

Results of Directional Survey

API number:	30-025-41173		
OGRID:		Operator:	CIMAREX ENERGY CO.
		Property:	WEST GRAMA RIDGE 6 FEDERAL # 4H

surface	ULSTR:	A	06	T 22S	R 34E
				330 FNL	660 FEL

BH Loc	ULSTR:	P	06	T 22S	R 34E
15315	MD	11026.2	TVD	330 FSL	620 FEL
				4950 FNL	

Top Perf/OH	ULSTR:	A	06	T 22S	R 34E
10910	MD	10854.4	TVD	591 FNL	631 FEL

Bot Perf/OH	ULSTR:	P	06	T 22S	R 34E
15277	MD	11026.1	TVD	368 FSL	621 FEL
				4912 FNL	

	MD	N/S	E/W	VD
	10903	-255.89	28.94	10849.78
TOP PERFS/OH	10910	-261.18	29.12	10854.36
	10935	-280.09	29.76	10870.70
	15241	-4545.99	39.10	11025.93
BOT PERFS/OH	15277	-4581.99	39.48	11026.08
	15315	-4619.98	39.89	11026.24

NEXT TO LAST	15241	-4545.99	39.10	11025.93
LAST READING	15315	-4619.98	39.89	11026.24
TD	15315	-4619.98	39.89	11026.24

Surface Location	330	FN	660	FE
Projected BHL	4950	FN	620	FE
Location of				
Top Perfs/OH	591	FN	631	FE
Bottom Perfs/OH	4912	FN	621	FE

SUMMARY of Subsurface Locations

Surface Location	A-06-22S-34E	330	FN	660	FE	Vert. Depth
Top Perfs/OH	A-06-22S-34E	591	FN	631	FE	10854.36
Bottom Perfs/OH	P-06-22S-34E	4912	FN	621	FE	11026.08
Projected TD	P-06-22S-34E	4950	FN	620	FE	11026.24

MAR 05 2014

Oilfield Services, Central U.S. Land

Schlumberger

Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

HOBBS OCD

JAN 24 2014

September 4, 2013

RECEIVED

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

CLIENT: Cimarex Energy Co.

WELL: West Grama Ridge 6 Federal 4H

FIELD: Grama Ridge; Bone Spring, West

RIG: Scandril Eagle

COUNTY: Lea

API NO: 30-025-41173

JOB NO: 13MLD0399

P-6S-T22S-R34E 330 FNL 660 FEL

N 32.42714 W 103.50269

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>
Yahya Lazrak	West Grama Ridge 6 Federal 4H	10493.00 Ft to	August 15, 2013 to	SlimPulse
MWD	Original Hole	15241.00 Ft	August 23, 2013	

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:

P-6S-T22S-R34E 330 FNL 660 FEL

N 32.42714 W 103.50269

I, Yahya Lazrak certify that; I am employed by Drilling & Measurements (formerly Anadrill), a division of Schlumberger Technology Corporation; that I did on the day(s) of August 15, 2013 through August 23, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 10493.00 feet to a depth of 15241.00 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 West Grama Ridge 6 Federal 4H Well (Original Hole) API No. 30-025-41173 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
Yahya Lazrak
MWD

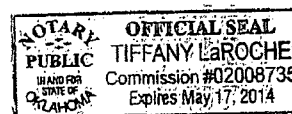
Subscribed and Sworn to before me this 4 day of September (month) 2013 (yr)

My Commission expires:

May 17, 2014

Tiffany LaRoche (signature)
Notary Public

Cleveland, Oklahoma
(County State)



SCHLUMBERGER
Survey Report

24-Aug-13

Client.....: Cimarex Energy Co.
Field.....: Grama Ridge; Bone Spring, West

Well.....: West Grama Ridge 6 Federal 4H
API number.....: 30-025-41173
Engineer.....: Yahya Lazrak

COUNTY.....: Lea
STATE.....: New Mexico
RIG.....: Scandril Eagle

Spud date.....: 02-AUG-2013
Last survey date.....: 23-AUG-2013
Total accepted surveys.....: 69
MD of first survey.....: 10493.00 ft
MD of last survey.....: 15241.00 ft

