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Cimarex

Eddy County, NM (NAD 83)
(Cabrera) SEC 34_T-26-S_R-27-E
Cabrera 34 Federal #1H

OWB

Design: AWB

Survey Report - Geographic

02 July, 2019





Microsoft
Survey Report - Geographic



Company:	Cimarex	Local Co-ordinate Reference:	Well Cabrera 34 Federal #1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	KB @ 3259.3usft (H&P 393)
Site:	(Cabrera) SEC 34, T-26-S, R-27-E	MD Reference:	KB @ 3259.3usft (H&P 393)
Well:	Cabrera 34 Federal #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 10-13

Project	Eddy County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	(Cabrera) SEC 34, T-26-S, R-27-E
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Site Position:	Map	Northing:	364,888.71 usft	Latitude:	32° 0' 10.995 N
From:		Easting:	591,937.91 usft	Longitude:	104° 10' 12.341 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	Cabrera 34 Federal #1H				
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Well Position	+N/-S	0.0 usft	Northing:	364,888.71 usft	Latitude:	32° 0' 10.995 N
	+E/-W	0.0 usft	Easting:	591,937.91 usft	Longitude:	104° 10' 12.341 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,233.3 usft

Wellbore	OWB				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	01/28/2019	7.10	59.62	45,795.00000000

Design	AWB				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	269.96

Survey Program	Date 07/02/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
299.0	7,145.0	Extreme MWD (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction
7,258.0	12,343.0	Intrepid MWD (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	364,888.71	591,937.91	32° 0' 10.995 N	104° 10' 12.341 W	
299.0	0.59	209.86	299.0	-1.3	-0.8	364,887.37	591,937.15	32° 0' 10.981 N	104° 10' 12.350 W	
393.0	0.55	209.35	393.0	-2.1	-1.2	364,886.56	591,936.68	32° 0' 10.973 N	104° 10' 12.355 W	
574.0	0.90	221.28	574.0	-4.0	-2.6	364,884.73	591,935.32	32° 0' 10.955 N	104° 10' 12.371 W	
664.0	0.57	176.86	664.0	-5.0	-3.0	364,883.76	591,934.88	32° 0' 10.946 N	104° 10' 12.376 W	
846.0	0.71	80.35	846.0	-5.7	-1.9	364,883.04	591,936.04	32° 0' 10.939 N	104° 10' 12.362 W	
1,049.0	0.74	53.41	1,048.9	-4.7	0.4	364,884.03	591,938.33	32° 0' 10.948 N	104° 10' 12.336 W	
1,225.0	1.19	17.86	1,224.9	-2.3	1.9	364,886.45	591,939.81	32° 0' 10.972 N	104° 10' 12.319 W	
1,319.0	1.28	5.81	1,318.9	-0.3	2.3	364,888.42	591,940.21	32° 0' 10.992 N	104° 10' 12.314 W	
1,413.0	0.83	4.91	1,412.9	1.4	2.5	364,890.15	591,940.38	32° 0' 11.009 N	104° 10' 12.312 W	
1,508.0	0.83	358.84	1,507.9	2.8	2.5	364,891.52	591,940.42	32° 0' 11.022 N	104° 10' 12.311 W	



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Survey Report - Geographic



Company:	Cimarex	Local Co-ordinate Reference:	Well: Cabrera:34 Federal #1H
Project:	Eddy County, NM (NAD:83)	TVD Reference:	KB @ 3259.3usft (H&P:393)
Site:	(Cabrera) SEC 34-T-26-S-R-27-E	MD Reference:	KB @ 3259.3usft (H&P:393)
Well:	Cabrera 34 Federal #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 10_13

