

Results of Directional Survey

API number:	30-025-40825		
OGRID:		Operator:	CIMAREX ENERGY CO.
		Property:	LYNCH 35 # 1H

surface	ULSTR:	A	35	T	20S	R	34E
				290	FNL	800	FEL

BH Loc	ULSTR:	P	35	T	20S	R	34E
15739	MD	11293.0	TVD	359	FSL	508	FEL
				4921	FNL		

Top Perf/OH	ULSTR:	A	35	T	20S	R	34E
11175	MD	11106.0	TVD	414	FNL	946	FEL

Bot Perf/OH	ULSTR:	P	35	T	20S	R	34E
15701	MD	11296.2	TVD	396	FSL	516	FEL
				4884	FNL		

	MD	N/S	E/W	VD
	11164	-114.79	-144.25	11100.3
TOP PERFS/OH	11175	-124.12	-145.61	11105.95
	11195	-141.09	-148.08	11116.23
	15661	-4555.17	275.33	11299.53
BOT PERFS/OH	15701	-4594.10	283.89	11296.17
	15739	-4631.08	292.03	11292.98

NEXT TO LAST	15661	-4555.17	275.33	11299.53
LAST READING	15739	-4631.08	292.03	11292.98
TD	15739	-4631.08	292.03	11292.98

Surface Location	290	FN	800	FE
Projected BHL	4921	FN	508	FE
Location of				
Top Perfs/OH	414	FN	946	FE
Bottom Perfs/OH	4884	FN	516	FE

SUMMARY of Subsurface Locations

Surface Location	A-35-20S-34E	290	FN	800	FE	Vert. Depth
Top Perfs/OH	A-35-20S-34E	414	FN	946	FE	11105.95
Bottom Perfs/OH	P-35-20S-34E	4884	FN	516	FE	11296.17
Projected TD	P-35-20S-34E	4921	FN	508	FE	11292.98

OCT 22 2013



Cimarex

PATHFINDER
A Schlumberger Company

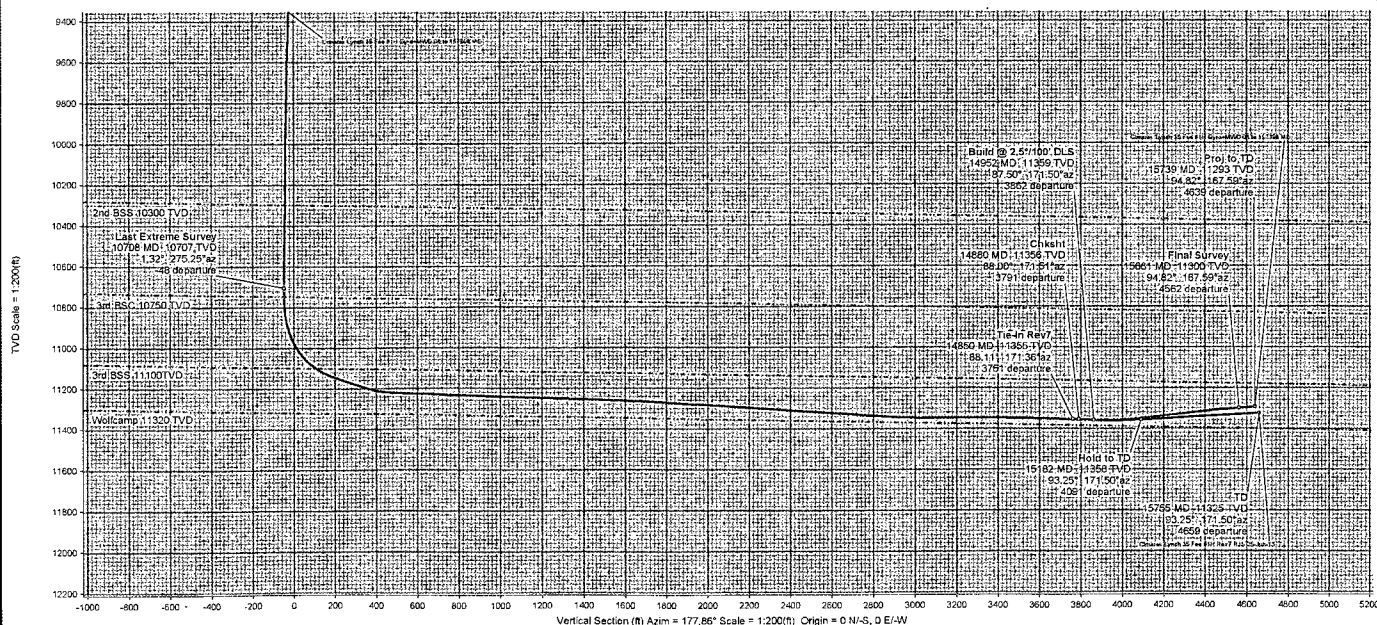
WELL	Lynch 35 Fee #1H	FIELD	NM Lea County	STRUCTURE	ScanDrill Eagle
Magnetic Parameters		Location		Miscellaneous	
Model: BHC031 2013	Dip: 49.43°	Date: June 22, 2013	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Sit: Lynch 35 Fee #1H	TVD Ref: RLS(378) above MSL
Mag Dec: 7.446°	FS: 48602 dIT	Lat: N 32 32 9.762	Wellbore: 55460 76 RLS	Plan: Rev7 RLS 25-Jun-13	Srv Date: June 11, 2013
		Lon: W 100 31 29 736	Easting: 796508 50 RLS		
			Scale Fact: 0.99998017		

Legend

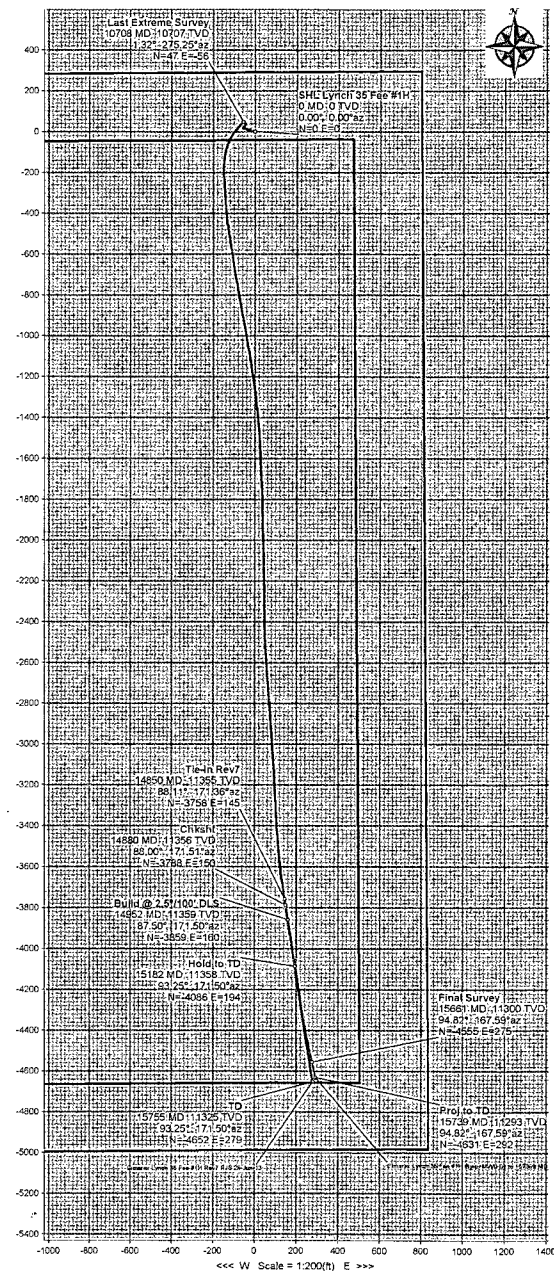
Continued Lynch 35 Fee #1H 10766 TVD
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 Continued Lynch 35 Fee #1H 11356 TVD