Latitude: 32° 25' 37.696" N
Longitude: 103° 30' 09.699" W

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

--- Depth reference -----
Permanent datum.....: MEAN SEA LEVEL
Depth reference.....: Driller's Depth
GL above permanent.....: 3646.00 ft
KB above permanent.....: Top Drive
DF above permanent.....: 3671.00 ft

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

--- Grid Coordinates -----
NAD83, New Mexico State Plane, Eastern Zone, US Feet
X.....: 797628.720 ft US
Y.....: 520120.110 ft US

Azimuth from Vsect Origin to target: 179.66 degrees

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

---Run1---
Geomag Model: : BGGM 2012 Calculation Date: : 14-Aug-2013
Location G : 998.84 mgn Tolerance G : 2.50 mgn
Location B : 48496.09 nT Tolerance B : 300.00 nT
Magnetic Dip : 60.29 degrees Tolerance Dip : 0.45 degrees

---Run2---
Geomag Model: : BGGM 2012 Calculation Date: : 17-Aug-2013
Location G : 998.84 mgn Tolerance G : 2.50 mgn
Location B : 48495.04 nT Tolerance B : 300.00 nT
Magnetic Dip : 60.29 degrees Tolerance Dip : 0.45 degrees

---Run3---
Geomag Model: : BGGM 2012 Calculation Date: : 21-Aug-2013
Location G : 998.84 mgn Tolerance G : 2.50 mgn
Location B : 48493.63 nT Tolerance B : 300.00 nT
Magnetic Dip : 60.29 degrees Tolerance Dip : 0.45 degrees

-----MWD Survey Azimuth Correction-----

---Run1---
Magnetic dec (+E/-) : 7.4097 degrees
Grid convergence (+E/-) : 0.4454 degrees
GTotal az corr (+E/-) : 6.9643 degrees

---Run2---
Magnetic dec (+E/-) : 7.4088 degrees
Grid convergence (+E/-) : 0.4454 degrees
GTotal az corr (+E/-) : 6.9634 degrees

---Run3---
Magnetic dec (+E/-) : 7.4075 degrees
Grid convergence (+E/-) : 0.4454 degrees
GTotal az corr (+E/-) : 6.9621 degrees