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,697.0	1.98	70.66	1,696.8	5.3	5.6	364,893.97	591,943.47	32° 0' 11.047 N	104° 10' 12.276 W
1,791.0	2.01	64.78	1,790.8	6.5	8.6	364,895.21	591,946.50	32° 0' 11.059 N	104° 10' 12.241 W
1,981.0	1.13	83.99	1,980.7	8.1	13.5	364,896.83	591,951.38	32° 0' 11.075 N	104° 10' 12.184 W
2,075.0	1.46	78.21	2,074.7	8.5	15.6	364,897.17	591,953.47	32° 0' 11.078 N	104° 10' 12.160 W
2,127.0	1.23	66.73	2,126.7	8.8	16.7	364,897.52	591,954.63	32° 0' 11.082 N	104° 10' 12.146 W
2,255.0	1.35	77.30	2,254.6	9.7	19.5	364,898.40	591,957.36	32° 0' 11.090 N	104° 10' 12.115 W
2,349.0	1.41	150.51	2,348.6	8.9	21.1	364,897.64	591,959.01	32° 0' 11.083 N	104° 10' 12.095 W
2,444.0	2.97	179.62	2,443.5	5.4	21.7	364,894.16	591,959.61	32° 0' 11.048 N	104° 10' 12.089 W
2,538.0	4.24	182.97	2,537.3	-0.5	21.5	364,888.25	591,959.44	32° 0' 10.990 N	104° 10' 12.091 W
2,633.0	6.19	185.18	2,631.9	-9.1	20.9	364,879.64	591,958.80	32° 0' 10.905 N	104° 10' 12.098 W
2,727.0	8.36	187.58	2,725.2	-20.9	19.5	364,867.82	591,957.44	32° 0' 10.788 N	104° 10' 12.114 W
2,822.0	10.69	186.12	2,818.9	-36.5	17.7	364,852.21	591,955.59	32° 0' 10.633 N	104° 10' 12.136 W
2,917.0	11.23	187.25	2,912.1	-54.4	15.6	364,834.27	591,953.48	32° 0' 10.456 N	104° 10' 12.161 W
3,011.0	12.04	186.43	3,004.2	-73.3	13.3	364,815.45	591,951.23	32° 0' 10.270 N	104° 10' 12.187 W
3,105.0	11.32	184.56	3,096.3	-92.2	11.5	364,796.51	591,949.40	32° 0' 10.082 N	104° 10' 12.209 W
3,294.0	12.98	182.90	3,281.0	-131.9	8.9	364,756.82	591,946.85	32° 0' 9.689 N	104° 10' 12.239 W
3,483.0	14.73	180.34	3,464.5	-177.1	7.7	364,711.59	591,945.63	32° 0' 9.242 N	104° 10' 12.254 W
3,672.0	14.38	181.15	3,647.4	-224.6	7.1	364,664.10	591,945.02	32° 0' 8.772 N	104° 10' 12.262 W
3,861.0	13.52	179.73	3,830.9	-270.2	6.7	364,618.54	591,944.65	32° 0' 8.321 N	104° 10' 12.267 W
4,050.0	13.55	179.06	4,014.6	-314.4	7.2	364,574.31	591,945.12	32° 0' 7.883 N	104° 10' 12.262 W
4,239.0	15.06	181.74	4,197.8	-361.1	6.8	364,527.63	591,944.74	32° 0' 7.421 N	104° 10' 12.268 W
4,428.0	14.47	180.70	4,380.5	-409.2	5.8	364,479.47	591,943.70	32° 0' 6.945 N	104° 10' 12.281 W
4,617.0	12.35	179.71	4,564.4	-453.1	5.6	364,435.64	591,943.52	32° 0' 6.511 N	104° 10' 12.283 W
4,711.0	13.05	179.76	4,656.1	-473.7	5.7	364,414.98	591,943.61	32° 0' 6.306 N	104° 10' 12.283 W
4,806.0	12.93	178.44	4,748.6	-495.1	6.0	364,393.63	591,943.94	32° 0' 6.095 N	104° 10' 12.279 W
4,900.0	12.42	178.64	4,840.3	-515.7	6.6	364,373.01	591,944.47	32° 0' 5.891 N	104° 10' 12.273 W
5,089.0	11.70	177.51	5,025.2	-555.2	7.9	364,333.54	591,945.79	32° 0' 5.500 N	104° 10' 12.259 W
