

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

30-025-41832

January 13, 2015

HOBBS OCD

Cimarex
600 N MARIENFELD STREET SUITE 600

APR 23 2015

MIDLAND .TX 79701

RECEIVED

Re:

Sec 29, T23S, R32E Lea NM
N 32.28227 W 103.70052

CLIENT: Cimarex Energy Co.
WELL: James 29 Federal 36H
FIELD: Sand Dunes, Bone Spring
RIG: Cactus 104
COUNTY: Lea
API NO: 30-025-41832
JOB NO: 15MLD0007

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 White MWD	James 29 Federal 36H Original Hole	8861.00 Ft to 13802.00 Ft	November 20, 2014 to November 28, 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

MAY 04 2015

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PathFinder, a Schlumberger Company
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Oklahoma City, Oklahoma 73127 USA
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A Schlumberger Company

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Well Reference:

Sec 29, T23S, R32E Lea NM
N 32.28227 W 103.70052

I, Jesse White certify that; I am employed by PathFinder, a division of Schlumberger Technology Corporation; that I did on the day(s) of November 20, 2014 through November 28, 2014, conduct or supervise the taking of the SlimPulse surveys from a depth of 8861.00 feet to a depth of 13802.00 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 James 29 Federal 36H Well (Original Hole) API No. 30-025-41832 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 JESSE WHITE BY JOE HOGAN

By
Jesse White
MWD



Subscribed and Sworn to before me this 13 day of January (month) 2015 (yr)

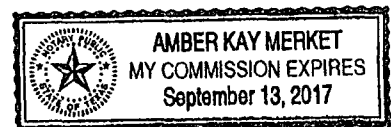
My Commission expires:

September 13, 2017

Amber Kay Merket
Notary Public

(signature)

Midland County, Texas
(County State)



SCHLUMBERGER

Survey Report

12-Jan-2015

Client.....: Cimarex Energy Co
Field.....: Sand Dunes, Bone Spring

Well.....: James 29 Federal 36H
API number.....: 30-025-41832
Engineer.....: J. White

Spud date.....: 7-Nov-14
Last survey date.....: 28-Nov-14
Total accepted surveys...: 72
MD of first survey.....: 8861.00 ft
MD of last survey.....: 13802.00 ft

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

Latitude.....: 32° 16' 56.246" N
Longitude.....: 103° 42' 1.782" 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.....: 3682.00
KB above permanent.....: 3702.00
DF above permanent.....: 3702.00

----- Vertical section origin -----

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

----- Grid Coordinates -----

NAD83 New Mexico State Planes, Eastern Zone, US Foot
X.....: 736908.10 ft
Y.....: 467007.00 ft

Azimuth from Vsect Origin to target: 181.09 degrees

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

-----Run1----- Calculation Date: 21-Nov-2014
Location G.....: 998.69367 mgn Tolerance G....: 2.50 mgn
Location B.....: 48423.3 nT Tolerance B....: 300.00 nT
Magnetic Dip: 60.126 degrees Tolerance Dip: 0.45 degrees

-----Run2----- Calculation Date: 24-Nov-2014
Location G.....: 998.69149 mgn Tolerance G....: 2.50 mgn
Location B.....: 48423.3 nT Tolerance B....: 300.00 nT
Magnetic Dip: 60.13 degrees Tolerance Dip: 0.45 degrees

HDGM Model: 2014

-----Run1-----

Magnetic dec (+E/-W).....: 7.199 degrees
Grid Conv (+E/-W).....: 0.338 degrees
Total Azim Corr (+E/-W)....: 6.861 degrees

