

Results of Directional Survey

API number:	30-025-41141		
OGRID:		Operator:	CIMAREX ENERGY CO.
		Property:	QUAIL 11 STATE # 3H

surface	ULSTR:	M	11	T	19S	R	34E
				330	FSL	530	FWL

BH Loc	ULSTR:	D	11	T	19S	R	34E
15124	MD	10861.5	TVD	403	FNL	617	FWL
				4877	FSL		

Top Perf/OH	ULSTR:	M	11	T	19S	R	34E
10940	MD	10762.1	TVD	704	FSL	580	FWL

Bot Perf/OH	ULSTR:	D	11	T	19S	R	34E
15095	MD	10861.6	TVD	432	FNL	618	FWL
				4848	FSL		

	MD	N/S	E/W	VD
	10916	351.22	50.07	10755.93
TOP PERFS/OH	10940	374.41	49.76	10762.11
	10947	381.17	49.67	10763.91
	15037	4459.72	90.93	10861.72
BOT PERFS/OH	15095	4517.65	88.08	10861.55
	15124	4546.61	86.66	10861.46

NEXT TO LAST	15037	4459.72	90.93	10861.72
LAST READING	15124	4546.61	86.66	10861.46
TD	15124	4546.61	86.66	10861.46

Surface Location	330	FS	530	FW
Projected BHL	4877	FS	617	FW
Location of				
Top Perfs/OH	704	FS	580	FW
Bottom Perfs/OH	4848	FS	618	FW

SUMMARY of Subsurface Locations

Surface Location	M-11-19S-34E	330	FS	530	FW	Vert. Depth
Top Perfs/OH	M-11-19S-34E	704	FS	580	FW	10762.11
Bottom Perfs/OH	D-11-19S-34E	4848	FS	618	FW	10861.55
Projected TD	D-11-19S-34E	4877	FS	617	FW	10861.46

JUN 09 2014

Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

PATHFINDER

A Schlumberger Company

April 4, 2014

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

HOBBS OCD

MAY 28 2014

RECEIVED

Re:

CLIENT: Cimarex Energy, Co.

WELL: Quail 11 State #3H

FIELD: Scharb; Bone Spring

RIG: Cactus 104

COUNTY: Lea

API NO: 30-025-41141

JOB NO: 14MLD0059

Sec 11, T19S, R34E 330 FSL 530 FWL

N 32.66848 W 103.53783

Enclosed, please find the original copy of the survey performed on the referenced well by PathFinder, 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 Ritch MWD	Quail 11 State #3H Original Hole	10314.00 Ft to 15037.00 Ft	March 25, 2014 to April 2, 2014	SlimPulse

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

Sincerely,

Joseph Hogan

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

PATHFINDER

A Schlumberger Company

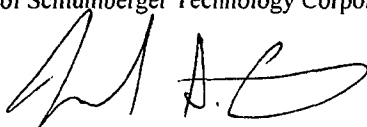
Well Reference:

Sec 11, T19S, R34E 330 FSL 530 FWL

N 32.66848 W 103.53783

I, Jesse Ritch certify that; I am employed by PathFinder, a division of Schlumberger Technology Corporation; that I did on the day(s) of March 25, 2014 through April 02, 2014, conduct or supervise the taking of the SlimPulse surveys from a depth of 10314.00 feet to a depth of 15037.00 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 Quail 11 State #3H Well (Original Hole) API No. 30-025-41141 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
Jesse Ritch
MWD


on behalf of

Subscribed and Sworn to before me this 4th day of April (month) 2014 (yr)

My Commission expires:

September 5, 2016

Michelle Ellwood

Notary Public

Midland, Texas

(County State)



SCHLUMBERGER

Survey Report

8-May-2014

Client.....: Cimarex Energy Co.
Field.....: Scharb; Bone Spring

Well.....: Quail 11 State 3H
API number.....: 30-025-41141
Engineer.....: J. Collinsworth

