32.58	0.24	0.24	-0.47	
3,748.00	6.90	268.90	3,727.11	-23.34	-369.03	33.97	0.00	0.00	0.00	
3,832.00	6.70	270.00	3,810.51	-23.44	-378.97	35.41	0.28	-0.24	1.31	
3,917.00	6.30	271.00	3,894.97	-23.36	-388.59	36.97	0.49	-0.47	1.18	
4,002.00	6.30	270.00	3,979.45	-23.28	-397.92	38.50	0.13	0.00	-1.18	
4,088.00	5.60	270.00	4,064.99	-23.28	-406.83	39.87	0.81	-0.81	0.00	
4,173.00	6.00	266.10	4,149.56	-23.58	-415.41	40.90	0.66	0.47	-4.59	
4,258.00	6.30	263.00	4,234.07	-24.45	-424.47	41.44	0.53	0.35	-3.65	
4,343.00	6.20	258.40	4,318.56	-25.94	-433.60	41.38	0.60	-0.12	-5.41	
4,429.00	6.00	259.80	4,404.08	-27.67	-442.57	41.06	0.29	-0.23	1.63	
4,514.00	5.80	259.10	4,488.62	-29.27	-451.16	40.80	0.25	-0.24	-0.82	
4,599.00	6.70	262.30	4,573.12	-30.75	-460.29	40.76	1.13	1.06	3.76	
4,684.00	6.70	259.80	4,657.54	-32.29	-470.09	40.75	0.34	0.00	-2.94	
4,769.00	6.70	260.50	4,741.96	-33.98	-479.86	40.58	0.10	0.00	0.82	
4,855.00	6.70	258.40	4,827.37	-35.82	-489.72	40.29	0.28	0.00	-2.44	
4,940.00	6.30	257.70	4,911.82	-37.81	-499.13	39.78	0.48	-0.47	-0.82	
5,025.00	6.20	252.10	4,996.32	-40.22	-508.06	38.78	0.73	-0.12	-6.59	
5,110.00	6.70	256.60	5,080.78	-42.78	-517.25	37.67	0.84	0.59	5.29	

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<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,196.00	6.20	254.90	5,166.24	-45.15	-526.61	36.78	0.62	-0.58	-1.98	
5,281.00	6.70	261.20	5,250.70	-47.10	-535.95	36.29	1.02	0.59	7.41	
5,366.00	6.70	262.60	5,335.12	-48.50	-545.76	36.42	0.19	0.00	1.65	
5,451.00	6.20	260.50	5,419.58	-49.90	-555.21	36.50	0.65	-0.59	-2.47	
5,536.00	5.80	269.60	5,504.12	-50.68	-564.03	37.09	1.21	-0.47	10.71	
5,622.00	7.00	281.90	5,589.58	-49.63	-573.50	39.59	2.11	1.40	14.30	
5,707.00	6.90	283.00	5,673.96	-47.42	-583.55	43.33	0.20	-0.12	1.29	
5,749.00	6.70	283.00	5,715.66	-46.30	-588.39	45.19	0.48	-0.48	0.00	
5,792.00	6.70	293.20	5,758.37	-44.75	-593.14	47.45	2.76	0.00	23.72	
5,835.00	7.70	304.10	5,801.03	-42.14	-597.83	50.75	3.93	2.33	25.35	
5,877.00	9.50	309.70	5,842.56	-38.35	-602.83	55.27	4.72	4.29	13.33	
5,920.00	12.00	322.00	5,884.81	-32.56	-608.31	61.84	7.86	5.81	28.60	
5,963.00	14.80	328.00	5,926.64	-24.38	-613.98	70.80	7.26	6.51	13.95	
6,005.00	18.10	330.50	5,966.91	-14.15	-620.04	81.84	8.03	7.86	5.95	
6,048.00	21.50	332.90	6,007.36	-1.31	-626.92	95.58	8.13	7.91	5.58	
6,090.00	24.60	334.30	6,046.01	13.42	-634.22	111.27	7.49	7.38	3.33	
6,133.00	28.30	335.70	6,084.50	30.78	-642.29	129.67	8.73	8.60	3.26	
