

APR 23 2015

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Cimarex Cuervo Federal 26H XEM + MWD 0ft to 14008 Survey Report

(Def Survey)

Report Date: January 24, 2015 - 12:05 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Cuervo Federal #26H / Cimarex Cuervo Federal #26H
Well: Cuervo Federal #26H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Cuervo Federal 26H XEM + MWD 0ft to 14008
Survey Date: December 26, 2014
Tort / AHD / DDI / ERD Ratio: 187.794 ° / 4676.393 ft / 6.099 / 0.477
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 18' 39.49435", W 103° 38' 22.59320"
Location Grid N/E Y/X: N 477557.040 ftUS, E 755656.990 ftUS
CRS Grid Convergence Angle: 0.3708 °
Grid Scale Factor: 0.9999617
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 174.666 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3764.000 ft above MSL
Seabed / Ground Elevation: 3740.000 ft above MSL
Magnetic Declination: 7.154 °
Total Gravity Field Strength: 998.4392mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48437.694 nT
Magnetic Dip Angle: 60.170 °
Declination Date: December 26, 2014
Magnetic Declination Model: HDGM 2014
North Reference: Grid North
Grid Convergence Used: 0.3708 °
Total Corr Mag North->Grid North: 6.7836 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
SHL: 372'FNL 835'FEL	0.00	0.00	98.34	0.00	0.00	0.00	0.00	0.00	0.00	N/A	162.57M
	369.64	0.31	162.57	369.64	0.98	-0.95	0.30	1.00	162.57	0.08	227.34M
	428.19	0.22	227.34	428.19	1.20	-1.18	0.26	1.21	167.39	0.50	53.48M
	490.56	0.22	53.48	490.56	1.21	-1.19	0.27	1.22	167.12	0.70	152.65M
	553.14	0.22	152.65	553.14	1.26	-1.23	0.42	1.30	160.92	0.54	316.4M
	615.18	0.62	316.40	615.18	1.11	-1.09	0.25	1.12	167.20	1.34	63.41M
	676.65	0.09	63.41	676.65	0.83	-0.83	0.06	0.83	175.76	1.06	206.41M
	734.50	0.31	206.41	734.49	0.95	-0.95	0.03	0.95	178.04	0.67	1.13M
	768.95	0.40	1.13	768.94	0.91	-0.91	-0.01	0.91	180.43	2.01	5.36M
	826.12	0.31	5.36	826.11	0.55	-0.56	0.01	0.56	178.80	0.16	274.98M
	921.40	0.22	274.98	921.39	0.27	-0.28	-0.15	0.32	207.31	0.40	263.96M
	1014.66	0.31	263.96	1014.65	0.24	-0.29	-0.58	0.65	242.89	0.11	261.14M
	1108.12	0.22	261.14	1108.11	0.25	-0.35	-1.00	1.06	250.84	0.10	274.19M
	1199.01	0.40	274.19	1199.00	0.21	-0.35	-1.49	1.53	256.71	0.21	302.08M
	1289.65	0.40	302.08	1289.64	-0.03	-0.16	-2.08	2.08	265.55	0.21	310.28M
	1364.34	0.22	310.28	1364.33	-0.29	0.07	-2.41	2.41	271.66	0.25	282.21M
	1459.45	0.49	282.21	1459.43	-0.55	0.27	-2.94	2.96	275.31	0.33	347.38M
	1556.55	0.88	347.38	1556.53	-1.41	1.09	-3.51	3.68	287.23	0.83	297.28M

