Results of Directional Survey

API number:	30-025-41359			
OGRID:		Operator:	CIMAREX ENERGY CO.	
		Property:	HANSON 26 FEDERAL COM	# 5H

surface	ULSTR:	A	26	T	20S	R	34E
				330	FNL	480	FEL
BH Loc	ULSTR:	P	26	T	20S	R	34E
14250	MD	9691.5	TVD	340	FSL	502	FEL
				4940	FNL		
Top Perf/OH	ULSTR:	A	26	T	20S	R	34E
9650	MD	9616.2	TVD	397	FNL	441	FEL
Bot Perf/OH	ULSTR:	P	26	T	20S	R	34E
14219	MD	9691.8	TVD	371	FSL	501	FEL
				4909	FNL		

	MD	N/S	E/W	VD
	9643	-62.30	39.50	9611
TOP PERFS/OH	**9650**	-66.98	39.50	9616.18
	9675	-83.70	39.50	9634.70
	14186	-4545.80	-20.50	9692.10
BOT PERFS/OH	**14219**	-4578.80	-21.17	9691.79
	14250	-4609.80	-21.80	9691.50

NEXT TO LAST	14186	-4545.80	-20.50	9692.10
LAST READING	14250	-4609.80	-21.80	9691.50
TD	**14250**	-4609.80	-21.80	9691.50

Surface Location	330	FN	480	FE
Projected BHL	4940	FN	502	FE
Location of				
Top Perfs/OH	397	FN	441	FE
Bottom Perfs/OH	4909	FN	501	FE

SUMMARY of Subsurface Locations

Surface Location	A-26-20S-34E	330	FN	480	FE	Vert. Depth
Top Perfs/OH	A-26-20S-34E	397	FN	441	FE	9616.18
Bottom Perfs/OH	P-26-20S-34E	4909	FN	501	FE	9691.79
Projected TD	P-26-20S-34E	4940	FN	502	FE	9691.50

MAY 19 2014

Cimarex Energy Co. Hanson 26 Federal Com#5H Gyro+MWD

PATHFINDER
A Schlumberger Company

Report Date:	4/15/2014	**Survey / DLS Computation Method:**	Minimum Curvature / Lubinski
Client:	Cimarex Energy Co.	**Vertical Section Azimuth:**	180.322° (GridNorth)
Field:	Lea, Bone Spring	**Vertical Section Origin:**	0 ft, 0 ft
Structure / Slot:	Cimarex Energy Co. Hanson 26 Federal Com#5H	**TVD Reference Datum:**	DF
Well:	Hanson 26 Federal Com#5H	**TVD Reference Elevation:**	3719 ft above MSL
Borehole:	Original Borehole	**Sea Bed / Ground Level Elevation:**	3694 ft above MSL
UWI/API#:	Unknown / 30-025-41359	**Magnetic Declination:**	7.3955 °
Survey Name / Date:	Cimarex Energy Co. Hanson 26 Federal Com#5H Gyro+MWD 30-Nov-2013	**Total Field Strength:**	48530.36 nT
Grid Coordinate System:	NAD83 New Mexico State Pla	**Magnetic Dip:**	60.39221 °
Location Lat/Long:	32∞ 33' 1.616" N, 103∞ 31' 25.984" W	**Declination Date:**	11/28/2013
Location Grid N/E Y/X:	Easting 790749.900 ft USNorthing 564931.900 ft US	**Magnetic Declination Model:**	BGGM 2012
Grid Convergence Angle:	0.43554 °	**North Reference:**	GridNorth
Grid Scale Factor:	0.99991045	**Total Corr Mag North -> Grid North:**	6.95997 °
		Local Coordinates Referenced To:	GridNorth

MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure (ft)	ATAZIM
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.0
100	0.6	94.3	100.0	0.0	0.0	0.5	0.6	0.5	94.3
200	0.6	83.2	200.0	0.0	0.0	1.6	0.1	1.6	90.6
300	0.6	80.0	300.0	-0.1	0.1	2.6	0.1	2.6	87.1
400	0.5	87.2	400.0	-0.3	0.2	3.6	0.1	3.6	86.1
500	0.3	75.7	500.0	-0.4	0.3	4.3	0.3	4.3	85.6
600	0.1	80.2	600.0	-0.4	0.4	4.7	0.2	4.7	85.0
700	0.1	87.1	700.0	-0.5	0.4	4.9	0.0	4.9	84.9
800	0.1	107.8	800.0	-0.4	0.4	5.1	0.0	5.1	85.4
900	0.1	75.7	900.0	-0.4	0.4	5.3	0.1	5.3	85.7
1,000	0.1	188.4	1000.0	-0.4	0.4	5.4	0.2	5.4	85.9
1,100	0.1	196.9	1100.0	-0.3	0.3	5.4	0.0	5.4	86.8
1,176	0.1	167.9	1176.1	-0.2	0.2	5.4	0.1	5.4	87.8
1,269	0.2	249.3	1269.3	-0.1	0.1	5.2	0.2	5.2	89.1
1,363	0.3	251.1	1362.5	0.0	-0.1	4.9	0.1	4.9	90.6
1,456	0.6	223.1	1455.7	0.5	-0.5	4.3	0.4	4.3	96.6
1,549	0.7	214.9	1548.9	1.3	-1.3	3.6	0.1	3.9	109.7
1,642	0.6	218.3	1642.1	2.1	-2.1	3.0	0.1	3.7	124.7
1,735	0.3	231.5	1735.3	2.6	-2.6	2.5	0.3	3.7	135.9
1,829	0.3	241.6	1828.5	2.9	-2.9	2.1	0.1	3.6	144.3
1,922	0.3	240.0	1921.7	3.2	-3.2	1.7	0.0	3.6	152.5
2,015	0.2	226.7	2014.9	3.4	-3.4	1.3	0.1	3.7	159.2