Grid North
 Tot Corr (M->G 7.0116°)
 Mag Dec (7.446°)
 Grid Conv (0.435°)



<<< S Scale = 1:200(f) N >>>



Drawn By: R. Schneider
 Date Created: June 25, 2013 02:20:20 PM
 Checked By:
 Checked Date:
 Approved By:
 Approved Date:



Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to 15739ft MD

(Def Survey)

Report Date: June 28, 2013 - 04:28 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: ScanDrill Eagle / Cimarex Lynch 35 Fee #1H
Well: Cimarex Lynch 35 Fee #1H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to 15739ft MD
Survey Date: June 11, 2013
Tort / AHD / DDI / ERD Ratio: 175.061 ° / 4860.022 ft / 6.071 / 0.428
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 32' 9.76740", W 103° 31' 29.73624"
Location Grid N/E Y/X: N 559689.700 ftUS, E 790468.500 ftUS
CRS Grid Convergence Angle: 0.4348 °
Grid Scale Factor: 0.99998017

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 177.860 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3750.000 ft above MSL
Seabed / Ground Elevation: 3725.000 ft above MSL
Magnetic Declination: 7.446 °
Total Gravity Field Strength: 998.4817mgn (9.80665 Based)
Total Magnetic Field Strength: 48602.401 nT
Magnetic Dip Angle: 60.427 °
Declination Date: June 11, 2013
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.4348 °
Total Corr Mag North->Grid North: 7.0116 °