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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1650.21	0.80	297.28	1650.18	-2.48	2.09	-4.25	4.74	296.19	0.76	296.35M
	1745.96	0.71	296.35	1745.92	-3.15	2.66	-5.38	6.00	296.33	0.09	317.02M
	1842.67	0.62	317.02	1842.62	-3.88	3.31	-6.27	7.09	297.82	0.26	282.52M
	1939.03	0.62	282.52	1938.98	-4.45	3.80	-7.13	8.09	298.06	0.38	274.98M
	2035.05	0.49	274.98	2035.00	-4.68	3.95	-8.05	8.97	296.14	0.16	285.43M
	2127.28	0.62	285.43	2127.22	-4.93	4.12	-8.92	9.83	294.77	0.18	300.67M
	2222.17	0.49	300.67	2222.11	-5.35	4.46	-9.77	10.74	294.55	0.21	316.4M
	2319.88	0.71	316.40	2319.81	-6.07	5.11	-10.55	11.72	295.87	0.28	292.04M
	2410.73	0.71	292.04	2410.65	-6.77	5.73	-11.46	12.81	296.59	0.33	321.21M
	2506.48	0.49	321.21	2506.40	-7.39	6.27	-12.26	13.77	297.10	0.39	325.35M
	2601.33	0.62	325.35	2601.24	-8.17	7.01	-12.81	14.60	298.70	0.14	305.7M
	2695.90	0.49	305.70	2695.81	-8.88	7.67	-13.43	15.46	299.74	0.24	329.84M
	2789.50	0.80	329.84	2789.40	-9.74	8.47	-14.08	16.43	301.02	0.43	321.74M
	2885.30	0.62	321.74	2885.20	-10.78	9.45	-14.74	17.51	302.68	0.21	58.8M
	2980.23	0.62	58.80	2980.12	-11.44	10.12	-14.62	17.78	304.71	0.98	328.43M
	3078.35	0.80	328.43	3078.24	-12.28	10.98	-14.52	18.21	307.10	1.03	337.07M
	3171.10	0.80	337.07	3170.98	-13.48	12.13	-15.11	19.38	308.75	0.13	325.83M
	3264.88	1.02	325.83	3264.75	-14.84	13.42	-15.84	20.76	310.29	0.30	337.69M
	3359.24	0.80	337.69	3359.10	-16.20	14.73	-16.56	22.16	311.65	0.31	329.76M
	3455.35	0.80	329.76	3455.20	-17.45	15.93	-17.15	23.41	312.88	0.12	329.14M
	3547.67	1.10	329.14	3547.50	-18.84	17.25	-17.93	24.88	313.89	0.33	339.06M
	3643.67	0.88	339.06	3643.49	-20.38	18.72	-18.67	26.44	315.09	0.29	332.75M
	3734.44	1.33	332.75	3734.24	-22.03	20.31	-19.40	28.09	316.32	0.51	331.43M
	3832.14	0.88	331.43	3831.92	-23.77	21.98	-20.27	29.90	317.31	0.46	328.13M
	3927.73	1.02	328.13	3927.50	-25.20	23.35	-21.08	31.45	317.93	0.16	326.14M
	4024.14	1.10	326.14	4023.89	-26.79	24.84	-22.04	33.21	318.42	0.09	326.85M
	4116.37	1.41	326.85	4116.10	-28.57	26.53	-23.16	35.21	318.88	0.34	336.76M
	4212.86	0.88	336.76	4212.57	-30.32	28.20	-24.10	37.10	319.49	0.58	321.34M
	4308.72	0.62	321.34	4308.42	-31.46	29.29	-24.71	38.32	319.84	0.34	234M
	4401.49	0.31	234.00	4401.19	-31.75	29.53	-25.23	38.84	319.49	0.73	250.22M
	4491.37	0.31	250.22	4491.07	-31.56	29.30	-25.66	38.95	318.80	0.10	215.23M
	4586.55	1.02	215.23	4586.24	-30.85	28.53	-26.39	38.86	317.23	0.83	207.03M
	4681.57	1.00	207.03	4681.25	-29.51	27.10	-27.25	38.43	314.84	0.15	188.65M
	4779.71	1.50	188.65	4779.37	-27.54	25.06	-27.83	37.45	312.00	0.65	198.3M
	4875.45	1.19	198.30	4875.08	-25.41	22.88	-28.33	36.42	308.92	0.40	202.97M
	4970.58	1.50	202.97	4970.18	-23.41	20.80	-29.13	35.79	305.52	0.35	201.48M
	5007.72	1.33	201.48	5007.31	-22.60	19.95	-29.48	35.59	304.09	0.47	204.21M
	5102.48	1.50	204.21	5102.04	-20.54	17.79	-30.39	35.21	300.35	0.19	162.48M
	5197.87	1.59	162.48	5197.40	-18.16	15.39	-30.50	34.17	296.78	1.16	159.39M
	5294.33	1.72	159.39	5293.82	-15.46	12.76	-29.59	32.22	293.33	0.16	158.78M
	5382.32	1.59	158.78	5381.77	-13.01	10.39	-28.68	30.51	289.91	0.15	166M
	5480.85	1.72	166.00	5480.26	-10.23	7.68	-27.83	28.87	285.42	0.25	168.91M
