

Results of Directional Survey

API number:	30-025-40793		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	DOS EQUIS 12 FEDERAL # 4H

surface	ULSTR:	D	12	T 24S	R 32E
				330 FNL	660 FWL

BH Loc	ULSTR:	M	12	T 24S	R 32E
15240	MD	10932.8	TVD	312 FSL	712 FWL
				4968 FNL	

Top Perf/OH	ULSTR:	D	12	T 24S	R 32E
10750	MD	10716.1	TVD	549 FNL	636 FWL

Bot Perf/OH	ULSTR:	M	12	T 24S	R 32E
15210	MD	10932.9	TVD	342 FSL	713 FWL
				4938 FNL	

	MD	N/S	E/W	VD
	10739	-211.86	-24.10	10707.56
TOP PERFS/OH	10750	-218.82	-24.23	10716.07
	10770	-231.48	-24.48	10731.55
	15163	-4561.08	55.26	10933.10
BOT PERFS/OH	15210	-4608.03	53.15	10932.90
	15240	-4638.00	51.80	10932.77

NEXT TO LAST	15163	-4561.08	55.26	10933.10
LAST READING	15240	-4638.00	51.80	10932.77
TD	15240	-4638.00	51.80	10932.77

Surface Location	330	FN	660	FW
Projected BHL	4968	FN	712	FW
Location of				
Top Perfs/OH	549	FN	636	FW
Bottom Perfs/OH	4938	FN	713	FW

SUMMARY of Subsurface Locations

Surface Location	D-12-24S-32E	330	FN	660	FW	Vert. Depth
Top Perfs/OH	D-12-24S-32E	549	FN	636	FW	10716.07
Bottom Perfs/OH	M-12-24S-32E	4938	FN	713	FW	10932.90
Projected TD	M-12-24S-32E	4968	FN	712	FW	10932.77

**Reservoir Development**

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

September 2, 2013

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

Sec 12 T24S R32E 330FNL 660FWL
N 32.23858 W 103.63466CLIENT: Cimarex Energy Co. of Colorado
WELL: Dos Equis 12 Federal Com No. 4 ST01
FIELD: Triple X; Bone Spring, West
RIG: NorAm Drilling #23
COUNTY: Lea
API NO: 30-025-40793-01
JOB NO: 13MLD0385

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>
Brandon Chandler MWD	Dos Equis 12 Federal Com No. 4 ST01 Side Track	10360.00 Ft to 15163.00 Ft	August 23, 2013 to August 28, 2013	SlimPulse

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:

Sec 12 T24S R32E 330FNL 660FWL

N 32.23858 W 103.63466

I, Brandon Chandler 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 23, 2013 through August 28, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 10360.00 feet to a depth of 15163.00 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. of Colorado for the Dos Equis 12 Federal Com No. 4 ST01 Well (Side Track) API No. 30-025-40793-01 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
Brandon Chandler
MWD

Nicholas Agnew
on behalf of Brandon Chandler

Subscribed and Sworn to before me this 9th day of September (month) 2013 (yr)

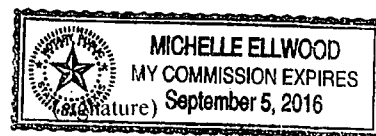
My Commission expires:

September 5, 2016

Michelle Ellwood

Notary Public

Medford, Tx
(County State)



SCHLUMBERGER

Survey Report

16-Sep-2013

Client.....: Cimarex Energy Co. of Colorado
 Field.....: Triple X; Bone Spring, West

Well.....: Dos Equis 12 Federal Com No. 4 ST01
 API number.....: 30-025-40793-01
 Engineer.....: Brandon Chandler

County.....: Lea
 State.....: New Mexico
 Rig.....: NorAm Drilling #23

Spud date.....: 2-Aug-13
 Last survey date.....: 28-Aug-13
 Total accepted surveys...: 71
 MD of first survey.....: 10360.00 ft
 MD of last survey.....: 15163.00 ft
 Latitude.....: 32° 14' 18.877" N
 Longitude.....: 103° 38' 4.773" 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....: 3611.00
 KB above permanent....: 3639.00
 DF above permanent....: 3639.00

---- 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.....: 757357.80 ft
 Y.....: 451230.50 ft

