

Reservoir Development

PathFinder, a Schlumberger Company
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

PATHFINDER
A Schlumberger Company

May 29, 2015

Cimarex
600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

Sec 33, T26S, R27E Eddy NM
N 32.00060 W 104.19686

CLIENT: Cimarex Energy Co.
WELL: Klein 33 Federal 6H
FIELD: Wolfcamp
RIG: Cactus 112
COUNTY: Eddy
API NO: 30-015-42034-01
JOB NO: 14MLD0404-ST01

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>
Jacob Collinsworth MWD	Klein 33 Federal 6H Side Track	9647.00 Ft to 16345.00 Ft	February 1, 2015 to February 18, 2015	SlimPulse

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

Joseph Hogan
Field Service Manager

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 01 2015

RECEIVED

Reservoir Development

PathFinder, a Schlumberger Company
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

PATHFINDER
A Schlumberger Company

Well Reference:

Sec 33, T26S, R27E Eddy NM
N 32.00060 W 104.19686

I, Jacob Collinsworth certify that; I am employed by PathFinder, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 01, 2015 through February 18, 2015, conduct or supervise the taking of the SlimPulse surveys from a depth of 9647.00 feet to a depth of 16345.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by PathFinder, 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 Klein 33 Federal 6H Well (Side Track) API No. 30-015-42034-01 and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by PathFinder, a division of Schlumberger Technology Corporation.

SIGNED ON BEHALF OF JACOB COLLINSWORTH BY JOE HOGAN

By
Jacob Collinsworth
MWD



Subscribed and Sworn to before me this 29th day of May (month) 2015 (yr)

My Commission expires:

September 5, 2016

Michelle Ellwood
Notary Public

(signature)

Midland, TX
(County State)



SCHLUMBERGER
Survey Report

18-Jun-2015

Client..... Cimarex Energy Co.
Field..... Wolfcamp

Well..... Klein 33 Federal Com 6H S
API number..... 30-015-42034-01
Engineer..... J. Collinsworth

County..... Eddy
State..... New Mexico
Rig..... Cactus 112

Spud date..... 7-Dec-14
Last survey date..... 18-Feb-15
Total accepted surveys... 81
MD of first survey..... 9647.00 ft
MD of last survey..... 16345.00 ft

Latitude..... 32° 0' 2.155" N
Longitude..... 104° 11' 48.678" W

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

--- Depth reference ---
Permanent datum..... MSL
Depth reference..... Driller's Depth
GI above permanent..... 3185.50
KB above permanent..... 3210.50
DF above permanent..... 3210.50

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

--- Grid Coordinates ---
NAD83 New Mexico State Planes, Eastern Zone, US Feet
X..... 583643.94 ft
Y..... 363983.98 ft

Azimuth from Vsect Origin to target: 359.48 degrees

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

---Run1--- Calculation Date: 5-Feb-2015
Location G..... 998.68745 mgn Tolerance G...: 2.50 mgn
Location B..... 48182.71 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.723 degrees Tolerance Dip: 0.45 degrees

---Run2--- Calculation Date: 8-Feb-2015
Location G..... 998.69149 mgn Tolerance G...: 2.50 mgn
Location B..... 48182.71 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.72 degrees Tolerance Dip: 0.45 degrees

---Run3--- Calculation Date: 10-Feb-2015
Location G..... 998.69149 mgn Tolerance G...: 2.50 mgn
Location B..... 48182.71 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.72 degrees Tolerance Dip: 0.45 degrees

---Run4--- Calculation Date: 14-Feb-2015
Location G..... 998.69149 mgn Tolerance G...: 2.50 mgn
Location B..... 48182.71 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.72 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2014

---Run1---
Magnetic dec (+E/W-)..... 7.602 degrees
Grid Conv (+E/W-)..... 0.07232 degrees
Total Azim Corr (+E/W-)... 7.52968 degrees

---Run2---
Magnetic dec (+E/W-)..... 7.602 degrees
Grid Conv (+E/W-)..... 0.07232 degrees
Total Azim Corr (+E/W-)... 7.52968 degrees

---Run3---
Magnetic dec (+E/W-)..... 7.602 degrees
Grid Conv (+E/W-)..... 0.07232 degrees
Total Azim Corr (+E/W-)... 7.52968 degrees

