

Results of Directional Survey

API number:	30-025-40837			
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO	
		Property:	SNODDY FEDERAL	# 23H

surface	ULSTR:	A	26	T 20S	R 32E
				811 FNL	644 FEL

BH Loc	ULSTR:	L	26	T 20S	R 32E
14527	MD	9945.3	TVD	2354 FSL	317 FWL
				2926 FNL	4963 FEL

Top Perf/OH	ULSTR:	A	26	T 20S	R 32E
10877	MD	9904.7	TVD	1333 FNL	1686 FEL

Bot Perf/OH	ULSTR:	L	26	T 20S	R 32E
14500	MD	9942.9	TVD	2366 FSL	341 FWL
				2914 FNL	4939 FEL

	MD	N/S	E/W	VD
	100782	-485.93	-954.28	9903.81
TOP PERFS/OH	10877	-522.45	-1041.97	9904.69
	10877	-522.45	-1041.97	9904.69
	14438	-2075.36	-4240.12	9937.29
BOT PERFS/OH	14500	-2103.11	-4295.29	9942.85
	14527	-2115.19	-4319.31	9945.27

NEXT TO LAST	14438	-2075.36	-4240.12	9937.29
LAST READING	14527	-2115.19	-4319.31	9945.27
TD	14527	-2115.19	-4319.31	9945.27

Surface Location	811	FN	644	FE
Projected BHL	2926	FN	4963	FE
Location of				
Top Perfs/OH	1333	FN	1686	FE
Bottom Perfs/OH	2914	FN	4939	FE

SUMMARY of Subsurface Locations

Surface Location	A-26-20S-32E	811	FN	644	FE	Vert. Depth
Top Perfs/OH	A-26-20S-32E	1333	FN	1686	FE	9904.69
Bottom Perfs/OH	L-26-20S-32E	2914	FN	4939	FE	9942.85
Projected TD	L-26-20S-32E	2926	FN	4963	FE	9945.27

MAR 05 2014

Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

~~HOBBS OGD~~

November 13, 2013

JAN 15 2014

Cimarex

600 N MARIENFELD STREET SUITE 600

RECEIVED

MIDLAND, TX 79701

Re:

CLIENT: Cimarex Energy Co.
WELL: Snoddy Federal 23H
FIELD: Salt Lake; Bone Spring
RIG: Cactus 104
COUNTY: Lea
API NO: 30-025-40837
JOB NO: 13ML0380

A-S26-T20S-R32E 811 FNL 644 FEL
N 32.54916 W 103.73041

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>
Jesse White MWD	Snoddy Federal 23H Original Hole	9317.00 Ft to 14438.00 Ft	November 2, 2013 to November 11, 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

SCHLUMBERGER
Survey Report

21-Nov-2013

Client.....: Cimarex Energy
Field.....: Salt Lake; Bone Spring

Well.....: Snoddy Federal 23H
API number.....: 30-025-40837
Engineer.....: John Gilchrist

Spud date.....: 17-Oct-13
Last survey date.....: 11-Nov-13
Total accepted surveys...: 173
MD of first survey.....: 9317.00 ft
MD of last survey.....: 14438.00 ft

County.....: Lea
State.....: New Mexico
Rig.....: Cactus 104

Latitude.....: 32° 32' 56.962" N
Longitude.....: 103° 43' 49.472" 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.....: 3555.00
KB above permanent.....: 3575.00
DF above permanent.....: 3575.00

— 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.....: 727115.80 ft
Y.....: 564039.60 ft

Azimuth from Vsect Origin to target: 243.33 degrees

— MWD Survey Reference Criteria —

—Run1— Calculation Date: 1-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.395 degrees Tolerance Dip: 0.45 degrees

—Run2— Calculation Date: 2-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.4 degrees Tolerance Dip: 0.45 degrees

—Run3— Calculation Date: 3-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.395 degrees Tolerance Dip: 0.45 degrees

—Run4— Calculation Date: 5-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.4 degrees Tolerance Dip: 0.45 degrees

—Run5— Calculation Date: 6-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.4 degrees Tolerance Dip: 0.45 degrees

