



Cimarex Energy Co., Inc.

Ward Co., Texas

Cimarex-University 18-38 #2H

Cimarex-University 18-38 #2H

Lateral

Plan: Plan #6

Standard Survey Report

14 December, 2007





Black Viper Energy

Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Cimarex-University 18-38 #2H
Project:	Ward Co., Texas	TVD Reference:	Rig KB @ 2812.00ft (Key Rig #92 KB Elev)
Site:	Cimarex-University 18-38 #2H	MD Reference:	Rig KB @ 2812.00ft (Key Rig #92 KB Elev)
Well:	Cimarex-University 18-38 #2H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan #6	Database:	EDM 2003.14.1.0 Server DB

Project	Ward Co., Texas		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	Cimarex-University 18-38 #2H			
Site Position:		Northing:	715,197.40 ft	Latitude: 31° 35' 55.942 N
From:	Map	Easting:	1,070,805.16 ft	Longitude: 103° 19' 5.350 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence: -1.54 °

Well	Cimarex-University 18-38 #2H			
Well Position	+N/-S	0.00 ft	Northing:	715,197.40 ft
	+E/-W	0.00 ft	Easting:	1,070,805.16 ft
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft
			Ground Level:	2,796.00 ft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/20/2007	7.84	59.74	48,648

Design	Plan #6			
Audit Notes:				
Version:	ZERO	Phase:	PLAN	Tie On Depth: 12,752.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	218.33

Survey Tool Program	Date	12/14/2007		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
12,752.00	15,523.57	Plan #6 (Lateral)	MWD	MWD - Standard

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,752.00	89.90	216.50	11,449.49	-1,096.71	-899.64	1,418.26	0.00	0.00	0.00	
Build 3.13° / 100 :: Turn 2.71°										
12,800.00	91.40	217.80	11,448.94	-1,134.97	-928.62	1,466.25	4.14	3.13	2.71	
Build 0.40° / 100										
12,850.00	91.60	217.80	11,447.64	-1,174.46	-959.26	1,516.23	0.40	0.40	0.00	
Drop -0.60° / 100										
12,900.00	91.30	217.80	11,446.37	-1,213.95	-989.89	1,566.21	0.60	-0.60	0.00	
EOD - Hold 91.3° Inc. :: 217.81° Azi.										
13,000.00	91.30	217.80	11,444.10	-1,292.95	-1,051.17	1,666.18	0.00	0.00	0.00	
13,100.00	91.30	217.80	11,441.83	-1,371.94	-1,112.45	1,766.15	0.00	0.00	0.00	
13,200.00	91.30	217.80	11,439.56	-1,450.94	-1,173.72	1,866.12	0.00	0.00	0.00	
13,300.00	91.30	217.80	11,437.30	-1,529.93	-1,235.00	1,966.09	0.00	0.00	0.00	
13,400.00	91.30	217.80	11,435.03	-1,608.92	-1,296.28	2,066.06	0.00	0.00	0.00	



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Site:	Cimarex-University 18-38 #2H	MD Reference:	Rig KB @ 2812.00ft (Key Rig #92 KB Elev)
Well:	Cimarex-University 18-38 #2H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan #6	Database:	EDM 2003.14.1.0 Server DB

