

**5D Survey Report****Cimarex Energy**

Field Name: *Cimarex Nad 83 NMEZ*
Site Name: *Triste Draw 25 Federal*
Well Name: *Triste Draw 25 Federal 9H*
Survey: *Definitive survey*

23 January 2019

**Weatherford®**


Weatherford


Triste Draw 25 Federal 9H

Field Name: Cimarex Nad 83 NMEZ	Map Units: US ft		Company Name: Cimarex Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD83 / New Mexico East (ftUS)			
	Comment:			
Site: Triste Draw 25 Federal	Units: US ft	North Reference: Grid	Convergence Angle: 0.37	
	Position:	Northing: 462609.01 US ft	Latitude: 32° 16' 11.45"	
		Easting: 757738.43 US ft	Longitude: -103° 37' 59.48"	
	Site TVD Reference: TVD relative to Mean Sea Level			
Elevation above MSL: 3679.80 US ft				
Comment:				
Slot: Triste Draw 25 Federal 9H	Position (Relative to Site Centre)			
	+N/-S: -0.41 US ft	Northing: 462608.60 US ft	Latitude: 32° 16' 11.44"	
	+E/-W: -39.94 US ft	Easting: 757698.49 US ft	Longitude: -103° 37' 59.94"	
	Elevation above MSL: 3679.80 US ft			
Comment: Lea Co. NM				
Well: Triste Draw 25 Federal 9H	Type: Main well		UWI:	
	File Number:	Comment:		
	Closure Distance: 4468.59 US ft		Closure Azimuth: 353.52°	
	Vertical Section: Position of Origin (Relative to Slot centre)			
+N/-S: 0.00 US ft		+E/-W: -0.00 US ft	Az: 352.79°	

Drill floor: Survey Name: Definitive Survey
Rig Height (Drill Floor): 24.00 US ft **Elevation above MSL:** 3703.80 US ft **Inclination:** 0.00° **Azimuth:** 0.00°

Survey Name: Definitive Survey
Date: 17/Oct/2017

Survey Tool: See Survey
Tool Ranges below.

Comment:
Company:
Magnetic Model:
Model Name: Surcon

Date: 19/Nov/2017

Field Strength:
48103.0 nT

Declination: 6.96°

Dip: 60.05°

Tie Point:
MD: 0.00 US ft

Inclination:
0.00°

Azimuth: 0.00°

TVD: 0.00 US
ft

North Offset: 0.00 US
ft

East Offset: -0.00
US ft

Survey Tool Ranges:

Name	Start MD (US ft)	End MD (US ft)	Source Survey
MWD + IFR + MS	0.00	8943.00	Extreme SVY (Surcon Corrected)
MWD + IFR + MS	8943.00	9417.00	WFT MWD SVY_1
MWD + IFR + MS	9417.00	9763.00	WFT MWD SVY_2
MWD + IFR + MS	9763.00	10592.00	WFT MWD SVY_3
MWD + IFR + MS	10592.00	13793.00	WFT MWD SVY_4