5,183.0	12.19	176.51	5,117.1	-574.6	8.9	364,314.12	591,946.80	32° 0' 5.308 N	104° 10' 12.247 W
5,372.0	11.91	177.21	5,302.0	-614.0	11.1	364,274.72	591,948.97	32° 0' 4.918 N	104° 10' 12.223 W
5,466.0	11.59	178.33	5,394.0	-633.1	11.8	364,255.59	591,949.72	32° 0' 4.729 N	104° 10' 12.215 W
5,561.0	11.26	178.24	5,487.1	-651.9	12.4	364,236.78	591,950.28	32° 0' 4.543 N	104° 10' 12.208 W
5,656.0	9.55	178.91	5,580.5	-669.1	12.8	364,219.63	591,950.71	32° 0' 4.373 N	104° 10' 12.204 W
5,750.0	7.35	180.92	5,673.5	-682.9	12.9	364,205.82	591,950.76	32° 0' 4.236 N	104° 10' 12.203 W
5,845.0	5.73	185.35	5,767.9	-693.7	12.3	364,195.02	591,950.23	32° 0' 4.130 N	104° 10' 12.210 W
5,939.0	4.16	185.45	5,861.5	-701.8	11.6	364,186.96	591,949.46	32° 0' 4.050 N	104° 10' 12.219 W
6,034.0	2.59	197.02	5,956.4	-707.2	10.6	364,181.47	591,948.51	32° 0' 3.995 N	104° 10' 12.230 W
6,129.0	2.53	207.96	6,051.3	-711.1	9.0	364,177.57	591,946.90	32° 0' 3.957 N	104° 10' 12.249 W
6,223.0	2.21	214.73	6,145.2	-714.5	7.0	364,174.25	591,944.89	32° 0' 3.924 N	104° 10' 12.272 W
6,318.0	2.09	228.86	6,240.1	-717.1	4.6	364,171.60	591,942.54	32° 0' 3.898 N	104° 10' 12.299 W
6,412.0	1.92	254.33	6,334.1	-718.7	1.8	364,170.05	591,939.74	32° 0' 3.883 N	104° 10' 12.332 W
6,506.0	2.20	274.24	6,428.0	-719.0	-1.5	364,169.76	591,936.42	32° 0' 3.880 N	104° 10' 12.371 W
6,601.0	2.69	262.24	6,522.9	-719.1	-5.5	364,169.59	591,932.39	32° 0' 3.878 N	104° 10' 12.417 W
6,695.0	2.62	282.45	6,616.8	-719.0	-9.8	364,169.76	591,928.11	32° 0' 3.880 N	104° 10' 12.467 W
6,884.0	1.92	265.91	6,805.7	-718.2	-17.2	364,170.46	591,920.73	32° 0' 3.887 N	104° 10' 12.553 W
7,073.0	1.77	242.32	6,994.6	-719.8	-22.9	364,168.88	591,914.99	32° 0' 3.871 N	104° 10' 12.619 W
7,145.0	1.36	241.88	7,066.6	-720.7	-24.7	364,167.96	591,913.25	32° 0' 3.862 N	104° 10' 12.640 W
TIE ON									
7,215.0	5.82	286.23	7,136.4	-720.1	-28.8	364,168.56	591,909.11	32° 0' 3.868 N	104° 10' 12.688 W
KOP @ 7215.0' MD									
7,258.0	8.81	290.05	7,179.1	-718.4	-34.0	364,170.30	591,903.93	32° 0' 3.886 N	104° 10' 12.748 W
7,306.0	16.15	294.45	7,225.9	-714.4	-43.5	364,174.33	591,894.38	32° 0' 3.926 N	104° 10' 12.859 W
7,353.0	23.04	295.52	7,270.2	-707.7	-57.8	364,181.00	591,880.11	32° 0' 3.992 N	104° 10' 13.024 W
7,400.0	28.53	293.08	7,312.5	-699.3	-76.4	364,189.37	591,861.47	32° 0' 4.075 N	104° 10' 13.241 W
7,447.0	33.94	288.26	7,352.6	-690.8	-99.2	364,197.89	591,838.67	32° 0' 4.160 N	104° 10' 13.505 W
7,494.0	39.02	281.58	7,390.4	-683.7	-126.2	364,204.98	591,811.69	32° 0' 4.230 N	104° 10' 13.819 W