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,500.00	91.30	217.80	11,432.76	-1,687.92	-1,357.56	2,166.03	0.00	0.00	0.00
13,600.00	91.30	217.80	11,430.50	-1,766.91	-1,418.84	2,266.00	0.00	0.00	0.00
13,700.00	91.30	217.80	11,428.23	-1,845.90	-1,480.12	2,365.97	0.00	0.00	0.00
13,800.00	91.30	217.80	11,425.96	-1,924.89	-1,541.40	2,465.94	0.00	0.00	0.00
13,900.00	91.30	217.81	11,423.70	-2,003.88	-1,602.68	2,565.91	0.00	0.00	0.00
14,000.00	91.30	217.81	11,421.43	-2,082.87	-1,663.96	2,665.88	0.00	0.00	0.00
14,100.00	91.30	217.81	11,419.16	-2,161.86	-1,725.25	2,765.85	0.00	0.00	0.00
14,200.00	91.30	217.81	11,416.90	-2,240.85	-1,786.53	2,865.82	0.00	0.00	0.00
14,300.00	91.30	217.81	11,414.63	-2,319.83	-1,847.81	2,965.79	0.00	0.00	0.00
14,400.00	91.30	217.81	11,412.37	-2,398.82	-1,909.10	3,065.76	0.00	0.00	0.00
14,500.00	91.30	217.81	11,410.10	-2,477.81	-1,970.39	3,165.73	0.00	0.00	0.00
14,600.00	91.30	217.81	11,407.84	-2,556.79	-2,031.67	3,265.70	0.00	0.00	0.00
14,700.00	91.30	217.81	11,405.58	-2,635.78	-2,092.96	3,365.67	0.00	0.00	0.00
14,800.00	91.30	217.81	11,403.31	-2,714.76	-2,154.25	3,465.64	0.00	0.00	0.00
14,900.00	91.30	217.81	11,401.05	-2,793.75	-2,215.54	3,565.61	0.00	0.00	0.00
15,000.00	91.30	217.81	11,398.79	-2,872.73	-2,276.83	3,665.58	0.00	0.00	0.00
15,100.00	91.30	217.81	11,396.52	-2,951.71	-2,338.12	3,765.55	0.00	0.00	0.00
15,200.00	91.30	217.81	11,394.26	-3,030.70	-2,399.41	3,865.52	0.00	0.00	0.00
15,300.00	91.30	217.81	11,392.00	-3,109.68	-2,460.70	3,965.50	0.00	0.00	0.00
15,400.00	91.30	217.81	11,389.74	-3,188.66	-2,521.99	4,065.47	0.00	0.00	0.00
15,500.00	91.30	217.81	11,387.47	-3,267.64	-2,583.29	4,165.44	0.00	0.00	0.00
15,524.05	91.30	217.81	11,386.93	-3,286.64	-2,598.03	4,189.48	0.00	0.00	0.00
PBHL#6[CU18-38#2H]									



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Site:	Cimarex-University 18-38 #2H	MD Reference:	Rig KB @ 2812.00ft (Key Rig #92 KB Elev)
Well:	Cimarex-University 18-38 #2H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan #6	Database:	EDM 2003.14.1.0 Server DB

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL#4[CU18-38#2H] - plan misses by 14.64ft at 15524.05ft MD (11386.93 TVD, -3286.64 N, -2598.03 E) - Point	0.00	0.00	11,372.29	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W
z1 - plan misses by 11537.02ft at 12752.00ft MD (11449.49 TVD, -1096.71 N, -899.64 E) - Point	0.00	0.00	0.00	0.00	0.00	715,197.40	1,070,805.16	31° 35' 55.942 N	103° 19' 5.350 W
PBHL#5[CU18-38#2H] - plan misses by 15.94ft at 15523.69ft MD (11386.94 TVD, -3286.36 N, -2597.81 E) - Point	0.00	0.00	11,402.87	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W
PBHL#2[CU18-38#2H] - plan misses by 47.19ft at 15522.99ft MD (11386.95 TVD, -3285.80 N, -2597.38 E) - Point	0.00	0.00	11,434.13	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W
PBHL#3[CU18-38#2H] - plan misses by 37.87ft at 15523.20ft MD (11386.95 TVD, -3285.96 N, -2597.50 E) - Point	0.00	0.00	11,424.81	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W
PBHL#6[CU18-38#2H] - plan hits target - Point	0.00	0.00	11,386.93	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W
PBHL#1[CU18-38#2H] - plan misses by 16.94ft at 15523.67ft MD (11386.94 TVD, -3286.34 N, -2597.80 E) - Point	0.00	0.00	11,403.87	-3,286.64	-2,598.03	711,910.76	1,068,207.13	31° 35' 22.735 N	103° 19' 34.357 W

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	11,475.50	T/ 'D' Sand	Sand	1.30	38.33
	11,488.50	B/ 'D' Sand	Sand	1.30	38.33

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
12,752.00	11,449.49	-1,096.71	-899.64	Build 3.13° / 100 :: Turn 2.71°	
12,800.00	11,448.94	-1,134.97	-928.62	Build 0.40° / 100	
12,850.00	11,447.64	-1,174.46	-959.26	Drop -0.60° / 100	
12,900.00	11,446.37	-1,213.95	-989.89	EOD - Hold 91.3° Inc. :: 217.81° Azi.	

