

Oilfield Services, Central U.S. Land

Schlumberger

Reservoir Development

Drilling & Measurements (Anadrill)

9200 West Reno Avenue

Oklahoma City, Oklahoma 73127 USA

Phone: (405) 789-1515

Fax: (405) 789-1519

December 11, 2015

Cimarex Energy Co.

202 S. Cheyenne Ave. Ste 1000

Tulsa, OK 74103

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 18 2016

RECEIVED

Re:

Sec 17, T25S, R27E
N 32.12318 W 104.21100

CLIENT: Cimarex Energy Co.
WELL: Cottonberry 20 Federal Com 3H
FIELD: Bone Spring
RIG: H&P 381
COUNTY: Eddy
API NO: 30-015-43454
JOB NO: 15MLD2664

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>
Julie Schmautz MWD	Cottonberry 20 Federal Com 3H Original Hole	6735.00 Ft to 12256.00 Ft	December 7, 2015 to December 11, 2015	SlimPulse

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

Sincerely,

John Wilkerson
Field Service Manager

Reservoir Development

Drilling & Measurements (Anadrill)

9200 West Reno Avenue

Oklahoma City, Oklahoma 73127 USA

Phone: (405) 789-1515

Fax: (405) 789-1519

Well Reference:

Sec 17, T25S, R27E

N 32.12318 W 104.21100

I, Julie Schmautz certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 07, 2015 through December 11, 2015, conduct or supervise the taking of the SlimPulse surveys from a depth of 6735.00 feet to a depth of 12256.00 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 Cottonberry 20 Federal Com 3H Well (Original Hole) API No. 30-015-43454 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 Julie A. Schmautz
Julie Schmautz
MWD

Subscribed and Sworn to before me this 15th day of December (month) 2015 (yr)

My Commission expires:

4/24/19

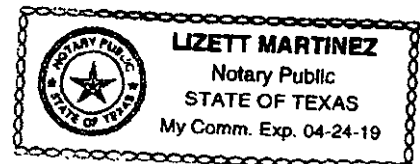
Lizett Martinez

Notary Public

Bexar, Texas

(County State)

(signature)



SCHLUMBERGER
Survey Report

11-Dec-2015

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

Well.....: Cottonberry 20 Federal Co
API number.....: 30-015-43454
Engineer.....: J. Schmautz

Spud date.....: 1-Dec-15
Last survey date.....: 11-Dec-15
Total accepted surveys...: 70
MD of first survey.....: 6735.00 ft
MD of last survey.....: 12256.00 ft

County.....: Eddy
State.....: New Mexico
Rig.....: H&P 381

Latitude.....: 32° 7' 23.46" N
Longitude.....: 104° 12' 39.597" 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.....: 3135.70
KB above permanent.....: 3160.70
DF above permanent.....: 3160.70

---- 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.....: 579208.90 ft
Y.....: 408571.64 ft

Azimuth from Vsect Origin to target: 176.22 degrees

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

----Run1---- Calculation Date: 6-Dec-2015
Location G....: 998.94325 mgn Tolerance G...: 2.50 mgn
Location B....: 48250.27 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.8975 degrees Tolerance Dip: 0.45 degrees

----Run2---- Calculation Date: 9-Dec-2015
Location G....: 998.94325 mgn Tolerance G...: 2.50 mgn
Location B....: 48249.39 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.8974 degrees Tolerance Dip: 0.45 degrees

----Run3---- Calculation Date: 10-Dec-2015
Location G....: 998.94325 mgn Tolerance G...: 2.50 mgn
Location B....: 48249.09 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.8973 degrees Tolerance Dip: 0.45 degrees

HDGM Model: 2015

----Run1----
Magnetic dec (+E/W-).....: 7.6099 degrees
Grid Conv (+E/W-).....: 0.0699 degrees
Total Azim Corr (+E/W-)..: 7.54 degrees

----Run2----
Magnetic dec (+E/W-).....: 7.609 degrees
Grid Conv (+E/W-).....: 0.069 degrees
Total Azim Corr (+E/W-)..: 7.54 degrees