5D Survey Report

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)													
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
0.00	0.00	0.00	0.00	-3703.80	0.00	0.00	-0.00	462608.6 0	757698.4 9	32° 16' 11.44"	-103° 37' 59.94"	0.00	
24.00	0.00	0.00	24.00	-3679.80	0.00	0.00	-0.00	462608.6 0	757698.4 9	32° 16' 11.44"	-103° 37' 59.94"	0.00	
159.00	0.82	222.07	159.00	-3544.80	-0.63	-0.72	-0.65	462607.8 8	757697.8 4	32° 16' 11.44"	-103° 37' 59.95"	0.61	
311.00	0.57	205.39	310.98	-3392.82	-1.98	-2.21	-1.70	462606.3 9	757696.7 9	32° 16' 11.42"	-103° 37' 59.96"	0.21	
493.00	0.75	243.50	492.97	-3210.83	-3.13	-3.56	-3.15	462605.0 4	757695.3 4	32° 16' 11.41"	-103° 37' 59.98"	0.25	
674.00	1.04	63.46	673.96	-3029.84	-2.98	-3.35	-2.75	462605.2 5	757695.7 4	32° 16' 11.41"	-103° 37' 59.97"	0.99	
854.00	1.13	57.36	853.93	-2849.87	-1.68	-1.66	0.21	462606.9 4	757698.7 0	32° 16' 11.43"	-103° 37' 59.94"	0.08	
948.00	0.91	66.84	947.92	-2755.88	-1.07	-0.87	1.68	462607.7 3	757700.1 7	32° 16' 11.44"	-103° 37' 59.92"	0.29	
1043.00	1.19	76.20	1042.90	-2660.90	-0.75	-0.34	3.33	462608.2 6	757701.8 2	32° 16' 11.44"	-103° 37' 59.90"	0.34	
1138.00	0.34	255.68	1137.90	-2565.90	-0.68	-0.17	4.01	462608.4 3	757702.5 0	32° 16' 11.44"	-103° 37' 59.90"	1.61	
1220.00	0.75	269.10	1219.89	-2483.91	-0.65	-0.24	3.24	462608.3 6	757701.7 3	32° 16' 11.44"	-103° 37' 59.90"	0.52	
1326.00	1.20	260.05	1325.88	-2377.92	-0.62	-0.44	1.46	462608.1 6	757699.9 5	32° 16' 11.44"	-103° 37' 59.93"	0.45	
1420.00	0.96	281.50	1419.86	-2283.94	-0.42	-0.46	-0.29	462608.1 4	757698.2 0	32° 16' 11.44"	-103° 37' 59.95"	0.50	
1610.00	1.02	272.39	1609.83	-2093.97	0.37	-0.07	-3.54	462608.5 3	757694.9 5	32° 16' 11.44"	-103° 37' 59.98"	0.09	
1705.00	1.02	269.27	1704.82	-1998.98	0.61	-0.05	-5.23	462608.5 5	757693.2 6	32° 16' 11.44"	-103° 38' 0.00"	0.06	
1799.00	0.43	76.70	1798.81	-1904.99	0.74	0.03	-5.72	462608.6 3	757692.7 7	32° 16' 11.45"	-103° 38' 0.01"	1.53	
1989.00	0.59	136.59	1988.81	-1714.99	0.03	-0.52	-4.35	462608.0 8	757694.1 4	32° 16' 11.44"	-103° 37' 59.99"	0.28	
2178.00	0.48	178.81	2177.80	-1526.00	-1.54	-2.02	-3.67	462606.5 8	757694.8 2	32° 16' 11.43"	-103° 37' 59.99"	0.21	
2273.00	0.08	47.12	2272.80	-1431.00	-1.90	-2.37	-3.61	462606.2 3	757694.8 8	32° 16' 11.42"	-103° 37' 59.98"	0.56	
2368.00	0.42	198.61	2367.80	-1336.00	-2.18	-2.66	-3.67	462605.9 4	757694.8 2	32° 16' 11.42"	-103° 37' 59.99"	0.52	
2462.00	0.04	18.01	2461.80	-1242.00	-2.46	-2.95	-3.77	462605.6 5	757694.7 2	32° 16' 11.42"	-103° 37' 59.99"	0.49	
2557.00	0.45	139.93	2556.80	-1147.00	-2.74	-3.21	-3.52	462605.3 9	757694.9 7	32° 16' 11.41"	-103° 37' 59.98"	0.50	
2652.00	0.18	77.47	2651.79	-1052.01	-3.04	-3.46	-3.14	462605.1 4	757695.3 5	32° 16' 11.41"	-103° 37' 59.98"	0.42	
2747.00	0.51	191.56	2746.79	-957.01	-3.43	-3.84	-3.08	462604.7 6	757695.4 1	32° 16' 11.41"	-103° 37' 59.98"	0.64	
2842.00	0.38	256.42	2841.79	-862.01	-3.86	-4.33	-3.47	462604.2 7	757695.0 2	32° 16' 11.40"	-103° 37' 59.98"	0.52	
2937.00	0.42	170.44	2936.79	-767.01	-4.24	-4.75	-3.72	462603.8 5	757694.7 7	32° 16' 11.40"	-103° 37' 59.99"	0.58	
3032.00	1.14	257.62	3031.78	-672.02	-4.68	-5.29	-4.58	462603.3 1	757693.9 1	32° 16' 11.39"	-103° 37' 60.00"	1.26	
3127.00	3.20	273.50	3126.71	-577.09	-4.27	-5.33	-8.15	462603.2 7	757690.3 4	32° 16' 11.39"	-103° 38' 0.04"	2.24	
3221.00	5.09	271.41	3220.46	-483.34	-3.16	-5.07	-14.94	462603.5 3	757683.5 5	32° 16' 11.40"	-103° 38' 0.12"	2.02	
3317.00	4.68	271.81	3316.11	-387.69	-1.90	-4.84	-23.11	462603.7 6	757675.3 8	32° 16' 11.40"	-103° 38' 0.21"	0.43	
3411.00	5.63	272.28	3409.73	-294.07	-0.54	-4.54	-31.55	462604.0 6	757666.9 4	32° 16' 11.40"	-103° 38' 0.31"	1.01	