---Run4---
Magnetic dec (+E/W-)..... 7.602 degrees
Grid Conv (+E/W-)..... 0.07232 degrees
Total Azim Corr (+E/W-)... 7.52968 degrees

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

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

===== Survey List =====
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 -999.25 0.00 0.00 0.00 0.00 0 90.00 0.00 TIP 0

2	83.00	0.31	307.05	83.00	83.00	0.14	0.14	-0.18	0.22454	307.05	0.37	SingleShot	0
3	144.00	0.09	275.67	61.00	144.00	0.24	0.24	-0.36	0.43118	303.73	0.39	SingleShot	0
4	177.00	0.00	225.92	33.00	177.00	0.25	0.24	-0.38	0.45422	302.19	0.27	SingleShot	0
5	234.00	0.09	256.59	57.00	234.00	0.24	0.23	-0.43	0.48659	298.43	0.16	SingleShot	0
6	297.00	0.22	327.50	63.00	297.00	0.33	0.32	-0.54	0.62969	300.77	0.33	SingleShot	0
7	356.00	0.09	320.09	59.00	356.00	0.46	0.45	-0.63	0.77742	305.66	0.22	SingleShot	0
8	429.00	0.22	268.35	73.00	429.00	0.50	0.49	-0.81	0.94705	301.38	0.24	SingleShot	0
9	521.00	0.09	274.74	92.00	521.00	0.50	0.49	-1.06	1.16683	295.05	0.14	SingleShot	0
10	616.00	0.22	302.02	95.00	616.00	0.61	0.60	-1.29	1.41785	294.90	0.15	SingleShot	0
11	740.00	0.09	66.57	124.00	740.00	0.77	0.76	-1.40	1.59261	298.58	0.23	SingleShot	0
12	863.00	0.22	265.75	123.00	863.00	0.80	0.78	-1.55	1.73235	296.86	0.25	SingleShot	0
13	985.00	0.09	349.26	123.00	985.00	0.88	0.86	-1.80	1.99399	295.56	0.19	SingleShot	0
14	1109.00	0.09	52.86	123.00	1109.00	1.03	1.01	-1.74	2.01353	300.22	0.08	SingleShot	0
15	1231.00	0.09	240.38	122.00	1231.00	1.04	1.02	-1.75	2.02479	300.38	0.15	SingleShot	0
16	1326.00	0.22	77.50	95.00	1326.00	1.04	1.03	-1.63	1.92937	302.14	0.32	SingleShot	0
17	1420.00	0.09	140.38	94.00	1420.00	1.02	1.01	-1.41	1.73395	305.57	0.21	SingleShot	0
18	1515.00	0.09	23.56	95.00	1515.00	1.03	1.02	-1.33	1.67821	307.41	0.16	SingleShot	0
19	1610.00	0.09	252.80	95.00	1610.00	1.08	1.07	-1.37	1.73933	307.80	0.17	SingleShot	0
20	1705.00	0.22	69.61	95.00	1705.00	1.12	1.11	-1.27	1.68859	310.98	0.33	SingleShot	0
21	1801.00	0.22	355.69	96.00	1801.00	1.37	1.36	-1.12	1.75564	320.54	0.28	SingleShot	0
22	1874.00	0.09	77.50	73.00	1874.00	1.52	1.51	-1.07	1.84894	324.63	0.31	SingleShot	0
23	1965.00	0.22	158.62	91.00	1964.99	1.37	1.36	-0.94	1.65181	325.45	0.25	SingleShot	0
24	2060.00	0.40	187.31	95.00	2059.99	0.87	0.86	-0.91	1.2551	313.36	0.24	SingleShot	0
25	2154.00	0.40	192.03	94.00	2153.99	0.22	0.22	-1.02	1.04515	281.89	0.04	SingleShot	0
26	2249.00	0.49	177.70	95.00	2248.99	-0.51	-0.51	-1.08	1.19246	244.42	0.15	SingleShot	0
27	2344.00	0.31	158.14	95.00	2343.99	-1.15	-1.16	-0.96	1.50749	219.73	0.24	SingleShot	0
28	2438.00	0.40	195.02	94.00	2437.98	-1.70	-1.71	-0.95	1.96005	209.12	0.26	SingleShot	0
29	2534.00	0.49	206.66	96.00	2533.98	-2.39	-2.40	-1.22	2.69699	207.01	0.13	SingleShot	0