6,175.00	32.00	336.80	6,120.81	50.09	-650.78	150.06	8.91	8.81	2.62	
6,217.00	35.90	337.80	6,155.65	71.73	-659.82	172.83	9.38	9.29	2.38	
6,259.00	40.80	340.00	6,188.57	96.04	-669.17	198.29	12.11	11.67	5.24	
6,301.00	46.60	342.10	6,218.93	123.48	-678.56	226.86	14.23	13.81	5.00	
6,343.00	52.80	343.80	6,246.08	154.09	-687.93	258.55	15.08	14.76	4.05	
6,385.00	58.10	345.20	6,269.89	187.41	-697.16	292.90	12.91	12.62	3.33	
6,427.00	64.90	347.30	6,289.92	223.25	-705.90	329.65	16.77	16.19	5.00	
6,469.00	72.50	349.10	6,305.17	261.52	-713.88	368.70	18.53	18.10	4.29	
6,512.00	81.30	352.30	6,314.91	302.81	-720.62	410.54	21.71	20.47	7.44	
6,570.00	92.70	355.80	6,317.94	360.32	-726.61	468.28	20.56	19.66	6.03	
6,601.00	92.20	356.50	6,316.61	391.22	-728.68	499.13	2.77	-1.61	2.26	
6,631.00	89.70	356.10	6,316.12	421.15	-730.62	529.00	8.44	-8.33	-1.33	
6,662.00	89.00	355.10	6,316.47	452.06	-733.00	559.90	3.94	-2.26	-3.23	
6,693.00	90.40	356.10	6,316.63	482.96	-735.38	590.80	5.55	4.52	3.23	
6,723.00	89.00	356.10	6,316.79	512.89	-737.42	620.69	4.67	-4.67	0.00	
6,754.00	89.00	355.40	6,317.33	543.80	-739.71	651.58	2.26	0.00	-2.26	
6,785.00	90.10	356.10	6,317.57	574.72	-742.01	682.48	4.21	3.55	2.26	
6,827.00	91.70	356.50	6,316.91	616.62	-744.72	724.30	3.93	3.81	0.95	
6,870.00	96.40	358.20	6,313.88	659.45	-746.71	766.93	11.62	10.93	3.95	
6,885.00	98.20	358.90	6,311.97	674.33	-747.08	781.68	12.86	12.00	4.67	
6,900.00	99.80	359.60	6,309.62	689.14	-747.28	796.34	11.62	10.67	4.67	
6,912.00	100.10	359.60	6,307.55	700.96	-747.36	808.03	2.50	2.50	0.00	
6,930.00	100.30	359.30	6,304.36	718.67	-747.53	825.56	1.98	1.11	-1.67	
6,945.00	100.50	359.30	6,301.66	733.43	-747.71	840.17	1.33	1.33	0.00	
6,955.00	100.10	359.30	6,299.87	743.27	-747.83	849.90	4.00	-4.00	0.00	
6,977.00	98.50	358.60	6,296.31	764.97	-748.23	871.41	7.92	-7.27	-3.18	

<b>Company:</b>	Carrizo Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well 3-44-7-60
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<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
6,998.00	97.50	358.90	6,293.39	785.76	-748.68	892.02	4.97	-4.76	1.43	
7,020.00	95.50	359.30	6,290.90	807.62	-749.02	913.67	9.27	-9.09	1.82	
7,040.00	95.20	358.90	6,289.03	827.53	-749.34	933.39	2.49	-1.50	-2.00	
7,062.00	93.80	359.30	6,287.31	849.46	-749.68	955.11	6.62	-6.36	1.82	
7,082.00	92.20	359.30	6,286.26	869.43	-749.93	974.87	8.00	-8.00	0.00	