-----Run2-----

Magnetic dec (+E/-W).....: 7.199 degrees
Grid Conv (+E/-W).....: 0.338 degrees
Total Azim Corr (+E/-W)....: 6.861 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	56.00	0.40	0.00	56.00	56.00	-0.20	0.20	0.00	0.19548	360.00	0.71	Other	0
3	166.00	0.49	147.38	110.00	166.00	-0.19	0.18	0.25	0.31286	54.14	0.78	Other	0
4	205.00	0.49	138.55	39.00	205.00	0.07	-0.08	0.45	0.46123	100.26	0.19	Other	0
5	337.00	0.40	187.39	132.00	336.99	0.95	-0.96	0.77	1.23124	141.40	0.29	Other	0
6	500.00	0.22	144.69	163.00	499.99	1.76	-1.78	0.88	1.98545	153.82	0.17	Other	0
7	620.00	0.31	194.49	120.00	619.99	2.27	-2.28	0.93	2.46536	157.89	0.20	Other	0
8	793.00	0.09	151.70	173.00	792.99	2.84	-2.86	0.88	2.9879	162.97	0.15	Other	0
9	888.00	0.31	202.55	95.00	887.99	3.14	-3.16	0.81	3.26256	165.59	0.28	Other	0
10	983.00	0.40	188.98	95.00	982.99	3.71	-3.72	0.66	3.78311	169.93	0.13	Other	0