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 Lynch 35 Fee #1H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	308.25M
	100.00	1.17	308.25	99.99	-0.66	0.63	-0.80	1.02	308.25	1.17	306.87M
	200.00	1.70	306.87	199.96	-2.26	2.15	-2.79	3.53	307.67	0.53	301.03M
	300.00	1.72	301.03	299.92	-4.01	3.82	-5.26	6.50	305.96	0.18	303.58M
	400.00	1.30	303.58	399.88	-5.49	5.22	-7.49	9.13	304.85	0.43	284.57M
	500.00	1.32	284.57	499.86	-6.49	6.14	-9.55	11.35	302.71	0.43	280.06M
	600.00	1.03	280.06	599.84	-7.01	6.58	-11.55	13.30	299.67	0.30	276.47M
	700.00	1.07	276.47	699.82	-7.34	6.84	-13.37	15.02	297.12	0.08	274.6M
	816.80	1.14	274.60	816.60	-7.64	7.06	-15.61	17.13	294.34	0.07	272.36M
	912.10	1.00	272.36	911.88	-7.82	7.17	-17.38	18.80	292.42	0.15	276.58M
	1007.30	0.80	276.58	1007.07	-7.98	7.28	-18.87	20.23	291.10	0.22	274.06M
	1102.60	0.65	274.06	1102.36	-8.14	7.40	-20.07	21.39	290.23	0.16	281.52M
	1197.80	0.46	281.52	1197.56	-8.29	7.51	-20.99	22.29	289.69	0.21	292.88M
	1293.10	0.37	292.88	1292.85	-8.51	7.71	-21.65	22.98	289.60	0.13	285.33M
	1388.30	0.48	285.33	1388.05	-8.76	7.93	-22.31	23.68	289.57	0.13	267.84M
	1483.60	0.48	267.84	1483.35	-8.88	8.02	-23.10	24.45	289.15	0.15	256.32M
	1578.80	0.46	256.32	1578.54	-8.80	7.92	-23.87	25.15	288.35	0.10	232.58M
	1674.10	0.40	232.58	1673.84	-8.53	7.62	-24.50	25.66	287.28	0.20	232.96M
	1769.30	0.19	232.96	1769.04	-8.25	7.33	-24.89	25.95	286.40	0.22	94.31M
	1864.60	0.07	94.31	1864.34	-8.15	7.23	-24.96	25.99	286.15	0.26	78.5M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1959.80	0.09	78.50	1959.54	-8.16	7.24	-24.83	25.86	286.25	0.03	57.18M
	2055.10	0.11	57.18	2054.84	-8.22	7.30	-24.68	25.74	286.48	0.04	58.61M
	2150.30	0.13	58.61	2150.04	-8.32	7.41	-24.51	25.61	286.82	0.02	48.55M
	2245.60	0.14	48.55	2245.34	-8.45	7.54	-24.33	25.47	287.22	0.03	10.2M
	2340.80	0.21	10.20	2340.54	-8.69	7.79	-24.21	25.44	287.84	0.14	6.02M
	2436.10	0.28	6.02	2435.84	-9.09	8.19	-24.16	25.51	288.74	0.08	6.18M
	2531.30	0.33	6.18	2531.04	-9.59	8.70	-24.10	25.63	289.84	0.05	5.36M
	2626.60	0.33	5.36	2626.34	-10.14	9.24	-24.05	25.76	291.03	0.00	9.84M
	2721.80	0.33	9.84	2721.53	-10.68	9.79	-23.98	25.90	292.21	0.03	22.18M
	2817.10	0.38	22.18	2816.83	-11.23	10.35	-23.81	25.96	293.49	0.10	44.89M
	2912.30	0.40	44.89	2912.03	-11.75	10.88	-23.46	25.86	294.88	0.16	65.43M
	3007.60	0.57	65.43	3007.33	-12.15	11.31	-22.79	25.44	296.39	0.25	66.99M
	3102.80	0.63	66.99	3102.52	-12.52	11.71	-21.88	24.82	298.16	0.07	67.62M
	3198.10	0.60	67.62	3197.82	-12.88	12.11	-20.93	24.18	300.04	0.03	89.91M
	3293.30	0.50	89.91	3293.01	-13.04	12.30	-20.06	23.53	301.51	0.25	83.07M
	3388.60	0.68	83.07	3388.31	-13.07	12.37	-19.08	22.74	302.95	0.20	55.28M
	3483.80	0.32	55.28	3483.50	-13.26	12.59	-18.30	22.21	304.52	0.45	326.33M
	3579.10	0.21	326.33	3578.80	-13.55	12.88	-18.18	22.28	305.32	0.40	286M
	3674.30	0.32	286.00	3674.00	-13.78	13.10	-18.53	22.70	305.26	0.22	273.37M
	3769.60	0.49	273.37	3769.30	-13.91	13.20	-19.19	23.29	304.51	0.20	273.25M
	3864.80	0.61	273.25	3864.49	-13.99	13.25	-20.11	24.08	303.39	0.13	266.51M
	3960.10	0.68	266.51	3959.79	-14.03	13.25	-21.18	24.98	302.02	0.11	262.79M
	4055.30	0.66	262.79	4054.98	-13.97	13.14	-22.29	25.87	300.53	0.05	248.27M
	4150.60	0.58	248.27	4150.28	-13.76	12.89	-23.28	26.61	298.98	0.18	236.29M
	4245.80	0.52	236.29	4245.47	-13.37	12.48	-24.09	27.12	297.39	0.14	235.66M
	4341.10	0.52	235.66	4340.77	-12.91	11.99	-24.80	27.55	295.81	0.01	238.66M
	4436.30	0.53	238.66	4435.96	-12.47	11.52	-25.53	28.01	294.28	0.03	236.12M
	4531.60	0.55	236.12	4531.26	-12.01	11.04	-26.29	28.51	292.77	0.03	238.92M
	4626.80	0.58	238.92	4626.46	-11.54	10.53	-27.08	29.06	291.25	0.04	243.77M
	4722.10	0.66	243.77	4721.75	-11.08	10.04	-27.99	29.73	289.74	0.10	244.94M
	4817.30	0.65	244.94	4816.94	-10.64	9.57	-28.97	30.51	288.28	0.02	240.42M
	4912.60	0.61	240.42	4912.24	-10.20	9.09	-29.90	31.25	286.91	0.07	240.47M
	5007.80	0.53	240.47	5007.43	-9.76	8.62	-30.72	31.91	285.68	0.08	250.21M
	5103.10	0.53	250.21	5102.73	-9.43	8.26	-31.52	32.59	284.68	0.09	252.8M
	5198.30	0.39	252.80	5197.93	-9.21	8.01	-32.25	33.23	283.95	0.15	256.04M
	5293.60	0.27	256.04	5293.22	-9.08	7.86	-32.77	33.70	283.49	0.13	318.14M
	5523.00	0.22	318.14	5522.62	-9.31	8.06	-33.59	34.55	283.49	0.11	328.65M
	5618.00	0.90	328.65	5617.62	-10.10	8.83	-34.10	35.23	284.52	0.72	303.86M
	5713.00	0.40	303.86	5712.61	-10.95	9.65	-34.77	36.08	285.52	0.59	291.16M
	5807.00	0.48	291.16	5806.61	-11.29	9.98	-35.41	36.78	285.74	0.13	292.57M
	5902.00	0.31	292.57	5901.61	-11.56	10.22	-36.01	37.44	285.85	0.18	277.36M
	5997.00	0.48	277.36	5996.60	-11.73	10.37	-36.65	38.09	285.80	0.21	277.36M
	6092.00	0.70	277.36	6091.60	-11.89	10.50	-37.62	39.05	285.59	0.23	301.05M
	6186.00	0.62	301.05	6185.59	-12.27	10.83	-38.62	40.11	285.67	0.30	325.83M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	6375.00	0.79	325.83	6374.58	-13.93	12.44	-40.23	42.11	287.18	0.18	313.13M
	6470.00	0.79	313.13	6469.57	-14.95	13.43	-41.07	43.21	288.10	0.18	317.75M
	6565.00	0.79	317.75	6564.56	-15.92	14.36	-41.99	44.38	288.88	0.07	277.85M
	6660.00	0.40	277.85	6659.56	-16.48	14.89	-42.76	45.28	289.20	0.58	283.87M
	6754.00	0.40	283.87	6753.55	-16.62	15.01	-43.41	45.93	289.08	0.04	254.25M
	6848.00	0.40	254.25	6847.55	-16.64	15.00	-44.04	46.53	288.81	0.22	278.55M
	6943.00	0.62	278.55	6942.55	-16.65	14.99	-44.87	47.30	288.47	0.32	282.55M
	7038.00	0.70	282.55	7037.54	-16.90	15.19	-45.94	48.39	288.30	0.10	288.83M
	7130.00	0.40	288.83	7129.54	-17.15	15.42	-46.79	49.27	288.24	0.33	271.96M
	7320.00	0.48	271.96	7319.53	-17.45	15.66	-48.22	50.70	287.99	0.08	220.15M
	7414.00	0.31	220.15	7413.53	-17.29	15.48	-48.78	51.17	287.61	0.40	268.44M
	7509.00	0.48	268.44	7508.53	-17.10	15.27	-49.34	51.65	287.20	0.38	307.24M
	7604.00	0.31	307.24	7603.53	-17.27	15.42	-49.94	52.27	287.15	0.32	242.87M