Checked By: _____ Approved By: _____ Date: _____

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Ci marex Energy Co. , Inc.
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Ward Co. , Texas
Ci marex-Uni versi ty 18-38 #2H
Your Ref:

Measured Dogleg Depth (ft)	Incl .	Azi m.	Depth (ft)	Verti cal Northi ngs (ft)	Easti ngs (ft)	Verti cal Secti on Rate (°/100ft)
12760.00		90.150	216.717	11449.48	-1103.13	-904.41
1426.26	0.00					
12770.00		90.463	216.987	11449.43	-1111.13	-910.41
1436.26	4.14					
12780.00		90.775	217.258	11449.32	-1119.11	-916.44
1446.25	4.14					
12790.00		91.088	217.529	11449.16	-1127.05	-922.52
1456.25	4.14					
12800.00		91.400	217.800	11448.94	-1134.97	-928.62
1466.25	4.14					
12810.00		91.440	217.800	11448.70	-1142.86	-934.75
1476.24	0.40					
12820.00		91.480	217.800	11448.44	-1150.76	-940.88
1486.24	0.40					
12830.00		91.520	217.800	11448.18	-1158.66	-947.01
1496.24	0.40					
12840.00		91.560	217.800	11447.91	-1166.56	-953.13
1506.23	0.40					
12850.00		91.600	217.800	11447.64	-1174.46	-959.26
1516.23	0.40					
12860.00		91.540	217.800	11447.36	-1182.36	-965.39
1526.22	0.60					
12870.00		91.480	217.800	11447.10	-1190.26	-971.51
1536.22	0.60					
12880.00		91.420	217.800	11446.84	-1198.16	-977.64
1546.22	0.60					
12890.00		91.360	217.800	11446.60	-1206.06	-983.77
1556.21	0.60					
12900.00		91.300	217.800	11446.37	-1213.95	-989.89
1566.21	0.60					
12910.00		91.300	217.800	11446.14	-1221.85	-996.02
1576.21	0.00					
12920.00		91.300	217.800	11445.92	-1229.75	-1002.15
1586.20	0.00					
12930.00		91.300	217.800	11445.69	-1237.65	-1008.28
1596.20	0.00					
12940.00		91.300	217.800	11445.46	-1245.55	-1014.40
1606.20	0.00					
12950.00		91.300	217.800	11445.24	-1253.45	-1020.53
1616.19	0.00					
12960.00		91.300	217.800	11445.01	-1261.35	-1026.66
1626.19	0.00					
12970.00		91.300	217.800	11444.78	-1269.25	-1032.79
1636.19	0.00					
12980.00		91.300	217.800	11444.55	-1277.15	-1038.91
1646.19	0.00					
12990.00		91.300	217.800	11444.33	-1285.05	-1045.04