11	1077.00	0.62	209.47	94.00	1076.98	4.48	-4.49	0.36	4.50609	175.41	0.30	Other	0
12	1172.00	0.62	216.08	95.00	1171.98	5.36	-5.35	-0.20	5.35812	182.09	0.08	Other	0
13	1297.00	0.31	180.96	125.00	1296.97	6.25	-6.24	-0.60	6.26797	185.49	0.33	Other	0
14	1392.00	0.40	180.17	95.00	1391.97	6.84	-6.83	-0.60	6.85454	185.06	0.09	Other	0
15	1488.00	0.40	177.48	96.00	1487.97	7.51	-7.50	-0.59	7.52095	184.51	0.02	Other	0
16	1584.00	0.31	211.94	96.00	1583.97	8.06	-8.05	-0.71	8.08441	185.06	0.24	Other	0
17	1678.00	0.62	201.23	94.00	1677.96	8.76	-8.74	-1.03	8.80344	186.73	0.34	Other	0
18	1773.00	0.62	202.73	95.00	1772.96	9.72	-9.70	-1.42	9.79888	188.31	0.02	Other	0
19	1870.00	0.49	175.45	97.00	1869.95	10.62	-10.59	-1.59	10.7116	188.52	0.30	Other	0
20	1964.00	0.49	205.64	94.00	1963.95	11.39	-11.36	-1.73	11.4873	188.66	0.27	Other	0
21	2059.00	0.49	196.60	95.00	2058.95	12.15	-12.11	-2.02	12.27937	189.47	0.08	Other	0
22	2154.00	0.71	205.64	95.00	2153.94	13.08	-13.03	-2.39	13.2495	190.40	0.25	Other	0
23	2251.00	0.62	220.27	97.00	2250.94	14.03	-13.97	-2.99	14.29059	192.08	0.20	Other	0
24	2346.00	0.71	225.12	95.00	2345.93	14.85	-14.78	-3.74	15.24746	194.20	0.11	Other	0
25	2441.00	0.49	224.98	95.00	2440.92	15.57	-15.48	-4.44	16.10948	196.01	0.23	Other	0
26	2536.00	0.49	210.04	95.00	2535.92	16.21	-16.12	-4.93	16.86158	197.02	0.13	Other	0
27	2633.00	0.49	214.36	97.00	2632.92	16.92	-16.82	-5.38	17.66293	197.72	0.04	Other	0
28	2724.00	0.62	231.90	91.00	2723.91	17.56	-17.45	-5.98	18.44716	198.93	0.23	Other	0
29	2818.00	0.71	234.94	94.00	2817.91	18.23	-18.10	-6.86	19.35482	200.76	0.10	Other	0
30	2913.00	0.71	241.42	95.00	2912.90	18.86	-18.72	-7.86	20.30082	202.78	0.08	Other	0
31	3009.00	0.62	242.13	96.00	3008.89	19.41	-19.25	-8.84	21.1786	204.67	0.09	Other	0
32	3104.00	0.80	230.62	95.00	3103.89	20.09	-19.91	-9.81	22.19115	206.23	0.24	Other	0
33	3198.00	0.71	243.45	94.00	3197.88	20.79	-20.58	-10.84	23.26092	207.76	0.20	Other	0
34	3292.00	0.88	227.72	94.00	3291.87	21.55	-21.33	-11.89	24.4195	209.14	0.29	Other	0
35	3389.00	0.71	232.43	97.00	3388.86	22.44	-22.20	-12.92	25.68197	210.20	0.19	Other	0
36	3484.00	0.88	228.90	95.00	3483.85	23.30	-23.03	-13.93	26.92169	211.17	0.19	Other	0
37	3580.00	0.49	234.33	96.00	3579.84	24.04	-23.76	-14.82	28.00396	211.96	0.41	Other	0
38	3675.00	1.10	230.40	95.00	3674.83	24.87	-24.58	-15.86	29.24804	212.83	0.64	Other	0