7,104.00	89.90	359.60	6,285.86	891.42	-750.14	996.64	10.54	-10.45	1.36	
7,125.00	88.90	358.90	6,286.08	912.42	-750.41	1,017.42	5.81	-4.76	-3.33	
7,147.00	89.00	359.30	6,286.48	934.41	-750.76	1,039.21	1.87	0.45	1.82	
7,168.00	89.70	359.30	6,286.72	955.41	-751.01	1,059.99	3.33	3.33	0.00	
7,190.00	90.30	359.30	6,286.72	977.41	-751.28	1,081.77	2.73	2.73	0.00	
7,211.00	90.40	359.30	6,286.59	998.40	-751.54	1,102.55	0.48	0.48	0.00	
7,233.00	91.30	359.30	6,286.27	1,020.40	-751.81	1,124.32	4.09	4.09	0.00	
7,253.00	91.70	358.90	6,285.74	1,040.39	-752.12	1,144.12	2.83	2.00	-2.00	
7,275.00	92.60	359.30	6,284.92	1,062.37	-752.47	1,165.89	4.48	4.09	1.82	
7,296.00	92.70	358.90	6,283.95	1,083.35	-752.80	1,186.67	1.96	0.48	-1.90	
7,317.00	92.90	358.90	6,282.92	1,104.32	-753.20	1,207.45	0.95	0.95	0.00	
7,339.00	91.80	359.30	6,282.02	1,126.30	-753.54	1,229.22	5.32	-5.00	1.82	
7,360.00	90.80	359.30	6,281.54	1,147.29	-753.80	1,250.00	4.76	-4.76	0.00	
7,381.00	90.80	0.00	6,281.25	1,168.29	-753.93	1,270.76	3.33	0.00	3.33	
7,403.00	90.80	0.30	6,280.94	1,190.28	-753.87	1,292.49	1.36	0.00	1.36	
7,424.00	90.80	0.00	6,280.65	1,211.28	-753.82	1,313.22	1.43	0.00	-1.43	
7,446.00	89.90	1.00	6,280.51	1,233.28	-753.62	1,334.93	6.12	-4.09	4.55	
7,466.00	89.70	1.40	6,280.58	1,253.28	-753.21	1,354.62	2.24	-1.00	2.00	
7,488.00	88.70	1.80	6,280.89	1,275.26	-752.59	1,376.25	4.90	-4.55	1.82	
7,509.00	88.30	2.10	6,281.44	1,296.24	-751.88	1,396.87	2.38	-1.90	1.43	
7,530.00	87.30	2.10	6,282.25	1,317.21	-751.11	1,417.47	4.76	-4.76	0.00	
7,551.00	87.30	2.50	6,283.24	1,338.17	-750.27	1,438.04	1.90	0.00	1.90	
7,573.00	87.80	2.50	6,284.18	1,360.13	-749.31	1,459.59	2.27	2.27	0.00	
7,592.00	88.00	2.10	6,284.87	1,379.11	-748.55	1,478.22	2.35	1.05	-2.11	
7,615.00	88.90	2.10	6,285.49	1,402.08	-747.70	1,500.79	3.91	3.91	0.00	
7,635.00	89.70	1.80	6,285.74	1,422.07	-747.02	1,520.43	4.27	4.00	-1.50	
7,677.00	90.30	1.80	6,285.74	1,464.05	-745.70	1,561.70	1.43	1.43	0.00	
7,720.00	90.30	1.00	6,285.51	1,507.03	-744.65	1,604.01	1.86	0.00	-1.86	
7,763.00	89.20	0.70	6,285.70	1,550.03	-744.01	1,646.39	2.65	-2.56	-0.70	
7,805.00	89.90	1.00	6,286.03	1,592.02	-743.39	1,687.78	1.81	1.67	0.71	
7,848.00	90.60	1.00	6,285.84	1,635.01	-742.64	1,730.14	1.63	1.63	0.00	
7,891.00	90.60	0.70	6,285.39	1,678.01	-742.00	1,772.52	0.70	0.00	-0.70	
7,933.00	91.00	1.00	6,284.81	1,720.00	-741.38	1,813.91	1.19	0.95	0.71	