Spud date.....: 6-Mar-14
Last survey date.....: 1-Apr-14
Total accepted surveys...: 71
MD of first survey.....: 10314.00 ft
MD of last survey.....: 15037.00 ft

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

Latitude.....: 32° 40' 6.517" N
Longitude.....: 103° 32' 16.204" 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.....: 3982.00
KB above permanent.....: 4002.00
DF above permanent.....: 4002.00

--- Vertical section origin ---

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

--- Grid Coordinates ---

NAD27 Texas State Plane, Central Zone, US Feet
X.....: 786130.10 ft
Y.....: 607840.30 ft

Azimuth from Vsect Origin to target: 1.09 degrees

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

---Run1--- Calculation Date: 25-Mar-2014
Location G....: 998.8643 mgn Tolerance G...: 2.50 mgn
Location B....: 48586.98 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.52341 degrees Tolerance Dip: 0.45 degrees

---Run2--- Calculation Date: 28-Mar-2014
Location G....: 998.8643 mgn Tolerance G...: 2.50 mgn
Location B....: 48586.02 nT Tolerance B...: 300.00 nT
Magnetic Dip: 60.52316 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2013

---Run1---

Magnetic dec (+E/-).....: 7.37612 degrees
Grid Conv (+E/-).....: 0.42941 degrees
Total Azim Corr (+E/-)....: 6.94671 degrees

---Run2---

Magnetic dec (+E/-).....: 7.3752 degrees
Grid Conv (+E/-).....: 0.42941 degrees
Total Azim Corr (+E/-)....: 6.94579 degrees

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

0 = Uncorrected 3 = Sag Corrected

1 = DMAG Corrected 2 = 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	103.00	0.22	34.55	103.00	103.00	0.16	0.16	0.11	0.19775	34.55	0.21	MultiShot	0
3	270.00	0.09	238.46	167.00	270.00	0.36	0.36	0.18	0.40199	26.95	0.18	MultiShot	0
4	331.00	0.09	250.85	61.00	331.00	0.32	0.32	0.10	0.33178	16.84	0.03	MultiShot	0
5	451.00	0.09	275.10	120.00	451.00	0.29	0.30	-0.09	0.30752	343.60	0.03	MultiShot	0
6	566.00	0.62	152.15	115.00	566.00	-0.24	-0.25	0.11	0.27208	155.25	0.59	MultiShot	0
7	660.00	0.22	52.13	94.00	660.00	-0.58	-0.59	0.49	0.7664	139.87	0.74	MultiShot	0
8	756.00	0.22	46.64	96.00	755.99	-0.33	-0.35	0.77	0.84743	114.12	0.02	MultiShot	0
9	851.00	0.09	41.85	95.00	850.99	-0.15	-0.17	0.96	0.97005	99.82	0.14	MultiShot	0
10	945.00	0.09	81.13	94.00	944.99	-0.08	-0.10	1.08	1.08258	95.25	0.06	MultiShot	0
11	1040.00	0.09	18.56	95.00	1039.99	0.01	-0.02	1.18	1.17562	90.82	0.10	MultiShot	0