—Run6— Calculation Date: 7-Nov-2013
Location G.....: 998.85435 mgn Tolerance G...: 2.50 mgn
Location B.....: 48660.83 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.4 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2012

—Run1—
Magnetic dec (+E/W-).....: 7.50175 degrees
Grid Conv (+E/W-).....: 0.3244 degrees
Total Azim Corr (+E/W-)...: 7.17735 degrees

—Run2—
Magnetic dec (+E/W-).....: 7.50143 degrees
Grid Conv (+E/W-).....: 0.3244 degrees
Total Azim Corr (+E/W-)...: 7.17703 degrees

—Run3—
Magnetic dec (+E/W-).....: 7.50111 degrees
Grid Conv (+E/W-).....: 0.3244 degrees
Total Azim Corr (+E/W-)...: 7.17671 degrees

—Run4—
Magnetic dec (+E/W-).....: 7.50047 degrees
Grid Conv (+E/W-).....: 0.3244 degrees

Total Azim Corr (+E/-M/-) : 7.17507 degrees

-----Run5-----
Magnetic dec (+E/-M/-) : 7.50015 degrees
Grid Conv (+E/-M/-) : 0.3244 degrees
Total Azim Corr (+E/-M/-) : 7.17575 degrees

-----Run6-----
Magnetic dec (+E/-M/-) : 7.49983 degrees
Grid Conv (+E/-M/-) : 0.3244 degrees
Total Azim Corr (+E/-M/-) : 7.17543 degrees

-----Survey Correction Index Description-----
0 = Uncorrected 1 = Sag Corrected
2 = DMAG Corrected 3 = Sag + DMAG Corrected