----Run3----
Magnetic dec (+E/W-).....: 7.6087 degrees
Grid Conv (+E/W-).....: 0.0687 degrees
Total Azim Corr (+E/W-)..: 7.54 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	195.00	1.19	353.72	195.00	194.99	-2.02	2.01	-0.22	2.02	353.72	0.61	Other	0
3	331.00	1.32	358.82	136.00	330.95	-5.00	4.98	-0.41	5	355.32	0.13	Other	0
4	411.00	1.19	353.24	80.00	410.93	-6.75	6.73	-0.53	6.75	355.54	0.22	Other	0
5	486.00	1.41	348.40	75.00	485.91	-8.44	8.41	-0.80	8.44	354.55	0.33	Other	0
6	547.00	1.32	348.40	61.00	546.90	-9.88	9.83	-1.09	9.89	353.65	0.15	Other	0
7	608.00	1.49	351.92	61.00	607.88	-11.37	11.30	-1.35	11.38	353.20	0.31	Other	0
8	668.00	1.41	352.01	60.00	667.86	-12.88	12.81	-1.56	12.9	353.06	0.13	Other	0
9	759.00	0.48	160.80	91.00	758.85	-13.63	13.56	-1.59	13.65	353.31	2.07	Other	0
10	849.00	0.70	168.62	90.00	848.85	-12.72	12.66	-1.36	12.73	353.88	0.26	Other	0
11	938.00	0.60	181.50	89.00	937.84	-11.72	11.66	-1.26	11.73	353.82	0.20	Other	0
12	1029.00	0.79	199.34	91.00	1028.84	-10.67	10.59	-1.48	10.7	352.03	0.31	Other	0
13	1120.00	1.01	213.01	91.00	1119.82	-9.45	9.33	-2.13	9.57	347.16	0.34	Other	0
14	1211.00	1.19	209.80	91.00	1210.81	-8.02	7.84	-3.03	8.4	338.84	0.21	Other	0
15	1302.00	1.19	183.52	91.00	1301.79	-6.29	6.07	-3.56	7.04	329.61	0.59	Other	0
16	1392.00	1.41	154.12	90.00	1391.77	-4.34	4.14	-3.14	5.2	322.89	0.77	Other	0
17	1486.00	1.58	152.63	94.00	1485.73	-2.08	1.95	-2.03	2.82	313.82	0.19	Other	0
18	1582.00	2.02	135.71	96.00	1581.69	0.42	-0.43	-0.24	0.5	209.43	0.71	Other	0
19	1677.00	2.90	122.31	95.00	1676.60	3.11	-2.92	2.96	4.15	134.62	1.10	Other	0
20	1772.00	1.89	118.44	95.00	1771.52	5.36	-4.95	6.36	8.06	127.86	1.08	Other	0
21	1866.00	2.29	115.41	94.00	1865.45	7.10	-6.49	9.42	11.44	124.56	0.44	Other	0
22	1932.00	2.02	111.10	66.00	1931.41	8.23	-7.48	11.70	13.88	122.58	0.48	Other	0
23	2057.00	2.02	108.73	125.00	2056.33	10.00	-8.98	15.84	18.21	119.54	0.07	Other	0
24	2152.00	2.11	102.31	95.00	2151.27	11.13	-9.89	19.14	21.54	117.32	0.26	Other	0
25	2247.00	2.02	107.72	95.00	2246.21	12.22	-10.77	22.44	24.89	115.64	0.23	Other	0
26	2342.00	1.80	106.13	95.00	2341.15	13.35	-11.69	25.47	28.02	114.66	0.24	Other	0
27	2437.00	1.80	99.10	95.00	2436.11	14.19	-12.34	28.37	30.94	113.51	0.23	Other	0