12	1135.00	0.09	7.83	95.00	1134.99	0.15	0.13	1.21	1.21614	83.97	0.02	MultiShot	0
13	1230.00	0.09	71.73	95.00	1229.99	0.25	0.23	1.29	1.30991	80.11	0.10	MultiShot	0
14	1325.00	0.09	88.96	95.00	1324.99	0.28	0.25	1.44	1.45745	80.13	0.03	MultiShot	0
15	1421.00	0.22	154.96	96.00	1420.99	0.11	0.08	1.59	1.5915	86.97	0.21	MultiShot	0
16	1495.00	0.00	147.61	74.00	1494.99	-0.01	-0.04	1.65	1.65001	91.55	0.30	MultiShot	0
17	1611.00	0.09	92.16	116.00	1610.99	-0.01	-0.05	1.74	1.74111	91.58	0.08	MultiShot	0
18	1706.00	0.09	87.55	95.00	1705.99	-0.01	-0.05	1.89	1.89015	91.44	0.01	MultiShot	0
19	1802.00	0.09	309.96	96.00	1801.99	0.04	0.00	1.91	1.90709	89.88	0.17	MultiShot	0
20	1867.00	0.00	293.74	65.00	1866.99	0.07	0.04	1.87	1.86832	88.87	0.14	MultiShot	0
21	1985.00	0.22	29.54	118.00	1984.99	0.27	0.23	1.98	1.99343	83.26	0.19	MultiShot	0
22	2079.00	0.22	9.94	94.00	2078.99	0.61	0.57	2.10	2.17543	74.85	0.08	MultiShot	0
23	2174.00	0.31	357.77	95.00	2173.99	1.05	1.01	2.12	2.34737	64.65	0.11	MultiShot	0
24	2269.00	0.31	16.93	95.00	2268.99	1.55	1.51	2.19	2.65568	55.40	0.11	MultiShot	0
25	2364.00	0.31	24.14	95.00	2363.99	2.03	1.99	2.37	3.0905	49.96	0.04	MultiShot	0
26	2460.00	0.40	17.77	96.00	2459.99	2.59	2.54	2.57	3.61964	45.34	0.10	MultiShot	0
27	2555.00	0.22	150.26	95.00	2554.99	2.75	2.70	2.77	3.8667	45.68	0.60	MultiShot	0
28	2649.00	0.62	22.86	94.00	2648.98	3.07	3.01	3.05	4.29011	45.37	0.82	MultiShot	0
29	2745.00	0.62	28.44	96.00	2744.98	4.02	3.95	3.50	5.27843	41.57	0.06	MultiShot	0
30	2840.00	0.70	31.56	95.00	2839.97	4.97	4.90	4.05	6.35419	39.61	0.09	MultiShot	0
31	2935.00	0.88	36.75	95.00	2934.96	6.06	5.97	4.79	7.65829	38.73	0.20	MultiShot	0
32	3030.00	1.01	40.13	95.00	3029.95	7.31	7.20	5.77	9.22441	38.70	0.15	MultiShot	0
33	3125.00	1.01	43.03	95.00	3124.94	8.58	8.45	6.88	10.89664	39.14	0.05	MultiShot	0
34	3220.00	1.19	39.74	95.00	3219.92	9.97	9.82	8.08	12.71859	39.44	0.20	MultiShot	0
35	3315.00	1.19	44.04	95.00	3314.90	11.47	11.29	9.40	14.6886	39.77	0.09	MultiShot	0
36	3410.00	1.19	38.55	95.00	3409.88	12.97	12.77	10.70	16.65867	39.95	0.12	MultiShot	0
37	3506.00	1.19	40.35	96.00	3505.86	14.54	14.31	11.96	18.65208	39.90	0.04	MultiShot	0
38	3589.00	1.41	33.76	83.00	3588.83	16.06	15.82	13.09	20.5295	39.61	0.32	MultiShot	0
39	3684.00	1.32	23.04	95.00	3683.81	18.06	17.79	14.17	22.74509	38.53	0.28	MultiShot	0
40	3779.00	1.32	28.36	95.00	3778.78	20.05	19.76	15.12	24.88137	37.41	0.13	MultiShot	0