3505.00	7.52	267.18	3503.11	-200.69	0.69	-4.66	-42.30	462603.9 4	757656.1 9	32° 16' 11.40"	-103° 38' 0.44"	2.10	
3600.00	7.13	270.06	3597.33	-106.47	1.91	-4.96	-54.41	462603.6 4	757644.0 8	32° 16' 11.40"	-103° 38' 0.58"	0.56	
3694.00	6.13	273.64	3690.70	-13.10	3.59	-4.63	-65.25	462603.9 7	757633.2 4	32° 16' 11.40"	-103° 38' 0.70"	1.15	
3789.00	6.17	266.87	3785.16	81.36	4.91	-4.59	-75.41	462604.0 1	757623.0 8	32° 16' 11.40"	-103° 38' 0.82"	0.76	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)													
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° '")	Longitude (° '")	DLS (°/100US ft)	Comment
3884.00	6.98	269.30	3879.53	175.73	5.93	-4.94	-86.28	462603.6 6	757612.2 1	32° 16' 11.40"	-103° 38' 0.95"	0.90	
3978.00	6.57	268.26	3972.88	269.08	7.09	-5.17	-97.37	462603.4 3	757601.1 2	32° 16' 11.40"	-103° 38' 1.08"	0.46	
4034.00	6.48	269.42	4028.51	324.71	7.76	-5.30	-103.73	462603.3 0	757594.7 6	32° 16' 11.40"	-103° 38' 1.15"	0.28	Crossing 330' 1/4 line (4034' MD)
4165.00	6.29	272.24	4158.70	454.90	9.79	-5.10	-118.30	462603.5 0	757580.1 9	32° 16' 11.40"	-103° 38' 1.32"	0.28	
4260.00	5.77	270.59	4253.17	549.37	11.29	-4.84	-128.27	462603.7 6	757570.2 2	32° 16' 11.41"	-103° 38' 1.44"	0.58	
4356.00	5.84	262.69	4348.68	644.88	11.94	-5.41	-137.94	462603.1 9	757560.5 5	32° 16' 11.40"	-103° 38' 1.55"	0.83	
4451.00	6.87	268.95	4443.10	739.30	12.54	-6.13	-148.42	462602.4 7	757550.0 7	32° 16' 11.39"	-103° 38' 1.67"	1.31	
4640.00	6.37	264.74	4630.84	927.04	14.11	-7.30	-170.16	462601.3 0	757528.3 3	32° 16' 11.38"	-103° 38' 1.92"	0.37	
4734.00	7.41	265.53	4724.16	1020.36	14.58	-8.25	-181.39	462600.3 5	757517.1 0	32° 16' 11.37"	-103° 38' 2.06"	1.11	
4829.00	7.88	275.75	4818.32	1114.52	16.33	-8.08	-193.98	462600.5 2	757504.5 1	32° 16' 11.38"	-103° 38' 2.20"	1.51	
4911.00	8.86	281.95	4899.45	1195.65	19.67	-6.21	-205.75	462602.3 9	757492.7 4	32° 16' 11.40"	-103° 38' 2.34"	1.62	
5007.00	8.03	281.05	4994.41	1290.61	24.19	-3.39	-219.57	462605.2 1	757478.9 2	32° 16' 11.43"	-103° 38' 2.50"	0.88	
5102.00	7.96	275.48	5088.48	1384.68	27.72	-1.49	-232.63	462607.1 1	757465.8 6	32° 16' 11.45"	-103° 38' 2.65"	0.82	
5290.00	8.31	272.19	5274.59	1570.79	32.80	0.27	-259.16	462608.8 7	757439.3 3	32° 16' 11.46"	-103° 38' 2.96"	0.31	
5385.00	8.21	273.13	5368.61	1664.81	35.13	0.90	-272.79	462609.5 0	757425.7 0	32° 16' 11.47"	-103° 38' 3.12"	0.18	
5480.00	7.89	274.07	5462.67	1758.87	37.63	1.74	-286.07	462610.3 4	757412.4 2	32° 16' 11.48"	-103° 38' 3.27"	0.36	
5670.00	8.19	269.46	5650.80	1947.00	41.75	2.54	-312.61	462611.1 4	757385.8 8	32° 16' 11.49"	-103° 38' 3.58"	0.37	
5765.00	8.19	266.17	5744.84	2041.04	42.93	2.02	-326.13	462610.6 2	757372.3 6	32° 16' 11.49"	-103° 38' 3.74"	0.49	
5859.00	6.74	261.70	5838.04	2134.24	43.22	0.78	-338.27	462609.3 8	757360.2 2	32° 16' 11.47"	-103° 38' 3.88"	1.66	
5953.00	6.21	263.70	5931.44	2227.64	43.20	-0.58	-348.78	462608.0 2	757349.7 1	32° 16' 11.46"	-103° 38' 4.00"	0.61	
6048.00	5.94	259.86	6025.91	2322.11	43.03	-2.01	-358.73	462606.5 9	757339.7 6	32° 16' 11.45"	-103° 38' 4.12"	0.51	
6143.00	5.40	262.49	6120.44	2416.64	42.76	-3.46	-368.00	462605.1 4	757330.4 9	32° 16' 11.43"	-103° 38' 4.23"	0.63	
6238.00	5.85	270.77	6214.98	2511.18	43.41	-3.98	-377.27	462604.6 2	757321.2 2	32° 16' 11.43"	-103° 38' 4.34"	0.98	
6427.00	7.70	276.68	6402.66	2698.86	47.78	-2.37	-399.48	462606.2 3	757299.0 1	32° 16' 11.45"	-103° 38' 4.60"	1.04	
6521.00	6.99	275.59	6495.89	2792.09	50.56	-1.08	-411.43	462607.5 2	757287.0 6	32° 16' 11.46"	-103° 38' 4.73"	0.77	
6617.00	7.03	274.77	6591.17	2887.37	53.07	-0.03	-423.10	462608.5 7	757275.3 9	32° 16' 11.47"	-103° 38' 4.87"	0.11	
6711.00	6.43	274.06	6684.52	2980.72	55.30	0.82	-434.08	462609.4 2	757264.4 1	32° 16' 11.48"	-103° 38' 5.00"	0.64	