7,976.00	91.10	0.70	6,284.02	1,762.99	-740.74	1,856.28	0.74	0.23	-0.70	
8,018.00	90.40	0.70	6,283.47	1,804.98	-740.23	1,897.69	1.67	-1.67	0.00	
8,061.00	89.60	0.30	6,283.47	1,847.98	-739.85	1,940.11	2.08	-1.86	-0.93	
8,104.00	89.70	2.10	6,283.73	1,890.97	-738.95	1,982.45	4.19	0.23	4.19	
8,146.00	89.40	2.50	6,284.06	1,932.93	-737.27	2,023.65	1.19	-0.71	0.95	

<b>Company:</b>	Carrizo Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well 3-44-7-60
<b>Project:</b>	Weld County, Colorado (NAD83)	<b>TVD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,189.00	90.40	4.90	6,284.14	1,975.84	-734.49	2,065.61	6.05	2.33	5.58	
8,232.00	90.30	5.30	6,283.87	2,018.67	-730.67	2,107.33	0.96	-0.23	0.93	
8,274.00	89.70	5.30	6,283.87	2,060.49	-726.79	2,148.05	1.43	-1.43	0.00	
8,317.00	90.10	5.60	6,283.95	2,103.29	-722.71	2,189.71	1.16	0.93	0.70	
8,359.00	89.70	4.20	6,284.02	2,145.14	-719.12	2,230.50	3.47	-0.95	-3.33	
8,402.00	89.90	3.50	6,284.17	2,188.04	-716.23	2,272.44	1.69	0.47	-1.63	
8,445.00	89.60	2.50	6,284.36	2,230.98	-713.98	2,314.52	2.43	-0.70	-2.33	
8,487.00	87.40	1.80	6,285.46	2,272.93	-712.41	2,355.72	5.50	-5.24	-1.67	
8,530.00	87.30	1.80	6,287.45	2,315.86	-711.06	2,397.93	0.23	-0.23	0.00	
8,572.00	89.00	1.80	6,288.80	2,357.82	-709.74	2,439.18	4.05	4.05	0.00	
8,615.00	90.30	2.50	6,289.07	2,400.79	-708.13	2,481.38	3.43	3.02	1.63	
8,658.00	90.60	2.50	6,288.73	2,443.75	-706.25	2,523.53	0.70	0.70	0.00	
8,700.00	90.60	2.10	6,288.29	2,485.71	-704.57	2,564.73	0.95	0.00	-0.95	
8,742.00	89.20	1.80	6,288.36	2,527.68	-703.14	2,605.98	3.41	-3.33	-0.71	
8,784.00	89.00	1.80	6,289.02	2,569.66	-701.82	2,647.25	0.48	-0.48	0.00	
8,826.00	89.70	1.40	6,289.50	2,611.64	-700.65	2,688.54	1.92	1.67	-0.95	
8,869.00	91.10	2.50	6,289.20	2,654.61	-699.18	2,730.77	4.14	3.26	2.56	
8,911.00	91.50	1.40	6,288.24	2,696.58	-697.75	2,772.01	2.79	0.95	-2.62	
8,954.00	91.80	0.70	6,287.01	2,739.55	-696.97	2,814.35	1.77	0.70	-1.63	
8,996.00	90.80	0.70	6,286.05	2,781.54	-696.45	2,855.75	2.38	-2.38	0.00	
9,038.00	89.40	0.70	6,285.98	2,823.53	-695.94	2,897.16	3.33	-3.33	0.00	
9,081.00	88.00	0.30	6,286.96	2,866.52	-695.56	2,939.57	3.39	-3.26	-0.93	
9,124.00	87.10	0.00	6,288.79	2,909.48	-695.45	2,982.00	2.21	-2.09	-0.70	
9,166.00	86.90	359.30	6,290.99	2,951.42	-695.71	3,023.48	1.73	-0.48	-1.67	
9,209.00	87.40	358.90	6,293.13	2,994.36	-696.38	3,066.01	1.49	1.16	-0.93	
9,251.00	88.50	358.20	6,294.63	3,036.32	-697.44	3,107.62	3.10	2.62	-1.67	