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Company:	Cimarex	Local Co-ordinate Reference:	Well: Cabrera 34 Federal #1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	KB @ 3259.3usft (H&P 393)
Site:	(Cabrera) SEC 34 T-26-S R-27-E	MD Reference:	KB @ 3259.3usft (H&P 393)
Well:	Cabrera 34 Federal #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 10-13

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,541.0	42.85	277.34	7,425.9	-678.7	-156.6	364,210.00	591,781.32	32° 0' 4.280 N	104° 10' 14.171 W
7,589.0	49.08	274.99	7,459.3	-675.0	-190.9	364,213.66	591,747.03	32° 0' 4.317 N	104° 10' 14.569 W
7,636.0	53.58	270.14	7,488.7	-673.5	-227.5	364,215.25	591,710.40	32° 0' 4.333 N	104° 10' 14.995 W
7,683.0	58.39	262.05	7,515.0	-676.2	-266.3	364,212.53	591,671.60	32° 0' 4.307 N	104° 10' 15.445 W
7,730.0	65.39	259.35	7,537.1	-682.9	-307.2	364,205.80	591,630.73	32° 0' 4.241 N	104° 10' 15.920 W
7,778.0	69.53	261.60	7,555.5	-690.2	-350.9	364,198.48	591,587.02	32° 0' 4.169 N	104° 10' 16.428 W
7,825.0	72.53	264.52	7,570.8	-695.6	-395.0	364,193.12	591,542.90	32° 0' 4.117 N	104° 10' 16.940 W
7,872.0	72.83	266.63	7,584.8	-699.0	-439.7	364,189.66	591,498.17	32° 0' 4.083 N	104° 10' 17.460 W
7,919.0	73.39	269.72	7,598.4	-700.5	-484.7	364,188.23	591,453.23	32° 0' 4.070 N	104° 10' 17.982 W
7,966.0	77.01	270.93	7,610.4	-700.2	-530.1	364,188.49	591,407.80	32° 0' 4.073 N	104° 10' 18.509 W
8,013.0	82.00	272.04	7,619.0	-699.0	-576.3	364,189.69	591,361.61	32° 0' 4.086 N	104° 10' 19.046 W
8,060.0	87.75	272.99	7,623.2	-697.0	-623.0	364,191.75	591,314.87	32° 0' 4.107 N	104° 10' 19.589 W
8,137.0	89.94	272.33	7,624.7	-693.4	-699.9	364,195.32	591,237.97	32° 0' 4.143 N	104° 10' 20.481 W
8,231.0	88.44	270.83	7,626.1	-690.8	-793.9	364,197.91	591,144.02	32° 0' 4.170 N	104° 10' 21.573 W
8,326.0	85.91	270.40	7,630.8	-689.8	-888.8	364,198.93	591,049.15	32° 0' 4.182 N	104° 10' 22.674 W
8,421.0	84.51	269.19	7,638.7	-690.1	-983.4	364,198.59	590,954.49	32° 0' 4.180 N	104° 10' 23.774 W
8,516.0	85.92	269.49	7,646.6	-691.2	-1,078.1	364,197.50	590,859.83	32° 0' 4.170 N	104° 10' 24.873 W
8,610.0	87.10	270.56	7,652.3	-691.2	-1,171.9	364,197.54	590,766.00	32° 0' 4.172 N	104° 10' 25.963 W
8,705.0	88.17	270.33	7,656.3	-690.4	-1,266.8	364,198.28	590,671.09	32° 0' 4.181 N	104° 10' 27.065 W
8,800.0	89.34	268.59	7,658.3	-691.3	-1,361.8	364,197.39	590,576.12	32° 0' 4.173 N	104° 10' 28.168 W
8,894.0	90.07	268.51	7,658.8	-693.7	-1,455.8	364,195.01	590,482.15	32° 0' 4.151 N	104° 10' 29.259 W
8,989.0	91.31	269.11	7,657.7	-695.7	-1,550.7	364,193.04	590,387.18	32° 0' 4.133 N	104° 10' 30.362 W
9,083.0	91.91	269.04	7,655.0	-697.2	-1,644.7	364,191.52	590,293.23	32° 0' 4.119 N	104° 10' 31.453 W
9,178.0	92.74	268.92	7,651.2	-698.9	-1,739.6	364,189.83	590,198.33	32° 0' 4.104 N	104° 10' 32.555 W
9,272.0	91.87	268.64	7,647.4	-700.9	-1,833.5	364,187.83	590,104.42	32° 0' 4.085 N	104° 10' 33.646 W
9,367.0	91.44	267.48	7,644.6	-704.1	-1,928.4	364,184.61	590,009.52	32° 0' 4.055 N	104° 10' 34.748 W