6901.00	6.02	273.96	6873.40	3169.60	59.31	2.27	-454.63	462610.8 7	757243.8 6	32° 16' 11.50"	-103° 38' 5.24"	0.22	
7091.00	5.62	269.34	7062.42	3358.62	62.30	2.85	-473.87	462611.4 5	757224.6 2	32° 16' 11.50"	-103° 38' 5.46"	0.32	
7186.00	6.05	269.42	7156.93	3453.13	63.41	2.74	-483.53	462611.3 4	757214.9 6	32° 16' 11.50"	-103° 38' 5.57"	0.45	
7375.00	2.72	281.77	7345.35	3641.55	66.02	3.56	-497.88	462612.1 6	757200.6 1	32° 16' 11.51"	-103° 38' 5.74"	1.82	
7470.00	1.35	281.31	7440.29	3736.49	67.10	4.24	-501.19	462612.8 4	757197.3 0	32° 16' 11.52"	-103° 38' 5.78"	1.44	
7564.00	0.88	268.77	7534.27	3830.47	67.53	4.44	-503.00	462613.0 4	757195.4 9	32° 16' 11.52"	-103° 38' 5.80"	0.56	
7659.00	0.93	254.24	7629.26	3925.46	67.49	4.21	-504.47	462612.8 1	757194.0 2	32° 16' 11.52"	-103° 38' 5.82"	0.25	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)													
MD (US ft)	Incl (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
7753.00	1.10	243.71	7723.25	4019.45	67.08	3.61	-506.01	462612.2 1	757192.4 8	32° 16' 11.51"	-103° 38' 5.84"	0.27	
7848.00	1.43	215.71	7818.22	4114.42	65.92	2.24	-507.52	462610.8 4	757190.9 7	32° 16' 11.50"	-103° 38' 5.85"	0.73	
7942.00	1.45	214.92	7912.19	4208.39	64.18	0.31	-508.89	462608.9 1	757189.6 0	32° 16' 11.48"	-103° 38' 5.87"	0.03	
8131.00	1.32	205.42	8101.14	4397.34	60.57	-3.62	-511.19	462604.9 8	757187.3 0	32° 16' 11.44"	-103° 38' 5.90"	0.14	
8226.00	1.25	171.95	8196.12	4492.32	58.61	-5.63	-511.51	462602.9 7	757186.9 8	32° 16' 11.42"	-103° 38' 5.90"	0.78	
8416.00	1.62	193.02	8386.06	4682.26	54.02	-10.30	-511.83	462598.3 0	757186.6 6	32° 16' 11.38"	-103° 38' 5.90"	0.34	
8511.00	1.76	196.45	8481.02	4777.22	51.42	-13.01	-512.54	462595.5 9	757185.9 5	32° 16' 11.35"	-103° 38' 5.91"	0.18	
8606.00	1.84	205.54	8575.97	4872.17	48.81	-15.78	-513.61	462592.8 2	757184.8 8	32° 16' 11.32"	-103° 38' 5.93"	0.31	
8701.00	1.91	204.75	8670.92	4967.12	46.18	-18.60	-514.93	462590.0 0	757183.5 6	32° 16' 11.29"	-103° 38' 5.94"	0.08	
8796.00	2.15	212.31	8765.86	5062.06	43.46	-21.54	-516.55	462587.0 6	757181.9 4	32° 16' 11.27"	-103° 38' 5.96"	0.38	
8890.00	2.51	224.41	8859.78	5155.98	40.82	-24.50	-518.93	462584.1 0	757179.5 6	32° 16' 11.24"	-103° 38' 5.99"	0.65	
8943.00	2.69	226.90	8912.73	5208.93	39.37	-26.18	-520.65	462582.4 2	757177.8 4	32° 16' 11.22"	-103° 38' 6.01"	0.40	Tie On Extreme
9015.00	1.54	302.77	8984.69	5280.89	39.01	-26.81	-522.70	462581.7 9	757175.7 9	32° 16' 11.21"	-103° 38' 6.03"	3.83	KOP 9015'MD
9037.00	1.98	326.51	9006.68	5302.88	39.54	-26.33	-523.16	462582.2 7	757175.3 3	32° 16' 11.22"	-103° 38' 6.04"	3.83	First WFT Svy
9069.00	6.01	358.11	9038.60	5334.80	41.70	-24.19	-523.52	462584.4 1	757174.9 7	32° 16' 11.24"	-103° 38' 6.04"	13.89	
9101.00	10.43	3.54	9070.26	5366.46	46.22	-19.63	-523.40	462588.9 7	757175.0 9	32° 16' 11.28"	-103° 38' 6.04"	14.01	
9132.00	12.63	9.19	9100.63	5396.83	52.23	-13.48	-522.68	462595.1 2	757175.8 1	32° 16' 11.35"	-103° 38' 6.03"	7.97	
9164.00	15.21	9.15	9131.69	5427.89	59.61	-5.88	-521.46	462602.7 2	757177.0 3	32° 16' 11.42"	-103° 38' 6.02"	8.06	
9196.00	17.87	6.51	9162.37	5458.57	68.41	3.14	-520.23	462611.7 4	757178.2 6	32° 16' 11.51"	-103° 38' 6.00"	8.64	
9228.00	21.29	5.17	9192.51	5488.71	78.86	13.81	-519.15	462622.4 1	757179.3 4	32° 16' 11.62"	-103° 38' 5.99"	10.78	
9259.00	24.83	5.77	9221.03	5517.23	90.70	25.90	-517.99	462634.5 0	757180.5 0	32° 16' 11.73"	-103° 38' 5.97"	11.44	
9290.00	27.53	5.89	9248.85	5545.05	104.02	39.50	-516.60	462648.1 0	757181.8 9	32° 16' 11.87"	-103° 38' 5.96"	8.71	
9322.00	30.85	6.00	9276.78	5572.98	119.22	55.02	-514.98	462663.6 2	757183.5 1	32° 16' 12.02"	-103° 38' 5.94"	10.38	