28	2532.00	2.02	98.40	95.00	2531.05	14.87	-12.82	31.50	34.01	112.15	0.23	Other	0
29	2627.00	1.89	96.03	95.00	2626.00	15.49	-13.23	34.72	37.15	110.87	0.16	Other	0
30	2721.00	1.80	98.84	94.00	2719.95	16.08	-13.62	37.72	40.1	109.86	0.14	Other	0
31	2816.00	1.49	100.82	95.00	2814.91	16.72	-14.08	40.41	42.79	109.22	0.33	Other	0
32	2911.00	1.10	99.63	95.00	2909.89	17.24	-14.47	42.52	44.91	108.79	0.41	Other	0
33	3006.00	1.10	93.52	95.00	3004.87	17.57	-14.68	44.33	46.69	108.32	0.12	Other	0
34	3100.00	1.01	86.31	94.00	3098.85	17.68	-14.68	46.05	48.34	107.68	0.17	Other	0
35	3195.00	0.70	83.94	95.00	3193.84	17.66	-14.56	47.47	49.65	107.06	0.33	Other	0
36	3290.00	0.48	85.22	95.00	3288.84	17.63	-14.47	48.44	50.56	106.63	0.23	Other	0
37	3385.00	0.40	96.51	95.00	3383.83	17.68	-14.47	49.17	51.25	106.40	0.12	Other	0
38	3479.00	0.09	197.10	94.00	3477.83	17.81	-14.58	49.47	51.58	106.42	0.45	Other	0
39	3574.00	0.31	146.61	95.00	3572.83	18.10	-14.87	49.59	51.77	106.69	0.28	Other	0
40	3669.00	0.31	148.23	95.00	3667.83	18.55	-15.30	49.87	52.16	107.06	0.01	Other	0
41	3763.00	0.40	165.02	94.00	3761.83	19.10	-15.83	50.09	52.53	107.54	0.15	Other	0
42	3858.00	0.48	158.74	95.00	3856.83	19.80	-16.53	50.32	52.96	108.18	0.10	Other	0
43	3953.00	0.48	160.63	95.00	3951.82	20.57	-17.27	50.59	53.46	108.85	0.02	Other	0
44	4048.00	0.79	139.00	95.00	4046.82	21.47	-18.14	51.15	54.28	109.53	0.41	Other	0
45	4142.00	0.48	151.00	94.00	4140.81	22.34	-18.98	51.77	55.14	110.13	0.36	Other	0
46	4237.00	0.48	161.90	95.00	4235.81	23.09	-19.70	52.09	55.69	110.72	0.10	Other	0
47	4332.00	0.62	171.61	95.00	4330.80	23.99	-20.59	52.28	56.19	111.49	0.18	Other	0
48	4428.00	0.79	170.03	94.00	4424.80	25.14	-21.73	52.47	56.79	112.50	0.18	Other	0
49	4521.00	1.01	181.24	95.00	4519.78	26.62	-23.21	52.57	57.46	113.82	0.30	Other	0
50	4616.00	1.19	177.02	95.00	4614.77	28.44	-25.03	52.60	58.25	115.45	0.21	Other	0
51	4711.00	1.32	182.33	95.00	4709.74	30.52	-27.11	52.61	59.18	117.27	0.18	Other	0
52	4805.00	1.32	177.72	94.00	4803.72	32.68	-29.28	52.61	60.2	119.10	0.11	Other	0
53	4900.00	1.32	172.53	95.00	4898.69	34.86	-31.45	52.79	61.45	120.79	0.13	Other	0
54	4995.00	1.41	169.02	95.00	4993.67	37.11	-33.69	53.16	62.93	122.36	0.13	Other	0