	5575.03	1.72	168.91	5574.40	-7.43	4.92	-27.22	27.66	280.25	0.09	118.06M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	5672.24	1.90	118.06	5671.57	-5.09	2.73	-25.51	25.66	276.11	1.61	114.36M
	5768.43	1.81	114.36	5767.71	-3.46	1.35	-22.72	22.76	273.41	0.16	110.52M
	5865.11	1.72	110.52	5864.34	-2.07	0.21	-19.97	19.98	270.62	0.15	111.05M
	5962.02	1.72	111.05	5961.21	-0.79	-0.82	-17.25	17.27	267.29	0.02	107.13M
	6055.00	1.72	107.13	6054.15	0.36	-1.73	-14.62	14.72	263.25	0.13	108.94M
	6145.00	1.41	108.94	6144.11	1.33	-2.49	-12.28	12.53	258.55	0.35	110.04M
	6240.00	1.50	110.04	6239.08	2.35	-3.29	-10.01	10.53	251.79	0.10	109.16M
	6329.43	1.50	109.16	6328.48	3.34	-4.08	-7.80	8.80	242.40	0.03	108.14M
	6427.00	1.50	108.14	6426.02	4.37	-4.89	-5.38	7.27	227.71	0.03	125.2M
	6523.74	0.22	125.20	6522.75	5.00	-5.40	-4.03	6.73	216.73	1.33	159.48M
	6620.18	0.09	159.48	6619.18	5.19	-5.57	-3.85	6.77	214.63	0.16	149.74M
	6708.57	0.09	149.74	6707.57	5.32	-5.70	-3.79	6.84	213.62	0.02	121.76M
	6806.70	0.09	121.76	6805.70	5.44	-5.81	-3.69	6.88	212.40	0.04	223.55M
	6898.17	0.09	223.55	6897.17	5.53	-5.90	-3.67	6.95	211.93	0.15	187.46M
	6994.91	0.09	187.46	6993.91	5.65	-6.03	-3.74	7.09	211.80	0.06	229.77M
	7090.96	0.22	229.77	7089.96	5.83	-6.22	-3.89	7.33	212.00	0.17	290.36M
	7187.26	0.40	290.36	7186.26	5.79	-6.22	-4.34	7.59	214.91	0.36	278.73M
	7277.11	0.40	278.73	7276.11	5.58	-6.07	-4.95	7.83	219.20	0.09	266.56M
	7373.27	0.40	266.56	7372.27	5.49	-6.03	-5.61	8.24	222.93	0.09	201.48M
	7468.85	0.31	201.48	7467.85	5.71	-6.30	-6.04	8.73	223.82	0.41	154.68M
	7565.18	0.40	154.68	7564.18	6.26	-6.84	-5.99	9.10	221.22	0.31	158.07M
	7662.84	0.49	158.07	7661.83	6.98	-7.54	-5.69	9.44	217.05	0.10	156.26M
	7759.49	0.40	156.26	7758.48	7.69	-8.23	-5.40	9.84	213.28	0.09	156.09M
	7846.95	0.40	156.09	7845.94	8.27	-8.79	-5.15	10.19	210.39	0.00	153.84M
	7942.17	0.49	153.84	7941.15	8.97	-9.46	-4.84	10.62	207.10	0.10	166.88M
	8036.05	0.40	166.88	8035.03	9.67	-10.14	-4.59	11.13	204.35	0.14	171.73M
	8136.12	0.40	171.73	8135.10	10.36	-10.82	-4.46	11.71	202.39	0.03	186.54M
	8225.51	0.22	186.54	8224.49	10.84	-11.30	-4.43	12.14	201.42	0.22	228.05M
	8319.10	0.31	228.05	8318.08	11.17	-11.65	-4.64	12.54	201.73	0.22	228.05M
	8413.69	0.31	228.05	8412.67	11.47	-11.99	-5.02	13.00	202.73	0.00	243.21M
	8511.26	0.40	243.21	8510.23	11.76	-12.32	-5.52	13.50	204.15	0.13	239.59M
	8607.59	0.49	239.59	8606.56	12.05	-12.68	-6.18	14.11	205.98	0.10	243.83M
	8698.02	0.71	243.83	8696.99	12.42	-13.12	-7.02	14.88	208.12	0.25	247.92M
	8795.09	0.71	247.92	8794.05	12.80	-13.62	-8.11	15.85	210.79	0.05	204.96M
	8890.00	0.93	204.96	8888.95	13.64	-14.54	-8.98	17.09	211.71	0.67	204.82M
	8985.00	0.95	204.82	8983.94	14.98	-15.95	-9.64	18.64	211.14	0.02	179.95M
	9087.00	0.81	179.95	9085.92	16.43	-17.44	-9.99	20.10	209.81	0.39	110.48M
	9118.00	2.51	110.48	9116.91	16.95	-17.89	-9.36	20.19	207.60	7.59	99.84M
	9150.00	5.70	99.84	9148.83	17.67	-18.41	-7.13	19.74	201.18	10.21	99.47M
	9182.00	9.41	99.47	9180.54	18.75	-19.11	-2.99	19.35	188.88	11.59	11.07L
	9213.00	12.50	96.69	9210.98	20.10	-19.92	2.85	20.12	171.87	10.11	0.92R
	9245.00	15.49	96.87	9242.02	21.72	-20.84	10.53	23.35	153.19	9.34	8.35R
	9277.00	19.56	98.65	9272.53	23.92	-22.15	20.07	29.89	137.82	12.83	3.05R
	9309.00	21.87	98.98	9302.46	26.69	-23.89	31.26	39.34	127.39	7.23	2.54L