30	2629.00	0.71	225.74	95.00	2628.98	-3.16	-3.18	-1.83	3.66539	209.93	0.31	SingleShot	0
31	2724.00	1.02	227.63	95.00	2723.97	-4.13	-4.16	-2.88	5.05452	214.67	0.33	SingleShot	0
32	2819.00	1.10	228.12	95.00	2818.95	-5.30	-5.34	-4.18	6.77732	218.07	0.08	SingleShot	0
33	2914.00	0.22	143.51	95.00	2913.94	-6.05	-6.09	-4.75	7.72381	217.94	1.16	SingleShot	0
34	3009.00	0.31	70.00	95.00	3008.94	-6.11	-6.15	-4.40	7.56139	215.58	0.34	SingleShot	0
35	3104.00	0.22	58.86	95.00	3103.94	-5.93	-5.97	-4.00	7.18515	213.84	0.11	SingleShot	0
36	3199.00	0.22	45.94	95.00	3198.94	-5.71	-5.75	-3.71	6.84251	212.88	0.05	SingleShot	0
37	3294.00	0.22	81.95	95.00	3293.94	-5.56	-5.59	-3.40	6.54781	211.31	0.14	SingleShot	0
38	3389.00	0.22	32.99	95.00	3388.94	-5.39	-5.42	-3.12	6.25155	209.97	0.19	SingleShot	0
39	3484.00	0.22	258.83	95.00	3483.94	-5.27	-5.30	-3.20	6.19072	211.15	0.43	SingleShot	0
40	3578.00	0.22	252.49	94.00	3577.94	-5.35	-5.39	-3.55	6.45267	213.40	0.03	SingleShot	0
41	3674.00	0.62	236.76	96.00	3673.94	-5.69	-5.73	-4.16	7.07986	216.00	0.43	SingleShot	0
42	3768.00	0.71	231.73	94.00	3767.93	-6.32	-6.37	-5.04	8.12307	218.39	0.11	SingleShot	0
43	3863.00	0.80	236.70	95.00	3862.92	-7.04	-7.10	-6.06	9.33176	220.50	0.12	SingleShot	0
44	3958.00	0.71	254.43	95.00	3957.91	-7.55	-7.62	-7.18	10.46963	223.31	0.26	SingleShot	0
45	4050.00	0.88	75.42	92.00	4049.91	-7.53	-7.59	-7.05	10.3595	222.87	1.73	SingleShot	0
46	4148.00	1.02	52.64	98.00	4147.90	-6.82	-6.87	-5.63	8.88279	219.30	0.41	SingleShot	0
47	4243.00	0.62	23.25	95.00	4242.89	-5.85	-5.89	-4.75	7.56626	218.90	0.60	SingleShot	0
48	4337.00	0.62	18.05	94.00	4336.88	-4.90	-4.94	-4.39	6.6089	221.65	0.06	SingleShot	0
49	4433.00	0.40	23.07	96.00	4432.88	-4.10	-4.14	-4.10	5.82384	224.75	0.23	SingleShot	0
50	4527.00	0.49	12.32	94.00	4526.87	-3.41	-3.44	-3.89	5.19063	228.47	0.13	SingleShot	0
51	4622.00	0.49	344.46	95.00	4621.87	-2.62	-2.65	-3.91	4.72352	235.83	0.25	SingleShot	0
52	4717.00	0.40	329.03	94.00	4716.87	-1.94	-1.98	-4.19	4.63092	244.72	0.16	SingleShot	0
53	4812.00	0.62	328.11	95.00	4811.86	-1.21	-1.26	-4.63	4.79724	254.82	0.23	SingleShot	0
54	4907.00	0.22	356.79	95.00	4906.86	-0.59	-0.64	-4.91	4.95277	262.60	0.46	SingleShot	0
55	5002.00	0.22	23.78	95.00	5001.86	-0.25	-0.29	-4.85	4.85678	266.59	0.11	SingleShot	0
56	5097.00	0.09	71.28	95.00	5096.86	-0.06	-0.10	-4.70	4.70499	268.80	0.18	SingleShot	0
57	5192.00	0.09	222.92	95.00	5191.86	-0.09	-0.13	-4.68	4.68588	268.42	0.18	SingleShot	0
58	5287.00	0.40	228.34	95.00	5286.86	-0.36	-0.40	-4.98	4.99901	265.37	0.33	SingleShot	0
59	5382.00	0.49	227.55	95.00	5381.86	-0.85	-0.90	-5.53	5.60267	260.77	0.09	SingleShot	0
60	5477.00	0.31	195.64	95.00	5476.85	-1.37	-1.42	-5.90	6.06771	256.46	0.29	SingleShot	0