Seq	Survey List										Tool	Correction	
	MD	Incl	Azim	Course	TVD	V Sec	N/S	E/W	Closure	at Azi			DLS
	(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(deg/100ft)		
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	0.20	112.51	100.00	100.00	-0.11	-0.07	0.16	0.17453	112.51	0.02	Other	0
3	200.00	0.21	118.26	100.00	200.00	-0.33	-0.22	0.48	0.53172	114.49	0.20	Other	0
4	300.00	0.18	183.14	100.00	300.00	-0.36	-0.46	0.64	0.78784	126.08	0.21	Other	0
5	400.00	0.22	178.92	100.00	400.00	-0.20	-0.81	0.63	1.02943	142.15	0.04	Other	0
6	500.00	0.29	196.00	100.00	500.00	0.05	-1.25	0.57	1.37021	155.62	0.10	Other	0
7	600.00	0.17	230.72	100.00	600.00	0.37	-1.59	0.38	1.63037	166.49	0.18	Other	0
8	734.00	0.69	14.92	134.00	733.99	0.03	-0.93	0.43	1.02793	154.97	0.62	Other	0
9	829.40	1.36	11.80	95.20	829.19	-0.76	-0.01	0.72	0.76848	69.19	0.12	Other	0
10	924.40	0.80	213.88	95.20	924.38	-0.19	-0.01	0.22	0.22487	93.67	2.23	Other	0
11	1019.90	3.15	209.04	95.50	1019.80	2.96	-3.25	-1.68	3.65867	207.36	1.88	Other	0
12	1115.50	3.19	215.32	95.60	1115.25	7.48	-7.72	-4.49	8.92958	210.22	0.37	Other	0
13	1210.40	1.96	236.23	94.90	1210.06	11.42	-10.77	-7.37	13.05266	214.38	1.61	Other	0
14	1247.00	1.59	236.77	36.60	1246.64	12.55	-11.40	-8.31	14.10951	216.11	1.01	Other	0
15	1291.00	1.71	0.00	44.00	1290.63	12.86	-11.08	-8.83	14.16312	218.55	6.60	Other	0
16	1366.00	0.70	212.04	95.00	1365.62	12.72	-10.15	-9.13	13.65552	221.98	2.46	Other	0
17	1480.00	0.88	206.02	94.00	1479.61	13.78	-11.29	-9.75	14.9181	220.84	0.21	Other	0
18	1575.00	0.79	212.12	95.00	1574.60	14.92	-12.50	-10.42	16.27323	219.83	0.03	Other	0
19	1672.00	0.79	211.42	97.00	1671.59	16.06	-13.68	-11.13	17.59839	219.22	0.01	Other	0
20	1767.00	0.79	222.01	95.00	1766.58	17.23	-14.68	-11.91	18.90147	219.05	0.15	Other	0
21	1862.00	1.01	220.61	95.00	1861.57	18.61	-15.80	-12.89	20.39256	219.21	0.23	Other	0
22	1957.00	1.01	219.64	95.00	1956.56	20.15	-17.08	-13.97	22.06866	219.28	0.02	Other	0
23	2051.00	1.01	218.10	94.00	2050.54	22.66	-18.37	-15.01	23.7236	219.25	0.03	Other	0
24	2146.00	1.10	214.94	95.00	2145.53	23.22	-19.78	-16.05	25.47016	219.06	0.11	Other	0
25	2241.00	0.88	201.53	95.00	2240.51	24.56	-21.20	-16.84	27.07685	218.45	0.33	Other	0
26	2336.00	0.79	137.90	95.00	2335.50	24.93	-22.37	-16.67	27.89551	216.69	0.93	Other	0
27	2430.00	1.01	111.31	94.00	2429.40	24.21	-23.15	-15.46	27.83879	213.73	0.50	Other	0
28	2526.00	1.49	106.04	96.00	2525.47	22.72	-23.80	-13.47	27.35173	209.51	0.51	Other	0
29	2621.00	1.71	95.10	95.00	2620.43	20.61	-24.27	-10.87	26.59528	204.13	0.40	Other	0
30	2716.00	1.80	95.32	95.00	2715.39	18.14	-24.54	-7.98	25.79912	198.01	0.10	Other	0
31	2810.00	1.80	91.23	94.00	2809.34	15.58	-24.70	-5.03	25.21068	191.51	0.14	Other	0
32	2905.00	2.42	115.14	95.00	2904.28	13.02	-25.59	-1.72	25.64579	183.85	1.12	Other	0
33	3001.00	2.20	89.52	96.00	3000.20	10.12	-26.43	1.95	26.50564	175.77	1.09	Other	0
34	3188.18	2.29	88.20	187.18	3187.74	3.50	-26.29	9.28	27.87758	160.55	0.06	Other	0
35	3282.00	2.42	87.54	93.82	3280.98	-0.01	-26.14	13.14	29.25738	153.32	0.14	Other	0
36	3377.73	2.20	85.32	95.73	3376.63	-3.55	-25.91	16.99	30.98424	146.75	0.25	Other	0
37	3472.57	1.58	73.30	94.84	3471.42	-6.52	-25.39	20.06	32.35848	141.70	0.78	Other	0