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

0 : Not Flagged Survey 1 : DMAG Corrected Survey
7 : Projection to Bit

HOBBS OGD

JAN 24 2014

RECEIVED

Seq	MD	Incl	Azim	Course	TVD	V.Sec	N/S	E/W	Closure	at Azi	DLS	Tool	Correction
	(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(deg/100ft)		
1	0.00	0.00	0.00	-99.25	0.00	0.00	0.00	0.00	0	90.00	0.00	GyroTool	0
2	100.00	0.54	160.19	100.00	100.00	0.44	-0.44	0.16	0.47124	160.19	0.54	GyroTool	0
3	200.00	0.71	182.17	100.00	139.99	1.51	-1.51	0.30	1.53463	168.88	0.29	GyroTool	0
4	300.00	0.57	174.87	100.00	299.99	2.62	-2.62	0.32	2.63948	173.10	0.16	GyroTool	0
5	400.00	0.77	170.74	100.00	399.98	3.78	-3.78	0.47	3.80803	172.92	0.21	GyroTool	0
6	500.00	0.66	175.58	100.00	499.97	5.02	-5.02	0.62	5.05481	172.93	0.13	GyroTool	0
7	600.00	0.69	175.75	100.00	599.96	6.20	-6.19	0.71	6.23178	173.45	0.03	GyroTool	0
8	700.00	0.56	175.02	100.00	699.96	7.28	-7.28	0.80	7.32202	173.74	0.13	GyroTool	0
9	800.00	0.50	194.10	100.00	799.95	8.19	-8.19	0.73	8.22127	174.88	0.19	GyroTool	0
10	813.60	0.52	194.89	13.60	813.55	8.31	-8.31	0.70	8.33598	175.16	0.16	GyroTool	0
11	909.10	0.55	193.14	95.50	909.05	9.17	-9.17	0.49	9.18377	176.95	0.04	GyroTool	0
12	1004.60	0.50	194.69	95.50	1004.55	10.02	-10.02	0.28	10.02407	178.41	0.05	GyroTool	0
13	1100.10	0.48	187.70	95.50	1100.04	10.82	-10.82	0.12	10.82035	179.37	0.07	GyroTool	0
14	1195.60	0.43	196.87	95.50	1195.54	11.56	-11.56	-0.04	11.55911	180.19	0.09	GyroTool	0
15	1291.10	0.46	221.84	95.50	1291.04	12.19	-12.19	-0.40	12.19409	181.87	0.20	GyroTool	0
16	1386.50	0.56	228.08	95.50	1386.43	12.77	-12.78	-1.01	12.81778	184.50	0.12	GyroTool	0
17	1482.00	0.68	231.12	95.50	1481.93	13.43	-13.44	-1.80	13.5596	187.63	0.13	GyroTool	0
18	1577.50	0.75	232.13	95.50	1577.42	14.16	-14.18	-2.73	14.44026	190.91	0.07	GyroTool	0
19	1673.00	0.69	218.53	95.50	1672.91	14.99	-15.01	-3.59	15.43486	193.43	0.19	GyroTool	0
20	1768.50	0.64	217.46	95.50	1768.41	15.86	-15.89	-4.27	16.44922	195.04	0.05	GyroTool	0
21	1864.00	0.61	205.78	95.50	1863.90	16.74	-16.77	-4.81	17.44426	196.02	0.14	GyroTool	0
22	1959.50	0.47	209.65	95.50	1959.40	17.53	-17.57	-5.23	18.32679	196.58	0.15	GyroTool	0
23	2055.00	0.18	162.83	95.50	2054.89	18.02	-18.05	-5.38	18.83307	196.59	0.39	GyroTool	0
24	2150.50	0.14	147.10	95.50	2150.39	18.28	-18.31	-5.26	19.05076	196.02	0.05	GyroTool	0