39	3767.00	0.62	240.85	92.00	3766.82	25.70	-25.38	-16.97	30.53344	213.77	0.55	Other	0
40	3863.00	0.62	256.58	96.00	3862.82	26.09	-25.76	-17.93	31.38245	214.84	0.18	Other	0
41	3958.00	0.71	245.17	95.00	3957.81	26.48	-26.12	-18.96	32.28039	215.98	0.17	Other	0
42	4054.00	0.49	220.40	96.00	4053.81	27.06	-26.68	-19.77	33.21048	216.53	0.35	Other	0
43	4149.00	0.71	212.07	95.00	4148.80	27.87	-27.49	-20.35	34.20259	216.50	0.25	Other	0
44	4243.00	0.88	201.23	94.00	4242.79	29.05	-28.66	-20.92	35.48038	216.12	0.24	Other	0
45	4338.00	1.41	179.00	95.00	4337.77	30.90	-30.51	-21.16	37.12809	214.75	0.72	Other	0
46	4432.00	1.33	166.24	94.00	4431.75	33.12	-32.72	-20.88	38.81824	212.54	0.33	Other	0
47	4528.00	0.31	142.89	96.00	4527.73	34.40	-34.01	-20.46	39.69214	211.03	1.10	Other	0
48	4624.00	0.49	116.97	96.00	4623.73	34.78	-34.41	-19.94	39.76512	210.09	0.26	Other	0
49	4682.00	0.62	133.23	58.00	4681.73	35.10	-34.73	-19.49	39.82681	209.29	0.35	Other	0
50	4812.00	0.80	128.43	130.00	4811.72	36.12	-35.78	-18.26	40.17134	207.04	0.15	Other	0
51	4907.00	0.88	103.36	95.00	4906.71	36.68	-36.36	-17.03	40.15275	205.10	0.39	Other	0
52	5003.00	0.80	96.75	96.00	5002.70	36.90	-36.61	-15.65	39.81487	203.15	0.13	Other	0
53	5098.00	0.88	115.48	95.00	5097.69	37.27	-37.00	-14.33	39.68083	201.18	0.30	Other	0
54	5193.00	0.71	104.77	95.00	5192.68	37.71	-37.47	-13.11	39.6916	199.28	0.24	Other	0
55	5288.00	0.62	126.32	95.00	5287.67	38.14	-37.92	-12.12	39.81052	197.73	0.28	Other	0
56	5383.00	0.62	133.72	95.00	5382.67	38.79	-38.58	-11.34	40.21083	196.38	0.08	Other	0
57	5479.00	0.62	125.92	96.00	5478.66	39.44	-39.24	-10.54	40.63428	195.04	0.09	Other	0
58	5574.00	0.40	102.96	95.00	5573.66	39.80	-39.62	-9.80	40.81356	193.90	0.31	Other	0
59	5669.00	0.40	119.62	95.00	5668.66	40.02	-39.86	-9.19	40.90318	192.98	0.12	Other	0
60	5764.00	0.49	132.22	95.00	5763.65	40.45	-40.29	-8.60	41.202	192.05	0.14	Other	0
61	5859.00	0.62	110.58	95.00	5858.65	40.89	-40.75	-7.82	41.49129	190.86	0.26	Other	0
62	5954.00	0.88	122.53	95.00	5953.64	41.44	-41.32	-6.72	41.86415	189.24	0.32	Other	0
63	6050.00	0.88	134.73	96.00	6049.63	42.33	-42.24	-5.58	42.60274	187.52	0.19	Other	0
64	6144.00	0.88	110.06	94.00	6143.62	43.07	-42.99	-4.39	43.21486	185.83	0.40	Other	0
65	6240.00	1.19	112.57	96.00	6239.60	43.67	-43.63	-2.77	43.71518	183.64	0.33	Other	0