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1656. 18	0. 00					
13000. 00		91. 300	217. 801	11444. 10	-1292. 95	-1051. 17
1666. 18	0. 01					
13010. 00		91. 300	217. 801	11443. 87	-1300. 85	-1057. 30
1676. 18	0. 00					
13020. 00		91. 300	217. 801	11443. 65	-1308. 75	-1063. 42
1686. 17	0. 00					
13030. 00		91. 300	217. 801	11443. 42	-1316. 65	-1069. 55
1696. 17	0. 00					
13040. 00		91. 300	217. 801	11443. 19	-1324. 55	-1075. 68
1706. 17	0. 00					
13050. 00		91. 300	217. 801	11442. 97	-1332. 45	-1081. 81
1716. 16	0. 00					
13060. 00		91. 300	217. 801	11442. 74	-1340. 35	-1087. 94
1726. 16	0. 00					
13070. 00		91. 300	217. 801	11442. 51	-1348. 25	-1094. 06
1736. 16	0. 00					
13080. 00		91. 300	217. 801	11442. 29	-1356. 15	-1100. 19
1746. 16	0. 00					
13090. 00		91. 300	217. 801	11442. 06	-1364. 04	-1106. 32
1756. 15	0. 00					
13100. 00		91. 300	217. 801	11441. 83	-1371. 94	-1112. 45
1766. 15	0. 01					
13110. 00		91. 300	217. 801	11441. 61	-1379. 84	-1118. 57
1776. 15	0. 00					
13120. 00		91. 300	217. 801	11441. 38	-1387. 74	-1124. 70
1786. 14	0. 00					
13130. 00		91. 300	217. 801	11441. 15	-1395. 64	-1130. 83
1796. 14	0. 00					
13140. 00		91. 300	217. 801	11440. 93	-1403. 54	-1136. 96
1806. 14	0. 00					
13150. 00		91. 300	217. 801	11440. 70	-1411. 44	-1143. 08
1816. 13	0. 00					
13160. 00		91. 300	217. 801	11440. 47	-1419. 34	-1149. 21
1826. 13	0. 00					
13170. 00		91. 300	217. 801	11440. 25	-1427. 24	-1155. 34
1836. 13	0. 00					
13180. 00		91. 300	217. 801	11440. 02	-1435. 14	-1161. 47
1846. 13	0. 00					
13190. 00		91. 300	217. 801	11439. 79	-1443. 04	-1167. 59
1856. 12	0. 00					
13200. 00		91. 300	217. 802	11439. 56	-1450. 94	-1173. 72
1866. 12	0. 01					
13210. 00		91. 300	217. 802	11439. 34	-1458. 84	-1179. 85
1876. 12	0. 00					
13220. 00		91. 300	217. 802	11439. 11	-1466. 74	-1185. 98
1886. 11	0. 00					
13230. 00		91. 300	217. 802	11438. 88	-1474. 64	-1192. 11
1896. 11	0. 00					
13240. 00		91. 300	217. 802	11438. 66	-1482. 54	-1198. 23
1906. 11	0. 00					
13250. 00		91. 300	217. 802	11438. 43	-1490. 43	-1204. 36
1916. 10	0. 00					
13260. 00		91. 300	217. 802	11438. 20	-1498. 33	-1210. 49
1926. 10	0. 00					
13270. 00		91. 300	217. 802	11437. 98	-1506. 23	-1216. 62
1936. 10	0. 00					
13280. 00		91. 300	217. 802	11437. 75	-1514. 13	-1222. 74
1946. 10	0. 00					
13290. 00		91. 300	217. 802	11437. 52	-1522. 03	-1228. 87
1956. 09	0. 00					
13300. 00		91. 299	217. 802	11437. 30	-1529. 93	-1235. 00
1966. 09	0. 01					

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13310.00		91.299	217.802	11437.07	-1537.83	-1241.13
1976.09	0.00					
13320.00		91.299	217.802	11436.84	-1545.73	-1247.26
1986.08	0.00					
13330.00		91.299	217.802	11436.62	-1553.63	-1253.38
1996.08	0.00					
13340.00		91.299	217.802	11436.39	-1561.53	-1259.51
2006.08	0.00					
13350.00		91.299	217.802	11436.16	-1569.43	-1265.64
2016.08	0.00					
13360.00		91.299	217.802	11435.94	-1577.33	-1271.77
2026.07	0.00					
13370.00		91.299	217.802	11435.71	-1585.23	-1277.89
2036.07	0.00					
13380.00		91.299	217.802	11435.48	-1593.13	-1284.02
2046.07	0.00					
13390.00		91.299	217.802	11435.26	-1601.02	-1290.15
2056.06	0.00					
13400.00		91.299	217.803	11435.03	-1608.92	-1296.28
2066.06	0.01					
13410.00		91.299	217.803	11434.80	-1616.82	-1302.41
2076.06	0.00					
13420.00		91.299	217.803	11434.58	-1624.72	-1308.53
2086.05	0.00					
13430.00		91.299	217.803	11434.35	-1632.62	-1314.66
2096.05	0.00					
13440.00		91.299	217.803	11434.12	-1640.52	-1320.79
2106.05	0.00					
13450.00		91.299	217.803	11433.90	-1648.42	-1326.92
2116.05	0.00					
13460.00		91.299	217.803	11433.67	-1656.32	-1333.05
2126.04	0.00					
13470.00		91.299	217.803	11433.44	-1664.22	-1339.17
2136.04	0.00					
13480.00		91.299	217.803	11433.22	-1672.12	-1345.30
2146.04	0.00					
13490.00		91.299	217.803	11432.99	-1680.02	-1351.43
2156.03	0.00					
13500.00		91.299	217.803	11432.76	-1687.92	-1357.56
2166.03	0.01					
13510.00		91.299	217.803	11432.54	-1695.82	-1363.68
2176.03	0.00					
13520.00		91.299	217.803	11432.31	-1703.71	-1369.81
2186.02	0.00					
13530.00		91.299	217.803	11432.08	-1711.61	-1375.94
2196.02	0.00					
13540.00		91.299	217.803	11431.86	-1719.51	-1382.07
2206.02	0.00					
13550.00		91.299	217.803	11431.63	-1727.41	-1388.20
2216.02	0.00					
13560.00		91.299	217.803	11431.40	-1735.31	-1394.32
2226.01	0.00					
13570.00		91.299	217.803	11431.18	-1743.21	-1400.45
2236.01	0.00					
13580.00		91.299	217.803	11430.95	-1751.11	-1406.58
2246.01	0.00					
13590.00		91.299	217.803	11430.72	-1759.01	-1412.71
2256.00	0.00					
13600.00		91.299	217.804	11430.50	-1766.91	-1418.84
2266.00	0.01					
13610.00		91.299	217.804	11430.27	-1774.81	-1424.96
2276.00	0.00					
13620.00		91.299	217.804	11430.04	-1782.71	-1431.09