38	3568.06	1.49	73.83	95.49	3566.88	-9.04	-24.67	22.51	33.39531	137.62	0.10	Other	0
39	3662.68	1.71	71.41	94.62	3661.46	-11.65	-23.88	25.03	34.59106	133.65	0.24	Other	0
40	3759.08	1.80	65.22	96.40	3757.81	-14.59	-22.78	27.77	35.91771	129.37	0.22	Other	0
41	3854.47	2.02	63.50	95.39	3853.15	-17.76	-21.41	30.63	37.36946	124.95	0.24	Other	0
42	3949.49	2.50	67.61	95.02	3948.10	-21.50	-19.88	34.05	39.42549	120.27	0.54	Other	0
43	4005.08	2.59	69.83	95.59	4003.59	-25.73	-18.34	38.01	42.20173	115.76	0.13	Other	0
44	4140.17	2.02	76.20	95.09	4138.61	-29.50	-17.20	41.65	46.06367	112.44	0.66	Other	0
45	4234.00	1.41	74.84	93.83	4232.39	-32.24	-16.51	44.37	47.34191	110.41	0.65	Other	0
46	4329.27	1.49	60.34	95.27	4327.63	-34.63	-15.59	46.58	49.11756	108.50	0.39	Other	0
47	4425.92	1.41	64.42	96.65	4424.25	-37.07	-14.45	48.74	50.84049	106.52	0.14	Other	0
48	4513.18	1.49	59.02	95.26	4513.48	-39.48	-13.31	50.86	52.57441	104.66	0.17	Other	0
49	4612.52	0.79	67.24	91.34	4610.80	-41.29	-12.45	52.46	53.9108	103.35	0.79	Other	0
50	4699.67	0.62	53.22	57.15	4697.95	-41.99	-12.12	53.07	54.4373	102.86	0.42	Other	0
51	4740.83	0.31	36.91	71.16	4739.11	-42.54	-11.73	53.50	54.76709	102.37	0.47	Other	0
52	4833.99	0.31	35.20	93.16	4832.27	-42.99	-11.32	53.79	54.97148	101.89	0.01	Other	0
53	4928.57	0.31	230.33	94.58	4926.84	-42.96	-11.28	53.74	54.91158	101.85	0.65	Other	0
54	5023.68	0.48	229.53	95.11	5021.95	-42.32	-11.70	53.24	54.5083	102.39	0.18	Other	0
55	5117.47	0.40	228.52	93.79	5115.74	-41.63	-12.17	52.69	54.08118	103.00	0.09	Other	0
56	5211.95	0.31	234.32	94.48	5210.22	-41.05	-12.54	52.24	53.72282	103.49	0.10	Other	0
57	5306.42	0.22	279.41	94.47	5304.69	-40.66	-12.66	51.85	53.37523	103.72	0.23	Other	0
58	5402.57	0.22	269.52	96.15	5400.84	-40.34	-12.63	51.49	53.01224	103.76	0.04	Other	0
59	5495.15	0.00	310.12	96.58	5497.42	-40.17	-12.63	51.30	52.83255	103.83	0.23	Other	0
60	5594.76	0.22	147.22	95.61	5593.03	-40.19	-12.78	51.40	52.96609	103.97	0.23	Other	0
61	5688.25	0.40	140.01	93.49	5686.51	-40.29	-13.18	51.71	53.36161	104.30	0.20	Other	0
62	5784.10	0.31	167.92	95.05	5782.36	-40.30	-13.69	51.98	53.75023	104.76	0.20	Other	0
63	5879.66	0.22	185.41	95.56	5877.92	-40.14	-14.13	52.01	53.89833	105.20	0.13	Other	0
64	5975.96	0.22	141.02	96.30	5974.22	-40.08	-14.46	52.11	54.08045	105.51	0.17	Other	0
65	6070.86	0.48	31.28	94.90	6069.12	-40.45	-14.26	52.43	54.33752	105.21	0.62	Other	0
66	6166.25	0.62	24.61	95.39	6164.51	-41.20	-13.45	52.86	54.53967	104.28	0.16	Other	0
67	6261.02	0.62	25.01	94.77	6259.27	-42.00	-12.52	53.29	54.73644	103.22	0.00	Other	0
68	6355.84	0.31	101.82	94.82	6354.09	-42.60	-12.11	53.75	55.10005	102.69	0.66	Other	0
69	6451.65	0.40	131.53	95.81	6449.90	-42.93	-12.38	54.26	55.26075	102.85	0.21	Other	0
70	6544.64	0.40	108.02	92.99	6542.88	-43.28	-12.70	54.81	56.26075	103.04	0.18	Other	0
71	6640.10	0.22	112.53	95.46	6638.34	-43.68	-12.91	55.36	56.84528	103.35	0.28	Other	0
72	6735.34	0.31	115.34	95.24	6733.38	-43.78	-13.20	55.62	57.16204	103.53	0.10	Other	0
73	6830.86	0.31	237.92	95.52	6823.94	-43.46	-13.52	55.42	57.04699	103.71	0.31	Other	0
74	6925.70	0.31	235.50	94.84	6923.94	-42.95	-13.72	54.96	56.64821	104.02	0.10	Other	0
75	7021.46	0.40	289.51	95.76	7019.70	-42.47	-13.67	54.39	56.08283	104.11	0.23	Other	0