55	5090.00	1.49	168.32	95.00	5088.64	39.50	-36.04	53.63	64.62	123.90	0.09	Other	0
56	5185.00	1.71	172.93	95.00	5183.60	42.14	-38.66	54.05	66.46	125.57	0.27	Other	0
57	5279.00	1.80	169.81	94.00	5277.56	45.00	-41.50	54.49	68.49	127.30	0.14	Other	0
58	5374.00	1.80	171.92	95.00	5372.51	47.97	-44.45	54.96	70.69	128.96	0.07	Other	0
59	5469.00	1.49	171.13	95.00	5467.47	50.69	-47.15	55.36	72.72	130.42	0.33	Other	0
60	5564.00	1.19	184.64	95.00	5562.44	52.90	-49.35	55.47	74.25	131.66	0.46	Other	0
61	5658.00	0.88	222.32	94.00	5656.43	54.36	-50.86	54.91	74.84	132.81	0.78	Other	0
62	5753.00	0.62	242.01	95.00	5751.42	55.08	-51.64	53.96	74.69	133.74	0.38	Other	0
63	5848.00	0.79	259.02	95.00	5846.41	55.37	-52.00	52.86	74.16	134.53	0.28	Other	0
64	5943.00	0.88	281.30	95.00	5941.40	55.27	-51.99	51.51	73.18	135.27	0.35	Other	0
65	6037.00	1.89	274.31	94.00	6035.38	54.86	-51.73	49.25	71.43	136.40	1.09	Other	0
66	6132.00	1.89	272.33	95.00	6130.32	54.47	-51.55	46.13	69.17	138.18	0.07	Other	0
67	6227.00	1.89	261.04	95.00	6225.27	54.45	-51.73	43.01	67.27	140.26	0.39	Other	0
68	6321.00	1.58	245.13	94.00	6319.23	55.05	-52.51	40.31	66.2	142.49	0.61	Other	0
69	6416.00	1.49	236.43	95.00	6414.20	56.14	-53.75	38.09	65.88	144.68	0.26	Other	0
70	6511.00	2.11	242.01	95.00	6509.15	57.47	-55.25	35.51	65.68	147.27	0.68	Other	0
71	6606.00	2.02	244.21	95.00	6604.09	58.82	-56.80	32.46	65.42	150.25	0.13	Other	0
72	6697.00	1.10	263.33	91.00	6695.05	59.46	-57.60	30.15	65.01	152.37	1.15	Other	0
73	6793.00	0.99	260.71	38.00	6793.05	59.51	-57.70	29.46	64.78	152.95	0.31	SlimPulse	0
74	6882.00	3.85	83.33	47.00	6880.02	59.47	-57.58	30.63	65.22	151.99	10.30	SlimPulse	0
75	6829.00	10.16	88.28	47.00	6826.64	59.54	-57.27	36.35	67.83	147.60	13.48	SlimPulse	0
76	6876.00	16.37	92.52	47.00	6872.37	60.42	-57.44	47.12	74.29	140.64	13.35	SlimPulse	0
77	6924.00	21.87	94.21	48.00	6917.70	62.40	-58.39	62.80	85.75	132.92	11.52	SlimPulse	0
78	6971.00	25.90	93.54	47.00	6960.67	64.93	-59.67	81.78	101.24	126.11	8.60	SlimPulse	0
79	7019.00	25.95	105.92	48.00	7003.87	69.81	-63.20	102.36	120.3	121.69	11.27	SlimPulse	0
80	7066.00	28.66	121.04	47.00	7045.68	79.72	-71.84	121.94	141.53	120.51	15.79	SlimPulse	0
81	7113.00	33.14	128.24	47.00	7086.01	94.77	-85.62	141.71	165.57	121.14	12.35	SlimPulse	0