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2285. 99	0. 00					
13630. 00		91. 299	217. 804	11429. 82	-1790. 60	-1437. 22
2295. 99	0. 00					
13640. 00		91. 299	217. 804	11429. 59	-1798. 50	-1443. 35
2305. 99	0. 00					
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2315. 99	0. 00					
13660. 00		91. 299	217. 804	11429. 14	-1814. 30	-1455. 60
2325. 98	0. 00					
13670. 00		91. 299	217. 804	11428. 91	-1822. 20	-1461. 73
2335. 98	0. 00					
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2345. 98	0. 00					
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2355. 97	0. 00					
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2365. 97	0. 01					
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2375. 97	0. 00					
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2385. 96	0. 00					
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2395. 96	0. 00					
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2405. 96	0. 00					
13750. 00		91. 299	217. 804	11427. 10	-1885. 39	-1510. 76
2415. 96	0. 00					
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2425. 95	0. 00					
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2455. 94	0. 00					
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2465. 94	0. 01					
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2475. 94	0. 00					
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2485. 93	0. 00					
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2545. 92	0. 00					
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2555. 91	0. 00					
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2565. 91	0. 01					
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2575. 91	0. 00					
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2585. 90	0. 00					
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2595. 90	0. 00					

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2635.89	0.00					
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2845.83	0.00					
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2935. 80	0. 00					
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2945. 80	0. 00					
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2955. 79	0. 00					
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2965. 79	0. 01					
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2975. 79	0. 00					
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2985. 79	0. 00					
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3005. 78	0. 00					
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3015. 78	0. 00					
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3025. 77	0. 00					
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3035. 77	0. 00					
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3055. 77	0. 00					
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3075. 76	0. 00					
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3085. 76	0. 00					
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3095. 75	0. 00					
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3115. 75	0. 00					
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3125. 74	0. 00					
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3145. 74	0. 00					
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3155. 74	0. 00					
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3165. 73	0. 01					
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3175. 73	0. 00					
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3185. 73	0. 00					
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3195. 72	0. 00					
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3205. 72	0. 00					
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3215. 72	0. 00					
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3285.70	0.00					
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3355.68	0.00					
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3365.67	0.01					
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3375.67	0.00					
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3385.67	0.00					
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3395.66	0.00					
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3425.66	0.00					
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3445.65	0.00					
14790.00		91.297	217.809	11403.54	-2706.86	-2148.12
3455.65	0.00					
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3495.63	0.00					
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3505.63	0.00					
14850.00		91.297	217.810	11402.18	-2754.26	-2184.89
3515.63	0.00					
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3565. 61	0. 01					
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3575. 61	0. 00					
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3585. 61	0. 00					
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3595. 60	0. 00					
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3635. 59	0. 00					
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3675. 58	0. 00					
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3685. 58	0. 00					
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3695. 58	0. 00					
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3705. 57	0. 00					
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3715. 57	0. 00					
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3725. 57	0. 00					
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3735. 56	0. 00					
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3755. 56	0. 00					
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3825. 54	0. 00					
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3835. 53	0. 00					
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15470.00		91.296	217.813	11388.15	-3243.95	-2564.90
4135.44	0.00					
15480.00		91.296	217.813	11387.93	-3251.85	-2571.03
4145.44	0.00					
15490.00		91.296	217.813	11387.70	-3259.74	-2577.16
4155.44	0.00					
15500.00		91.296	217.814	11387.47	-3267.64	-2583.29
4165.44	0.01					
15510.00		91.296	217.814	11387.25	-3275.54	-2589.42