9,461.0	93.39	267.25	7,640.7	-708.4	-2,022.2	364,180.30	589,915.71	32° 0' 4.014 N	104° 10' 35.838 W
9,556.0	92.29	266.90	7,636.0	-713.3	-2,117.0	364,175.45	589,820.95	32° 0' 3.967 N	104° 10' 36.938 W
9,651.0	90.97	267.10	7,633.3	-718.2	-2,211.8	364,170.49	589,726.12	32° 0' 3.919 N	104° 10' 38.040 W
9,745.0	90.47	267.26	7,632.1	-722.8	-2,305.7	364,165.86	589,632.24	32° 0' 3.875 N	104° 10' 39.130 W
9,839.0	89.48	269.77	7,632.1	-725.3	-2,399.6	364,163.43	589,538.28	32° 0' 3.852 N	104° 10' 40.221 W
9,934.0	90.35	270.29	7,632.3	-725.2	-2,494.6	364,163.47	589,443.28	32° 0' 3.854 N	104° 10' 41.325 W
10,029.0	91.71	270.05	7,630.6	-725.0	-2,589.6	364,163.76	589,348.30	32° 0' 3.858 N	104° 10' 42.428 W
10,123.0	90.41	270.36	7,628.8	-724.6	-2,683.6	364,164.09	589,254.32	32° 0' 3.863 N	104° 10' 43.519 W
10,217.0	89.58	271.18	7,628.8	-723.4	-2,777.6	364,165.36	589,160.33	32° 0' 3.876 N	104° 10' 44.611 W
10,311.0	90.76	271.52	7,628.6	-721.1	-2,871.6	364,167.57	589,066.36	32° 0' 3.900 N	104° 10' 45.702 W
10,406.0	91.37	271.64	7,626.8	-718.5	-2,966.5	364,170.19	588,971.41	32° 0' 3.927 N	104° 10' 46.804 W
10,500.0	90.49	272.04	7,625.3	-715.5	-3,060.4	364,173.21	588,877.47	32° 0' 3.958 N	104° 10' 47.895 W
10,595.0	91.51	272.69	7,623.6	-711.6	-3,155.3	364,177.13	588,782.57	32° 0' 3.998 N	104° 10' 48.997 W
10,689.0	91.60	273.19	7,621.1	-706.8	-3,249.2	364,181.95	588,688.73	32° 0' 4.047 N	104° 10' 50.087 W
10,784.0	90.27	272.23	7,619.5	-702.3	-3,344.1	364,186.44	588,593.85	32° 0' 4.093 N	104° 10' 51.189 W
10,878.0	90.43	271.13	7,618.9	-699.5	-3,438.0	364,189.19	588,499.90	32° 0' 4.122 N	104° 10' 52.280 W
10,973.0	90.48	270.13	7,618.2	-698.5	-3,533.0	364,190.24	588,404.91	32° 0' 4.133 N	104° 10' 53.383 W
11,067.0	90.93	268.89	7,617.0	-699.3	-3,627.0	364,189.43	588,310.92	32° 0' 4.127 N	104° 10' 54.475 W
11,162.0	91.01	267.88	7,615.4	-702.0	-3,721.9	364,186.76	588,215.97	32° 0' 4.101 N	104° 10' 55.577 W
11,256.0	90.85	267.48	7,613.9	-705.8	-3,815.9	364,182.95	588,122.06	32° 0' 4.065 N	104° 10' 56.668 W
11,351.0	92.52	267.76	7,611.1	-709.7	-3,910.7	364,179.01	588,027.19	32° 0' 4.027 N	104° 10' 57.770 W
11,445.0	92.07	268.51	7,607.3	-712.8	-4,004.6	364,175.95	587,933.31	32° 0' 3.998 N	104° 10' 58.860 W
11,540.0	90.44	268.78	7,605.2	-715.0	-4,099.5	364,173.71	587,838.37	32° 0' 3.978 N	104° 10' 59.963 W
11,634.0	89.15	267.97	7,605.6	-717.7	-4,193.5	364,171.04	587,744.41	32° 0' 3.952 N	104° 11' 1.054 W
11,729.0	89.53	268.08	7,606.7	-720.9	-4,288.4	364,167.77	587,649.47	32° 0' 3.921 N	104° 11' 2.157 W
11,823.0	89.83	268.04	7,607.2	-724.1	-4,382.4	364,164.58	587,555.53	32° 0' 3.891 N	104° 11' 3.248 W
11,918.0	90.42	267.92	7,607.0	-727.5	-4,477.3	364,161.24	587,460.58	32° 0' 3.859 N	104° 11' 4.351 W
12,012.0	90.24	268.53	7,606.5	-730.4	-4,571.3	364,158.32	587,366.63	32° 0' 3.832 N	104° 11' 5.442 W
12,107.0	91.01	268.62	7,605.4	-732.7	-4,666.2	364,155.96	587,271.67	32° 0' 3.810 N	104° 11' 6.545 W