9354.00	34.00	5.94	9303.79	5599.99	135.92	72.08	-513.20	462680.6 8	757185.2 9	32° 16' 12.19"	-103° 38' 5.91"	9.84	
9385.00	36.53	5.40	9329.10	5625.30	153.37	89.89	-511.43	462698.4 9	757187.0 6	32° 16' 12.37"	-103° 38' 5.89"	8.22	
9417.00	40.25	4.84	9354.17	5650.37	172.78	109.68	-509.66	462718.2 8	757188.8 3	32° 16' 12.56"	-103° 38' 5.87"	11.68	
9449.00	43.37	4.75	9378.02	5674.22	193.65	130.94	-507.88	462739.5 4	757190.6 1	32° 16' 12.77"	-103° 38' 5.85"	9.75	
9481.00	48.17	4.76	9400.34	5696.54	216.07	153.78	-505.98	462762.3 8	757192.5 1	32° 16' 13.00"	-103° 38' 5.82"	15.00	
9513.00	53.93	4.87	9420.44	5716.64	240.40	178.57	-503.89	462787.1 7	757194.6 0	32° 16' 13.24"	-103° 38' 5.80"	18.00	
9544.00	58.89	5.72	9437.59	5733.79	265.60	204.27	-501.50	462812.8 7	757196.9 9	32° 16' 13.50"	-103° 38' 5.77"	16.16	FTP 9544'MD
9575.00	63.14	5.89	9452.61	5748.81	292.02	231.25	-498.76	462839.8 5	757199.7 3	32° 16' 13.77"	-103° 38' 5.73"	13.72	
9607.00	67.46	5.10	9465.98	5762.18	320.37	260.18	-495.98	462868.7 8	757202.5 1	32° 16' 14.05"	-103° 38' 5.70"	13.68	
9638.00	72.59	3.56	9476.56	5772.76	348.91	289.22	-493.79	462897.8 2	757204.7 0	32° 16' 14.34"	-103° 38' 5.67"	17.19	
9670.00	76.51	2.21	9485.09	5781.29	379.27	320.02	-492.24	462928.6 2	757206.2 5	32° 16' 14.64"	-103° 38' 5.65"	12.91	
9702.00	80.37	0.92	9491.50	5787.70	410.24	351.35	-491.39	462959.9 5	757207.1 0	32° 16' 14.95"	-103° 38' 5.64"	12.69	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)													
MD (US.ft)	Inc (°)	Az (°)	TVD (US.ft)	TVD (MSL) (US.ft)	VS (US.ft)	N.Offset (US.ft)	E.Offset (US.ft)	Northing (US.ft)	Easting (US.ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
9733.00	84.88	359.49	9495.48	5791.68	440.72	382.09	-491.28	462990.6 9	757207.2 1	32° 16' 15.26"	-103° 38' 5.64"	15.25	
9763.00	89.37	358.38	9496.98	5793.18	470.50	412.03	-491.84	463020.6 3	757206.6 5	32° 16' 15.55"	-103° 38' 5.64"	15.42	
9835.00	91.33	357.15	9496.54	5792.74	542.23	483.97	-494.64	463092.5 7	757203.8 5	32° 16' 16.27"	-103° 38' 5.67"	3.21	
9930.00	90.07	357.98	9495.38	5791.58	636.89	578.88	-498.68	463187.4 8	757199.8 1	32° 16' 17.21"	-103° 38' 5.71"	1.59	
10025.00	89.09	359.10	9496.08	5792.28	731.40	673.84	-501.10	463282.4 4	757197.3 9	32° 16' 18.15"	-103° 38' 5.73"	1.57	
10121.00	88.53	359.57	9498.07	5794.27	826.76	769.81	-502.21	463378.4 1	757196.2 8	32° 16' 19.09"	-103° 38' 5.73"	0.76	
10215.00	88.53	0.11	9500.48	5796.68	920.02	863.78	-502.48	463472.3 8	757196.0 1	32° 16' 20.02"	-103° 38' 5.73"	0.57	
10309.00	89.16	0.36	9502.38	5798.58	1013.20	957.76	-502.09	463566.3 6	757196.4 0	32° 16' 20.95"	-103° 38' 5.72"	0.72	
10498.00	85.94	0.74	9510.46	5806.66	1200.28	1146.55	-500.28	463755.1 5	757198.2 1	32° 16' 22.82"	-103° 38' 5.68"	1.72	
10592.00	87.69	0.48	9515.68	5811.88	1293.26	1240.40	-499.28	463849.0 0	757199.2 1	32° 16' 23.75"	-103° 38' 5.66"	1.88	
10687.00	87.97	1.09	9519.28	5815.48	1387.26	1335.32	-497.98	463943.9 2	757200.5 1	32° 16' 24.69"	-103° 38' 5.64"	0.71	
10782.00	89.30	0.58	9521.54	5817.74	1481.30	1430.28	-496.60	464038.8 8	757201.8 9	32° 16' 25.63"	-103° 38' 5.62"	1.50	
10876.00	89.93	0.54	9522.17	5818.37	1574.43	1524.28	-495.68	464132.8 8	757202.8 1	32° 16' 26.56"	-103° 38' 5.60"	0.67	
10971.00	90.00	0.89	9522.23	5818.43	1668.53	1619.27	-494.49	464227.8 7	757204.0 0	32° 16' 27.50"	-103° 38' 5.58"	0.38	
11066.00	88.74	359.46	9523.27	5819.47	1762.73	1714.26	-494.20	464322.8 6	757204.2 9	32° 16' 28.44"	-103° 38' 5.57"	2.01	
11160.00	88.81	359.10	9525.28	5821.48	1856.10	1808.23	-495.38	464416.8 3	757203.1 1	32° 16' 29.37"	-103° 38' 5.58"	0.39	
11254.00	88.67	359.52	9527.35	5823.55	1949.47	1902.20	-496.51	464510.8 0	757201.9 8	32° 16' 30.30"	-103° 38' 5.58"	0.47	