41	3874.00	1.41	27.96	95.00	3873.76	22.06	21.76	16.18	27.11738	36.64	0.10	MultiShot	0
42	3969.00	0.40	70.63	95.00	3968.74	23.22	22.90	17.04	28.54781	36.66	1.21	MultiShot	0
43	4064.00	0.48	100.73	95.00	4063.74	23.27	22.94	17.75	29.00189	37.73	0.25	MultiShot	0
44	4158.00	0.62	68.04	94.00	4157.74	23.41	23.05	18.61	29.62594	38.91	0.36	MultiShot	0
45	4253.00	0.40	102.50	95.00	4252.73	23.54	23.17	19.41	30.22733	39.94	0.39	MultiShot	0
46	4349.00	0.79	69.66	96.00	4348.73	23.72	23.33	20.35	30.96286	41.10	0.52	MultiShot	0
47	4444.00	0.79	92.34	95.00	4443.72	23.94	23.53	21.62	31.95872	42.58	0.33	MultiShot	0
48	4538.00	0.48	72.83	94.00	4537.71	24.05	23.62	22.65	32.72478	43.79	0.40	MultiShot	0
49	4633.00	0.88	79.16	95.00	4632.71	24.33	23.88	23.74	33.67319	44.84	0.43	MultiShot	0
50	4728.00	0.62	60.66	95.00	4727.70	24.74	24.27	24.91	34.77458	45.75	0.37	MultiShot	0
51	4824.00	0.70	66.63	96.00	4823.69	25.24	24.75	25.90	35.82602	46.29	0.11	MultiShot	0
52	4919.00	0.79	73.05	95.00	4918.68	25.69	25.17	27.06	36.9583	47.06	0.13	MultiShot	0
53	5014.00	0.79	47.65	95.00	5013.68	26.34	25.81	28.17	38.20301	47.51	0.37	MultiShot	0
54	5109.00	0.70	151.75	95.00	5108.67	26.28	25.74	28.93	38.71926	48.34	1.24	MultiShot	0
55	5204.00	0.70	149.16	95.00	5203.66	25.29	24.73	29.50	38.49246	50.03	0.03	MultiShot	0
56	5299.00	0.79	156.15	95.00	5298.66	24.20	23.63	30.06	38.23742	51.83	0.13	MultiShot	0
57	5394.00	0.70	150.44	95.00	5393.65	23.11	22.53	30.61	38.00777	53.65	0.12	MultiShot	0
58	5489.00	1.01	133.96	95.00	5488.64	22.04	21.44	31.50	38.10593	55.76	0.41	MultiShot	0
59	5584.00	0.88	140.55	95.00	5583.62	20.91	20.30	32.57	38.37456	58.07	0.18	MultiShot	0
60	5679.00	0.79	122.44	95.00	5678.61	20.02	19.38	33.58	38.77556	60.01	0.29	MultiShot	0
61	5774.00	1.10	121.87	95.00	5773.60	19.21	18.55	34.91	39.53302	62.02	0.33	MultiShot	0
62	5870.00	0.48	126.97	96.00	5869.59	18.50	17.82	36.02	40.18285	63.67	0.65	MultiShot	0
63	5965.00	0.62	142.75	95.00	5964.59	17.87	17.17	36.64	40.46821	64.89	0.22	MultiShot	0
64	6060.00	1.01	177.95	95.00	6059.58	16.63	15.93	36.99	40.2685	66.70	0.65	MultiShot	0
65	6155.00	1.01	186.95	95.00	6154.56	14.96	14.26	36.91	39.5719	68.88	0.17	MultiShot	0
66	6250.00	1.32	191.44	95.00	6249.54	13.05	12.35	36.60	38.62478	71.35	0.34	MultiShot	0
67	6344.00	1.19	187.04	94.00	6343.52	11.02	10.32	36.26	37.70245	74.11	0.17	MultiShot	0