2,108	0.3	238.4	2108.2	3.7	-3.7	1.0	0.1	3.8	165.5
2,201	0.2	258.9	2201.4	3.8	-3.8	0.6	0.1	3.9	171.5
2,295	0.2	248.9	2294.6	3.9	-3.9	0.2	0.1	3.9	176.6
2,388	0.2	253.0	2387.8	4.0	-4.0	0.0	0.1	4.0	180.5
2,481	0.2	254.9	2481.0	4.1	-4.1	-0.3	0.0	4.1	184.0
2,574	0.2	255.4	2574.2	4.2	-4.2	-0.6	0.0	4.2	187.8
2,667	0.1	248.4	2667.4	4.3	-4.3	-0.8	0.0	4.3	190.9
2,761	0.1	247.4	2760.6	4.3	-4.3	-1.0	0.0	4.5	193.3
2,854	0.1	239.3	2853.8	4.4	-4.4	-1.2	0.1	4.6	194.9
2,947	0.2	68.6	2947.0	4.4	-4.4	-1.1	0.2	4.5	194.1
3,040	0.3	87.5	3040.3	4.3	-4.3	-0.8	0.1	4.4	190.1
3,134	0.3	73.4	3133.4	4.3	-4.3	-0.3	0.1	4.3	183.9
3,227	0.5	66.6	3226.6	4.0	-4.0	0.4	0.2	4.0	174.6
3,320	0.6	61.6	3319.8	3.6	-3.6	1.2	0.1	3.8	161.4
3,413	0.6	61.5	3413.0	3.1	-3.1	2.1	0.0	3.8	146.2
3,506	0.7	57.9	3506.2	2.5	-2.6	3.1	0.1	4.0	129.9
3,600	0.7	54.7	3599.4	1.9	-1.9	4.0	0.1	4.4	115.6
3,693	0.7	52.6	3692.6	1.2	-1.3	4.9	0.0	5.1	104.5
3,786	0.7	45.1	3785.8	0.5	-0.5	5.7	0.1	5.7	95.5
3,879	0.5	53.2	3879.0	-0.1	0.1	6.4	0.2	6.4	89.5
3,972	0.5	63.0	3972.3	-0.5	0.5	7.1	0.1	7.1	86.0
4,066	0.5	65.0	4065.5	-0.9	0.9	7.9	0.0	7.9	83.7
4,159	0.5	74.6	4158.7	-1.2	1.2	8.7	0.1	8.8	82.3
4,252	0.6	69.2	4251.9	-1.5	1.4	9.5	0.1	9.7	81.4
4,345	0.4	68.3	4345.1	-1.8	1.7	10.3	0.1	10.4	80.4
4,438	0.5	45.2	4438.3	-2.2	2.2	10.9	0.2	11.1	78.7
4,532	0.5	47.9	4531.5	-2.8	2.8	11.6	0.0	11.9	76.5
4,625	0.4	39.0	4624.7	-3.4	3.3	12.1	0.1	12.5	74.7
4,718	0.4	31.3	4717.9	-3.9	3.8	12.5	0.1	13.0	72.9
4,811	0.5	30.5	4811.1	-4.5	4.4	12.8	0.1	13.6	70.9
4,905	0.4	29.1	4904.4	-5.2	5.1	13.2	0.1	14.1	68.9
4,998	0.5	35.3	4997.6	-5.8	5.7	13.6	0.1	14.8	67.1
5,091	0.6	35.1	5090.8	-6.5	6.5	14.1	0.0	15.5	65.4
5,184	0.5	27.7	5184.0	-7.3	7.2	14.6	0.1	16.3	63.6
5,277	0.7	13.7	5277.2	-8.2	8.1	14.9	0.2	17.0	61.4
5,371	0.6	9.9	5370.3	-9.2	9.1	15.1	0.1	17.6	59.0
5,447	0.6	38.3	5446.8	-9.9	9.8	15.4	0.4	18.3	57.6
5,667	0.6	359.0	5666.8	-12.0	11.9	16.1	0.2	20.1	53.6
5,855	1.1	11.3	5854.8	-14.8	14.7	16.5	0.3	22.1	48.3
6,044	1.2	11.5	6043.8	-18.5	18.4	17.2	0.0	25.2	43.1
6,232	1.2	13.2	6231.7	-22.3	22.2	18.1	0.0	28.6	39.1