	7698.00	0.31	242.87	7697.52	-17.32	15.45	-50.37	52.69	287.06	0.35	278.07M
	7793.00	0.48	278.07	7792.52	-17.29	15.39	-50.99	53.26	286.80	0.30	284.96M
	7887.00	0.48	284.96	7886.52	-17.47	15.55	-51.76	54.05	286.72	0.06	264.84M
	7982.00	0.31	264.84	7981.52	-17.57	15.63	-52.40	54.68	286.61	0.23	266.86M
	8077.00	0.40	266.86	8076.51	-17.56	15.59	-52.99	55.24	286.39	0.10	246.64M
	8171.00	0.22	246.64	8170.51	-17.48	15.50	-53.48	55.68	286.16	0.22	298.46M
	8266.00	0.40	298.46	8265.51	-17.59	15.58	-53.94	56.15	286.11	0.33	279.25M
	8361.00	0.40	279.25	8360.51	-17.82	15.79	-54.56	56.80	286.15	0.14	290.06M
	8456.00	0.62	290.06	8455.51	-18.08	16.02	-55.37	57.64	286.14	0.25	316.87M
	8550.00	0.79	316.87	8549.50	-18.76	16.67	-56.29	58.71	286.50	0.39	324.87M
	8645.00	0.88	324.87	8644.49	-19.87	17.75	-57.16	59.85	287.25	0.15	344.33M
	8739.00	0.79	344.33	8738.48	-21.10	18.96	-57.75	60.78	288.18	0.31	25.56M
	8834.00	1.19	25.56	8833.47	-22.61	20.48	-57.50	61.04	289.61	0.83	36.54M
	8929.00	0.88	36.54	8928.45	-24.06	21.96	-56.64	60.75	291.19	0.39	18.57M
	9023.00	1.10	18.57	9022.44	-25.46	23.39	-55.92	60.62	292.70	0.40	128.91M
	9118.00	0.88	128.91	9117.43	-25.84	23.80	-55.07	59.99	293.37	1.72	142.49M
	9213.00	1.41	142.49	9212.41	-24.41	22.41	-53.79	58.27	292.62	0.62	12.06M
	9308.00	1.19	12.06	9307.40	-24.41	22.45	-52.87	57.44	293.01	2.49	19.75M
	9402.00	1.58	19.75	9401.37	-26.56	24.63	-52.23	57.74	295.24	0.46	37.86M
	9497.00	2.20	37.86	9496.32	-29.17	27.30	-50.67	57.55	298.31	0.90	27.75M
	9592.00	1.19	27.75	9591.28	-31.42	29.61	-49.09	57.33	301.10	1.10	35.36M
	9687.00	1.41	35.36	9686.25	-33.21	31.44	-47.95	57.34	303.25	0.29	31.75M
	9781.00	1.58	31.75	9780.22	-35.20	33.48	-46.60	57.38	305.70	0.21	38.56M
	9876.00	2.20	38.56	9875.17	-37.67	36.02	-44.77	57.47	308.82	0.69	337.35M
	9971.00	0.62	337.35	9970.14	-39.53	37.92	-43.84	57.96	310.86	2.08	293.93M
	10065.00	0.31	293.93	10064.14	-40.12	38.49	-44.26	58.66	311.01	0.48	309.75M
	10159.00	0.70	309.75	10158.13	-40.62	38.96	-44.94	59.48	310.93	0.44	308.96M
	10254.00	1.01	308.96	10253.12	-41.55	39.86	-46.03	60.89	310.89	0.33	327.64M
	10348.00	1.41	327.64	10347.10	-43.10	41.36	-47.30	62.83	311.17	0.59	305.14M
	10443.00	1.80	305.14	10442.07	-45.01	43.21	-49.14	65.44	311.32	0.77	301.53M
	10537.00	1.89	301.53	10536.02	-46.76	44.87	-51.67	68.43	310.97	0.16	297.93M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Last Extreme Survey	10631.00	1.32	297.93	10629.98	-48.17	46.18	-53.95	71.02	310.57	0.62	275.25M
	10708.00	1.32	275.25	10706.96	-48.72	46.68	-55.62	72.61	310.01	0.67	259.42M
	10754.00	1.63	259.42	10752.94	-48.70	46.61	-56.79	73.47	309.38	1.11	226.59M
	10785.00	5.20	226.59	10783.89	-47.71	45.56	-58.24	73.95	308.04	12.68	228.16M
	10817.00	8.99	228.16	10815.64	-45.15	42.90	-61.16	74.70	305.05	11.86	24.23L
	10848.00	12.90	220.49	10846.07	-41.06	38.65	-65.21	75.80	300.65	13.43	5.37L
	10880.00	17.35	219.09	10876.95	-34.84	32.22	-70.54	77.55	294.55	13.95	9.47R
	10911.00	22.19	221.22	10906.12	-27.10	24.23	-77.32	81.03	287.40	15.78	6.89L
	10943.00	27.06	219.93	10935.20	-17.30	14.10	-85.98	87.13	279.31	15.31	10.78L
	10974.00	31.49	218.32	10962.23	-5.90	2.33	-95.53	95.56	271.40	14.51	35.1L
	11006.00	34.76	214.37	10989.03	7.80	-11.76	-105.87	106.52	263.66	12.24	52.26L
	11038.00	37.78	208.33	11014.83	23.59	-27.93	-115.67	119.00	256.43	14.61	45.51L
	11069.00	41.80	202.43	11038.66	41.18	-45.85	-124.13	132.32	249.73	17.78	30.89L
	11101.00	47.05	198.21	11061.51	61.88	-66.85	-131.86	147.84	243.12	18.82	28.11L
	11132.00	51.97	194.91	11081.64	84.21	-89.44	-138.55	164.92	237.16	17.81	38.31L
	11164.00	56.69	190.53	11100.30	109.33	-114.79	-144.25	184.35	231.49	18.47	39.38L
	11195.00	61.46	186.15	11116.23	135.46	-141.09	-148.08	204.53	226.38	19.58	38.14L
	11227.00	65.80	182.46	11130.44	163.94	-169.67	-150.21	226.60	221.52	17.05	55.26L
	11258.00	69.10	177.49	11142.33	192.54	-198.28	-150.18	248.74	217.14	18.23	45.09L
	11290.00	70.43	176.08	11153.40	222.55	-228.26	-148.50	272.31	213.05	5.86	65.05R
	11321.00	70.69	176.67	11163.72	251.78	-257.43	-146.65	296.27	209.67	1.98	47.97L
	11353.00	71.10	176.19	11174.19	282.00	-287.61	-144.77	321.99	206.72	1.91	132.19R
	11385.00	71.04	176.26	11184.58	312.26	-317.81	-142.77	348.41	204.19	0.28	34.37L
	11416.00	71.47	175.95	11194.54	341.60	-347.10	-140.78	374.56	202.08	1.68	12.89L
	11448.00	74.59	175.21	11203.88	372.18	-377.61	-138.42	402.18	200.13	10.00	10.74L
	11479.00	77.63	174.62	11211.32	402.23	-407.58	-135.75	429.60	198.42	9.98	20.49L
	11511.00	82.55	172.77	11216.82	433.66	-438.90	-132.29	458.41	196.77	16.40	15.99L
	11543.00	86.28	171.70	11219.94	465.35	-470.45	-127.98	487.55	195.22	12.12	30.94L
	11574.00	87.18	171.16	11221.71	496.10	-501.06	-123.37	516.02	193.83	3.38	3.36R
	11605.00	87.35	171.17	11223.18	526.86	-531.66	-118.62	544.73	192.58	0.55	142.16R
	11631.00	87.08	171.38	11224.45	552.65	-557.32	-114.68	569.00	191.63	1.32	27.78L
	11725.00	87.63	171.09	11228.79	645.93	-650.13	-100.37	657.83	188.78	0.66	65.17L
	11820.00	87.94	170.42	11232.46	740.13	-743.82	-85.12	748.68	186.53	0.78	62.56L
	11915.00	88.21	169.90	11235.65	834.21	-837.37	-68.89	840.20	184.70	0.62	40.59L
	12009.00	88.28	169.84	11238.53	927.26	-929.86	-52.37	931.34	183.22	0.10	110.57R
	12104.00	88.07	170.40	11241.55	1021.35	-1023.41	-36.07	1024.04	182.02	0.63	90R
	12199.00	88.07	170.90	11244.75	1115.54	-1117.09	-20.65	1117.28	181.06	0.53	87.95R
	12293.00	88.11	172.01	11247.89	1208.90	-1209.99	-6.69	1210.01	180.32	1.18	84.14R
	12388.00	88.25	173.37	11250.90	1303.46	-1304.17	5.39	1304.18	179.76	1.44	84.17R
	12483.00	88.38	174.64	11253.70	1398.21	-1398.61	15.31	1398.69	179.37	1.34	120.65R
Survey 23-Jun-13	12577.00	87.28	176.50	11257.26	1492.06	-1492.26	22.57	1492.43	179.13	2.30	90R
	12671.00	87.28	177.40	11261.72	1585.94	-1586.02	27.56	1586.26	179.00	0.96	131.22R
	12766.00	87.21	177.48	11266.28	1680.83	-1680.81	31.80	1681.11	178.92	0.11	105.01R