61	5572.00	0.49	16.64	95.00	5571.85	-1.23	-1.28	-5.85	5.99015	257.68	0.84	SingleShot	0
62	5666.00	1.41	324.32	94.00	5665.84	0.10	0.05	-6.41	6.41176	270.41	1.25	SingleShot	0
63	5762.00	2.70	358.38	96.00	5761.78	3.33	3.27	-7.16	7.87377	294.51	1.80	SingleShot	0
64	5856.00	2.83	4.90	94.00	5855.67	7.85	7.79	-7.03	10.49317	317.94	0.36	SingleShot	0
65	5951.00	1.59	7.52	95.00	5950.60	11.49	11.43	-6.66	13.23073	329.80	1.31	SingleShot	0
66	6046.00	1.19	344.54	95.00	6045.57	13.75	13.69	-6.75	15.26391	333.77	0.71	SingleShot	0
67	6142.00	0.88	332.51	96.00	6141.56	15.37	15.31	-7.35	16.98109	334.34	0.39	SingleShot	0
68	6236.00	0.88	334.32	94.00	6235.54	16.67	16.60	-8.00	18.42442	334.27	0.03	SingleShot	0
69	6331.00	1.81	298.93	95.00	6330.52	18.07	17.98	-9.63	20.39629	331.83	1.27	SingleShot	0
70	6426.00	2.03	290.12	95.00	6425.47	19.40	19.29	-12.52	22.99348	327.01	0.39	SingleShot	0
71	6520.00	1.33	254.82	94.00	6519.43	19.71	19.57	-15.14	24.74293	322.28	1.30	SingleShot	0
72	6615.00	0.71	234.24	95.00	6614.41	19.09	18.94	-16.68	25.23682	318.63	0.75	SingleShot	0
73	6711.00	0.71	272.45	96.00	6710.41	18.78	18.62	-17.76	25.72702	316.36	0.48	SingleShot	0
74	6804.00	0.62	315.77	93.00	6803.40	19.17	19.00	-18.68	26.64838	315.49	0.54	SingleShot	0
75	6899.00	1.10	33.47	95.00	6898.39	20.30	20.13	-18.54	27.36687	317.36	1.20	SingleShot	0
76	6995.00	0.62	11.84	96.00	6994.38	21.57	21.41	-17.92	27.92095	320.06	0.60	SingleShot	0
77	7090.00	0.40	344.24	95.00	7089.38	22.39	22.23	-17.91	28.5466	321.15	0.34	SingleShot	0
78	7185.00	0.62	310.04	95.00	7184.37	23.05	22.88	-18.39	29.35602	321.21	0.39	SingleShot	0
79	7279.00	0.40	309.86	94.00	7278.37	23.59	23.42	-19.03	30.17712	320.90	0.23	SingleShot	0
80	7375.00	0.71	76.61	96.00	7374.37	23.94	23.77	-18.71	30.25165	321.79	1.04	SingleShot	0
81	7469.00	1.59	91.86	94.00	7468.35	24.02	23.86	-16.84	29.20765	324.79	0.98	SingleShot	0
82	7564.00	2.30	68.99	95.00	7563.29	24.63	24.50	-13.74	28.09548	330.71	1.09	SingleShot	0
83	7658.00	2.30	82.34	94.00	7657.22	25.52	25.43	-10.11	27.36916	338.31	0.57	SingleShot	0
84	7754.00	1.41	67.49	96.00	7753.17	26.20	26.14	-7.11	27.09143	344.78	1.05	SingleShot	0
85	7849.00	0.88	46.74	95.00	7848.15	27.14	27.09	-5.50	27.64147	348.52	0.70	SingleShot	0
86	7944.00	0.49	104.68	95.00	7943.14	27.53	27.49	-4.58	27.86395	350.54	0.79	SingleShot	0
87	8039.00	1.10	157.26	95.00	8038.13	26.57	26.54	-3.83	26.81661	351.78	0.94	SingleShot	0
88	8134.00	1.02	174.40	95.00	8133.12	24.89	24.86	-3.40	25.0899	352.22	0.34	SingleShot	0
89	8229.00	1.33	195.73	95.00	8228.10	22.99	22.96	-3.61	23.23876	351.05	0.56	SingleShot	0
90	8327.00	1.33	201.37	98.00	8326.07	20.84	20.80	-4.34	21.24942	348.22	0.13	SingleShot	0
91	8422.00	1.41	206.97	9									