25	2246.00	0.14	111.58	95.50	2245.89	18.44	-18.47	-5.07	19.15647	195.35	0.10	GyroTool	0
26	2341.40	0.21	65.75	95.50	2341.29	18.42	-18.44	-4.80	19.05932	194.60	0.16	GyroTool	0
27	2436.90	0.32	64.50	95.50	2436.79	18.23	-18.26	-4.40	18.78085	193.56	0.12	GyroTool	0
28	2532.40	0.45	115.46	95.50	2532.29	18.28	-18.30	-3.82	18.69895	191.80	0.37	GyroTool	0
29	2627.90	0.33	123.60	95.50	2627.79	18.60	-18.62	-3.26	18.8998	189.92	0.14	GyroTool	0
30	2723.40	0.43	99.65	95.50	2723.29	18.81	-18.83	-2.67	19.01835	188.08	0.19	GyroTool	0
31	2818.90	0.44	74.70	95.50	2818.78	18.78	-18.79	-1.97	18.8954	185.98	0.20	GyroTool	0
32	2914.20	0.42	56.09	95.50	2914.28	18.49	-18.50	-1.32	18.54793	184.09	0.15	GyroTool	0
33	3009.90	0.39	356.53	95.50	3009.78	17.97	-17.98	-1.05	18.01174	183.35	0.42	GyroTool	0
34	3105.40	0.47	356.15	95.50	3105.28	17.26	-17.27	-1.10	17.30064	183.64	0.08	GyroTool	0
35	3200.90	0.53	286.6	95.50	3200.77	16.45	-16.46	-0.91	16.4966	183.91	0.05	GyroTool	0
36	3296.30	0.53	286.6	95.50	3296.17	15.65	-15.65	-0.91	15.68139	183.34	0.27	GyroTool	0
37	3391.80	0.39	69.39	95.50	3391.67	15.15	-15.15	-0.40	15.40925	179.45	0.36	GyroTool	0
38	3487.30	0.53	146.92	95.50	3487.16	15.41	-15.41	0.15	15.40925	179.45	0.61	GyroTool	0
39	3582.80	0.68	149.13	95.50	3582.66	16.27	-16.27	0.68	16.27929	177.60	0.16	GyroTool	0
40	3678.30	0.75	128.69	95.50	3678.15	17.15	-17.14	1.46	17.20419	175.13	0.28	GyroTool	0
41	3773.80	0.76	107.39	95.50	3773.64	17.74	-17.74	2.55	17.90495	171.81	0.29	GyroTool	0
42	3869.30	0.66	68.15	95.50	3869.14	17.73	-17.71	3.67	18.08243	168.30	0.51	GyroTool	0
43	3964.80	0.66	42.60	95.50	3964.63	17.12	-17.11	4.55	17.69214	165.10	0.31	GyroTool	0
44	4060.30	0.61	38.76	95.50	4060.12	16.33	-16.30	5.24	17.11768	162.17	0.07	GyroTool	0
45	4155.80	0.40	26.58	95.50	4155.62	15.63	-15.60	5.71	16.6126	159.91	0.25	GyroTool	0
46	4251.20	0.11	33.83	95.50	4251.02	15.26	-15.23	5.91	16.33325	158.80	0.31	GyroTool	0
47	4346.70	0.04	203.01	95.50	4346.52	15.22	-15.18	5.95	16.30469	158.61	0.16	GyroTool	0
48	4442.20	0.32	229.10	95.50	4442.02	15.42	-15.39	5.73	16.41988	159.57	0.30	GyroTool	0
49	4537.70	0.51	242.14	95.50	4537.52	15.79	-15.76	5.15	16.58173	161.89	0.22	GyroTool	0
50	4633.20	0.06	281.03	95.50	4633.01	15.98	-15.95	4.73	16.69382	163.49	0.49	GyroTool	0
51	4728.70	0.68	55.56	95.50	4728.51	15.65	-15.62	5.15	16.44572	161.76	0.76	GyroTool	0