11349.00	90.49	358.73	9528.05	5824.25	2043.89	1997.18	-497.96	464605.7 8	757200.5 3	32° 16' 31.24"	-103° 38' 5.59"	2.09	
11444.00	90.91	358.87	9526.89	5823.09	2138.36	2092.15	-499.95	464700.7 5	757198.5 4	32° 16' 32.18"	-103° 38' 5.61"	0.47	
11539.00	91.68	359.56	9524.74	5820.94	2232.74	2187.12	-501.26	464795.7 2	757197.2 3	32° 16' 33.12"	-103° 38' 5.61"	1.09	
11634.00	90.77	0.14	9522.71	5818.91	2326.99	2282.09	-501.50	464890.6 9	757196.9 9	32° 16' 34.06"	-103° 38' 5.61"	1.14	
11729.00	91.05	0.22	9521.20	5817.40	2421.19	2377.08	-501.21	464985.6 8	757197.2 8	32° 16' 35.00"	-103° 38' 5.60"	0.31	
11824.00	90.84	0.66	9519.63	5815.83	2515.33	2472.07	-500.48	465080.6 7	757198.0 1	32° 16' 35.94"	-103° 38' 5.58"	0.51	
11918.00	91.75	1.28	9517.51	5813.71	2608.35	2566.03	-498.89	465174.6 3	757199.6 0	32° 16' 36.87"	-103° 38' 5.56"	1.17	
12013.00	90.63	0.84	9515.53	5811.73	2702.34	2660.99	-497.13	465269.5 9	757201.3 6	32° 16' 37.81"	-103° 38' 5.53"	1.27	
12107.00	90.14	359.32	9514.90	5811.10	2795.58	2754.98	-497.00	465363.5 8	757201.4 9	32° 16' 38.74"	-103° 38' 5.52"	1.70	
12202.00	90.98	358.47	9513.97	5810.17	2890.03	2849.96	-498.83	465458.5 6	757199.6 6	32° 16' 39.68"	-103° 38' 5.54"	1.26	
12297.00	91.47	358.70	9511.94	5808.14	2984.52	2944.91	-501.17	465553.5 1	757197.3 2	32° 16' 40.62"	-103° 38' 5.56"	0.57	
12392.00	90.84	358.55	9510.03	5806.23	3079.01	3039.86	-503.45	465648.4 6	757195.0 4	32° 16' 41.56"	-103° 38' 5.58"	0.68	
12486.00	90.42	358.27	9509.00	5805.20	3172.55	3133.82	-506.06	465742.4 2	757192.4 3	32° 16' 42.49"	-103° 38' 5.60"	0.54	
12580.00	90.56	358.43	9508.19	5804.39	3266.11	3227.78	-508.77	465836.3 8	757189.7 2	32° 16' 43.42"	-103° 38' 5.62"	0.23	
12675.00	91.68	358.75	9506.33	5802.53	3360.60	3322.73	-511.11	465931.3 3	757187.3 8	32° 16' 44.36"	-103° 38' 5.64"	1.23	
12769.00	90.70	358.98	9504.38	5800.58	3454.05	3416.69	-512.97	466025.2 9	757185.5 2	32° 16' 45.29"	-103° 38' 5.66"	1.07	
12864.00	90.56	359.88	9503.34	5799.54	3548.41	3511.68	-513.91	466120.2 8	757184.5 8	32° 16' 46.23"	-103° 38' 5.66"	0.96	
12958.00	90.70	0.56	9502.30	5798.50	3641.61	3605.67	-513.55	466214.2 7	757184.9 4	32° 16' 47.16"	-103° 38' 5.65"	0.74	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)													
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
13053.00	90.42	0.05	9501.38	5797.58	3735.79	3700.66	-513.05	466309.2 6	757185.4 4	32° 16' 48.10"	-103° 38' 5.64"	0.61	
13148.00	91.68	359.63	9499.63	5795.83	3830.06	3795.65	-513.31	466404.2 5	757185.1 8	32° 16' 49.04"	-103° 38' 5.63"	1.40	
13243.00	91.40	359.77	9497.08	5793.28	3924.33	3890.61	-513.81	466499.2 1	757184.6 8	32° 16' 49.98"	-103° 38' 5.63"	0.33	
13337.00	91.96	0.47	9494.33	5790.53	4017.52	3984.57	-513.61	466593.1 7	757184.8 8	32° 16' 50.91"	-103° 38' 5.62"	0.95	
13431.00	92.31	0.95	9490.82	5787.02	4110.56	4078.50	-512.45	466687.1 0	757186.0 4	32° 16' 51.84"	-103° 38' 5.60"	0.63	
13526.00	92.38	0.35	9486.94	5783.14	4204.59	4173.41	-511.37	466782.0 1	757187.1 2	32° 16' 52.77"	-103° 38' 5.58"	0.64	
13621.00	93.50	1.72	9482.06	5778.26	4298.48	4268.26	-509.66	466876.8 6	757188.8 3	32° 16' 53.71"	-103° 38' 5.55"	1.86	
13715.00	91.33	1.89	9478.10	5774.30	4391.23	4362.13	-506.70	466970.7 3	757191.7 9	32° 16' 54.64"	-103° 38' 5.51"	2.32	
13732.00	91.54	1.87	9477.68	5773.88	4408.01	4379.11	-506.14	466987.7 1	757192.3 5	32° 16' 54.81"	-103° 38' 5.51"	1.24	Last Svy
13766.00	91.54	1.87	9476.76	5772.96	4441.57	4413.08	-505.03	467021.6 8	757193.4 6	32° 16' 55.15"	-103° 38' 5.49"	0.00	LTP 13766'MD
13793.00	91.54	1.87	9476.04	5772.24	4468.23	4440.06	-504.15	467048.6 6	757194.3 4	32° 16' 55.41"	-103° 38' 5.48"	0.00	PTB