Cimarex-University 18-38 #2H Lateral Plan #6 Report 12-14-07.txt

4175.43	0.00					
15520.00		91.296	217.814	11387.02	-3283.44	-2595.55
4185.43	0.00					
15524.05		91.296	217.814	11386.93	-3286.64	-2598.03
4189.48	0.00					

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.

Vertical depths are relative to Rig KB. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Site and calculated along an Azimuth of 218.326° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), Texas Central 4203.

Central meridian is -100.333°.

Grid Convergence at Surface is -1.537°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 15524.05ft., the Bottom Hole Displacement is 4189.48ft., in the Direction of 218.326° (Grid).

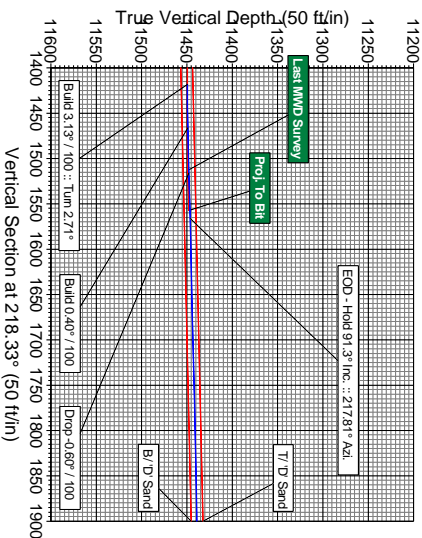


Project: Ward Co., Texas
Site: Cimarex-University 18-38 #2H
Well: Cimarex-University 18-38 #2H
Wellbore: Latena
Plan: Plan #6 (Cimarex-University 18-38 #2H Latenal)