100	9235.00	4.11	335.52	32.00	9233.76	5.58	5.42	-17.11	17.95411	287.59	10.16	SingleShot	0
101	9266.00	7.49	341.70	31.00	9264.60	8.52	8.36	-18.21	20.03526	294.65	11.07	SingleShot	0
102	9298.00	9.84	342.47	32.00	9296.23	13.12	12.94	-19.69	23.56211	303.32	7.35	SingleShot	0
103	9329.00	11.80	345.22	31.00	9326.68	18.73	18.53	-21.30	28.23157	311.03	6.54	SingleShot	0
104	9361.00	15.55	351.34	32.00	9357.77	26.15	25.94	-22.78	34.52154	318.72	12.55	SingleShot	0
105	9393.00	18.69	354.71	32.00	9388.35	35.51	35.29	-23.90	42.61882	325.90	10.29	SingleShot	0
106	9425.00	21.97	359.48	32.00	9418.35	46.60	46.38	-24.42	52.4214	332.23	11.48	SingleShot	0
107	9457.00	24.98	4.14	32.00	9447.70	59.33	59.11	-23.99	63.7957	337.91	11.04	SingleShot	0
108	9489.00	28.44	6.06	32.00	9476.28	73.64	73.43	-22.70	76.85206	342.83	11.14	SingleShot	0
109	9520.00	31.21	5.89	31.00	9503.18	88.96	88.77	-21.09	91.23899	346.63	8.94	SingleShot	0
110	9552.00	35.62	3.43	32.00	9529.88	106.50	106.33	-19.68	108.13239	349.51	14.41	SingleShot	0
111	9584.00	40.05	1.57	32.00	9555.15	126.10	125.93	-18.84	127.33147	351.49	14.29	SingleShot	0
112	9615.00	44.10	0.63	31.00	9578.15	146.86	146.69	-18.45	147.85	352.83	13.22	SingleShot	0
113	9647.00	49.09	0.15	32.00	9600.14	170.09	169.93	-18.30	170.91682	353.85	15.63	SlimPulse	0
114	9679.00	53.21	1.50	32.00	9620.21	195.00	194.85	-17.93	195.67004	354.74	13.29	SlimPulse	0
115	9735.87	55.06	3.76	56.87	9653.53	241.01	240.88	-15.81	241.39691	356.25	4.58	SlimPulse	13
116	9766.59	58.06	11.48	30.72	9670.47	266.35	266.25	-12.38	266.53812	357.34	23.12	SlimPulse	13
117	9799.07	62.12	15.91	32.48	9686.67	293.62	293.58	-5.70	293.63791	358.89	17.19	SlimPulse	13
118	9831.00	65.67	11.60	31.93	9700.72	321.40	321.42	1.10	321.42622	0.20	16.44	SlimPulse	0
119	9860.00	69.15	12.27	29.00	9711.86	347.54	347.62	6.63	347.67993	1.09	12.19	SlimPulse	13
120	9897.00	73.88	11.51	37.00	9723.58	381.80	381.95	13.86	382.19768	2.08	12.93	SlimPulse	0
121	9928.00	76.98	9.66	31.00	9731.38	411.24	411.43	19.36	411.88982	2.69	11.52	SlimPulse	0
122	9957.00	80.60	7.59	29.00	9737.02	439.32	439.55	23.63	440.18769	3.08	14.33	SlimPulse	0
123	9991.00	83.62	8.12	34.00	9741.69	472.64	472.91	28.23	473.75274	3.42	9.02	SlimPulse	0
124	10019.00	87.25	9.21	28.00	9743.92	500.18	500.50	32.44	501.54802	3.71	13.53	SlimPulse	0
125	10048.00	89.38	8.69	29.00	9744.77	528.77	529.13	36.95	530.41907	3.99	7.57	SlimPulse	0
126	10082.00	89.35	8.58	34.00	9745.15	562.34	562.74	42.05	564.31209	4.27	0.33	SlimPulse	0
127	10177.00	90.28	6.03	95.00	9745.46	656.44	656.96	54.14	659.18857	4.71	2.86	SlimPulse	0
128	10271.00	90.21	1.48	94.00	9745.07	750.16	750.73	60.29	753.1515	4.59	4.85	SlimPulse	0