76	7116.63	0.62	281.43	95.17	7114.86	-41.83	-13.46	53.57	55.23746	104.10	0.24	Other	0
77	7212.26	0.62	291.53	95.63	7210.49	-41.08	-13.17	52.58	54.20758	104.06	0.11	Other	0
78	7306.20	0.09	206.02	93.94	7300.43	-40.68	-13.05	52.08	53.68835	104.06	0.66	Other	0
79	7401.78	0.09	110.30	95.58	7400.01	-40.67	-13.14	52.12	53.74748	104.15	0.14	Other	0
80	7496.90	0.09	111.31	95.12	7495.13	-40.77	-13.19	52.26	53.89589	104.17	0.00	Other	0
81	7592.12	0.09	89.34	95.22	7590.34	-40.89	-13.22	52.40	54.04239	104.16	0.04	Other	0
82	7686.18	0.09	83.10	94.06	7684.40	-41.03	-13.21	52.55	54.18276	104.11	0.01	Other	0
83	7780.53	0.22	27.33	94.35	7778.75	-41.24	-13.04	52.70	54.29374	103.90	0.20	Other	0
84	7876.45	0.48	24.52	95.92	7874.67	-41.71	-12.51	52.96	54.41362	103.29	0.27	Other	0
85	7970.86	0.62	29.84	94.41	7969.08	-42.44	-11.71	53.37	54.54315	102.37	0.16	Other	0
86	8065.38	0.62	38.01	94.52	8063.59	-43.33	-10.86	53.94	55.0261	101.38	0.09	Other	0
87	8160.32	0.70	53.53	94.94	8158.53	-44.36	-10.11	54.73	55.65256	100.47	0.21	Other	0
88	8255.35	1.01	53.92	95.03	8253.55	-45.76	-9.27	55.87	56.63433	99.42	0.33	Other	0
89	8350.00	0.79	49.93	94.65	8348.18	-47.22	-8.36	57.04	57.65304	98.34	0.24	Other	0
90	8445.56	0.88	53.61	95.56	8443.73	-48.59	-7.50	58.14	58.62026	97.35	0.11	Other	0
91	8540.46	1.41	54.54	94.90	8538.61	-50.46	-6.39	59.68	60.01728	96.11	0.56	Other	0
92	8636.00	1.19	342.20	95.54	8634.14	-51.77	-4.77	60.33	60.51802	94.52	1.62	Other	0
93	8731.00	1.58	349.41	95.99	8729.11	-52.29	-2.54	59.79	59.84168	92.43	0.45	Other	0
94	8824.99	1.80	353.41	93.99	8823.06	-53.15	0.20	59.38	59.38055	89.81	0.27	Other	0
95	8919.23	1.88	349.81	94.24	8917.27	-53.87	2.38	59.08	59.13036	87.69	0.98	Other	0
96	9013.30	1.32	347.04	94.07	9011.32	-54.33	4.15	58.71	58.858	85.96	0.47	Other	0
97	9108.68	0.79	339.43	95.38	9106.69	-54.66	5.84	58.23	58.52582	84.28	0.57	Other	0
98	9203.09	1.10	357.01	94.41	9201.08	-55.09	7.35	57.96	58.42241	82.77	0.45	Other	0
99	9307.09	1.26	32.39	113.91	9314.97	-56.61	9.50	58.57	59.33789	80.79	0.64	SlimPulse	0
100	9351.00	0.65	286.92	34.00	9348.97	-56.79	9.87	58.59	59.41524	80.44	4.60	SlimPulse	0
101	9381.00	2.75	252.54	32.00	9380.95	-55.90	9.69	57.68	58.49251	80.46	7.03	SlimPulse	0
102	9416.00	5.86	247.79	33.00	9413.86	-53.44	8.82	55.37	56.0655	80.95	9.47	SlimPulse	1
103	9446.00	9.26	245.92	33.00	9443.59	-49.50	7.26	51.74	52.25106	82.02	11.36	SlimPulse	1
104	9477.00	13.11	244.04	31.00	9474.00	-43.49	4.70	46.30	46.54239	84.21	12.47	SlimPulse	1
105	9509.00	16.60	242.67	32.00	9504.92	-35.28	1.01	38.98	38.99174	86.52	10.96	SlimPulse	1
106	9540.00	20.14	242.08	31.00	9534.34	-25.52	-3.52	30.33	30.53044	98.63	11.43	SlimPulse	1