Company:	Cimarex	Local Co-ordinate Reference:	Well Cabrera 34 Federal #1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	KB @ 3259.3usft (H&P 393)
Site:	(Cabrera) SEC 34 T-26 S-R-27-E	MD Reference:	KB @ 3259.3usft (H&P 393)
Well:	Cabrera 34 Federal #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 10-13

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,201.0	91.70	269.19	7,603.2	-734.5	-4,760.2	364,154.17	587,177.71	32° 0' 3.793 N	104° 11' 7.636 W
12,264.0	91.71	269.56	7,601.3	-735.2	-4,823.2	364,153.48	587,114.74	32° 0' 3.787 N	104° 11' 8.367 W
LAST SVY									
12,343.0	91.71	269.56	7,599.0	-735.8	-4,902.1	364,152.87	587,035.78	32° 0' 3.782 N	104° 11' 9.284 W
PTD @ 12343.0' MD, 377' FSL, 104' FWL									

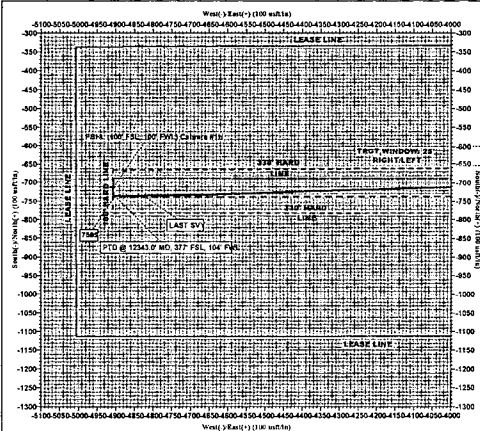
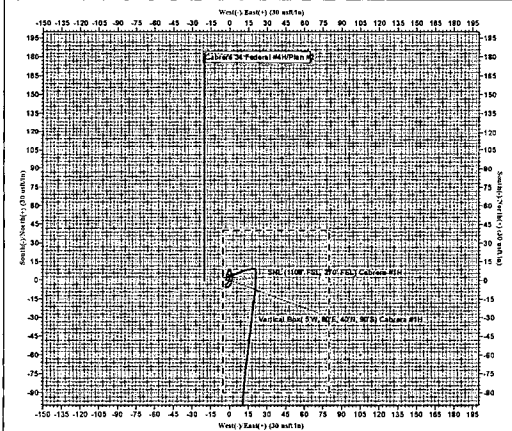
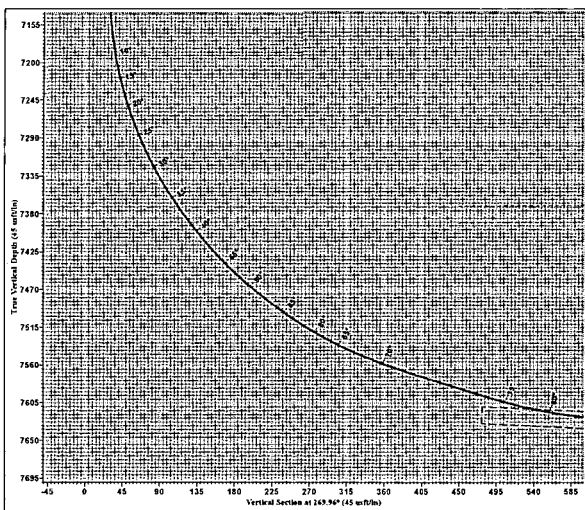
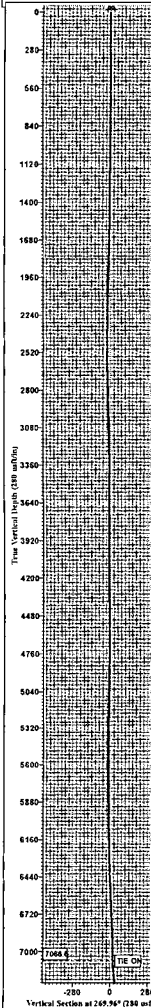
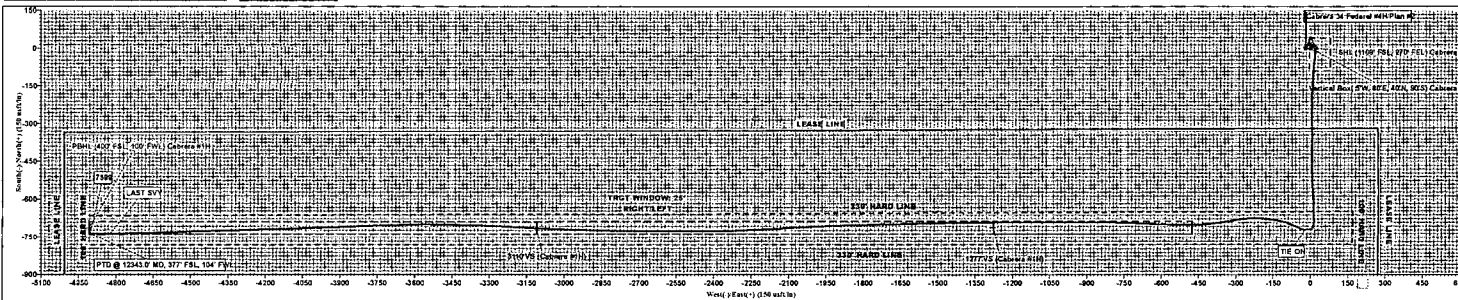
Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (1108' FSL, 270'	- actual wellpath hits target center	0.00	0.00	0.0	0.0	0.0	364,888.71	591,937.91	32° 0' 10.995 N	104° 10' 12.341 W
- Point										