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	12861.00	86.94	178.49	11271.13	1775.70	-1775.63	35.14	1775.98	178.87	1.10	111.41R
	12955.00	86.76	178.95	11276.30	1869.55	-1869.46	37.23	1869.83	178.86	0.52	87.88L
	13050.00	86.77	178.68	11281.66	1964.38	-1964.29	39.19	1964.68	178.86	0.28	178.06R
	13145.00	86.18	178.70	11287.50	2059.19	-2059.09	41.36	2059.50	178.85	0.62	83.88R
	13240.00	86.21	178.98	11293.80	2153.97	-2153.86	43.28	2154.29	178.85	0.30	122.9R
	13334.00	86.01	179.29	11300.18	2247.73	-2247.63	44.70	2248.07	178.86	0.39	16.47L
	13429.00	86.28	179.21	11306.57	2342.49	-2342.41	45.94	2342.86	178.88	0.30	108.26L
	13524.00	86.04	178.48	11312.93	2437.26	-2437.17	47.85	2437.64	178.88	0.81	85.61L
	13618.00	86.15	177.06	11319.33	2531.04	-2530.88	51.50	2531.40	178.83	1.51	84.36L
	13713.00	86.28	175.75	11325.60	2625.80	-2625.48	57.44	2626.11	178.75	1.38	127.63L
	13808.00	86.18	175.62	11331.85	2720.52	-2720.01	64.57	2720.78	178.64	0.17	160.06R
Survey 24-Jun-13	13902.00	86.07	175.66	11338.20	2814.24	-2813.52	71.70	2814.44	178.54	0.12	19.25R
	13997.00	87.73	176.24	11343.34	2909.04	-2908.14	78.40	2909.20	178.46	1.85	5.71L
	14092.00	88.73	176.14	11346.27	3003.96	-3002.89	84.71	3004.08	178.38	1.06	23.63R
	14186.00	90.17	176.77	11347.17	3097.92	-3096.70	90.52	3098.02	178.33	1.67	136.91R
	14281.00	89.86	177.06	11347.15	3192.91	-3191.56	95.64	3193.00	178.28	0.45	90L
	14376.00	89.86	176.60	11347.38	3287.89	-3286.42	100.89	3287.97	178.24	0.48	LS
	14470.00	89.79	176.60	11347.67	3381.87	-3380.25	106.46	3381.93	178.20	0.07	92.86L
	14565.00	89.76	176.00	11348.04	3476.83	-3475.05	112.59	3476.88	178.14	0.63	128.83L
	14660.00	88.69	174.67	11349.33	3571.73	-3569.73	120.32	3571.75	178.07	1.80	103.02L
Survey 25-Jun-13	14755.00	88.07	171.98	11352.01	3666.38	-3664.03	131.36	3666.39	177.95	2.90	86.32L
	14850.00	88.11	171.36	11355.18	3760.78	-3757.98	145.11	3760.78	177.79	0.65	21.96R
	14946.00	88.73	171.61	11357.83	3856.15	-3852.88	159.32	3856.18	177.63	0.70	6.59L
	15041.00	90.72	171.38	11358.28	3950.56	-3946.83	173.37	3950.64	177.48	2.11	3.9R
Survey 26-Jun-13	15135.00	94.23	171.62	11354.22	4043.88	-4039.70	187.25	4044.04	177.35	3.74	13.76R
	15229.00	96.30	172.13	11345.60	4136.96	-4132.36	200.48	4137.22	177.22	2.27	74.5L
	15324.00	96.55	171.22	11334.97	4230.82	-4225.77	214.15	4231.19	177.10	0.99	60.26L
	15419.00	96.89	170.62	11323.85	4324.47	-4318.93	229.04	4325.00	176.96	0.72	118.88L
	15514.00	95.96	168.93	11313.22	4417.93	-4411.83	245.79	4418.67	176.81	2.02	141.19L
Final Survey	15609.00	95.13	168.26	11304.04	4511.25	-4504.52	264.49	4512.28	176.64	1.12	114.88L
Proj to TD	15661.00	94.82	167.59	11299.53	4562.28	-4555.17	275.33	4563.49	176.54	1.42	HS
	15739.00	94.82	167.59	11292.98	4638.76	-4631.08	292.03	4640.28	176.39	0.00	