107	9573.00	24.17	241.73	33.00	9564.89	-13.08	-9.39	19.35	21.50815	115.88	12.22	SlimPulse	1
108	9604.00	27.79	241.11	31.00	9592.76	0.49	-15.89	7.43	17.53807	154.93	11.71	SlimPulse	1
109	9635.00	31.61	240.67	31.00	9619.68	15.83	-23.36	-5.98	24.11376	194.37	12.34	SlimPulse	1
110	9667.00	35.18	240.81	32.00	9646.39	33.42	-31.97	-38.62	38.43886	213.74	11.16	SlimPulse	1
111	9700.00	38.83	240.05	33.00	9672.74	53.26	-41.77	-38.62	56.88635	222.75	11.15	SlimPulse	1
112	9732.00	42.22	239.48	30.00	9695.54	72.71	-51.59	-55.45	75.73962	227.07	11.37	SlimPulse	1
113	9760.00	45.42	239.24	32.00	9718.63	94.81	-62.88	-74.51	97.49988	229.84	10.01	SlimPulse	1
114	9795.00	48.68	240.15	33.00	9741.11	118.91	-75.06	-95.37	121.36379	231.79	10.08	SlimPulse	1
115	9826.00	51.80	240.69	31.00	9760.93	142.71	-86.82	-116.09	144.96556	233.21	10.15	SlimPulse	1
116	9856.00	55.33	241.39	30.00	9778.75	166.82	-98.50	-137.21	168.90393	234.32	11.92	SlimPulse	1
117	9888.00	58.97	242.38	32.00	9796.10	193.69	-111.17	-160.92	195.57965	235.36	11.67	SlimPulse	1
118	9920.00	62.39	243.98	32.00	9811.77	221.59	-123.75	-185.81	223.24711	236.34	11.54	SlimPulse	1
119	9952.00	65.79	245.81	32.00	9825.75	250.35	-135.95	-211.87	251.73978	237.31	11.80	SlimPulse	1
120	9981.00	68.99	246.48	29.00	9836.90	277.09	-146.77	-236.36	278.22002	238.16	11.24	SlimPulse	1
121	10014.00	71.23	246.64	33.00	9848.13	308.07	-159.12	-264.82	308.94988	239.00	6.80	SlimPulse	1
122	10047.00	73.86	246.16	33.00	9858.03	339.50	-171.72	-293.67	340.18962	239.68	8.09	SlimPulse	1
123	10077.00	75.99	245.03	30.00	9865.83	368.44	-183.69	-320.05	369.01317	240.15	7.98	SlimPulse	1
124	10109.00	78.49	243.81	32.00	9872.90	399.64	-197.16	-348.19	400.13988	240.48	8.65	SlimPulse	1
125	10143.00	81.15	242.66	34.00	9878.90	433.11	-212.23	-378.07	433.56539	240.69	8.50	SlimPulse	1
126	10156.00	82.23	242.32	15.00	9881.07	447.95	-215.09	-391.23	448.40059	240.75	7.54	SlimPulse	1
127	10211.00	84.93	242.37	53.00	9887.00	500.60	-243.53	-437.88	501.04512	240.92	5.10	SlimPulse	1
128	10306.00	87.06	243.27	95.00	9893.63	595.36	-286.82	-522.18	595.76279	241.22	2.43	SlimPulse	1
129	10407.00	88.78	243.96	96.00	9897.37	681.24	-329.45	-608.11	691.61494	241.55	1.64	SlimPulse	1
130	10492.00	88.49	244.92	95.00	9899.63	796.28	-370.42	-693.79	786.48077	241.90	1.06	SlimPulse	1
131	10593.00	89.27	245.78	96.00	9901.26	882.16	-410.45	-781.02	882.31093	242.28	1.03	SlimPulse	1
132	10689.00	89.20	246.48	96.00	9902.54	978.04	-449.30	-868.80	978.10603	242.65	0.73	SlimPulse	1
133	10782.00	89.23	247.12	93.00	9903.81	1070.86	-485.93	-954.28	1070.87461	243.01	0.69	SlimPulse	1