9,294.00	89.00	358.20	6,295.57	3,079.29	-698.80	3,150.29	1.16	1.16	0.00	
9,337.00	89.40	357.90	6,296.17	3,122.26	-700.26	3,192.97	1.16	0.93	-0.70	
9,379.00	90.40	358.20	6,296.24	3,164.23	-701.69	3,234.66	2.49	2.38	0.71	
9,421.00	90.10	358.20	6,296.06	3,206.21	-703.01	3,276.34	0.71	-0.71	0.00	
9,463.00	90.80	357.50	6,295.73	3,248.18	-704.58	3,318.04	2.36	1.67	-1.67	
9,506.00	91.80	358.20	6,294.76	3,291.14	-706.19	3,360.74	2.84	2.33	1.63	
9,548.00	92.40	357.50	6,293.22	3,333.08	-707.77	3,402.42	2.19	1.43	-1.67	
9,591.00	92.40	357.20	6,291.42	3,376.00	-709.76	3,445.12	0.70	0.00	-0.70	
9,634.00	91.80	357.50	6,289.84	3,418.92	-711.74	3,487.84	1.56	-1.40	0.70	
9,676.00	89.00	356.50	6,289.55	3,460.86	-713.94	3,529.61	7.08	-6.67	-2.38	
9,719.00	88.20	357.20	6,290.60	3,503.78	-716.30	3,572.38	2.47	-1.86	1.63	
9,762.00	88.20	357.20	6,291.95	3,546.71	-718.40	3,615.12	0.00	0.00	0.00	
9,804.00	89.60	357.50	6,292.75	3,588.65	-720.34	3,656.86	3.41	3.33	0.71	
9,846.00	89.90	357.20	6,292.94	3,630.61	-722.29	3,698.61	1.01	0.71	-0.71	
9,888.00	89.40	356.50	6,293.19	3,672.54	-724.59	3,740.40	2.05	-1.19	-1.67	
9,931.00	89.70	356.10	6,293.53	3,715.45	-727.37	3,783.22	1.16	0.70	-0.93	
9,973.00	90.60	356.80	6,293.42	3,757.37	-729.97	3,825.04	2.71	2.14	1.67	
10,016.00	90.60	356.50	6,292.97	3,800.30	-732.48	3,867.84	0.70	0.00	-0.70	

<b>Company:</b>	Carrizo Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well 3-44-7-60
<b>Project:</b>	Weld County, Colorado (NAD83)	<b>TVD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Site:</b>	Pergamos	<b>MD Reference:</b>	Well @ 4952.00usft (Xtreme 19)
<b>Well:</b>	3-44-7-60	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,101.00	90.30	355.40	6,292.30	3,885.08	-738.48	3,952.53	1.34	-0.35	-1.29	
10,187.00	91.10	355.40	6,291.25	3,970.79	-745.38	4,038.28	0.93	0.93	0.00	
10,272.00	90.80	356.10	6,289.84	4,055.55	-751.68	4,122.99	0.90	-0.35	0.82	
10,357.00	90.60	355.80	6,288.81	4,140.33	-757.68	4,207.68	0.42	-0.24	-0.35	
10,400.00	90.30	355.40	6,288.47	4,183.20	-760.98	4,250.55	1.16	-0.70	-0.93	
10,442.00	88.30	357.20	6,288.98	4,225.11	-763.69	4,292.37	6.41	-4.76	4.29	
10,494.00	87.80	357.20	6,290.75	4,277.01	-766.23	4,344.05	0.96	-0.96	0.00	
10,553.00	87.80	357.20	6,293.02	4,335.90	-769.11	4,402.67	0.00	0.00	0.00	
Projection to TD-10553.00' MD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
10,553.00	6,293.02	4,335.90	-769.11	Projection to TD-10553.00' MD	