129	10367.00	90.38	359.02	96.00	9744.58	846.14	846.72	60.71	848.89849	4.10	2.56	SlimPulse	0
130	10461.00	90.21	357.30	94.00	9744.10	940.11	940.67	57.69	942.43917	3.51	1.84	SlimPulse	0
131	10555.00	90.21	356.56	94.00	9743.76	1034.01	1034.54	52.66	1035.87475	2.91	0.78	SlimPulse	0
132	10651.00	90.17	357.22	96.00	9743.44	1129.92	1130.39	47.45	1131.38849	2.40	0.69	SlimPulse	0
133	10746.00	90.07	357.08	95.00	9743.24	1224.84	1225.28	42.73	1226.02022	2.00	0.18	SlimPulse	0
134	10840.00	89.14	357.48	94.00	9743.89	1318.76	1319.17	38.27	1319.72111	1.66	1.07	SlimPulse	0
135	10935.00	89.31	357.37	95.00	9745.17	1413.69	1414.06	34.00	1414.46987	1.38	0.22	SlimPulse	0
136	11030.00	89.21	357.66	95.00	9746.40	1508.63	1508.96	29.88	1509.2596	1.13	0.33	SlimPulse	0
137	11124.00	89.24	357.14	94.00	9747.67	1602.56	1602.86	25.62	1603.06317	0.92	0.55	SlimPulse	0
138	11219.00	89.17	357.37	95.00	9748.98	1697.48	1697.74	21.07	1697.87128	0.71	0.25	SlimPulse	0
139	11313.00	89.21	357.26	94.00	9750.31	1791.40	1791.63	16.67	1791.70537	0.53	0.13	SlimPulse	0
140	11409.00	89.04	357.13	96.00	9751.78	1887.32	1887.50	11.97	1887.53954	0.36	0.22	SlimPulse	0
141	11503.00	89.04	356.95	94.00	9753.36	1981.22	1981.36	7.12	1981.37586	0.21	0.20	SlimPulse	0
142	11597.00	89.79	358.66	94.00	9754.32	2075.17	2075.28	3.52	2075.28797	0.10	1.99	SlimPulse	0
143	11692.00	89.73	359.11	95.00	9754.72	2170.16	2170.27	1.67	2170.26644	0.04	0.48	SlimPulse	0
144	11787.00	89.73	358.52	95.00	9755.18	2265.15	2265.24	-0.30	2265.2439	359.99	0.62	SlimPulse	0
145	11882.00	89.59	359.32	95.00	9755.75	2360.15	2360.22	-2.09	2360.22542	359.95	0.86	SlimPulse	0
146	11976.00	89.72	358.36	94.00	9756.31	2454.14	2454.20	-3.99	2454.20571	359.91	1.03	SlimPulse	0
147	12070.00	89.62	359.06	94.00	9756.85	2548.13	2548.18	-6.11	2548.1838	359.86	0.75	SlimPulse	0
148	12165.00	89.48	359.00	95.00	9757.59	2643.12	2643.16	-7.72	2643.1712	359.83	0.16	SlimPulse	0
149	12260.00	90.17	358.82	95.00	9757.87	2738.12	2738.14	-9.53	2738.15827	359.80	0.75	SlimPulse	0
150	12354.00	90.38	358.61	94.00	9757.42	2832.11	2832.12	-11.63	2832.1408	359.76	0.31	SlimPulse	0
151	12449.00	89.55	359.44	95.00	9757.48	2927.10	2927.10	-13.25	2927.13152	359.74	1.23	SlimPulse	0
152	12545.00	89.48	359.20	96.00	9758.29	3023.10	3023.09	-14.39	3023.12553	359.73	0.26	SlimPulse	0
153	12639.00	88.93	359.70	94.00	9759.58	3117.09	3117.08	-15.29	3117.1148	359.72	0.79	SlimPulse	0
154	12734.00	88.48	0.45	95.00	9761.72	3212.06	3212.05	-15.17	3212.08804	359.73	0.92	SlimPulse	0
155	12828.00	88.11	0.65	94.00	9764.52	3306.00	3306.01	-14.26	3306.03685	359.75	0.46	SlimPulse	0