6,420	1.3	15.0	6419.7	-26.3	26.2	19.1	0.1	32.4	36.0
6,611	1.3	16.4	6610.6	-30.6	30.4	20.2	0.0	36.6	33.6
6,800	1.1	22.4	6799.6	-34.3	34.2	21.6	0.1	40.4	32.2
6,989	0.8	26.0	6988.6	-37.2	37.1	22.8	0.2	43.5	31.6
7,178	1.0	20.9	7177.5	-39.9	39.8	24.0	0.1	46.5	31.1
7,366	0.9	31.8	7365.5	-42.7	42.6	25.3	0.1	49.5	30.8
7,555	0.9	29.9	7554.5	-45.2	45.1	26.8	0.0	52.4	30.8
7,743	1.0	20.8	7742.5	-48.0	47.9	28.1	0.1	55.5	30.4
7,933	0.8	25.2	7932.4	-50.8	50.6	29.3	0.1	58.5	30.0
8,122	1.1	27.4	8121.4	-53.6	53.4	30.7	0.2	61.6	29.9
8,310	1.1	34.9	8309.4	-56.7	56.5	32.5	0.1	65.2	29.9
8,500	0.9	22.6	8499.4	-59.5	59.3	34.1	0.2	68.4	29.9
8,687	0.8	42.3	8686.3	-61.8	61.6	35.5	0.2	71.1	30.0
8,877	0.2	338.3	8876.3	-63.1	62.9	36.3	0.4	72.6	30.0
9,066	0.4	315.8	9065.3	-63.9	63.7	35.7	0.1	73.0	29.3
9,257	0.1	10.8	9256.3	-64.5	64.3	35.3	0.2	73.4	28.7
9,360	7.3	166.5	9359.1	-58.3	58.1	36.8	7.2	68.7	32.4
9,391	12.8	169.5	9389.6	-53.0	52.7	37.9	17.9	64.9	35.7
9,423	17.2	171.5	9420.5	-44.8	44.6	39.2	13.8	59.4	41.4
9,454	20.7	176.1	9449.8	-34.8	34.6	40.3	12.2	53.1	49.4
9,486	24.6	181.5	9479.3	-22.5	22.3	40.5	13.9	46.2	61.2
9,517	28.0	182.3	9507.1	-8.8	8.5	40.0	11.1	40.9	78.0
9,549	30.9	181.1	9535.0	7.0	-7.2	39.6	9.0	40.2	100.3
9,580	34.3	179.9	9561.1	23.6	-23.9	39.4	11.2	46.1	121.2
9,612	37.8	179.8	9587.0	42.5	-42.7	39.5	11.1	58.2	137.2
9,643	40.5	180.2	9611.0	62.0	-62.3	39.5	8.6	73.7	147.6
9,675	43.8	179.9	9634.7	83.5	-83.7	39.5	10.5	92.6	154.7
9,706	48.6	180.2	9656.2	105.9	-106.1	39.5	15.6	113.2	159.6
9,737	53.6	180.8	9675.6	130.0	-130.2	39.3	16.2	136.0	163.2
9,769	56.9	182.0	9693.8	156.3	-156.5	38.6	10.8	161.2	166.1
9,800	58.9	182.3	9710.3	182.6	-182.8	37.6	6.4	186.6	168.4
9,832	60.6	182.5	9726.4	210.2	-210.4	36.5	5.2	213.5	170.2
9,863	63.7	182.6	9740.9	237.6	-237.8	35.3	10.2	240.4	171.6
9,895	68.1	181.9	9754.0	266.7	-266.9	34.1	13.8	269.1	172.7
9,926	71.9	179.8	9764.6	295.9	-296.1	33.7	13.8	298.0	173.5
9,958	75.2	179.2	9773.7	326.5	-326.7	34.0	10.5	328.5	174.1
9,989	78.0	178.9	9780.8	356.7	-356.9	34.5	9.1	358.5	174.5
10,021	80.6	179.4	9786.8	388.1	-388.3	35.0	8.4	389.9	174.9
10,052	83.8	180.1	9791.0	418.8	-419.0	35.1	10.6	420.5	175.2
10,084	86.2	180.9	9793.8	450.7	-450.9	34.8	8.0	452.2	175.6
10,115	86.8	181.2	9795.7	481.6	-481.8	34.2	2.1	483.1	175.9