Survey Type: Def Survey

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

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	25.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to 15739ft MD

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
		25.000	5293.600		Act Stns	30.000	30.000	SLB_NSG+MSHOT		Original Borehole / Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to	
		5293.600	10708.000		Act Stns	30.000	30.000	SLB_MWD-POOR		Original Borehole / Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to	
		10708.000	15661.000		Act Stns	30.000	30.000	SLB_MWD-STD		Original Borehole / Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to	
		15661.000	15739.000		Act Stns	30.000	30.000	SLB_BLIND+TREND		Original Borehole / Cimarex Lynch 35 Fee #1H Gyro+MWD 0ft to	

**Reservoir Development**

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

July 22, 2013

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

CLIENT: Cimarex Energy Co.
WELL: Lynch 35 #1H
FIELD: Berry; Bone Spring, North
RIG: Scandril Eagle
COUNTY: Lea
API NO: 30-025-40825
JOB NO: 13MLD0241

S35-T20S-R34E 290 FNL 800 FEL
N 32.53605 W 103.52493

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation.
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Brandon Fluhman MWD	Lynch 35 #1H Original Hole	10754.00 Ft to 15661.00 Ft	June 20, 2013 to June 26, 2013	SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Jasem Alharer
Field Service Manager

Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

Well Reference:

S35-T20S-R34E 290 FNL 800 FEL

N 32.53605 W 103.52493

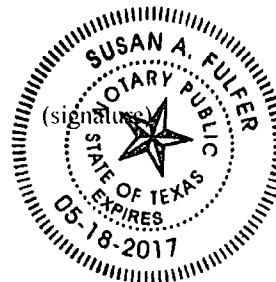
I, Brandon Fluhman certify that; I am employed by Drilling & Measurements (formerly Anadrill), a division of Schlumberger Technology Corporation; that I did on the day(s) of June 20, 2013 through June 26, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 0.00 feet to a depth of 15661.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Cimarex Energy Co. for the Lynch 35 #1H Well (Original Hole) API No. 30-025-40825 and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Olivia PozosOn behalf of
Brandon Fluhman
MWDSubscribed and Sworn to before me this 21st day of July (month) 2013 (yr)

My Commission expires:

5/18/17

Notary Public

Midland, TX
(County State)

SCHLUMBERGER
Survey Report

22-Jul-2013

Client.....: Cimarex Energy Co.
Field.....: Berry, Bone Spring, North

Well.....: Lynch 35 1H
API number.....: 30-025-40825
Engineer.....: Brandon Fluhman

Spud date.....: 6-Jun-13
Last survey date.....: 26-Jun-13
Total accepted surveys.....: 72
MD of first survey.....: 10754.00 ft
MD of last survey.....: 15661.00 ft

County.....: Lea
State.....: New Mexico
Rig.....: Scandriill Eagle

Latitude.....: ' 32° 32' 9.767" N
Longitude.....: 103° 31' 29.736" W

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Lubinski

----- Depth reference -----
Permanent datum.....: MSL
Depth reference.....: Driller's Depth
GL above permanent.....: 3725.00
KB above permanent.....: 3750.00
DF above permanent.....: 3750.00

----- Vertical section origin-----
Latitude (+N/S-).....: 0.00 ft
Departure (+E/W-).....: 0.00 ft

----- Grid Coordinates -----
NAD27 Texas State Plane, Central Zone, US Feet
X.....: 559689.70 ft
Y.....: 790468.50 ft

Azimuth from Vsect Origin to target: 177.86 degrees

-----MWD Survey Reference Criteria-----

-----Run1----- Calculation Date: 19-Jun-2013
Location G.....: 998.94325 mgn Tolerance G.....: 2.50 mgn
Location B.....: 48578.41 nT Tolerance B.....: 300.00 nT
Magnetic Dip: 60.3939 degrees Tolerance Dip: 0.45 degrees

-----Run2----- Calculation Date: 22-Jun-2013
Location G.....: 998.94325 mgn Tolerance G.....: 2.50 mgn
Location B.....: 48577.35 nT Tolerance B.....: 300.00 nT
Magnetic Dip: 60.3936 degrees Tolerance Dip: 0.45 degrees

-----Run3----- Calculation Date: 25-Jun-2013
Location G.....: 998.94325 mgn Tolerance G.....: 2.50 mgn
Location B.....: 48576.29 nT Tolerance B.....: 300.00 nT
Magnetic Dip: 60.3933 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2012

-----Run1-----
Magnetic dec (+E/W-).....: 7.4467 degrees
Grid Conv (+E/W-).....: 0.4367 degrees
Total Azim Corr (+E/W-).....: 7.01 degrees

-----Run2-----
Magnetic dec (+E/W-).....: 7.4457 degrees
Grid Conv (+E/W-).....: 0.4357 degrees
Total Azim Corr (+E/W-).....: 7.01 degrees

-----Run3-----
Magnetic dec (+E/W-).....: 7.4448 degrees
Grid Conv (+E/W-).....: 0.4348 degrees
Total Azim Corr (+E/W-).....: 7.01 degrees

-----Survey Correction Index Description-----

0 = Uncorrected 1 = Sag Corrected
2 = DMAG Corrected 3 = Sag + DMAG Corrected

===== Survey List =====														
Seq	MD (ft)	Incl (deg)	Azim (deg)	Course (ft)	TVD (ft)	V Sec (ft)	N/-S (ft)	E/-W (ft)	Closure (ft)	at Azi (deg)	DLS (deg/100ft)	Tool	Correction	
1	0.00	0.00	0.00	-999.25	0.00	0.00	0.00	0.00	0	90.00	0.00	TIP	0	
2	100.00	1.17	308.25	100.00	99.99	-0.66	0.63	-0.80	1.02	308.25	1.17	GyroTool	0	
3	200.00	1.70	306.87	100.00	199.96	-2.26	2.15	-2.79	3.53	307.67	0.53	GyroTool	0	
4	300.00	1.72	301.03	100.00	299.92	-4.01	3.82	-5.26	6.5	305.96	0.18	GyroTool	0	
5	400.00	1.30	303.58	100.00	399.88	-5.49	5.22	-7.49	9.13	304.85	0.43	GyroTool	0	