82	7160.00	37.01	129.12	47.00	7124.47	113.01	-102.51	162.78	192.37	122.20	8.30	SlimPulse	0
83	7208.00	41.27	133.28	48.00	7161.69	134.44	-122.49	185.53	222.32	123.43	10.42	SlimPulse	0
84	7255.00	43.49	140.62	47.00	7196.43	158.96	-145.63	207.09	253.17	125.12	11.54	SlimPulse	0
85	7302.00	45.70	146.93	47.00	7229.91	186.80	-172.25	226.54	284.59	127.25	10.52	SlimPulse	0
86	7349.00	48.59	153.86	47.00	7261.90	217.79	-202.19	243.50	316.5	129.70	12.43	SlimPulse	0
87	7397.00	54.36	158.77	48.00	7291.79	253.09	-236.57	258.51	350.42	132.46	14.44	SlimPulse	0
88	7444.00	59.93	161.80	47.00	7317.28	291.04	-273.73	271.79	385.74	135.20	13.03	SlimPulse	0
89	7492.00	65.80	164.93	48.00	7339.17	332.67	-314.64	283.98	423.85	137.93	13.52	SlimPulse	0
90	7539.00	68.27	167.40	47.00	7357.13	375.42	-356.81	294.36	462.56	140.48	8.85	SlimPulse	0
91	7586.00	72.95	170.38	47.00	7372.34	419.52	-400.43	302.91	502.1	142.89	9.87	SlimPulse	0
92	7633.00	79.80	173.82	47.00	7383.41	465.04	-445.64	309.17	542.39	145.25	16.20	SlimPulse	0
93	7680.00	85.56	175.81	47.00	7389.40	511.62	-492.05	313.37	583.37	147.51	12.97	SlimPulse	0
94	7774.00	87.93	181.56	94.00	7394.74	605.34	-585.83	315.52	665.39	151.69	6.60	SlimPulse	0
95	7819.00	88.31	181.33	45.00	7396.21	650.13	-630.79	314.39	704.79	153.51	0.98	SlimPulse	0
96	7913.00	89.24	182.46	94.00	7398.21	743.64	-724.71	311.28	788.74	156.76	1.56	SlimPulse	0
97	8008.00	89.66	181.81	95.00	7399.13	838.13	-819.64	307.75	875.51	159.42	0.81	SlimPulse	0
98	8102.00	90.62	181.02	94.00	7398.90	931.75	-913.61	305.43	963.31	161.51	1.32	SlimPulse	0
99	8197.00	90.69	179.11	95.00	7397.82	1026.52	-1008.60	305.32	1053.8	163.16	2.01	SlimPulse	0
100	8292.00	90.69	178.82	95.00	7396.68	1121.41	-1103.58	307.04	1145.49	164.45	0.30	SlimPulse	0
101	8386.00	90.72	177.65	94.00	7395.52	1215.34	-1197.53	309.93	1236.98	165.49	1.24	SlimPulse	0
102	8481.00	90.86	178.23	95.00	7394.21	1310.29	-1292.45	313.35	1329.9	166.37	0.63	SlimPulse	0
103	8575.00	90.38	178.28	94.00	7393.19	1404.22	-1386.40	316.21	1422.01	167.15	0.52	SlimPulse	0
104	8670.00	90.00	177.57	95.00	7392.88	1499.18	-1481.34	319.64	1515.44	167.82	0.85	SlimPulse	0
105	8765.00	90.28	176.97	95.00	7392.65	1594.16	-1576.23	324.16	1609.22	168.38	0.70	SlimPulse	0
106	8859.00	90.00	177.96	94.00	7392.42	1688.14	-1670.14	328.32	1702.1	168.88	1.09	SlimPulse	0
107	8954.00	90.03	178.66	95.00	7392.39	1783.08	-1765.10	331.13	1795.89	169.38	0.74	SlimPulse	0
108	9048.00	90.34	179.62	94.00	7392.08	1876.95	-1859.09	332.54	1888.59	169.86	1.08	SlimPulse	0
109	9143.00	90.03	180.09	95.00	7391.77	1971.76	-1954.08	332.78	1982.22	170.34	0.59	SlimPulse	0
110	9238.00	90.28	180.43	95.00	7391.51	2066.52	-2049.08	332.35	2075.86	170.79	0.44	SlimPulse	0
111	9333.00	89.93	180.15	95.00	7391.34	2161.29	-2144.08	331.87	2169.61	171.20	0.47	SlimPulse	0
112	9427.00	89.90	179.82	94.00	7391.48	2255.08	-2238.08	331.90	2262.56	171.56	0.35	SlimPulse	0