52	4824.20	0.61	105.81	95.50	4824.01	15.46	-15.42	6.11	16.58604	158.39	0.56	GyroTool	0
53	4919.70	0.76	89.97	95.50	4919.50	15.58	-15.54	7.24	17.14288	155.04	0.23	GyroTool	0
54	5015.20	0.66	73.92	95.50	5014.99	15.44	-15.39	8.40	17.5306	151.38	0.23	GyroTool	0
55	5110.70	0.38	67.55	95.50	5110.49	15.28	-15.22	9.24	17.80862	148.74	0.32	GyroTool	0
56	5206.20	0.09	40.38	138.30	5206.09	15.18	-15.12	9.77	18.00252	147.13	0.24	GyroTool	0
57	5301.70	0.22	39.28	190.00	5301.49	14.78	-14.72	10.10	17.85443	145.56	0.07	GyroTool	0
58	5397.20	0.40	150.15	191.00	5396.99	15.08	-15.02	10.66	18.41864	144.63	0.27	GyroTool	0
59	5492.70	0.70	148.04	192.00	5492.48	16.66	-16.60	11.62	20.25693	145.01	0.16	GyroTool	0
60	5588.20	0.79	152.35	191.00	5587.96	18.83	-18.75	12.85	22.72912	145.59	0.06	GyroTool	0
61	5683.70	0.79	148.75	191.00	5683.44	21.13	-21.04	14.14	25.35242	146.10	0.03	GyroTool	0
62	5779.20	0.70	154.68	191.00	5778.93	23.31	-23.22	15.32	27.8224	147.18	0.04	GyroTool	0
63	5874.70	0.62	154.86	190.00	5874.41	25.30	-25.20	16.25	29.99035	147.59	0.06	GyroTool	0
64	5970.20	0.62	170.28	189.00	5969.93	27.24	-27.14	16.86	31.94887	148.15	0.09	GyroTool	0
65	6065.70	0.70	175.86	189.00	6065.41	29.40	-29.30	17.12	33.93067	149.70	0.05	GyroTool	0
66	6161.20	1.19	174.06	189.00	6160.89	32.50	-32.40	17.40	36.77848	151.76	0.26	GyroTool	0
67	6256.70	1.32	171.16	189.00	6256.38	36.61	-36.50	17.94	40.67403	153.83	0.08	GyroTool	0
68	6352.20	1.49	175.55	190.00	6351.81	41.24	-41.13	18.47	45.0851	155.82	0.11	GyroTool	0
69	6447.70	1.58	173.84	188.00	6447.31	46.25	-46.14	18.94	49.87699	157.69	0.05	GyroTool	0
70	6543.20	1.58	166.74	190.00	6542.81	51.41	-51.30	19.82	54.9916	158.88	0.10	GyroTool	0
71	6638.70	1.49	167.47	189.00	6638.36	56.23	-56.10	20.92	59.87607	159.55	0.09	GyroTool	0
72	6734.20	1.49	169.05	189.00	6733.81	60.91	-60.78	21.89	64.60681	160.19	0.05	GyroTool	0
73	6829.70	1.49	167.78	190.00	6829.31	65.76	-65.62	22.88	69.49979	160.78	0.02	GyroTool	0
74	6925.20	1.10	163.07	189.00	6924.81	69.90	-69.76	23.93	73.75234	161.06	0.21	GyroTool	0
75	7020.70	0.70	163.07	189.00	7020.31	75.22	-75.07	25.10	79.15527	161.51	0.06	GyroTool	0
76	7116.20	0.31	150.15	190.00	7115.81	78.10	-77.95	24.97	81.85321	162.24	0.31	GyroTool	0
77	7211.70	0.79	351.47	189.00	7211.31	78.79	-78.65	24.83	83.27949	162.65	0.29	GyroTool	0
78	7307.20	0.79	351.47	189.00	7306.81	78.79	-78.65	24.89	82.49168	162.44	0.57	GyroTool	0