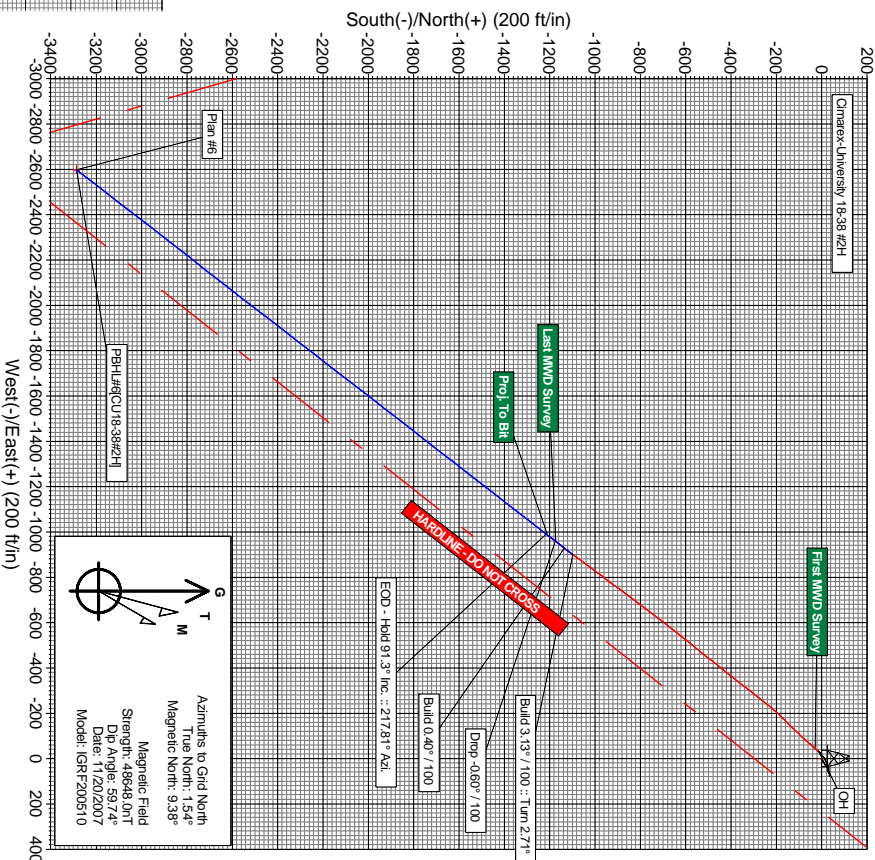
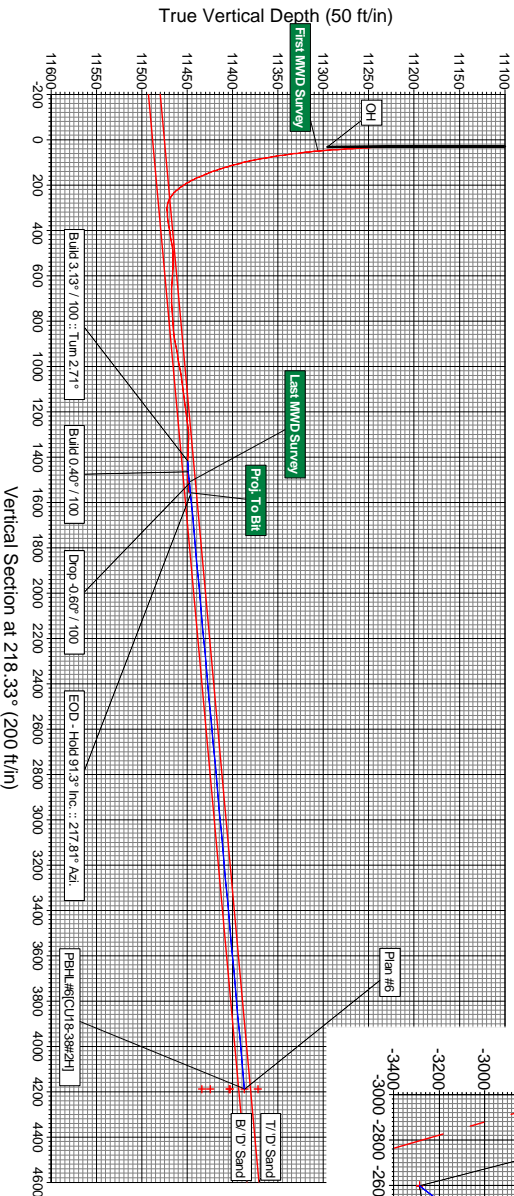


SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-/S	+E-/W	DLRQ	Trace	VSac	Target	
1	12752.00	89.90	216.50	11449.49	-1096.71	-899.64	0.00	0.00	1418.26		
2	12800.00	91.40	217.80	11448.94	-1134.97	-928.62	4.14	40.91	1466.25		
3	12850.00	91.60	217.80	11447.64	-1174.46	-959.26	0.40	0.00	1516.23		
4	12900.00	91.30	217.80	11446.37	-1213.95	-989.89	0.60	-180.00	1566.21		
5	15524.05	91.30	217.81	11386.93	-3286.64	-2598.03	0.00	106.54	4189.48		

PBH#6(CUI18-38#2H)



PROJECT DETAILS: Ward Co., Texas
Geologic System: State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCONUS)
Ellipsoid: Clarke 1866
Zone: Texas Central 4203
System Datum: Mean Sea Level



Annotations to Grid North
True North: 1.54°
Magnetic North: 9.38°
Magnetic Field
Strength: 48948.07T
Dip Angle: 69.74°
Date: 11/20/2007
Model: IGRF200510

ANNOTATIONS

TV	MD	Annotation
11449.49	12752.00	Build 3.13° / 100° : Turn 2.71°
11448.94	12800.00	Build 0.40° / 100°
11447.64	12850.00	Drop -0.60° / 100°
11446.37	12900.00	EOB - Hold 91.3° Inc.: 217.81° Azi.

CIMAREX-UNIVERSITY 18-38 #2H