6	500.00	1.32	284.57	100.00	499.86	-6.49	6.14	-9.55	11.35	302.71	0.43	GyroTool	0
7	600.00	1.03	280.06	100.00	599.84	-7.01	6.58	-11.55	13.3	299.67	0.30	GyroTool	0
8	700.00	1.07	276.47	100.00	699.82	-7.34	6.84	-13.37	15.02	297.12	0.08	GyroTool	0
9	816.80	1.14	274.60	116.80	816.60	-7.64	7.06	-15.61	17.13	294.34	0.07	GyroTool	0
10	912.10	1.00	272.36	95.30	911.88	-7.82	7.17	-17.38	18.8	292.42	0.15	GyroTool	0
11	1007.30	0.80	276.58	95.20	1007.07	-7.98	7.28	-18.87	20.23	291.10	0.22	GyroTool	0
12	1102.60	0.65	274.06	95.30	1102.36	-8.14	7.40	-20.07	21.39	290.23	0.16	GyroTool	0
13	1197.80	0.46	281.52	95.20	1197.56	-8.29	7.51	-20.99	22.29	289.69	0.21	GyroTool	0
14	1293.10	0.37	292.88	95.30	1292.85	-8.51	7.71	-21.65	22.98	289.60	0.13	GyroTool	0
15	1388.30	0.48	285.33	95.20	1388.05	-8.76	7.93	-22.31	23.68	289.57	0.13	GyroTool	0
16	1483.60	0.48	267.84	95.30	1483.35	-8.88	8.02	-23.10	24.45	289.15	0.15	GyroTool	0
17	1578.80	0.46	256.32	95.20	1578.54	-8.80	7.92	-23.87	25.15	288.35	0.10	GyroTool	0
18	1674.10	0.40	232.58	95.30	1673.84	-8.53	7.62	-24.50	25.66	287.28	0.20	GyroTool	0
19	1769.30	0.19	232.96	95.20	1769.04	-8.25	7.33	-24.89	25.95	286.40	0.22	GyroTool	0
20	1864.60	0.07	94.31	95.30	1864.34	-8.15	7.23	-24.96	25.99	286.15	0.26	GyroTool	0
21	1959.80	0.09	78.50	95.20	1959.54	-8.16	7.24	-24.83	25.86	286.25	0.03	GyroTool	0
22	2055.10	0.11	57.18	95.30	2054.84	-8.22	7.30	-24.68	25.74	286.48	0.04	GyroTool	0
23	2150.30	0.13	58.61	95.20	2150.04	-8.32	7.41	-24.51	25.61	286.82	0.02	GyroTool	0
24	2245.60	0.14	48.55	95.30	2245.34	-8.45	7.54	-24.33	25.47	287.22	0.03	GyroTool	0
25	2340.80	0.21	10.20	95.20	2340.54	-8.69	7.79	-24.21	25.44	287.84	0.14	GyroTool	0
26	2436.10	0.28	6.02	95.30	2435.84	-9.09	8.19	-24.16	25.51	288.74	0.08	GyroTool	0
27	2531.30	0.33	6.18	95.20	2531.04	-9.59	8.70	-24.10	25.63	289.84	0.05	GyroTool	0
28	2626.60	0.33	5.36	95.30	2626.34	-10.14	9.24	-24.05	25.76	291.03	0.00	GyroTool	0
29	2721.80	0.33	9.84	95.20	2721.53	-10.68	9.79	-23.98	25.9	292.21	0.03	GyroTool	0
30	2817.10	0.38	22.18	95.30	2816.83	-11.23	10.35	-23.81	25.96	293.49	0.10	GyroTool	0
31	2912.30	0.40	44.89	95.20	2912.03	-11.75	10.88	-23.46	25.86	294.88	0.16	GyroTool	0
32	3007.60	0.57	65.43	95.30	3007.33	-12.15	11.31	-22.79	25.44	296.39	0.25	GyroTool	0
33	3102.80	0.63	66.99	95.20	3102.52	-12.52	11.71	-21.88	24.82	298.16	0.07	GyroTool	0
34	3198.10	0.60	67.62	95.30	3197.82	-12.88	12.11	-20.93	24.18	300.04	0.03	GyroTool	0
35	3293.30	0.50	89.91	95.20	3293.01	-13.04	12.30	-20.06	23.53	301.51	0.25	GyroTool	0
36	3388.60	0.68	83.07	95.30	3388.31	-13.07	12.37	-19.08	22.74	302.95	0.20	GyroTool	0
37	3483.80	0.32	55.28	95.20	3483.50	-13.26	12.59	-18.30	22.21	304.52	0.45	GyroTool	0
38	3579.10	0.21	326.33	95.30	3578.80	-13.55	12.88	-18.18	22.28	305.32	0.40	GyroTool	0
39	3674.30	0.32	286.00	95.20	3674.00	-13.78	13.10	-18.53	22.7	305.26	0.22	GyroTool	0
40	3769.60	0.49	273.37	95.30	3769.30	-13.91	13.20	-19.19	23.29	304.51	0.20	GyroTool	0
41	3864.80	0.61	273.25	95.20	3864.49	-13.99	13.25	-20.11	24.08	303.39	0.13	GyroTool	0
42	3960.10	0.68	266.51	95.30	3959.79	-14.03	13.25	-21.18	24.98	302.02	0.11	GyroTool	0
43	4055.30	0.66	262.79	95.20	4054.98	-13.97	13.14	-22.29	25.87	300.53	0.05	GyroTool	0
44	4150.60	0.58	248.27	95.30	4150.28	-13.76	12.89	-23.28	26.61	298.98	0.18	GyroTool	0
45	4245.80	0.52	236.29	95.20	4245.47	-13.37	12.48	-24.09	27.12	297.39	0.14	GyroTool	0
46	4341.10	0.52	235.66	95.30	4340.77	-12.91	11.99	-24.80	27.55	295.81	0.01	GyroTool	0
47	4436.30	0.53	238.66	95.20	4435.96	-12.47	11.52	-25.53	28.01	294.28	0.03	GyroTool	0
48	4531.60	0.55	236.12	95.30	4531.26	-12.01	11.04	-26.29	28.51	292.77	0.03	GyroTool	0
49	4626.80	0.58	238.92	95.20	4626.46	-11.54	10.53	-27.08	29.06	291.25	0.04	GyroTool	0
50	4722.10	0.66	243.77	95.30	4721.75	-11.08	10.04	-27.99	29.73	289.74	0.10	GyroTool	0
51	4817.30	0.65	244.94	95.20	4816.94	-10.64	9.57	-28.97	30.51	288.28	0.02	GyroTool	0
52	4912.60	0.61	240.42	95.30	4912.24	-10.20	9.09	-29.90	31.25	286.91	0.07	GyroTool	0
53	5007.80	0.53	240.47	95.20	5007.43	-9.76	8.62	-30.72	31.91	285.68	0.08	GyroTool	0
54	5103.10	0.53	250.21	95.30	5102.73	-9.43	8.26	-31.52	32.59	284.68	0.09	GyroTool	0
55	5198.30	0.39	252.80	95.20	5197.93	-9.21	8.01	-32.25	33.23	283.95	0.15	GyroTool	0
56	5293.60	0.27	256.04	95.30	5293.22	-9.08	7.86	-32.77	33.7	283.49	0.13	GyroTool	0
57	5523.00	0.22	318.14	229.40	5522.62	-9.31	8.06	-33.59	34.55	283.49	0.11	Other	0
58	5618.00	0.90	328.65	95.00	5617.62	-10.10	8.83	-34.10	35.23	284.52	0.72	Other	0
59	5713.00	0.40	303.86	95.00	5712.61	-10.95	9.65	-34.77	36.08	285.52	0.59	Other	0
60	5807.00	0.48	291.16	94.00	5806.61	-11.29	9.98	-35.41	36.78	285.74	0.13	Other	0
61	5902.00	0.31	292.57	95.00	5901.61	-11.56	10.22	-36.01	37.44	285.85	0.18	Other	0
62	5997.00	0.48	277.36	95.00	5996.60	-11.73	10.37	-36.65	38.09	285.80	0.21	Other	0
63	6092.00	0.70	277.36	95.00	6091.60	-11.89	10.50	-37.62	39.05	285.59	0.23	Other	0
64	6186.00	0.62	301.05	94.00	6185.59	-12.27	10.83	-38.62	40.11	285.67	0.30	Other	0
65	6375.00	0.79	325.83	189.00	6374.58	-13.93	12.44	-40.23	42.11	287.18	0.18	Other	0
66	6470.00	0.79	313.13	95.00	6469.57	-14.95	13.43	-41.07	43.21	288.10	0.18	Other	0
67	6565.00	0.79	317.75	95.00	6564.56	-15.92	14.36	-41.99	44.38	288.88	0.07	Other	0
68	6660.00	0.40	277.85	95.00	6659.56	-16.48	14.89	-42.76	45.28	289.20	0.58	Other	0
69	6754.00	0.40	283.87	94.00	6753.55	-16.62	15.01	-43.41	45.93	289.08	0.04	Other	0
70	6848.00	0.40	254.25	94.00	6847.55	-16.64	15.00	-44.04	46.53	288.81	0.22	Other	0
71	6943.00	0.62	278.55	95.00	6942.55	-16.65	14.99	-44.87	47.3	288.47	0.32	Other	0
72	7038.00	0.70	282.55	95.00	7037.54	-16.90	15.19	-45.94	48.39	288.30	0.10	Other	0
73	7130.00	0.40	288.83	92.00	7129.54	-17.15	15.42	-46.79	49.27	288.24	0.33	Other	0
74	7320.00	0.48	271.96	190.00	7319.53	-17.45	15.66	-48.22	50.7	287.99	0.08	Other	0
75	7414.00	0.31	220.15	94.00	7413.53	-17.29	15.48	-48.78	51.17	287.61	0.40	Other	0
76	7509.00	0.48	268.44	95.00	7508.53	-17.10	15.27	-49.34	51.65	287.20	0.38	Other	0
77	7604.00	0.31	307.24	95.00	7603.53	-17.27	15.42	-49.94	52.27	287.15	0.32	Other	0
78	7698.00	0.31	242.87	94.00	7697.52	-17.32	15.45	-50.37	52.69	287.06	0.35	Other	0
79	7793.00	0.48	278.07	95.00	7792.52	-17.29	15.39	-50.99	53.26	286.80	0.30	Other	0
80	7887.00	0.48	284.96	94.00	7886.52	-17.47	15.55	-51.76	54.05	286.72	0.06	Other	0
81	7982.00	0.31	264.84	95.00	7981.52	-17.57	15.63	-52.40	54.68	286.61	0.23	Other	0
82	8077.00	0.40	266.86	95.00	8076.51	-17.56	15.59	-52.99	55.24	286.39	0.10	Other	0
83	8171.00	0.22	246.64	94.00	8170.51	-17.48	15.50	-53.48	55.68	286.16	0.22	Other	0
84	8266.00	0.40	298.46	95.00	8265.51	-17.59	15.58	-53.94	56.15	286.11	0.33	Other	0
85	8361.00	0.40	279.25	95.00	8360.51	-17.82	15.79	-54.56	56.8	286.15	0.14	Other	0
86	8456.00	0.62	290.06	95.00	8455.51	-18.08	16.02	-55.37	57.64	286.14	0.25	Other	0
87	8550.00	0.79	316.87	94.00	8549.50	-18.76	16.67	-56.29	58.71	286.50	0.39	Other	0
88	8645.00	0.88	324.87	95.00	8644.49	-19.87	17.75	-57.16	59.85	287.25	0.15	Other	0
89	8739.00	0.79	344.33	94.00	8738.48	-21.10	18.96	-57.75	60.78	288.18	0.31	Other	0
90	8834.00	1.19	25.56	95.00	8833.47	-22.61	20.48	-57.50	61.04	289.61	0.83	Other	0
91	8929.00	0.88	36.54	95.00	8928.45	-24.06	21.96	-56.64	60.75	291.19	0.39	Other	0
92	9023.00	1.10	18.57	94.00	9022.44	-25.46	23.39	-55.92	60.62	292.70	0.40	Other	0
93	9118.00	0.88	128.91	95.00	9117.43	-25.84	23.80	-55.07	59.99	293.37	1.72	Other	0
94	9213.00	1.41	142.49	95.00	9212.41	-24.41	22.41	-53.79	58.27	292.62	0.62	Other	0
95	9308.00	1.19	12.06	95.00	9307.40	-24.41	22.45	-52.87	57.44	293.01	2.49		