66	6335.00	1.10	128.83	95.00	6334.58	44.59	-44.58	-1.15	44.59236	181.48	0.35	Other	0
67	6430.00	1.10	124.02	95.00	6429.57	45.65	-45.66	0.31	45.66047	179.61	0.10	Other	0
68	6526.00	1.19	116.09	96.00	6525.55	46.57	-46.61	1.97	46.65505	177.58	0.19	Other	0
69	6621.00	0.88	114.99	95.00	6620.53	47.28	-47.36	3.52	47.48598	175.75	0.33	Other	0
70	6717.00	0.88	118.21	96.00	6716.52	47.91	-48.02	4.84	48.25835	174.25	0.05	Other	0
71	6812.00	1.19	110.19	95.00	6811.51	48.57	-48.70	6.41	49.12013	172.51	0.36	Other	0
72	6900.00	1.10	127.24	88.00	6899.49	49.37	-49.53	7.94	50.15897	170.90	0.40	Other	0
73	6996.00	0.88	138.26	96.00	6995.47	50.45	-50.63	9.16	51.45684	169.75	0.30	Other	0
74	7090.00	0.80	142.05	94.00	7089.46	51.49	-51.69	10.04	52.65786	169.00	0.10	Other	0
75	7186.00	0.80	147.16	96.00	7185.45	52.57	-52.78	10.82	53.88016	168.41	0.07	Other	0
76	7281.00	1.02	151.17	95.00	7280.44	53.85	-54.08	11.59	55.30799	167.91	0.24	Other	0
77	7374.00	0.88	135.44	93.00	7373.43	55.07	-55.31	12.49	56.70664	167.28	0.32	Other	0
78	7469.00	1.02	155.31	95.00	7468.42	56.34	-56.60	13.35	58.15629	166.73	0.37	Other	0
79	7565.00	1.02	152.10	96.00	7564.40	57.86	-58.13	14.11	59.82187	166.36	0.06	Other	0
80	7661.00	0.80	154.61	96.00	7660.39	59.20	-59.49	14.80	61.30715	166.03	0.23	Other	0
81	7754.00	1.02	151.39	93.00	7753.38	60.50	-60.81	15.47	62.74532	165.72	0.24	Other	0
82	7848.00	0.80	173.03	94.00	7847.37	61.88	-62.19	15.95	64.20696	165.61	0.43	Other	0
83	7944.00	0.88	164.92	96.00	7943.36	63.25	-63.57	16.23	65.60873	165.68	0.15	Other	0
84	8040.00	1.10	168.84	96.00	8039.34	64.86	-65.19	16.60	67.26596	165.72	0.24	Other	0
85	8136.00	1.33	182.06	96.00	8135.32	66.87	-67.20	16.73	69.25613	166.02	0.38	Other	0
86	8229.00	1.33	190.61	93.00	8228.30	69.02	-69.34	16.50	71.27872	166.62	0.21	Other	0
87	8323.00	1.50	189.68	94.00	8322.27	71.31	-71.63	16.09	73.41322	167.34	0.18	Other	0
88	8418.00	1.10	169.15	95.00	8417.24	73.43	-73.75	16.05	75.47642	167.72	0.64	Other	0
89	8513.00	1.19	175.14	95.00	8512.22	75.30	-75.63	16.31	77.36638	167.83	0.16	Other	0
90	8609.00	1.19	159.10	96.00	8608.20	77.22	-77.55	16.75	79.34046	167.82	0.35	Other	0
91	8705.00	1.19	169.63	96.00	8704.18	79.12	-79.46	17.28	81.32226	167.73	0.23	Other	0
92	8800.00	1.10	177.26	95.00	8799.16	81.00	-81.35	17.50	83.20769	167.86	0.19	Other	0
93	8825.00	1.19	197.13	25.00	8824.16	81.49	-81.83	17.44	83.67105	167.97	1.62	Other	0