Azimuth from Vsect Origin to target: 179.80 degrees

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

----Run1---- Calculation Date: 18-Aug-2013
 Location G.....: 998.63244 mgn Tolerance G...: 2.50 mgn
 Location B.....: 48391.85 nT Tolerance B...: 300.00 nT
 Magnetic Dip: 60.125 degrees Tolerance Dip: 0.45 degrees

----Run2---- Calculation Date: 21-Aug-2013
 Location G.....: 998.63244 mgn Tolerance G...: 2.50 mgn
 Location B.....: 48391.85 nT Tolerance B...: 300.00 nT
 Magnetic Dip: 60.13 degrees Tolerance Dip: 0.45 degrees

----Run3---- Calculation Date: 22-Aug-2013
 Location G.....: 998.63244 mgn Tolerance G...: 2.50 mgn
 Location B.....: 48391.85 nT Tolerance B...: 300.00 nT
 Magnetic Dip: 60.13 degrees Tolerance Dip: 0.45 degrees

----Run4---- Calculation Date: 26-Aug-2013
 Location G.....: 998.63244 mgn Tolerance G...: 2.50 mgn
 Location B.....: 48391.85 nT Tolerance B...: 300.00 nT
 Magnetic Dip: 60.13 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2013

----Run1----
 Magnetic dec (+E/-).....: 7.4559 degrees
 Grid Conv (+E/-).....: 0.3759 degrees
 Total Azim Corr (+E/-).....: 7.08 degrees

----Run2----
 Magnetic dec (+E/-).....: 7.4549 degrees
 Grid Conv (+E/-).....: 0.3749 degrees
 Total Azim Corr (+E/-).....: 7.08 degrees

----Run3----
 Magnetic dec (+E/-).....: 7.4546 degrees
 Grid Conv (+E/-).....: 0.3746 degrees
 Total Azim Corr (+E/-).....: 7.08 degrees