Vertical Box(5'W, 80'	- actual wellpath hits target center	0.00	0.00	0.0	0.0	0.0	364,888.71	591,937.91	32° 0' 10.995 N	104° 10' 12.341 W
- Rectangle (sides W85.0 H130.0 D0.0)										
PBHL (400' FSL, 100'	- actual wellpath misses target center by 23.6usft at 12343.0usft MD (7599.0 TVD, -735.8 N, -4902.1 E)	0.47	89.96	7,605.0	-713.3	-4,905.8	364,175.41	587,032.09	32° 0' 4.005 N	104° 11' 9.327 W
- Rectangle (sides W50.0 H1,796.3 D20.0)										
3110'VS (Cabrera #1H	- actual wellpath misses target center by 4.9usft at 10549.2usft MD (7624.6 TVD, -713.6 N, -3109.6 E)	1.42	89.66	7,620.0	-712.1	-3,109.5	364,176.61	588,828.41	32° 0' 3.993 N	104° 10' 48.465 W
- Rectangle (sides W50.0 H1,833.0 D20.0)										
1277'VS (Cabrera #1H	- actual wellpath misses target center by 20.5usft at 8714.9usft MD (7656.6 TVD, -690.4 N, -1276.7 E)	-2.74	89.96	7,658.0	-710.9	-1,276.5	364,177.83	590,661.41	32° 0' 3.978 N	104° 10' 27.178 W
- Rectangle (sides W50.0 H800.0 D20.0)										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
7,145.0	7,066.6	-720.7	-24.7 TIE ON
7,215.0	7,136.4	-720.1	-28.8 KOP @ 7215.0' MD
12,264.0	7,601.3	-735.2	-4,823.2 LAST SVY
12,343.0	7,599.0	-735.8	-4,902.1 PTD @ 12343.0' MD, 377' FSL, 104' FWL