94	8861.00	1.27	195.37	36.00	8860.15	82.23	-82.58	17.22	84.35208	168.22	0.24	SlimPulse	0
95	8893.00	3.76	198.11	32.00	8892.12	83.58	-83.91	16.80	85.5791	168.68	7.78	SlimPulse	0
96	8924.00	7.62	202.58	31.00	8922.96	86.46	-86.78	15.70	88.18619	169.75	12.54	SlimPulse	0
97	8956.00	11.23	203.22	32.00	8954.52	91.33	-91.60	13.65	92.61404	171.52	11.28	SlimPulse	0
98	8988.00	15.35	203.95	32.00	8985.66	98.12	-98.34	10.70	98.92073	173.79	12.90	SlimPulse	0
99	9019.00	19.86	204.84	31.00	9015.20	106.72	-106.87	6.82	107.09145	176.35	14.57	SlimPulse	0
100	9051.00	24.48	205.59	32.00	9044.82	117.74	-117.79	1.68	117.80435	179.19	14.46	SlimPulse	0
101	9083.00	27.15	206.19	32.00	9073.63	130.39	-130.33	-4.41	134.18227	181.94	8.39	SlimPulse	0
102	9114.00	30.17	204.19	31.00	9100.83	143.96	-143.78	-10.73	144.18227	184.27	10.20	SlimPulse	0
103	9146.00	33.25	204.40	32.00	9128.05	159.42	-159.11	-17.65	160.08646	186.33	9.65	SlimPulse	0
104	9177.00	35.71	204.75	31.00	9153.60	175.51	-175.07	-24.95	176.83872	188.11	7.86	SlimPulse	0
105	9209.00	37.75	204.20	32.00	9179.24	193.08	-192.49	-32.87	195.27577	189.69	6.45	SlimPulse	0
106	9241.00	40.90	203.33	32.00	9203.99	211.79	-211.05	-41.04	215.0014	191.00	9.99	SlimPulse	0
107	9272.00	44.65	203.10	31.00	9226.74	231.29	-230.39	-49.34	235.61603	192.09	12.09	SlimPulse	0
108	9304.00	46.15	201.74	32.00	9249.21	252.51	-251.46	-58.02	258.06216	192.99	5.59	SlimPulse	0
109	9335.00	48.53	199.74	31.00	9270.22	273.98	-272.77	-66.09	280.66564	193.62	9.03	SlimPulse	0
110	9367.00	51.73	198.09	32.00	9290.73	297.36	-296.01	-74.04	305.12616	194.04	10.76	SlimPulse	0
111	9398.00	55.16	196.38	31.00	9309.19	321.28	-319.79	-81.41	329.9874	194.28	11.90	SlimPulse	0
112	9430.00	59.19	194.43	32.00	9326.54	347.33	-345.71	-88.54	356.86474	194.37	13.59	SlimPulse	0
113	9462.00	63.14	192.82	32.00	9341.97	374.69	-372.95	-95.13	384.88775	194.31	13.12	SlimPulse	0
114	9494.00	66.60	192.15	32.00	9355.56	403.08	-401.23	-101.39	413.84057	194.18	10.97	SlimPulse	0
115	9526.00	71.27	191.34	32.00	9367.06	432.42	-430.46	-107.47	443.66816	194.02	14.78	SlimPulse	0
116	9557.00	74.64	189.88	31.00	9376.14	461.65	-459.58	-112.92	473.25236	193.80	11.77	SlimPulse	0
117	9589.00	77.31	187.99	32.00	9383.89	492.40	-490.25	-117.74	504.18893	193.50	10.13	SlimPulse	0
118	9620.00	80.01	186.10	31.00	9389.99	522.63	-520.41	-121.46	534.39723	193.14	10.55	SlimPulse	0
119	9652.00	82.90	184.68	32.00	9394.74	554.18	-551.91	-124.43	565.76479	192.71	10.04	SlimPulse	0
120	9683.00	86.18	182.94	31.00	9397.70	586.96	-582.70	-126.48	596.2661	192.25	11.98	SlimPulse	0
121	9715.00	89.11	180.70	32.00	9399.01	616.90	-614.65	-127.49	627.73215	191.72	11.50	SlimPulse	0
122	9778.00	91.03	179.15	63.00	9398.94	679.94	-677.64	-127.41	689.51805	190.65	3.93	SlimPulse	0
123	9828.00	92.48	179.13	50.00	9397.41	729.89	-727.61	-126.66	738.55602	189.88	2.89	SlimPulse	0
124	9823.00	90.07	180.23	95.00	9395.30	824.83	-822.58	-126.13	832.19435	188.72	2.78	SlimPulse	0
125	10018.00	90.24	180.90	95.00	9395.04	919.83	-917.57	-127.07	926.3314	187.88	0.74	SlimPulse	0
126	10113.00	89.90	181.21	95.00	9394.92	1014.83	-1012.56	-128.82	1020.71971	187.25	0.48	SlimPulse	0
127	10208.00	88.72	181.00	95.00	9395.24	1109.82	-1107.54	-130.65	1115.21941	186.73	0.28	SlimPulse	0
128	10304.00	89.90	178.45	96.00	9395.56	1205.79	-1203.53	-130.19	1210.55126	186.17	2.66	SlimPulse	0
129	10395.00	90.38	176.47	95.00	9395.33	1300.59	-1298.43	-125.98	1304.52886	185.54	2.14	SlimPulse	0
130	10494.00	90.65	175.34	95.00	9394.47	1395.20	-1393.18	-119.20	1398.27371	184.89	1.22	SlimPulse	0