----Run4----
 Magnetic dec (+E/-).....: 7.4533 degrees
 Grid Conv (+E/-).....: 0.3733 degrees
 Total Azim Corr (+E/-).....: 7.08 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	100.00	0.43	177.37	100.00	100.00	0.37	-0.37	0.02	0.38	177.37	0.43	GyroTool	0
3	200.00	0.44	176.75	100.00	200.00	1.13	-1.13	0.06	1.13	177.16	0.01	GyroTool	0
4	300.00	0.13	234.42	100.00	299.99	1.58	-1.58	-0.01	1.58	180.52	0.39	GyroTool	0
5	400.00	0.18	248.94	100.00	399.99	1.70	-1.70	-0.25	1.72	188.45	0.06	GyroTool	0
6	476.50	0.22	206.08	76.50	476.49	1.88	-1.88	-0.43	1.93	192.88	0.20	GyroTool	0
7	567.70	0.26	213.80	91.20	567.69	2.21	-2.21	-0.62	2.3	195.72	0.06	GyroTool	0
8	659.10	0.30	216.40	91.40	659.09	2.57	-2.57	-0.88	2.72	198.86	0.05	GyroTool	0
9	751.00	0.26	221.08	91.90	750.99	2.92	-2.92	-1.16	3.15	201.62	0.05	GyroTool	0
10	842.80	0.21	217.51	91.80	842.79	3.21	-3.22	-1.40	3.51	203.50	0.06	GyroTool	0
11	933.80	0.27	222.87	91.00	933.79	3.50	-3.50	-1.65	3.87	205.15	0.07	GyroTool	0
12	1025.80	0.44	224.94	92.00	1025.79	3.91	-3.91	-2.04	4.41	207.56	0.19	GyroTool	0
13	1120.40	0.40	223.34	94.60	1120.39	4.40	-4.41	-2.53	5.08	209.80	0.04	GyroTool	0
14	1215.00	0.14	22.61	94.60	1214.98	4.53	-4.54	-2.71	5.29	210.79	0.56	GyroTool	0
15	1309.60	0.07	79.60	94.60	1309.58	4.42	-4.43	-2.61	5.14	210.49	0.12	GyroTool	0
16	1404.30	0.05	131.57	94.70	1404.28	4.44	-4.44	-2.52	5.11	209.55	0.06	GyroTool	0
17	1499.20	0.06	79.02	94.90	1499.18	4.45	-4.46	-2.44	5.09	208.66	0.05	GyroTool	0
18	1593.90	0.11	19.58	94.70	1593.88	4.36	-4.37	-2.36	4.96	208.39	0.10	GyroTool	0
19	1688.60	0.17	0.06	94.70	1688.58	4.13	-4.14	-2.33	4.75	209.36	0.08	GyroTool	0
20	1783.30	0.18	1.36	94.70	1783.28	3.84	-3.85	-2.33	4.5	211.13	0.01	GyroTool	0
21	1877.90	0.21	3.43	94.60	1877.88	3.52	-3.53	-2.31	4.22	213.22	0.03	GyroTool	0
22	1972.60	0.22	346.98	94.70	1972.58	3.17	-3.18	-2.34	3.95	216.38	0.07	GyroTool	0
23	2067.30	0.34	342.92	94.70	2067.28	2.73	-2.73	-2.47	3.68	222.05	0.13	GyroTool	0
24	2162.00	0.37	331.76	94.70	2161.98	2.19	-2.20	-2.69	3.48	230.80	0.08	GyroTool	0
25	2256.70	0.41	322.22	94.70	2256.68	1.65	-1.66	-3.05	3.47	241.42	0.08	GyroTool	0
26	2351.40	0.44	324.03	94.70	2351.37	1.08	-1.10	-3.47	3.64	252.44	0.03	GyroTool	0
27	2446.00	0.42	323.79	94.60	2445.97	0.51	-0.52	-3.88	3.92	262.33	0.02	GyroTool	0
28	2540.70	0.46	331.97	94.70	2540.67	-0.11	0.09	-4.27	4.27	271.24	0.08	GyroTool	0
29	2635.40	0.47	334.31	94.70	2635.37	-0.79	0.78	-4.62	4.68	279.57	0.02	GyroTool	0