96	9402.00	1.58	19.75	94.00	9401.37	-26.56	24.63	-52.23	57.74	295.24	0.46	Other	0
97	9497.00	2.20	37.86	95.00	9496.32	-29.17	27.30	-50.67	57.55	298.31	0.90	Other	0
98	9592.00	1.19	27.75	95.00	9591.28	-31.42	29.61	-49.09	57.33	301.10	1.10	Other	0
99	9687.00	1.41	35.36	95.00	9686.25	-33.21	31.44	-47.95	57.34	303.25	0.29	Other	0
100	9781.00	1.58	31.75	94.00	9780.22	-35.20	33.48	-46.60	57.38	305.70	0.21	Other	0
101	9876.00	2.20	38.56	95.00	9875.17	-37.67	36.02	-44.77	57.47	308.82	0.69	Other	0
102	9971.00	0.62	337.35	95.00	9970.14	-39.53	37.92	-43.84	57.96	310.86	2.08	Other	0
103	10065.00	0.31	293.93	94.00	10064.14	-40.12	38.49	-44.26	58.66	311.01	0.48	Other	0
104	10159.00	0.70	309.75	94.00	10158.13	-40.62	38.96	-44.94	59.48	310.93	0.44	Other	0
105	10254.00	1.01	308.96	95.00	10253.12	-41.55	39.86	-46.03	60.89	310.89	0.33	Other	0
106	10348.00	1.41	327.64	94.00	10347.10	-43.10	41.36	-47.30	62.83	311.17	0.59	Other	0
107	10443.00	1.80	305.14	95.00	10442.07	-45.01	43.21	-49.14	65.44	311.32	0.77	Other	0
108	10537.00	1.89	301.53	94.00	10536.02	-46.76	44.87	-51.67	68.43	310.97	0.16	Other	0
109	10631.00	1.32	297.93	94.00	10629.98	-48.17	46.18	-53.95	71.02	310.57	0.62	Other	0
110	10708.00	1.32	275.25	77.00	10706.96	-48.72	46.68	-55.62	72.61	310.01	0.67	Other	0
111	10754.00	1.63	259.42	46.00	10752.94	-48.70	46.61	-56.79	73.47	309.38	1.11	SlimPulse	0
112	10785.00	5.20	226.59	31.00	10783.89	-47.71	45.56	-58.24	73.95	308.03	12.66	SlimPulse	0
113	10817.00	8.99	228.16	32.00	10815.64	-45.15	42.90	-61.16	74.7	305.05	11.86	SlimPulse	0
114	10848.00	12.90	220.49	31.00	10846.07	-41.06	38.65	-65.21	75.81	300.65	13.45	SlimPulse	0
115	10880.00	17.35	219.09	32.00	10876.95	-34.84	32.22	-70.55	77.56	294.55	13.94	SlimPulse	0
116	10911.00	22.19	221.22	31.00	10906.12	-27.10	24.23	-77.32	81.03	287.40	15.78	SlimPulse	0
117	10943.00	27.06	219.93	32.00	10935.20	-17.30	14.09	-85.98	87.13	279.31	15.32	SlimPulse	0
118	10974.00	31.49	218.32	31.00	10962.23	-5.90	2.33	-95.53	95.56	271.40	14.49	SlimPulse	0
119	11006.00	34.76	214.37	32.00	10989.03	7.80	-11.76	-105.87	106.52	263.66	12.26	SlimPulse	0
120	11038.00	37.78	208.33	32.00	11014.83	23.59	-27.93	-115.67	119	256.43	14.60	SlimPulse	0
121	11069.00	41.80	202.43	31.00	11038.66	41.19	-45.85	-124.13	132.33	249.73	17.79	SlimPulse	0
122	11101.00	47.05	198.21	32.00	11061.51	61.88	-66.86	-131.87	147.85	243.12	18.81	SlimPulse	0
123	11132.00	51.97	194.91	31.00	11081.63	84.21	-89.45	-138.56	164.92	237.15	17.81	SlimPulse	0
124	11164.00	56.69	190.53	32.00	11100.29	109.33	-114.80	-144.25	184.35	231.49	18.45	SlimPulse	0
125	11195.00	61.46	186.15	31.00	11116.23	135.47	-141.09	-148.08	204.53	226.38	19.60	SlimPulse	0
126	11227.00	65.80	182.46	32.00	11130.44	163.94	-169.67	-150.21	226.61	221.52	17.03	SlimPulse	0
127	11258.00	69.10	177.49	31.00	11142.33	192.54	-198.28	-150.18	248.74	217.14	18.23	SlimPulse	0
128	11290.00	70.43	176.08	32.00	11153.40	222.56	-228.26	-148.50	272.31	213.05	5.87	SlimPulse	0
129	11321.00	70.69	176.67	31.00	11163.72	251.78	-257.44	-146.65	296.27	209.67	1.97	SlimPulse	0
130	11353.00	71.10	176.19	32.00	11174.19	282.01	-287.61	-144.76	321.99	206.72	1.90	SlimPulse	0
131	11385.00	71.04	176.26	32.00	11184.57	312.27	-317.82	-142.77	348.41	204.19	0.28	SlimPulse	0
132	11416.00	71.47	175.95	31.00	11194.53	341.61	-347.11	-140.78	374.57	202.08	1.67	SlimPulse	0
133	11448.00	74.59	175.21	32.00	11203.87	372.19	-377.62	-138.41	402.19	200.13	10.00	SlimPulse	0
134	11479.00	77.63	174.62	31.00	11211.31	402.24	-407.59	-135.74	429.6	198.42	9.98	SlimPulse	0
135	11511.00	82.55	172.77	32.00	11216.81	433.66	-438.91	-132.28	458.41	196.77	16.38	SlimPulse	0
136	11543.00	86.28	171.70	32.00	11219.93	465.35	-470.46	-127.97	487.55	195.22	12.14	SlimPulse	0
137	11574.00	87.18	171.16	31.00	11221.69	496.11	-501.06	-123.36	516.03	193.83	3.38	SlimPulse	0
138	11605.00	87.35	171.17	31.00	11223.17	526.86	-531.66	-118.61	544.73	192.58	0.56	SlimPulse	0
139	11631.00	87.08	171.38	26.00	11224.44	552.66	-557.33	-114.67	569	191.63	1.33	SlimPulse	0
140	11725.00	87.63	171.09	94.00	11228.78	645.93	-650.13	-100.36	657.83	188.78	0.66	SlimPulse	0
141	11820.00	87.94	170.42	95.00	11232.46	740.13	-743.83	-85.10	748.68	186.53	0.77	SlimPulse	0
142	11915.00	88.21	169.90	95.00	11235.65	834.22	-837.37	-68.88	840.2	184.70	0.61	SlimPulse	0
143	12009.00	88.28	169.84	94.00	11238.53	927.26	-929.87	-52.35	931.34	183.22	0.10	SlimPulse	0
144	12104.00	88.07	170.40	95.00	11241.55	1021.35	-1023.41	-36.06	1024.05	182.02	0.63	SlimPulse	0
145	12199.00	88.07	170.90	95.00	11244.75	1115.55	-1117.09	-20.64	1117.29	181.06	0.52	SlimPulse	0
146	12293.00	88.11	172.01	94.00	11247.88	1208.91	-1210.00	-6.68	1210.02	180.32	1.19	SlimPulse	0
147	12388.00	88.25	173.37	95.00	11250.90	1303.47	-1304.18	5.40	1304.19	179.76	1.44	SlimPulse	0
148	12483.00	88.38	174.64	95.00	11253.70	1398.21	-1398.61	15.31	1398.7	179.37	1.34	SlimPulse	0
149	12577.00	87.28	176.50	94.00	11257.25	1492.06	-1492.26	22.57	1492.43	179.13	2.29	SlimPulse	0
150	12671.00	87.28	177.40	94.00	11261.71	1585.94	-1586.02	27.57	1586.26	179.00	0.96	SlimPulse	0
151	12766.00	87.21	177.48	95.00	11266.27	1680.83	-1680.82	31.80	1681.12	178.92	0.11	SlimPulse	0
152	12861.00	86.94	178.49	95.00	11271.12	1775.71	-1775.63	35.14	1775.98	178.87	1.09	SlimPulse	0
153	12955.00	86.76	178.95	94.00	11276.29	1869.55	-1869.47	37.24	1869.84	178.86	0.53	SlimPulse	0
154	13050.00	86.77	178.68	95.00	11281.65	1964.39	-1964.30	39.20	1964.69	178.86	0.29	SlimPulse	0
155	13145.00	86.18	178.70	95.00	11287.49	2059.20	-2059.09	41.36	2059.51	178.85	0.62	SlimPulse	0
156	13240.00	86.21	178.98	95.00	11293.79	2153.98	-2153.86	43.28	2154.3	178.85	0.30	SlimPulse	0
157	13334.00	86.01	179.29	94.00	11300.17	2247.74	-2247.63	44.69	2248.08	178.86	0.40	SlimPulse	0
158	13429.00	86.28	179.21	95.00	11306.55	2342.49	-2342.41	45.93	2342.86	178.88	0.30	SlimPulse	0
159	13524.00	86.04	178.48	95.00	11312.91	2437.27	-2437.18	47.84	2437.65	178.88	0.81	SlimPulse	0
160	13618.00	86.15	177.06	94.00	11319.31	2531.04	-2530.89	51.48	2531.41	178.83	1.51	SlimPulse	0
161	13713.00	86.28	175.75	95.00	11325.58	2625.80	-2625.49	57.43	2626.12	178.75	1.39	SlimPulse	0
162	13808.00	86.18	175.62	95.00	11331.82	2720.53	-2720.02	64.56	2720.78	178.64	0.17	SlimPulse	0
163	13902.00	86.07	175.66	94.00	11338.17	2814.25	-2813.53	71.69	2814.44	178.54	0.12	SlimPulse	0
164	13997.00	87.73	176.24	95.00	11343.30	2909.05	-2908.15	78.39	2909.21	178.46	1.85	SlimPulse	0
165	14092.00	88.73	176.14	95.00	11346.24	3003.96	-3002.90	84.70	3004.09	178.38	1.05	SlimPulse	0
166	14186.00	90.17	176.77	94.00	11347.14	3097.93	-3096.71	90.51	3098.03	178.33	1.68	SlimPulse	0
167	14281.00	89.86	177.06	95.00	11347.11	3192.92	-3191.57	95.62	3193	178.28	0.45	SlimPulse	0
168	14376.00	89.86	176.60	95.00	11347.34	3287.90	-3286.43	100.87	3287.97	178.24	0.49	SlimPulse	0
169	14470.00	89.79	176.60	94.00	11347.62	3381.88	-3380.26	106.45	3381.93	178.20	0.07	SlimPulse	0
170	14565.00	89.76	176.00	95.00	11348.00	3476.84	-3475.06	112.58	3476.88	178.14	0.63	SlimPulse	0
171	14660.00	88.69	174.67	95.00	11349.28	3571.74	-3569.73	120.30	3571.76	178.07	1.79	SlimPulse	0
172	14755.00	88.07	171.98	95.00	11351.96	3666.39	-3664.04	131.33	3666.4	177.95	2.91	SlimPulse	0
173	14850.00	88.11	171.36	95.00	11355.12	3760.79	-3757.99	145.09	3760.79	177.79	0.65	SlimPulse	0
174	14946.00	88.73	171.61	96.00	11357.77	3856.15	-3852.89	159.30	3856.19	177.63	0.70	SlimPulse	0
175	15041.00	90.72	171.38	95.00	11358.23	3950.56	-3946.84	173.34	3950.65	177.49	2.11	SlimPulse	0
176	15135.00	94.23	171.62	94.00	11354.16	4043.88	-4039.71	187.21	4044.05	177.35	3.74	SlimPulse	0
177	15229.00	96.30	172.13	94.00	11345.54	4136.97	-4132.37	200.44	4137.23	177.22	2.26	SlimPulse	0
178	15324.00	96.55	171.22	95.00	11334.90	4230.82	-4225.78	214.11	4231.2	177.10	0.98	SlimPulse	0
179	15419.00	96.89	170.62	95.00	11323.79	4324.48	-4318.94	228.99	4325.01	176.96	0.72	SlimPulse	0
180	15514.												