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	9340.00	25.34	98.62	9330.86	29.72	-25.79	43.52	50.59	120.65	11.20	1.35L
	9372.00	28.82	98.45	9359.35	33.21	-27.95	57.93	64.32	115.75	10.88	8.86L
	9404.00	32.44	97.40	9386.88	36.94	-30.19	74.07	79.99	112.17	11.43	18.23L
	9435.00	36.43	95.20	9412.44	40.46	-32.09	91.49	96.96	109.33	13.48	6.85R
	9467.00	39.56	95.79	9437.66	44.16	-33.98	111.10	116.18	107.01	9.85	61.21R
	9499.00	41.60	101.05	9461.97	49.13	-37.05	131.67	136.78	105.71	12.44	42.82R
	9530.00	43.54	103.62	9484.80	55.50	-41.53	152.15	157.72	105.27	8.40	42.42R
	9562.00	46.23	106.96	9507.47	63.46	-47.50	173.92	180.29	105.28	11.17	66.48R
	9593.00	48.20	112.60	9528.54	73.13	-55.21	195.31	202.96	105.79	14.78	70.45R
	9625.00	49.89	118.30	9549.52	85.50	-65.60	217.10	226.80	106.81	14.45	79.22R
	9657.00	51.00	124.63	9569.91	100.27	-78.48	238.12	250.72	108.24	15.64	66.46R
	9688.00	52.96	129.92	9589.01	116.81	-93.27	257.53	273.90	109.91	14.85	63.49R
	9720.00	55.60	135.96	9607.71	136.19	-110.97	276.52	297.96	111.87	17.40	75.6R
	9752.00	56.76	140.90	9625.52	157.63	-130.85	294.15	321.94	113.98	13.33	77.68R
	9784.00	57.80	145.97	9642.83	180.64	-152.47	310.17	345.62	116.18	13.72	82.66R
	9816.00	58.47	151.12	9659.73	205.03	-175.64	324.34	368.85	118.44	13.83	69.79R
	9848.00	59.84	155.22	9676.14	230.59	-200.16	336.73	391.73	120.73	11.80	60.1R
	9880.00	61.55	158.52	9691.81	257.16	-225.81	347.68	414.58	123.00	10.46	36.12R
	9912.00	65.19	161.42	9706.15	284.82	-252.68	357.47	437.76	125.26	13.96	45.76R
	9944.00	68.05	164.55	9718.85	313.58	-280.77	366.05	461.33	127.49	12.67	34.35R
	9975.00	72.00	167.37	9729.44	342.37	-309.02	373.11	484.47	129.63	15.34	33.59R
	10007.00	76.01	170.10	9738.26	372.96	-339.18	379.11	508.69	131.82	14.98	32.11R
	10038.00	79.98	172.62	9744.71	403.22	-369.15	383.66	532.42	133.90	15.07	36.03R
	10070.00	82.99	174.82	9749.44	434.86	-400.61	387.12	557.09	135.98	11.61	2.19R
	10096.00	83.25	174.83	9752.56	460.67	-426.31	389.45	577.42	137.59	1.00	13.92R
	10190.00	85.18	175.31	9762.03	554.18	-519.48	397.48	654.11	142.58	2.12	27.07R
	10237.00	86.45	175.96	9765.46	601.05	-566.22	401.05	693.86	144.69	3.03	30.86R
	10286.00	88.14	176.97	9767.77	649.97	-615.07	404.07	735.92	146.70	4.02	32.67R
	10333.00	89.45	177.81	9768.76	696.90	-662.01	406.21	776.70	148.47	3.31	44.33R
	10381.00	90.31	178.65	9768.86	744.81	-709.99	407.69	818.71	150.13	2.50	68.6R
	10476.00	90.69	179.62	9768.03	839.52	-804.97	409.12	902.97	153.06	1.10	114.98R
	10571.00	90.28	180.50	9767.23	934.09	-899.97	409.02	988.56	155.56	1.02	60.02R
	10667.00	90.58	181.02	9766.51	1029.55	-995.96	407.75	1076.19	157.74	0.63	157.62R
	10761.00	90.41	181.09	9765.70	1122.96	-1089.94	406.02	1163.11	159.57	0.20	148.89L
	10856.00	89.83	180.74	9765.50	1217.39	-1184.92	404.50	1252.06	161.15	0.71	81.53L
	10951.00	89.90	180.27	9765.72	1311.90	-1279.92	403.67	1342.07	162.50	0.50	120.68R