68	6439.00	1.32	185.06	95.00	6438.50	8.94	8.26	36.04	36.97719	77.10	0.14	MultiShot	0
69	6534.00	1.01	213.06	95.00	6533.48	7.14	6.46	35.49	36.07439	79.68	0.67	MultiShot	0
70	6629.00	1.10	204.36	95.00	6628.46	5.59	4.93	34.66	35.00678	81.90	0.19	MultiShot	0
71	6724.00	0.88	211.65	95.00	6723.45	4.13	3.48	33.90	34.0769	84.14	0.27	MultiShot	0
72	6818.00	0.48	214.07	94.00	6817.44	3.17	2.54	33.30	33.39608	85.64	0.43	MultiShot	0
73	6913.00	0.70	219.65	95.00	6912.44	2.39	1.76	32.71	32.75367	86.92	0.24	MultiShot	0
74	7008.00	0.40	195.26	95.00	7007.43	1.61	1.00	32.25	32.264	88.23	0.39	MultiShot	0
75	7103.00	0.31	206.95	95.00	7102.43	1.06	0.45	32.04	32.04799	89.20	0.12	MultiShot	0
76	7198.00	0.62	214.07	95.00	7197.43	0.40	-0.21	31.64	31.64114	90.38	0.33	MultiShot	0
77	7293.00	0.40	203.43	95.00	7292.42	-0.34	-0.94	31.22	31.23474	91.72	0.25	MultiShot	0
78	7388.00	0.79	203.74	95.00	7387.42	-1.25	-1.84	30.83	30.88011	93.42	0.41	MultiShot	0
79	7483.00	0.79	208.66	95.00	7482.41	-2.44	-3.02	30.25	30.39736	95.69	0.07	MultiShot	0
80	7578.00	0.79	185.15	95.00	7577.40	-3.67	-4.24	29.87	30.17427	98.08	0.34	MultiShot	0
81	7673.00	0.70	202.64	95.00	7672.39	-4.86	-5.43	29.59	30.0865	100.40	0.26	MultiShot	0
82	7768.00	0.48	187.75	95.00	7767.39	-5.80	-6.36	29.32	29.99736	102.24	0.28	MultiShot	0
83	7863.00	0.48	181.64	95.00	7862.38	-6.59	-7.15	29.25	30.11205	103.74	0.05	MultiShot	0
84	7958.00	0.62	170.74	95.00	7957.38	-7.50	-8.06	29.32	30.40853	105.37	0.18	MultiShot	0
85	8052.00	0.62	202.95	94.00	8051.37	-8.47	-9.03	29.21	30.56861	107.18	0.37	MultiShot	0
86	8147.00	0.70	189.77	95.00	8146.37	-9.52	-10.07	28.91	30.61104	109.21	0.18	MultiShot	0
87	8242.00	0.48	263.77	95.00	8241.36	-10.14	-10.69	28.41	30.356	110.62	0.77	MultiShot	0
88	8337.00	1.01	301.96	95.00	8336.36	-9.77	-10.29	27.31	29.18002	110.65	0.74	MultiShot	0
89	8432.00	1.10	298.84	95.00	8431.34	-8.91	-9.41	25.80	27.45803	110.03	0.11	MultiShot	0
90	8527.00	1.32	315.76	95.00	8526.32	-7.72	-8.18	24.23	25.57854	108.65	0.44	MultiShot	0
91	8622.00	1.41	301.17	95.00	8621.29	-6.36	-6.79	22.47	23.4755	106.82	0.38	MultiShot	0
92	8717.00	1.01	300.47	95.00	8716.27	-5.37	-5.76	20.75	21.53504	105.52	0.42	MultiShot	0
93	8812.00	1.19	337.34	95.00	8811.25	-4.05	-4.43	19.65	20.14069	102.70	0.75	MultiShot	0
94	8908.00	1.01	336.37	96.00	8907.24	-2.37	-2.73	18.92	19.12102	98.22	0.19	MultiShot	0
95	9003.00	0.62	15.74	95.00	9002.23	-1.11	-1.47	18.73	18.78622	94.49	0.70	MultiShot	0