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	TVD (MSL) (US ft)	Northing (US ft)	Easting (US ft)	Name	Comment
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1st Bone Spring Sand	
1240.11	0.83	266.64	1240.00	-0.25	2.96	-2463.80	462608.35	757701.45	Rustler	
1730.19	0.63	271.53	1730.00	-0.04	-5.59	-1973.80	462608.56	757692.90	Top of Salt (Salado)	
4810.51	7.77	273.86	4800.00	-8.29	-191.47	1096.20	462600.31	757507.02	Base of Salt	
5042.95	7.99	278.95	5030.00	-2.52	-224.50	1326.20	462606.08	757473.99	Delaware Sands	
7389.66	2.51	281.73	7360.00	3.69	-498.54	3656.20	462612.29	757199.95	Brushy Canyon	
8860.19	2.38	220.97	8830.00	-23.56	-518.07	5126.20	462585.04	757180.42	Bone Spring	
9373.75	35.61	5.59	9320.00	83.30	-512.07	5616.20	462691.90	757186.42	Avalon Shale	
9569.30	62.36	5.86	9450.00	226.21	-499.28	5746.20	462834.81	757199.21	Avalon Target	



Plan vs Actual



Triste Draw 25 Federal 9H
Lea County, NM

Plan Data for Triste Draw 25 Federal 9H

Plan Point Information:									
DogLeg Severity Unit: °/100.00ft									
MD	Inc	Az	TVD	+N/-S	+E/-W	Vsec	DLS	Comments	
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)		
8943.00	2.69	226.90	8912.73	-26.18	-520.65	39.37	0.40	Tie On Extreme	
9032.00	2.69	226.90	9001.63	-29.03	-523.70	36.93	0.00	KOP	
9300.16	30.00	9.69	9258.47	34.43	-516.83	99.02	12.00	Build/Turn	
9796.20	89.01	359.63	9499.63	441.97	-495.64	500.68	12.00	LP	
11453.65	89.01	359.63	9528.24	2099.14	-506.45	2146.11	0.00	Build	
11564.73	91.23	359.63	9528.00	2210.22	-507.17	2256.40	2.00	2261' VS	
13795.82	91.23	359.63	9480.00	4440.74	-521.66	4471.10	0.00	PBHL 610' FWL, 330' FNL	

Plan Data for Triste Draw 25 Federal 9H

Field: Cimarex Mad 83 NMEZ
Map Unit: USft Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / New Mexico East (ftUS)

Site: Triste Draw 25 Federal
Unit: USfeet TVD Reference: Mean Sea Level
Company Name: Cimarex Energy
Position: Northing: 462609.01USft Latitude: 32.269846°
Easting: 757738.43USft Longitude: -103.633188°
North Reference: Grid Grid Convergence: 0.37°
Elevation Above VRD: 3679.80USft