	11045.00	89.55	180.86	9766.17	1405.40	-1373.91	402.74	1431.72	163.66	0.73	164.67R
	11140.00	88.93	181.03	9767.43	1499.82	-1468.89	401.17	1522.69	164.72	0.68	177.61R
	11235.00	88.69	181.04	9769.41	1594.22	-1563.86	399.46	1614.07	165.67	0.25	78.69L
	11330.00	88.80	180.49	9771.49	1688.66	-1658.82	398.19	1705.95	166.50	0.59	20.32R
	11425.00	89.07	180.59	9773.25	1783.14	-1753.80	397.29	1798.24	167.24	0.30	156.81R
	11520.00	88.86	180.68	9774.97	1877.61	-1848.78	396.24	1890.77	167.90	0.24	93.78R
	11615.00	88.80	181.59	9776.91	1971.98	-1943.74	394.36	1983.34	168.53	0.96	122.48L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	11709.00	88.52	181.15	9779.11	2065.32	-2037.69	392.11	2075.07	169.11	0.55	92.43L
	11805.00	88.42	178.76	9781.67	2160.87	-2133.65	392.19	2169.39	169.58	2.49	77.16L
	11900.00	88.76	177.27	9784.01	2255.67	-2228.56	395.48	2263.38	169.94	1.61	64.81L
	11995.00	89.24	176.25	9785.67	2350.59	-2323.39	400.85	2357.72	170.21	1.19	82.62L
	12091.00	89.31	175.71	9786.88	2446.56	-2419.15	407.57	2453.24	170.44	0.57	70.25L
	12186.00	89.45	175.32	9787.91	2541.54	-2513.85	415.00	2547.88	170.63	0.44	99.31R
	12280.00	89.35	175.93	9788.89	2635.52	-2607.57	422.17	2641.53	170.80	0.66	104.49R
	12375.00	89.04	177.13	9790.23	2730.46	-2702.39	427.92	2736.06	171.00	1.30	108.24R
	12471.00	88.76	177.98	9792.07	2826.32	-2798.28	432.02	2831.43	171.22	0.93	12.26L
	12566.00	89.45	177.83	9793.56	2921.16	-2893.20	435.49	2925.80	171.44	0.74	92.91R
	12662.00	89.42	178.42	9794.50	3016.98	-2989.15	438.63	3021.16	171.65	0.62	127.78R
	12757.00	88.80	179.22	9795.98	3111.72	-3084.11	440.59	3115.43	171.87	1.07	13.71R
	12851.00	89.21	179.32	9797.61	3205.40	-3178.09	441.78	3208.65	172.09	0.45	12.72L
	12946.00	90.45	179.04	9797.89	3300.10	-3273.08	443.14	3302.94	172.29	1.34	155.81L
	13041.00	89.76	178.73	9797.72	3394.84	-3368.06	444.99	3397.33	172.47	0.80	69.44R
	13135.00	90.03	179.45	9797.89	3488.56	-3462.05	446.49	3490.72	172.65	0.82	86.31R
	13230.00	90.07	180.07	9797.81	3583.19	-3557.05	446.88	3585.01	172.84	0.65	94.5R
	13325.00	89.97	181.34	9797.77	3677.66	-3652.04	445.71	3679.14	173.04	1.34	72.06R
	13419.00	90.31	182.39	9797.54	3770.92	-3745.99	442.66	3772.05	173.26	1.17	116.56R
	13514.00	90.24	182.53	9797.09	3865.04	-3840.90	438.58	3865.86	173.49	0.16	122R
	13609.00	89.79	183.25	9797.06	3959.06	-3935.78	433.79	3959.61	173.71	0.89	37.3L
	13704.00	90.21	182.93	9797.06	4053.03	-4030.64	428.67	4053.37	173.93	0.56	71.56L
	13798.00	90.65	181.61	9796.36	4146.20	-4124.56	424.94	4146.39	174.12	1.48	128.74L
	13893.00	90.00	180.80	9795.82	4240.58	-4219.54	422.95	4240.68	174.28	1.09	13.39L
Final Survey 24- Jan-2015	13934.00	90.21	180.75	9795.74	4281.35	-4260.53	422.39	4281.42	174.34	0.53	HS
TD - Proj to Bit	14008.00	90.21	180.75	9795.47	4354.93	-4334.53	421.42	4354.96	174.45	0.00	