96	9099.00	0.22	86.54	96.00	9098.23	-0.60	-0.96	19.05	19.07757	92.88	0.61	MultiShot	0
97	9194.00	0.31	198.03	95.00	9193.23	-0.83	-1.19	19.16	19.19305	93.57	0.46	MultiShot	0
98	9289.00	0.09	141.47	95.00	9288.22	-1.13	-1.50	19.12	19.18129	94.47	0.29	MultiShot	0
99	9384.00	0.48	354.87	95.00	9383.22	-0.79	-1.16	19.13	19.16876	93.46	0.59	MultiShot	0
100	9541.00	0.70	333.64	157.00	9540.22	0.71	0.36	18.65	18.65251	88.91	0.20	MultiShot	0
101	9636.00	0.48	283.55	95.00	9635.21	1.31	0.97	18.00	18.03066	86.92	0.57	MultiShot	0
102	9731.00	0.70	283.55	95.00	9730.21	1.52	1.20	17.05	17.09564	85.98	0.23	MultiShot	0
103	9826.00	0.48	295.15	95.00	9825.20	1.81	1.50	16.13	16.19914	84.67	0.26	MultiShot	0
104	9921.00	0.62	335.93	95.00	9920.20	2.44	2.14	15.56	15.70612	82.16	0.43	MultiShot	0
105	10016.00	0.79	348.85	95.00	10015.19	3.54	3.25	15.22	15.56695	77.94	0.24	MultiShot	0
106	10111.00	0.79	341.33	95.00	10110.18	4.80	4.52	14.89	15.55694	73.12	0.11	MultiShot	0
107	10190.00	0.88	316.55	79.00	10189.17	5.75	5.47	14.30	15.30718	69.05	0.47	MultiShot	0
108	10314.00	3.27	9.10	124.00	10313.09	9.92	9.65	14.20	17.17	55.79	2.27	SlimPulse	0
109	10346.00	7.41	15.32	32.00	10344.94	12.83	12.55	14.89	19.47033	49.88	13.07	SlimPulse	0
110	10378.00	11.41	15.24	32.00	10376.51	17.90	17.59	16.27	23.96197	42.75	12.50	SlimPulse	0
111	10410.00	12.51	13.15	32.00	10407.81	24.36	24.02	17.89	29.95218	36.67	3.69	SlimPulse	0
112	10443.00	15.59	13.29	33.00	10439.82	32.19	31.82	19.72	37.43779	31.79	9.34	SlimPulse	0
113	10473.00	19.57	13.37	30.00	10468.41	41.05	40.64	21.81	46.12188	28.22	13.27	SlimPulse	0
114	10504.00	23.48	15.76	31.00	10497.25	52.10	51.64	24.69	57.23863	25.55	12.92	SlimPulse	0
115	10538.00	26.37	12.90	34.00	10528.08	66.05	65.52	28.22	71.34139	23.30	9.21	SlimPulse	0
116	10570.00	30.47	12.10	32.00	10556.21	80.98	80.39	31.51	86.34525	21.40	12.85	SlimPulse	0
117	10597.00	34.37	11.35	27.00	10579.00	95.20	94.56	34.44	100.64095	20.01	14.53	SlimPulse	0
118	10628.00	39.06	11.84	31.00	10603.84	113.42	112.71	38.17	119.0002	18.71	15.13	SlimPulse	0
119	10663.00	44.24	10.54	35.00	10629.99	136.31	135.52	42.67	142.08198	17.48	15.02	SlimPulse	0
120	10695.00	48.65	7.75	32.00	10652.03	159.27	158.41	46.33	165.05056	16.30	15.17	SlimPulse	0
121	10726.00	52.19	4.74	31.00	10671.78	183.06	182.16	48.91	188.61242	15.03	13.64	SlimPulse	0
122	10758.00	56.31	1.56	32.00	10690.48	209.00	208.08	50.32	214.07924	13.59	15.19	SlimPulse	0
123	10789.00	60.60	0.10	31.00	10706.69	235.42	234.49	50.69	239.90737	12.20	14.41	SlimPulse	0
124	10821.00	63.62	0.01	32.00	10721.66	263.69	262.77	50.72	267.62024	10.92	9.44	SlimPulse	0