79	9707.00	0.48	13.35	189.00	9706.09	76.73	-76.59	24.88	80.52801	162.00	0.21	GyroTrot
80	9896.00	0.62	349.18	189.00	9895.08	74.86	-74.81	24.87	78.8392	162.00	0.14	GyroTrot
81	10180.00	0.48	288.07	284.00	10179.07	72.88	-72.74	23.54	76.45617	162.67	0.17	GyroTrot
82	10370.00	0.40	325.54	190.00	10369.06	71.55	-71.82	22.46	75.25154	162.64	0.12	GyroTrot
83	10493.00	3.21	175.99	123.00	10492.00	75.04	-77.91	22.46	78.20299	163.31	2.90	SimplePulse
84	10524.00	7.99	174.57	31.00	10522.84	78.05	-77.92	22.72	81.16682	163.74	15.40	SimplePulse
85	10556.00	13.25	175.13	32.00	10554.29	83.93	-83.79	23.25	86.95657	164.49	16.45	SimplePulse
86	10587.00	16.86	178.14	31.00	10584.22	91.97	-91.83	23.70	94.883528	165.35	11.92	SimplePulse
87	10619.00	23.20	181.38	32.00	10614.55	102.13	-101.99	23.71	104.7137	166.91	10.93	SimplePulse
88	10661.00	23.20	182.40	32.00	10644.28	113.95	-113.82	23.32	116.18082	168.42	9.42	SimplePulse
89	10682.00	25.29	179.31	31.00	10678.21	156.12	-155.99	23.45	157.72363	171.49	10.41	SimplePulse
90	10714.00	27.71	179.41	32.00	10701.19	140.95	-140.82	23.30	142.73035	170.61	7.57	SimplePulse
91	10745.00	30.91	180.30	31.00	10728.21	136.12	-135.99	23.33	157.92868	172.30	12.50	SimplePulse
92	10777.00	34.84	178.98	32.00	10755.08	173.49	-173.35	23.45	193.25244	172.76	12.05	SimplePulse
93	10808.00	37.92	175.42	31.00	10780.04	191.85	-191.71	24.37	193.25244	172.76	12.05	SimplePulse
94	10840.00	41.28	174.67	32.00	10804.69	232.15	-232.09	26.10	214.62565	173.82	10.55	SimplePulse
95	10871.00	44.10	176.27	31.00	10827.48	223.13	-223.09	27.72	234.62565	173.82	9.59	SimplePulse
96	10903.00	47.49	177.56	32.00	10849.78	256.06	-255.89	28.94	257.92147	173.55	10.98	SimplePulse
97	10935.00	50.87	178.57	32.00	10870.70	280.26	-280.09	29.76	281.66555	173.94	10.83	SimplePulse
98	10966.00	54.15	179.49	31.00	10889.56	304.85	-304.68	30.17	306.16973	174.35	10.83	SimplePulse
99	10998.00	57.69	179.99	32.00	10907.49	331.35	-331.18	30.79	339.96012	175.15	11.14	SimplePulse
100	11031.00	60.70	179.65	31.00	10923.36	357.98	-357.80	30.57	359.09479	175.47	9.77	SimplePulse
101	11063.00	62.92	179.53	32.00	10938.48	386.18	-386.01	30.57	387.11479	175.47	6.93	SimplePulse
102	11092.00	63.76	180.59	31.00	10952.39	413.88	-413.71	30.60	414.64462	176.06	3.15	SimplePulse
103	11124.00	66.69	180.55	32.00	10965.80	442.93	-442.76	30.50	443.60988	176.06	9.24	SimplePulse
104	11155.00	68.58	182.03	31.00	10977.59	471.59	-471.42	29.86	472.56758	176.38	7.52	SimplePulse
105	11187.00	69.05	182.55	32.00	10989.16	501.39	-501.23	28.66	502.04972	177.03	2.11	SimplePulse
106	11218.00	72.11	182.75	31.00	10999.47	530.58	-530.43	27.31	551.13482	177.65	9.90	SimplePulse
107	11250.00	76.22	182.33	32.00	11008.20	561.32	-561.18	25.50	561.75547	177.36	12.85	SimplePulse
108	11282.00	80.99	182.05	32.00	11014.52	592.65	-592.51	24.65	593.02596	177.62	15.00	SimplePulse
109	11313.00	86.28	181.05	31.00	11017.99	623.43	-623.30	23.82	623.7530	177.81	17.36	SimplePulse
110	11345.00	89.04	180.22	32.00	11019.26	655.40	-655.27	23.46	655.68806	177.95	8.98	SimplePulse
111	11376.00	89.86	179.84	31.00	11019.56	686.39	-686.27	23.45	686.66575	178.02	2.94	SimplePulse
112	11465.00	90.45	179.26	89.00	11019.32	775.39	-775.26	24.15	775.65855	178.24	0.93	SimplePulse
113	11559.00	90.28	178.46	94.00	11018.72	869.38	-869.24	26.02	869.6306	178.29	0.86	SimplePulse
114	11654.00	90.21	176.52	95.00	11017.81	964.34	-964.18	29.34	964.62763	178.25	0.99	SimplePulse
115	11749.00	90.41	176.52	95.00	11017.81	1059.24	-1059.05	34.27	1059.60504	178.25	1.08	SimplePulse
116	11843.00	90.34	178.36	94.00	11017.19	1153.16	-1152.95	38.47	1153.59243	178.09	1.95	SimplePulse