Slot: Triste Draw 25 Federal 9H

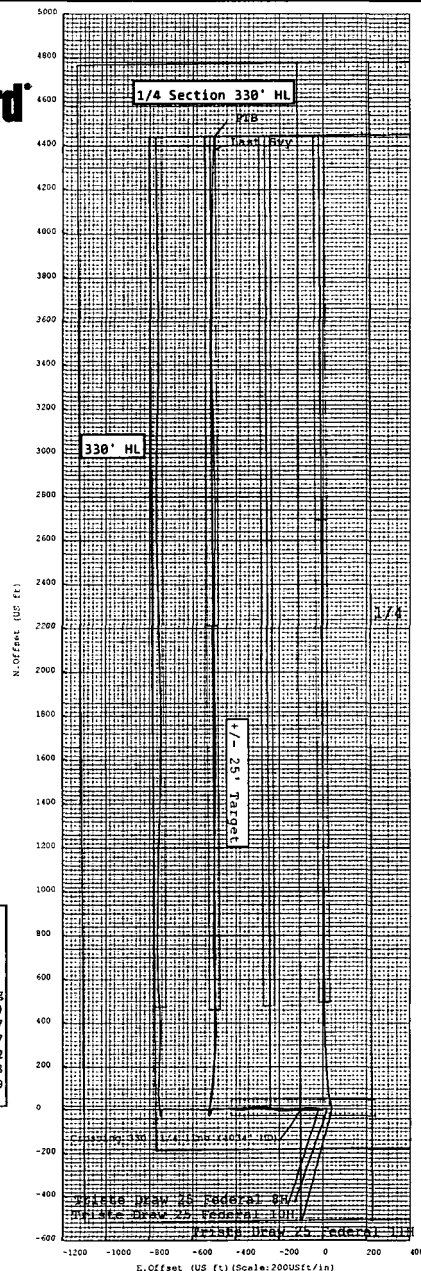
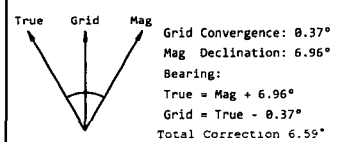
Position:
Offset is from Site centre
+N/-S: -0.41USft Northing: 462608.60USft Latitude: 32.269846°
+E/-W: -39.94USft Easting: 757698.49USft Longitude: -103.633117°
Elevation Above VRD: 3679.80USft
Comment: Lea Co. NM

Well: Triste Draw 25 Federal 9H

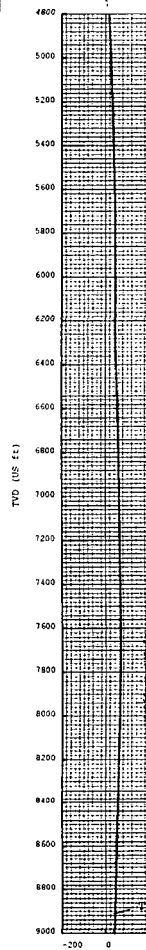
Type: Main-Well
File Number:
Plan Folder: P2 Plan: P2-V1
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft Azimuth: 352.79°
+E/-W: -0.00USft
Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
Surcon: 48103(nT) 6.96° 60.05° 2017-11-19

Plan Data for Triste Draw 25 Federal 9H

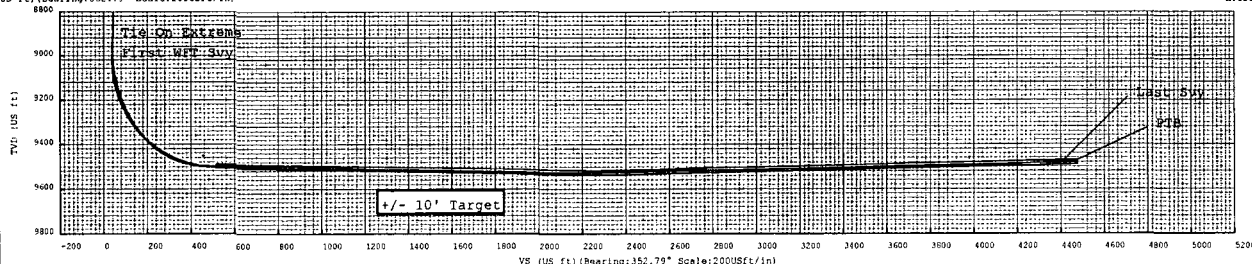
Target Set Information:									
Name: Triste Draw 25 Federal 9H									
Position offsets from Slot centre									
Name	TVD	TVD SS	+N/-S	+E/-W	Northing	Easting			
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)			
Nudge Target	7500.00	-3796.20	-0.27	-492.82	462608.33	757205.67			
LP	9450.00	-5746.20	394.90	-492.82	463003.50	757205.67			
2261' VS	9528.00	-5824.20	2210.22	-507.17	464818.82	757191.32			
PBHL 610' FWL, 330' FNL	9480.00	-5776.20	4440.74	-521.66	467049.34	757176.83			
Vertical Target box	0.00	3703.80	0.00	0.00	462608.60	757698.49			



KB: 3703.80
GL: 3679.80



VS (US ft) (Bearing: 352.79° Scale: 200USft/in)



Drawing By: CBD Date: 10/24/2017
Weatherford Drilling Services
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