113	9522.00	90.17	180.09	95.00	7391.42	2349.88	-2333.08	331.97	2356.58	171.90	0.41	SlimPulse	0
114	9617.00	90.48	180.92	95.00	7390.88	2444.61	-2428.07	331.13	2450.55	172.23	0.93	SlimPulse	0
115	9711.00	89.76	181.45	94.00	7390.68	2538.26	-2522.05	329.19	2543.45	172.56	0.95	SlimPulse	0
116	9806.00	89.11	181.64	95.00	7391.63	2632.85	-2617.01	326.63	2637.32	172.89	0.72	SlimPulse	0
117	9901.00	88.35	181.85	95.00	7393.74	2727.38	-2711.94	323.73	2731.2	173.19	0.83	SlimPulse	0
118	9995.00	88.21	182.27	94.00	7396.56	2820.85	-2805.84	320.35	2824.07	173.49	0.47	SlimPulse	0
119	10090.00	88.90	182.45	95.00	7398.95	2915.27	-2900.73	316.44	2917.94	173.77	0.75	SlimPulse	0
120	10185.00	89.21	183.60	95.00	7400.52	3009.59	-2995.58	311.42	3011.73	174.06	1.25	SlimPulse	0
121	10279.00	88.14	182.84	94.00	7402.69	3102.86	-3089.41	306.15	3104.54	174.34	1.40	SlimPulse	0
122	10374.00	88.04	181.37	95.00	7405.86	3197.31	-3184.29	302.66	3198.64	174.57	1.55	SlimPulse	0
123	10469.00	88.11	180.99	95.00	7409.05	3291.90	-3279.21	300.71	3292.97	174.76	0.41	SlimPulse	0
124	10563.00	88.11	180.28	94.00	7412.16	3385.57	-3373.16	299.68	3386.44	174.92	0.75	SlimPulse	0
125	10658.00	88.18	179.08	95.00	7415.23	3480.35	-3468.10	300.21	3481.07	175.05	1.26	SlimPulse	0
126	10753.00	88.38	178.85	95.00	7418.08	3575.20	-3563.05	301.93	3575.82	175.16	0.33	SlimPulse	0
127	10848.00	88.31	178.75	95.00	7420.82	3670.06	-3657.98	303.92	3670.59	175.25	0.12	SlimPulse	0
128	10943.00	87.97	178.63	95.00	7423.90	3764.92	-3752.91	306.09	3765.37	175.34	0.38	SlimPulse	0
129	11037.00	87.87	178.17	94.00	7427.31	3858.79	-3846.81	308.71	3859.18	175.41	0.50	SlimPulse	0
130	11132.00	87.59	178.48	95.00	7431.08	3953.65	-3941.70	311.48	3953.98	175.48	0.44	SlimPulse	0
131	11227.00	87.87	178.52	95.00	7434.85	4048.50	-4036.59	313.96	4048.78	175.55	0.29	SlimPulse	0
132	11322.00	87.94	178.13	95.00	7438.32	4143.37	-4131.48	316.73	4143.61	175.62	0.42	SlimPulse	0
133	11417.00	88.25	177.65	95.00	7441.49	4238.28	-4226.37	320.23	4238.48	175.67	0.61	SlimPulse	0
134	11511.00	88.35	177.36	94.00	7444.28	4332.22	-4320.24	324.32	4332.39	175.71	0.32	SlimPulse	0
135	11606.00	87.83	177.09	95.00	7447.45	4427.15	-4415.07	328.92	4427.31	175.74	0.61	SlimPulse	0
136	11701.00	88.00	177.31	95.00	7450.90	4522.07	-4509.90	333.56	4522.21	175.77	0.30	SlimPulse	0
137	11796.00	87.59	178.17	95.00	7454.55	4616.97	-4604.75	337.30	4617.09	175.81	1.00	SlimPulse	0
138	11890.00	87.97	178.38	94.00	7458.19	4710.84	-4698.64	340.12	4710.93	175.86	0.46	SlimPulse	0
139	11985.00	88.18	178.50	95.00	7461.38	4805.71	-4793.55	342.71	4805.78	175.91	0.25	SlimPulse	0
140	12080.00	88.11	178.29	95.00	7464.47	4900.59	-4888.46	345.37	4900.65	175.96	0.23	SlimPulse	0
141	12175.00	87.73	178.90	95.00	7467.92	4995.45	-4983.37	347.69	4995.48	176.01	0.75	SlimPulse	0
142	12256.00	87.87	179.21	81.00	7471.03	5076.29	-5064.30	349.03	5076.31	176.06	0.42	SlimPulse	0
143	12324.00	87.87	179.21	68.00	7473.56	5144.15	-5132.24	349.97	5144.16	176.10	0.01	PROJ	7