117	11938.00	90.38	178.33	95.00	11016.68	1248.13	-1247.91	41.21	1248.59016	178.11	0.08	SimplePulse
118	12033.00	90.28	178.32	95.00	11016.14	1343.11	-1342.87	43.98	1343.58795	178.12	0.11	SimplePulse
119	12127.00	90.07	178.73	94.00	11015.77	1437.09	-1436.84	46.39	1437.58474	178.15	0.54	SimplePulse
120	12222.00	89.76	178.37	95.00	11015.91	1532.07	-1531.81	48.80	1532.58219	178.18	0.50	SimplePulse
121	12317.00	89.69	179.24	95.00	11016.37	1627.06	-1626.78	50.78	1627.5748	178.21	0.91	SimplePulse
122	12411.00	89.83	179.68	94.00	11016.76	1721.05	-1720.78	51.51	1721.54899	178.29	0.70	SimplePulse
123	12506.00	89.62	180.99	95.00	11017.22	1816.04	-1815.77	50.79	1816.4031	178.30	1.19	SimplePulse
124	12601.00	90.24	182.95	95.00	11017.33	1910.96	-1910.71	47.52	1911.30232	178.38	2.17	SimplePulse
125	12696.00	89.66	184.73	95.00	11017.25	2005.70	-2005.49	41.15	2005.91633	178.82	1.91	SimplePulse
126	12790.00	89.86	185.78	94.00	11017.64	2099.25	-2099.10	32.54	2099.34907	179.11	1.14	SimplePulse
127	12885.00	90.24	186.32	95.00	11017.73	2193.66	-2193.57	22.53	2193.68242	179.41	0.84	SimplePulse
128	12979.00	89.59	185.93	94.00	11017.87	2287.06	-2287.02	12.45	2287.05783	179.69	0.78	SimplePulse
129	13074.00	89.59	185.03	95.00	11018.85	2381.56	-2381.58	3.33	2381.58943	179.92	1.01	SimplePulse
130	13169.00	89.79	184.50	95.00	11019.07	2476.19	-2476.26	-4.40	2476.26809	180.10	0.80	SimplePulse
131	13263.00	89.52	182.74	94.00	11019.63	2569.98	-2570.08	-10.18	2570.10211	180.31	1.68	SimplePulse
132	13358.00	89.79	182.24	95.00	11020.20	2664.86	-2664.99	-14.31	2665.02026	180.33	0.61	SimplePulse
133	13453.00	89.48	180.84	95.00	11020.80	2759.80	-2759.95	-16.66	2760.00234	180.35	1.51	SimplePulse
134	13548.00	89.79	179.28	94.00	11021.40	2854.80	-2854.95	-16.95	2854.98679	180.28	1.66	SimplePulse
135	13643.00	89.79	177.63	95.00	11021.74	2948.77	-2948.91	-14.41	2948.94349	180.34	1.75	SimplePulse
136	13737.00	89.72	175.30	95.00	11022.13	3043.62	-3043.72	-8.55	3043.73199	180.16	2.45	SimplePulse
137	13832.00	89.76	175.02	95.00	11022.56	3138.32	-3138.38	-0.55	3138.37999	180.01	0.30	SimplePulse
138	13927.00	89.76	174.73	94.00	11022.96	3231.99	-3232.00	-7.67	3232.01231	179.96	0.31	SimplePulse
139	14021.00	89.79	175.42	95.00	11023.33	3326.69	-3326.65	16.03	3326.68888	179.72	0.73	SimplePulse
140	14116.00	89.72	175.29	92.00	11023.71	3418.48	-3418.41	22.69	3418.48283	179.54	0.95	SimplePulse
141	14207.00	88.66	176.94	94.00	11024.22	3512.45	-3512.44	28.24	3512.35488	179.54	0.70	SimplePulse
142	14302.00	89.93	177.02	95.00	11024.56	3607.24	-3607.11	37.19	3607.26159	179.47	0.30	SimplePulse
143	14396.00	90.17	178.17	94.00	11024.94	3701.18	-3701.02	37.19	3701.21121	179.42	1.24	SimplePulse
144	14491.00	89.97	179.32	95.00	11024.36	3796.17	-3796.00	39.27	3796.20297	179.41	1.23	SimplePulse
145	14586.00	90.00	179.81	95.00	11024.59	3891.17	-3891.00	39.99	3891.20233	179.43	0.52	SimplePulse
146	14680.00	89.83	180.48	94.00	11024.93	3985.16	-3985.00	39.76	3985.19414	179.43	0.74	SimplePulse
147	14775.00	89.97	179.99	95.00	11024.71	4080.16	-4079.99	39.37	4080.18446	179.45	0.53	SimplePulse
148	14869.00	89.76	180.37	194.00	11025.17	4274.15	-4273.99	38.76	4274.1683	179.49	0.52	SimplePulse
149	14959.00	89.76	179.91	90.00	11025.55	4364.14	-4363.99	38.54	4364.16146	179.49	0.31	SimplePulse
150	15154.00	89.76	179.98	95.00	11025.75	4458.91	-4458.99	39.63	4459.1583	179.51	0.27	SimplePulse
151	15241.00	89.76	179.99	87.00	11025.99	4546.14	-4545.99	39.10	4546.15721	179.51	0.73	SimplePulse
152	15315.00	89.76	179.39	74.00	11026.24	4620.14	-4619.98	39.89	4620.15641	179.51	0.01	PRO1