125	10852.00	66.84	359.74	31.00	10734.65	291.83	290.91	50.66	295.29135	9.88	10.41	SlimPulse	0
126	10884.00	70.66	359.35	32.00	10746.24	321.64	320.73	50.42	324.67001	8.93	12.02	SlimPulse	0
127	10916.00	74.10	359.33	32.00	10755.93	352.12	351.22	50.07	354.77389	8.11	10.72	SlimPulse	0
128	10947.00	76.05	359.14	31.00	10763.91	382.05	381.17	49.67	384.39505	7.42	6.33	SlimPulse	0
129	10979.00	76.40	358.77	32.00	10771.54	413.11	412.25	49.10	415.16046	6.79	1.57	SlimPulse	0
130	11017.00	76.52	358.83	38.00	10780.43	450.02	449.18	48.33	451.77438	6.14	0.36	SlimPulse	1
131	11048.00	77.76	358.41	31.00	10787.33	480.22	479.40	47.60	481.75237	5.67	4.21	SlimPulse	1
132	11080.00	79.17	357.73	32.00	10793.73	511.53	510.73	46.54	512.84635	5.21	4.87	SlimPulse	1
133	11112.00	80.80	357.28	32.00	10799.30	542.98	542.21	45.17	544.08968	4.76	5.28	SlimPulse	1
134	11143.00	82.47	356.99	31.00	10803.81	573.57	572.84	43.64	574.50183	4.36	5.47	SlimPulse	1
135	11175.00	84.16	356.89	32.00	10807.53	605.27	604.58	41.94	606.03113	3.97	5.29	SlimPulse	1
136	11207.00	86.03	356.79	32.00	10810.27	637.06	636.41	40.18	637.67838	3.61	5.85	SlimPulse	1
137	11239.00	87.91	356.82	32.00	10811.96	668.93	668.32	38.40	669.41763	3.29	5.88	SlimPulse	1
138	11335.00	87.66	356.64	96.00	10815.67	764.58	764.09	32.93	764.79649	2.47	0.32	SlimPulse	1
139	11431.00	87.70	356.94	96.00	10819.55	860.23	859.86	27.56	860.29945	1.84	0.32	SlimPulse	1
140	11526.00	88.08	357.71	95.00	10823.05	954.96	954.69	23.13	954.9693	1.39	0.90	SlimPulse	1
141	11621.00	88.31	358.81	95.00	10826.04	1049.79	1049.60	20.24	1049.79198	1.10	1.18	SlimPulse	1
142	11715.00	88.48	359.97	94.00	10828.68	1143.71	1143.55	19.24	1143.71483	0.96	1.25	SlimPulse	1
143	11810.00	88.48	0.74	95.00	10831.20	1238.67	1238.52	19.83	1238.67573	0.92	0.81	SlimPulse	1
144	11905.00	88.42	0.93	95.00	10833.77	1333.63	1333.47	21.22	1333.64083	0.91	0.21	SlimPulse	1
145	12000.00	88.25	0.82	95.00	10836.53	1428.59	1428.42	22.67	1428.60065	0.91	0.21	SlimPulse	1
146	12095.00	88.21	0.68	95.00	10839.46	1523.55	1523.37	23.91	1523.55496	0.90	0.15	SlimPulse	1
147	12190.00	88.38	0.40	95.00	10842.29	1618.50	1618.32	24.80	1618.51101	0.88	0.34	SlimPulse	1
148	12285.00	88.69	0.91	95.00	10844.72	1713.47	1713.28	25.89	1713.47885	0.87	0.63	SlimPulse	1
149	12380.00	88.41	0.78	95.00	10847.12	1808.43	1808.24	27.29	1808.44831	0.86	0.32	SlimPulse	1
150	12474.00	88.62	1.65	94.00	10849.56	1902.40	1902.19	29.28	1902.41411	0.88	0.95	SlimPulse	1
151	12569.00	88.41	3.71	95.00	10852.02	1997.33	1997.05	33.72	1997.3325	0.97	2.18	SlimPulse	1
152	12664.00	88.51	5.02	95.00	10854.57	2092.14	2091.74	40.95	2092.13676	1.12	1.38	SlimPulse	1