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	Act Stns	30.000	30.000	SLB_MWD-STD-Depth Only	Original Borehole / Cimarex Cuervo Federal 26H XEM + MWD
	1	24.000	369.640	1/98.425	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Cuervo Federal 26H XEM + MWD
	1	369.640	14008.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Cuervo Federal 26H XEM + MWD



Cactus 137

Cimarex

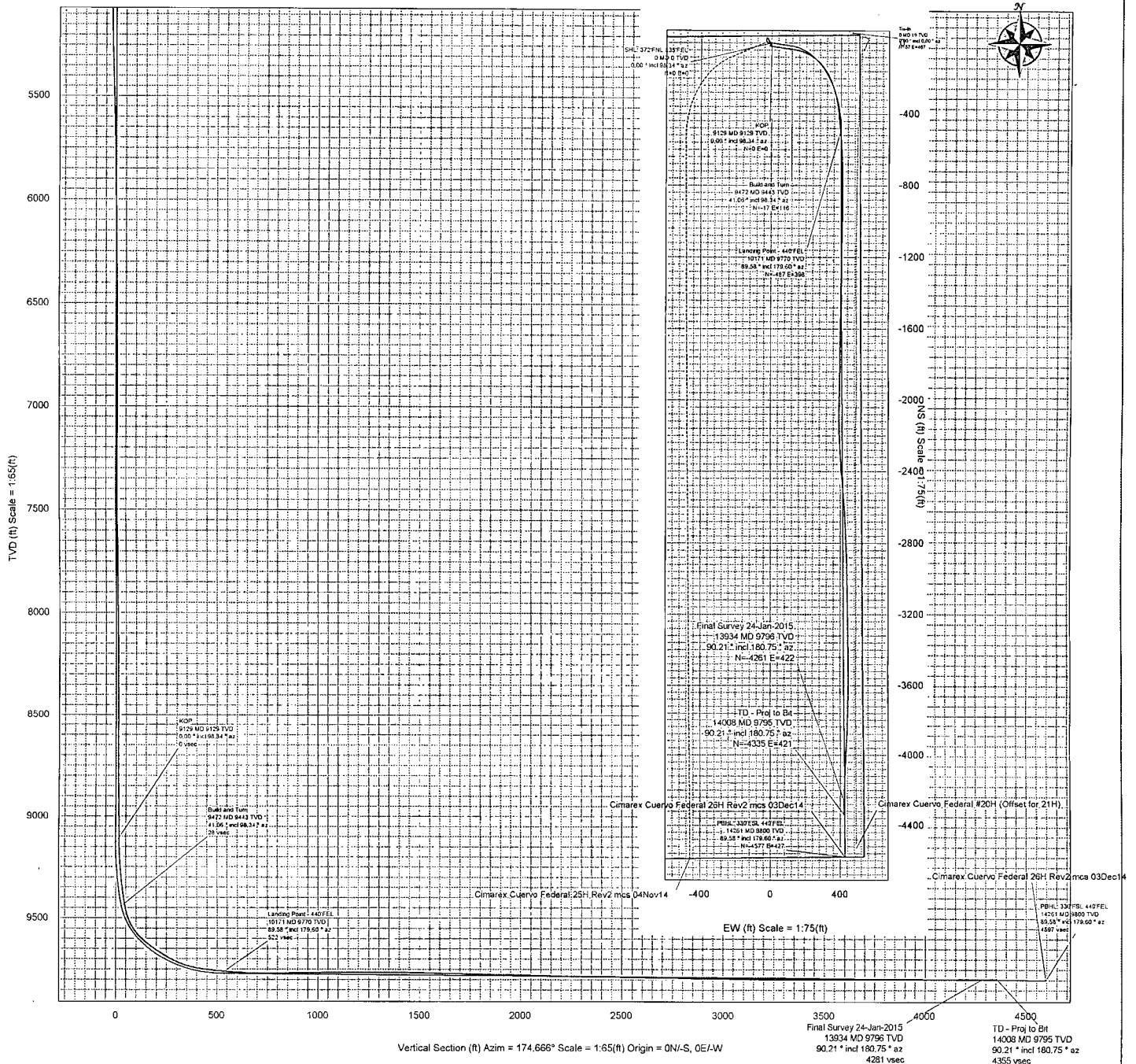
Rev2



Borehole:	Well:	Field:	Structure:
Original Borehole	Cuervo Federal #26H	NM Lea County	Cactus 137
Gravity & Magnetic Parameters			
Model:	HQGM 2014	Dip:	60.17°
Date:	26-Dec-2014	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, U.S. Feet
MagDec:	7.154°	FS:	48437.684nT
Gravity FS:	998.439mgN (9.80665 Based)	Lat:	N 32 18 39.49
		Lon:	W 103 38 22.59
		North:	477557.04NUS
		Grid Conv:	0.3708°
		Scale Fact:	0.9999617
Miscellaneous			
Slot:	Cuervo Federal #26H	TVD Ref:	RKB(3764ft above MSL)
Plan:	Rev2 MGS 03-Dec-14		

Critical Points

Comments	Survey MD	Inc	Azim	TVD	SSTVD	VS	NS	EW	Longitude	Latitude	Easting	Northing	DLS	Tool Face