30	2730.80	0.50	341.17	95.40	2730.76	-1.54	1.52	-4.92	5.15	287.22	0.07	GyroTool	0
31	2825.00	0.43	347.27	94.20	2824.96	-2.28	2.26	-5.13	5.61	293.76	0.09	GyroTool	0
32	2919.70	0.48	347.18	94.70	2919.66	-3.01	2.99	-5.30	6.08	299.46	0.05	GyroTool	0
33	3014.50	0.48	352.21	94.80	3014.45	-3.79	3.77	-5.44	6.62	304.75	0.04	GyroTool	0
34	3109.20	0.57	344.57	94.70	3109.15	-4.64	4.62	-5.62	7.27	309.43	0.12	GyroTool	0
35	3203.70	0.54	346.12	94.50	3203.64	-5.53	5.50	-5.85	8.03	313.26	0.04	GyroTool	0
36	3298.60	0.63	337.18	94.90	3298.54	-6.44	6.42	-6.16	8.9	316.19	0.13	GyroTool	0
37	3393.20	0.59	342.36	94.60	3393.13	-7.39	7.36	-6.51	9.83	318.53	0.07	GyroTool	0
38	3488.10	0.61	332.25	94.90	3488.03	-8.30	8.28	-6.89	10.77	320.22	0.11	GyroTool	0
39	3581.80	0.63	334.61	93.70	3581.72	-9.21	9.18	-7.34	11.76	321.35	0.03	GyroTool	0
40	3676.40	0.67	329.67	94.60	3676.32	-10.16	10.13	-7.85	12.81	322.24	0.07	GyroTool	0
41	3771.10	0.56	338.04	94.70	3771.01	-11.07	11.04	-8.30	13.81	323.06	0.15	GyroTool	0
42	3866.10	0.49	318.51	95.00	3866.01	-11.80	11.77	-8.74	14.66	323.40	0.20	GyroTool	0
43	3961.00	0.53	332.85	94.90	3960.90	-12.50	12.47	-9.21	15.5	323.54	0.14	GyroTool	0
44	4055.70	0.43	338.76	94.70	4055.60	-13.22	13.19	-9.54	16.28	324.12	0.12	GyroTool	0
45	4150.40	0.37	330.90	94.70	4150.30	-13.82	13.79	-9.82	16.92	324.54	0.09	GyroTool	0
46	4245.50	0.26	37.36	95.10	4245.40	-14.26	14.23	-9.84	17.3	325.34	0.38	GyroTool	0
47	4340.60	0.38	80.24	95.10	4340.50	-14.48	14.45	-9.39	17.24	326.97	0.27	GyroTool	0
48	4435.30	0.44	116.56	94.70	4435.19	-14.37	14.34	-8.76	16.8	328.58	0.28	GyroTool	0
49	4530.10	0.67	118.06	94.80	4529.99	-13.95	13.92	-7.94	16.03	330.28	0.24	GyroTool	0
50	4624.80	1.04	118.09	94.70	4624.68	-13.28	13.25	-6.70	14.85	333.19	0.39	GyroTool	0
51	4719.60	1.32	117.46	94.80	4719.46	-12.36	12.34	-4.97	13.31	338.07	0.30	GyroTool	0
52	4814.20	1.24	139.29	94.60	4814.04	-11.08	11.07	-3.34	11.56	343.23	0.52	GyroTool	0
53	4908.90	1.27	145.07	94.70	4908.71	-9.44	9.43	-2.07	9.65	347.64	0.14	GyroTool	0
54	5003.70	0.91	148.69	94.80	5003.50	-7.93	7.92	-1.07	8	352.28	0.39	GyroTool	0
55	5098.30	0.99	147.19	94.60	5098.08	-6.60	6.60	-0.24	6.6	357.91	0.09	GyroTool	0
56	5193.00	0.99	141.53	94.70	5192.77	-5.26	5.27	0.71	5.32	7.70	0.10	GyroTool	0
57	5287.70	1.14	140.50	94.70	5287.45	-3.89	3.90	1.82	4.3	25.02	0.16	GyroTool	0
58	5382.30	1.03	127.32	94.60	5382.04	-2.65	2.66	3.09	4.08	49.34	0.29	GyroTool	0
59	5477.00	0.93	123.97	94.70	5476.72	-1.70	1.71	4.41	4.73	68.77	0.12	GyroTool	0