153	12759.00	88.27	5.69	95.00	10857.24	2186.84	2186.28	49.81	2186.85078	1.31	0.75	SlimPulse	1
154	12854.00	88.52	5.77	95.00	10859.90	2281.49	2280.77	59.29	2281.54216	1.49	0.28	SlimPulse	1
155	12886.00	88.66	5.89	32.00	10860.69	2313.37	2312.60	62.54	2313.44196	1.55	0.58	SlimPulse	1
156	12949.00	88.56	6.04	63.00	10862.22	2376.12	2375.24	69.09	2376.24138	1.67	0.29	SlimPulse	1
157	13044.00	88.38	5.55	95.00	10864.76	2470.77	2469.72	78.68	2470.97017	1.82	0.55	SlimPulse	1
158	13138.00	88.52	4.94	94.00	10867.30	2564.49	2563.29	87.27	2564.77406	1.95	0.67	SlimPulse	1
159	13233.00	89.24	4.35	95.00	10869.15	2659.29	2657.96	94.96	2659.65356	2.05	0.98	SlimPulse	1
160	13328.00	89.79	3.37	95.00	10869.96	2754.17	2752.74	101.35	2754.60267	2.11	1.18	SlimPulse	1
161	13423.00	89.85	2.15	95.00	10870.26	2849.13	2847.62	105.93	2849.59447	2.13	1.29	SlimPulse	1
162	13518.00	90.13	1.21	95.00	10870.27	2944.12	2942.58	108.71	2944.59047	2.12	1.03	SlimPulse	1
163	13613.00	89.99	0.35	95.00	10870.17	3039.12	3037.57	110.01	3039.56449	2.07	0.92	SlimPulse	1
164	13707.00	90.13	359.97	94.00	10870.08	3133.11	3131.57	110.27	3133.51337	2.02	0.43	SlimPulse	1
165	13802.00	89.96	0.03	95.00	10870.00	3228.09	3226.57	110.27	3228.45619	1.96	0.19	SlimPulse	1
166	13897.00	90.03	359.94	95.00	10870.01	3323.07	3321.57	110.24	3323.4015	1.90	0.12	SlimPulse	1
167	13992.00	90.39	0.31	95.00	10869.66	3418.06	3416.57	110.45	3418.35617	1.85	0.54	SlimPulse	1
168	14086.00	90.09	1.74	94.00	10869.27	3512.05	3510.55	112.13	3512.34328	1.83	1.55	SlimPulse	1
169	14182.00	90.26	2.54	96.00	10868.97	3608.04	3606.48	115.72	3608.34065	1.84	0.85	SlimPulse	1
170	14277.00	90.22	3.58	95.00	10868.58	3702.98	3701.35	120.79	3703.31745	1.87	1.10	SlimPulse	1
171	14372.00	90.30	2.93	95.00	10868.15	3797.91	3796.19	126.18	3798.28886	1.90	0.69	SlimPulse	1
172	14467.00	91.43	0.05	95.00	10866.71	3892.88	3891.14	128.65	3893.26407	1.89	3.26	SlimPulse	1
173	14562.00	90.71	356.02	95.00	10864.94	3987.71	3986.05	125.40	3988.01711	1.80	4.31	SlimPulse	1
174	14658.00	90.96	353.98	96.00	10863.54	4083.16	4081.66	117.03	4083.34202	1.64	2.14	SlimPulse	1
175	14753.00	90.41	355.90	95.00	10862.40	4177.60	4176.28	108.65	4177.69598	1.49	2.10	SlimPulse	1
176	14848.00	89.89	356.01	95.00	10862.15	4272.21	4271.05	101.95	4272.26215	1.37	0.56	SlimPulse	1
177	14942.00	90.25	356.71	94.00	10862.05	4365.89	4364.86	95.98	4365.91033	1.26	0.83	SlimPulse	1
178	15037.00	90.17	357.19	95.00	10861.72	4460.64	4459.72	90.93	4460.64656	1.17	0.51	SlimPulse	1
179	15124.00	90.17	357.19	87.00	10861.46	4547.44	4546.61	86.66	4547.44057	1.			