SHL: 372'FNL 835'FEL	0.00	0.00	98.34	0.00	-3740.00	0.00	0.00	0.00	W 103 38 22.593	N 32 18 39.494	755656.99	477557.04		98.34
KOP Build 12°/100' DLS	9129.34	0.00	98.34	9129.34	5389.34	0.00	0.00	0.00	W 103 38 22.593	N 32 18 39.494	755656.99	477557.04	0.00	98.34
Build & Turn 12°/100' DLS	9471.51	41.06	98.34	9442.96	5702.96	27.76	-17.03	116.20	W 103 38 21.241	N 32 18 39.318	755773.19	477540.01	12.00	83.66
Landing Point: 440'FEL	10171.10	89.58	179.59	9770.00	6030.00	522.39	-487.47	398.40	W 103 38 17.988	N 32 18 34.645	756055.37	477069.59	12.00	0.00
PBHL: 330'FSL 440'FEL	14260.80	89.58	179.59	9800.00	6060.00	4596.87	-4576.96	427.31	W 103 38 17.960	N 32 17 54.179	756084.28	472980.26	0.00	



Vertical Section (ft) Azim = 174.666° Scale = 1:65(ft) Origin = 0N/S, 0E/W

Grid
True
Mag

Grid North
Tot Corr (M-3 G 6.783°)
Mag Dec (7.154°)
Grid Conv (0.371°)

Well: Cuervo Federal #26H
Field: NM Lea County
Structure: Cactus 137
Rev2 MGS 03-Dec-14
Date: 26-Dec-2014
Drawn by: [blank]
Checked by: [blank]
Scale: 1:65
Title: [blank]

CONTROLLED

Rev2 MGS 03-Dec-14

Drawn by: [blank]
Checked by: [blank]
Scale: 1:65
Title: [blank]