60	5571.80	0.83	127.38	94.80	5571.51	-0.85	0.87	5.59	5.66	81.20	0.12	GyroTool	0
61	5666.50	0.83	126.13	94.70	5666.20	-0.02	0.05	6.69	6.69	89.61	0.02	GyroTool	0
62	5761.30	0.70	131.63	94.80	5760.99	0.77	-0.74	7.68	7.72	95.54	0.16	GyroTool	0
63	5856.10	0.62	133.74	94.80	5855.79	1.51	-1.48	8.48	8.61	99.92	0.09	GyroTool	0
64	5950.80	0.92	127.62	94.70	5950.48	2.33	-2.30	9.45	9.73	103.68	0.33	GyroTool	0
65	6045.60	0.86	135.19	94.80	6045.27	3.31	-3.27	10.56	11.05	107.21	0.14	GyroTool	0
66	6140.30	0.84	136.87	94.70	6139.96	4.32	-4.28	11.53	12.3	110.37	0.03	GyroTool	0
67	6234.90	0.83	141.90	94.60	6234.55	5.37	-5.33	12.43	13.52	113.20	0.08	GyroTool	0
68	6329.60	0.91	145.73	94.70	6329.23	6.53	-6.49	13.28	14.78	116.04	0.10	GyroTool	0
69	6424.30	0.91	141.96	94.70	6423.92	7.75	-7.70	14.16	16.12	118.54	0.06	GyroTool	0
70	6519.10	0.81	152.04	94.80	6518.71	8.94	-8.89	14.94	17.39	120.74	0.19	GyroTool	0
71	6613.70	0.80	164.13	94.60	6613.30	10.17	-10.11	15.44	18.45	123.23	0.18	GyroTool	0
72	6708.50	0.77	173.10	94.80	6708.09	11.44	-11.38	15.69	19.39	125.95	0.13	GyroTool	0
73	6803.30	0.82	178.39	94.80	6802.88	12.75	-12.69	15.79	20.26	128.79	0.09	GyroTool	0
74	6897.80	0.92	180.00	94.50	6897.37	14.18	-14.13	15.81	21.2	131.78	0.11	GyroTool	0
75	6992.50	1.03	184.54	94.70	6992.06	15.79	-15.74	15.74	22.26	134.99	0.14	GyroTool	0
76	7087.30	1.13	185.67	94.80	7086.84	17.57	-17.52	15.58	23.44	138.34	0.11	GyroTool	0
77	7181.90	1.06	191.27	94.60	7181.43	19.35	-19.30	15.32	24.64	141.56	0.14	GyroTool	0
78	7276.50	1.23	191.69	94.60	7276.01	21.21	-21.15	14.94	25.9	144.76	0.18	GyroTool	0
79	7370.90	1.38	192.24	94.40	7370.38	23.31	-23.26	14.50	27.4	148.07	0.16	GyroTool	0
80	7465.50	1.38	192.62	94.60	7464.95	25.53	-25.48	14.01	29.08	151.21	0.01	GyroTool	0
81	7559.10	1.42	193.37	93.60	7558.53	27.76	-27.71	13.49	30.82	154.04	0.05	GyroTool	0
82	7653.80	1.40	194.00	94.70	7653.20	30.02	-29.97	12.94	32.65	156.65	0.03	GyroTool	0
83	7748.60	1.41	200.68	94.80	7747.97	32.23	-32.19	12.25	34.44	159.17	0.17	GyroTool	0
84	7843.10	1.49	204.06	94.50	7842.44	34.44	-34.40	11.34	36.22	161.76	0.12	GyroTool	0
85	7937.80	1.59	202.30	94.70	7937.11	36.77	-36.74	10.34	38.16	164.29	0.12	GyroTool	0
86	8032.50	1.68	206.26	94.70	8031.77	39.23	-39.20	9.22	40.27	166.76	0.15	GyroTool	0
87	8127.10	1.37	206.27	94.60	8126.33	41.48	-41.46	8.11	42.24	168.93	0.33	GyroTool	0
88	8221.90	0.80	177.78	94.80	8221.12	43.16	-43.13	7.63	43.8	169.96	0.81	GyroTool	0
89	8316.80	0.97	178.12	94.90	8316.01	44.63	-44.60	7.68	45.26	170.22	0.18	GyroTool	0