	MD	TVD
KOP, LTC-BTC XO	9315	9314
Top Shot	9650	9616
Bottom of CBL	9921	9763

10,150	87.0	181.1	9797.5	516.6	-516.8	33.5	0.5	517.9	176.3			
10,245	86.6	180.5	9802.9	611.4	-611.6	32.2	0.8	612.5	177.0	EOC	10164.0	9798
10,339	87.1	180.5	9808.0	705.3	-705.5	31.4	0.6	706.2	177.5			
10,433	89.1	181.1	9811.1	799.2	-799.4	30.0	2.2	800.0	177.8			
10,528	91.0	182.3	9811.0	894.2	-894.4	27.2	2.3	894.8	178.3			
10,623	92.9	182.4	9807.8	989.1	-989.2	23.4	2.1	989.5	178.6			
10,717	95.6	181.6	9800.8	1082.8	-1082.9	20.1	3.0	1083.1	178.9			
10,811	94.7	181.0	9792.4	1176.4	-1176.5	18.0	1.1	1176.6	179.1			
10,906	95.8	180.8	9783.7	1271.0	-1271.1	16.5	1.2	1271.2	179.3			
11,000	96.7	180.2	9773.4	1364.4	-1364.5	15.7	1.2	1364.6	179.3			
11,094	95.8	179.2	9763.2	1457.8	-1458.0	16.3	1.5	1458.1	179.4			
11,188	94.6	178.0	9754.7	1551.4	-1551.5	18.6	1.7	1551.7	179.3			
11,283	93.0	177.6	9748.4	1646.1	-1646.3	22.3	1.8	1646.4	179.2			
11,377	93.0	177.6	9743.5	1739.9	-1740.0	26.2	0.1	1740.2	179.1			
11,471	93.1	177.4	9738.4	1833.6	-1833.8	30.3	0.2	1834.1	179.1			
11,566	92.2	177.2	9734.0	1928.4	-1928.6	34.8	1.0	1928.9	179.0			
11,661	92.4	177.3	9730.2	2023.2	-2023.4	39.3	0.3	2023.8	178.9			
11,755	92.0	177.1	9726.6	2117.0	-2117.3	43.9	0.5	2117.7	178.8			
11,849	90.9	178.2	9724.2	2210.8	-2211.1	47.7	1.7	2211.7	178.8			
11,944	89.9	180.9	9723.6	2305.8	-2306.1	48.4	3.1	2306.6	178.8			
12,038	89.4	182.5	9724.1	2399.8	-2400.1	45.6	1.7	2400.5	178.9			
12,133	89.9	181.8	9724.6	2494.7	-2495.0	42.0	0.9	2495.4	179.0			
12,227	90.1	181.8	9724.6	2588.7	-2589.0	39.0	0.1	2589.3	179.1			
12,321	89.2	181.9	9725.2	2682.7	-2682.9	36.0	0.9	2683.1	179.2			
12,416	88.4	181.8	9727.2	2777.6	-2777.8	33.0	0.9	2778.0	179.3			
12,510	87.5	181.7	9730.6	2871.5	-2871.7	30.1	1.0	2871.9	179.4			
12,604	86.2	181.6	9735.8	2965.3	-2965.5	27.4	1.4	2965.7	179.5			
12,698	88.7	181.6	9740.1	3059.2	-3059.4	24.7	2.6	3059.5	179.5			
12,792	90.8	181.8	9740.5	3153.2	-3153.4	21.9	2.3	3153.4	179.6			
12,887	92.4	182.0	9737.8	3248.1	-3248.3	18.7	1.7	3248.3	179.7			
12,981	92.3	181.9	9733.9	3342.0	-3342.1	15.6	0.2	3342.2	179.7			
13,075	92.6	181.8	9729.9	3435.9	-3436.0	12.5	0.3	3436.0	179.8			
13,169	92.3	181.9	9725.8	3529.7	-3529.9	9.4	0.3	3529.9	179.8			
13,263	92.3	182.0	9722.0	3623.6	-3623.7	6.2	0.0	3623.7	179.9			
13,358	92.4	181.9	9718.1	3718.5	-3718.6	3.0	0.1	3718.6	180.0			
13,452	92.4	182.0	9714.2	3812.4	-3812.4	-0.2	0.1	3812.4	180.0			
13,547	92.5	181.9	9710.1	3907.3	-3907.3	-3.4	0.1	3907.3	180.1			
13,641	92.3	181.6	9706.2	4001.2	-4001.2	-6.3	0.4	4001.2	180.1			
13,735	92.4	181.4	9702.4	4095.1	-4095.1	-8.7	0.2	4095.1	180.1			
13,830	92.0	181.6	9698.8	4190.0	-4190.0	-11.2	0.5	4190.0	180.2			
13,924	91.1	181.5	9696.2	4283.9	-4283.9	-13.8	0.9	4283.9	180.2			

14,018	91.1	181.3	9694.4	4377.9	-4377.9	-16.1	0.2	4377.9	180.2			
14,113	90.8	181.8	9692.9	4472.8	-4472.8	-18.6	0.6	4472.8	180.2			
14,186	90.6	181.2	9692.1	4545.8	-4545.8	-20.5	0.9	4545.8	180.3			
14,250	90.6	181.2	9691.5	4609.8	-4609.8	-21.8	0.0	4609.8	180.3	Bottom Shot	14220.0	9692