134	10877.00	89.71	247.86	95.00	9904.69	1165.62	-522.45	-1041.97	1165.61554	243.37	0.76	SlimPulse	1
135	10972.00	89.92	247.50	95.00	9905.00	1260.35	-558.69	-1129.79	1260.37796	243.69	0.28	SlimPulse	1
136	11066.00	90.26	247.98	94.00	9904.85	1354.07	-594.29	-1216.78	1354.15869	243.97	0.63	SlimPulse	1
137	11161.00	90.30	247.81	95.00	9904.39	1448.77	-630.04	-1304.80	1448.94913	244.23	0.18	SlimPulse	1
138	11256.00	89.99	247.21	95.00	9904.15	1543.52	-666.38	-1392.57	1543.80184	244.43	0.71	SlimPulse	1
139	11351.00	90.09	246.64	95.00	9904.08	1638.33	-703.61	-1479.97	1638.71642	244.57	0.61	SlimPulse	1
140	11446.00	90.06	246.01	95.00	9903.95	1733.20	-741.76	-1566.98	1733.67386	244.67	0.66	SlimPulse	1
141	11540.00	90.06	245.15	94.00	9903.86	1827.13	-780.62	-1652.57	1827.66164	244.72	0.91	SlimPulse	1
142	11635.00	89.85	244.19	95.00	9903.93	1922.10	-821.67	-1738.43	1922.66042	244.71	1.03	SlimPulse	1
143	11730.00	89.89	243.73	95.00	9904.15	2017.09	-862.97	-1823.79	2017.65209	244.68	0.49	SlimPulse	1
144	11825.00	90.37	242.92	95.00	9903.93	2112.09	-905.62	-1908.68	2112.6255	244.62	0.99	SlimPulse	1
145	11920.00	90.13	242.42	95.00	9903.52	2207.09	-949.23	-1993.07	2207.57175	244.53	0.58	SlimPulse	1
146	12014.00	89.83	240.91	94.00	9903.55	2301.04	-999.85	-2075.81	2301.45598	244.42	1.64	SlimPulse	1
147	12110.00	89.93	239.91	96.00	9903.75	2396.92	-1041.25	-2159.28	2397.22937	244.26	1.05	SlimPulse	1
148	12204.00	90.03	239.85	94.00	9903.78	2490.75	-1088.42	-2240.59	2490.96569	244.09	0.12	SlimPulse	1
149	12299.00	89.89	240.62	95.00	9903.85	2585.61	-1135.58	-2323.06	2585.75779	243.95	0.82	SlimPulse	1
150	12394.00	90.17	240.86	95.00	9903.80	2680.51	-1182.02	-2405.94	2680.61391	243.84	0.39	SlimPulse	1
151	12490.00	90.41	240.75	96.00	9903.31	2776.42	-1228.84	-2489.74	2776.48299	243.73	0.28	SlimPulse	1
152	12582.00	90.03	240.64	92.00	9902.98	2868.32	-1273.87	-2569.97	2868.35722	243.63	0.46	SlimPulse	1
153	12678.00	90.03	240.69	96.00	9902.96	2964.21	-1320.90	-2653.66	2964.23257	243.54	0.06	SlimPulse	1
154	12773.00	89.89	240.42	95.00	9903.03	3059.10	-1367.61	-2736.38	3059.10776	243.44	0.32	SlimPulse	1
155	12868.00	89.86	240.52	95.00	9903.23	3153.98	-1414.43	-2819.04	3153.98336	243.36	0.11	SlimPulse	1
156	12962.00	89.90	240.79	94.00	9903.43	3247.88	-1460.49	-2900.98	3247.88172	243.28	0.29	SlimPulse	1
157	13058.00	89.90	241.91	96.00	9903.60	3343.82	-1506.52	-2985.23	3343.82731	243.22	1.17	SlimPulse	1
158	13153.00	90.04	243.01	95.00	9903.65	3438.81	-1550.45	-3065.46	3438.81765	243.20	1.17	SlimPulse	1
159	13248.00	89.76	244.35	95.00	9903.81	3533.80	-1592.57	-3154.61	3533.81201	243.21	1.44	SlimPulse	1
160	13343.00	89.62	245.81	95.00	9904.33	3628.76	-1632.59						