Checked By: _____ Approved By: _____ Date: _____



Cimarex
Project: Eddy County, NM (NAD 83)
Site: (Cabrera) SEC 34, T-26-S, R-27-E
Well: Cabrera 34 Federal #1H
Wellbore: OWB
Design: AWB
Lat: 32° 0' 10.995 N
Long: 104° 10' 12.341 W
Pad GL: 3233.3
KB: KB @ 3259.3usft (H&P 393)

WELL DETAILS: Cabrera 34 Federal #1H

+N-S	+E-W	North	East	Latitude	Longitude
0.0	0.0	364888.71	591937.91	32° 0' 10.995 N	104° 10' 12.341 W

SECTION DETAILS

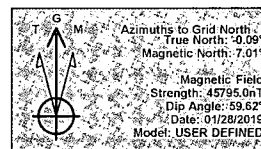
No plan data is available

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East
SHL (1108' FSL, 270' FEL) Cabrera #1H	0.0	0.0	0.0	364888.71	591937.91
Vertical Box SW, 80'E, 40'N, 90'S Cabrera #1H	0.0	0.0	0.0	364888.71	591937.91
PBHL (400' FSL, 100' FWL) Cabrera #1H	7650.0	-713.3	-4905.8	364176.41	591032.09
3110VS (Cabrera #1H)	7620.0	-712.1	-3109.5	364176.61	588828.41
1277VS (Cabrera #1H)	7658.0	-710.9	-1276.5	364177.83	590561.41

ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSec	Departure	Annotation
7145.0	1.36	241.88	7086.6	-720.7	-24.7	25.2	799.9	TIE ON
12264.0	91.71	269.58	7801.3	-735.2	-4823.2	4623.7	5610.1	LAST SVY
12343.0	91.71	269.58	7890.0	-735.8	-4802.1	4302.6	5689.1	PTD @ 12343.0' MD, 377' FSL, 104' FWL



To convert a Magnetic Direction to a Grid Direction, Add 7.01°