131	10589.00	90.55	175.61	95.00	9393.47	1489.74	-1487.88	-111.70	1492.06912	184.29	0.30	SlimPulse	0
132	10685.00	90.52	176.90	96.00	9392.58	1585.39	-1583.67	-105.43	1587.17626	183.81	1.35	SlimPulse	0
133	10779.00	90.55	177.60	94.00	9391.71	1679.01	-1677.56	-100.92	1680.59058	183.44	0.74	SlimPulse	0
134	10874.00	90.55	177.86	95.00	9390.79	1774.01	-1772.48	-97.15	1775.13894	183.14	0.28	SlimPulse	0
135	10969.00	90.65	178.04	95.00	9389.80	1868.86	-1867.41	-93.75	1869.76377	182.87	0.22	SlimPulse	0
136	11064.00	90.52	177.86	95.00	9388.83	1963.71	-1962.35	-90.35	1964.42505	182.64	0.23	SlimPulse	0
137	11159.00	90.34	179.48	95.00	9388.11	2058.62	-2057.31	-88.15	2059.20252	182.45	1.71	SlimPulse	0
138	11254.00	89.76	180.52	95.00	9388.03	2153.60	-2152.31	-88.15	2154.11761	182.35	1.25	SlimPulse	0
139	11349.00	89.00	180.32	95.00	9389.05	2248.59	-2247.30	-88.85	2249.06006	182.26	0.82	SlimPulse	0
140	11444.00	89.59	181.36	95.00	9390.22	2343.58	-2342.24	-90.25	2344.02314	182.21	1.25	SlimPulse	0
141	11539.00	88.93	181.63	95.00	9391.45	2438.57	-2437.24	-92.73	2439.00757	182.18	0.74	SlimPulse	0
142	11634.00	88.83	181.98	95.00	9393.30	2533.54	-2532.18	-95.71	2533.98734	182.16	0.38	SlimPulse	0
143	11729.00	89.38	182.36	95.00	9394.79	2628.51	-2627.10	-99.31	2628.97523	182.16	0.71	SlimPulse	0
144	11824.00	89.07	181.63	95.00	9396.07	2723.49	-2722.03	-102.61	2723.96542	182.16	0.83	SlimPulse	0
145	11919.00	88.76	181.03	95.00	9397.87	2818.47	-2816.99	-104.82	2818.9383	182.13	0.72	SlimPulse	0
146	12014.00	89.31	179.43	95.00	9399.46	2913.45	-2911.97	-105.20	2913.87068	182.07	1.78	SlimPulse	0
147	12109.00	90.41	177.15	95.00	9399.69	3008.32	-3006.92	-102.36	3008.66234	181.95	2.66	SlimPulse	0
148	12204.00	89.76	176.74	95.00	9399.55	3103.07	-3101.78	-97.30	3103.31053	181.80	0.81	SlimPulse	0
149	12299.00	88.56	177.25	95.00	9400.94	3197.82	-3196.64	-92.32	3197.97477	181.65	1.37	SlimPulse	0
150	12394.00	88.18	176.14	95.00	9403.65	3292.50	-3291.44	-86.84	3292.5888	181.51	1.24	SlimPulse	0
151	12489.00	88.52	177.32	95.00	9406.39	3387.18	-3386.25	-81.42	3387.22624	181.38	1.30	SlimPulse	0
152	12585.00	91.24	176.56	96.00	9406.59	3482.92	-3482.10	-76.30	3482.93686	181.26	2.94	SlimPulse	0
153	12679.00	91.96	176.62	94.00	9403.97	3576.60	-3575.90	-70.71	3576.59675	181.13	0.77	SlimPulse	0
154	12774.00	91.24	176.53	95.00	9401.32	3671.26	-3670.69	-65.04	3671.2664	181.02	0.77	SlimPulse	0
155	12868.00	92.24	177.64	94.00	9398.47	3764.99	-3764.52	-60.26	3765.00491	180.92	1.59	SlimPulse	0
156	12963.00	93.48	178.51	95.00	9393.73	3859.74	-3859.35	-57.07	3859.77003	180.85	1.59	SlimPulse	0
157	13058.00	93.58	178.95	95.00	9387.89	3954.47	-3954.14	-54.96	3954.52647	180.80	0.48	SlimPulse	0
158	13154.00	93.23	179.57	96.00	9382.18	4050.26	-4049.97	-53.73	4050.32262	180.76	0.73	SlimPulse	0
159	13249.00	93.82	180.16	95.00	9376.34	4145.05	-4144.79	-53.51	4145.13054	180.74	0.88	SlimPulse	0
160	13344.00	94.23	180.42	95.00	9369.67	4239.81	-4239.55	-53.99	4239.89301	180.73	0.51	SlimPulse	0
161	13439.00	94.38	180.69	95.00	9362.54	4334.54	-4334.28	-54.92	4334.62457	180.73	0.32	SlimPulse	0
162	13533.00	95.06	180.62	94.00	9354.80	4428.22	-4427.95	-55.99	4428.30537	180.72	0.73	SlimPulse	0
163	13629.00	96.00	180.00	96.00	9345.56	4523.76	-4523.50	-56.51	4523.8548	180.72	1.17	SlimPulse	0
164	13723.00	97.00	179.99	94.00	9334.92	4617.14	-4616.90	-56.50	4617.24226	180.70	1.07	SlimPulse	0
165	13802.00	97.24	179.96	79.00	9325.12	4695.51	-4695.29	-56.46	4695.62638	180.69	0.31	SlimPulse	0
166	13872.00	97.45	179.93	70.00	9316.17	4764.92	-4764.71	-56.39	4765.04595	180.68	0.30	Proj	7