156	12923.00	88.17	0.85	95.00	9767.60	3400.93	3400.95	-13.02	3400.97278	359.78	0.22	SlimPulse	0
157	13018.00	88.35	1.16	95.00	9770.48	3495.85	3495.89	-11.35	3495.90779	359.81	0.38	SlimPulse	0
158	13112.00	88.35	1.27	94.00	9773.19	3589.77	3589.83	-9.35	3589.84128	359.85	0.12	SlimPulse	0
159	13206.00	88.25	1.21	94.00	9775.98	3683.68	3683.77	-7.31	3683.77277	359.89	0.13	SlimPulse	0
160	13301.00	88.55	1.08	95.00	9778.64	3778.60	3778.71	-5.41	3778.71317	359.92	0.35	SlimPulse	0
161	13395.00	88.42	0.71	94.00	9781.12	3872.54	3872.66	-3.94	3872.66679	359.94	0.42	SlimPulse	0
162	13491.00	88.35	359.88	96.00	9783.83	3968.49	3968.62	-3.45	3968.62595	359.95	0.86	SlimPulse	0
163	13586.00	88.52	359.32	95.00	9786.42	4063.46	4063.59	-4.10	4063.58837	359.94	0.62	SlimPulse	0
164	13680.00	88.73	359.58	94.00	9788.68	4157.43	4157.55	-5.00	4157.55776	359.93	0.35	SlimPulse	0
165	13776.00	89.18	358.75	96.00	9790.44	4253.41	4253.53	-6.40	4253.53222	359.91	0.98	SlimPulse	0
166	13871.00	90.41	357.90	95.00	9790.78	4348.39	4348.48	-9.18	4348.49318	359.88	1.58	SlimPulse	0
167	13966.00	90.41	358.15	95.00	9790.09	4443.35	4443.42	-12.46	4443.4418	359.84	0.26	SlimPulse	0
168	14060.00	90.38	357.73	94.00	9789.44	4537.32	4537.36	-15.84	4537.3887	359.80	0.44	SlimPulse	0
169	14155.00	90.48	357.86	95.00	9788.73	4632.27	4632.29	-19.49	4632.32907	359.76	0.17	SlimPulse	0
170	14249.00	90.38	357.91	94.00	9788.02	4726.24	4726.22	-22.96	4726.27716	359.72	0.12	SlimPulse	0
171	14343.00	90.55	358.25	94.00	9787.26	4820.20	4820.17	-26.11	4820.23609	359.69	0.40	SlimPulse	0
172	14438.00	89.97	357.70	95.00	9786.83	4915.17	4915.10	-29.47	4915.19254	359.66	0.85	SlimPulse	0
173	14532.00	90.45	358.00	94.00	9786.50	5009.13	5009.04	-32.99	5009.14568	359.62	0.61	SlimPulse	0
174	14627.00	89.79	358.72	95.00	9786.30	5104.11	5104.00	-35.71	5104.12179	359.60	1.02	SlimPulse	0
175	14722.00	90.07	358.99	95.00	9786.41	5199.10	5198.98	-37.60	5199.11372	359.59	0.40	SlimPulse	0
176	14818.00	89.45	359.91	96.00	9786.81	5295.10	5294.97	-38.52	5295.111	359.58	1.16	SlimPulse	0
177	14912.00	90.10	1.63	94.00	9787.18	5389.07	5388.96	-37.25	5389.08647	359.60	1.96	SlimPulse	0
178	15006.00	89.79	1.92	94.00	9787.27	5483.00	5482.91	-34.35	5483.01997	359.64	0.45	SlimPulse	0
179	15100.00	89.86	2.31	94.00	9787.55	5576.90	5576.85	-30.88	5576.93326	359.68	0.43	SlimPulse	0
180	15196.00	89.66	2.34	96.00	9787.95	5672.78	5672.77	-26.98	5672.83199	359.73	0.22	SlimPulse	0
181	15289.00	89.66	1.49	93.00	9788.51	5765.69	5765.71	-23.87	5765.76278	359.76	0.91	SlimPulse	0
182	15383.00	89.90	0.86	94.00	9788.88	5859.65	5859.69	-21.94	5859.73333	359.79	0.72	SlimPulse	0
183	15478.00	90.10	0.8										