90	8411.70	1.00	183.31	94.90	8410.89	46.26	-46.23	7.66	46.86	170.59	0.10	GyroTool	0
91	8506.40	1.06	186.40	94.70	8505.58	47.95	-47.92	7.52	48.51	171.08	0.09	GyroTool	0
92	8601.10	1.13	192.77	94.70	8600.26	49.73	-49.71	7.21	50.23	171.74	0.15	GyroTool	0
93	8695.70	1.08	196.64	94.60	8694.84	51.49	-51.47	6.75	51.91	172.53	0.09	GyroTool	0
94	8790.30	1.09	201.51	94.60	8789.42	53.18	-53.16	6.17	53.52	173.38	0.10	GyroTool	0
95	8885.00	1.10	210.79	94.70	8884.11	54.80	-54.78	5.37	55.04	174.40	0.19	GyroTool	0
96	8979.50	1.39	197.17	94.50	8978.58	56.67	-56.65	4.57	56.84	175.39	0.44	GyroTool	0
97	9074.20	1.38	197.23	94.70	9073.26	58.85	-58.84	3.89	58.97	176.22	0.01	GyroTool	0
98	9168.80	1.17	205.87	94.60	9167.83	60.81	-60.80	3.13	60.88	177.05	0.30	GyroTool	0
99	9263.50	0.96	196.07	94.70	9262.52	62.44	-62.43	2.49	62.48	177.71	0.29	GyroTool	0
100	9358.20	1.37	197.12	94.70	9357.20	64.28	-64.27	1.94	64.3	178.27	0.43	GyroTool	0
101	9454.80	1.58	202.97	96.60	9453.77	66.61	-66.60	1.08	66.61	179.07	0.27	GyroTool	0
102	9547.50	2.13	218.18	92.70	9546.42	69.13	-69.13	-0.48	69.14	180.40	0.79	GyroTool	0
103	9642.20	1.75	234.65	94.70	9641.06	71.34	-71.35	-2.75	71.41	182.21	0.71	GyroTool	0
104	9736.90	1.07	234.24	94.70	9735.73	72.69	-72.71	-4.65	72.86	183.66	0.72	GyroTool	0
105	9831.70	1.04	217.46	94.80	9830.52	73.89	-73.91	-5.89	74.14	184.56	0.33	GyroTool	0
106	9926.30	1.32	250.57	94.60	9925.10	74.93	-74.95	-7.44	75.32	185.67	0.77	GyroTool	0
107	10021.00	2.11	256.56	94.70	10019.76	75.68	-75.72	-10.16	76.4	187.65	0.85	GyroTool	0
108	10115.70	2.01	257.47	94.70	10114.39	76.44	-76.49	-13.48	77.66	190.00	0.11	GyroTool	0
109	10210.30	1.82	270.59	94.60	10208.94	76.77	-76.83	-16.60	78.6	192.19	0.50	GyroTool	0
110	10305.00	2.53	277.53	94.70	10303.57	76.47	-76.54	-20.18	79.16	194.77	0.80	GyroTool	0
111	10360.00	3.76	201.75	55.00	10358.51	77.98	-78.06	-22.05	81.11	195.77	7.25	SlimPulse	0
112	10391.00	7.29	200.15	31.00	10389.36	80.77	-80.85	-23.11	84.09	195.95	11.37	SlimPulse	0
113	10423.00	10.37	191.22	32.00	10420.98	85.50	-85.58	-24.37	88.98	195.89	10.50	SlimPulse	0
114	10454.00	13.72	183.02	31.00	10451.30	91.90	-91.99	-25.10	95.35	195.26	12.13	SlimPulse	0
115	10486.00	16.84	179.07	32.00	10482.16	100.33	-100.42	-25.23	103.54	194.10	10.27	SlimPulse	0
116	10518.00	18.28	177.77	32.00	10512.67	109.98	-110.07	-24.96	112.86	192.77	4.65	SlimPulse	0
117	10549.00	19.82	175.26	31.00	10541.97	120.08	-120.17	-24.33	122.6	191.45	5.62	SlimPulse	0
118	10581.00	23.32	179.40	32.00	10571.73	131.83	-131.91	-23.82	134.04	190.24	11.95	SlimPulse	0
119	10612.00	26.63	178.19	31.00	10599.82	144.91	-144.99	-23.54	146.89	189.22	10.77	SlimPulse	0
120	10644.00	28.90	179.12	32.00	10628.14	159.81	-159.89	-23.19	161.57	188.25	7.24	SlimPulse	0
121	10676.00	31.87	180.96	32.00	10655.74	175.99	-176.08	-23.21	177.6	187.51	9.71	SlimPulse	0
122	10707.00	34.59	181.95	31.00	10681.67	192.97	-193.05	-23.65	194.5	186.98	8.97	SlimPulse	0
123	10739.00	37.41	180.85	32.00	10707.56	211.77	-211.86	-24.10	213.22	186.49	9.03	SlimPulse	0
124	10770.00	41.15	181.36	31.00	10731.55	231.39	-231.48	-24.48	232.77	186.04	12.13	SlimPulse	0
125	10802.00	44.52	178.85	32.00	10755.01	253.14	-253.23	-24.51	254.41	185.53	11.80	SlimPulse	0
126	10833.00	47.81	178.33	31.00	10776.48	275.49	-275.58	-23.96	276.62	184.97	10.67	SlimPulse	0
127	10865.00	51.63	181.51	32.00	10797.17	299.89	-299.98	-23.94	300.93	184.56	14.13	SlimPulse	0
128	10897.00	54.57	181.50	32.00	10816.38	325.47	-325.56	-24.61	326.49	184.32	9.19	SlimPulse	0
129	10928.00	57.98	178.81	31.00	10833.59	351.24	-351.33	-24.67	352.2	184.02	13.15	SlimPulse	0
130	10960.00	60.56	177.99	32.00	10849.94	378.74	-378.82	-23.90	379.58	183.61	8.37	SlimPulse	0
131	10991.00	62.76	178.06	31.00	10864.66	406.01	-406.09	-22.96	406.74	183.24	7.12	SlimPulse	0
132	11023.00	64.09	178.88	32.00	10878.97	434.62	-434.70	-22.19	435.27	182.92	4.75	SlimPulse	0
133	11054.00	66.74	179.54	31.00	10891.87	462.80	-462.88	-21.81	463.4	182.70	8.75	SlimPulse	0
134	11086.00	70.20	180.27	32.00	10903.61	492.57	-492.64	-21.76	493.13	182.53	11.02	SlimPulse	0
135	11116.00	73.19	180.49	30.00	10913.03	521.04	-521.12	-21.95	521.59	182.41	10.02	SlimPulse	0
136	11149.00	76.29	180.60	33.00	10921.72	552.87	-552.95	-22.25	553.4	182.30	9.37	SlimPulse	0
137	11181.00	79.91	181.45	32.00	10928.32	584.17	-584.26	-22.81	584.7	182.24	11.63	SlimPulse	0
138	11210.00	83.32	181.47	29.00	10932.55	612.85	-612.93	-23.54	613.38	182.20	11.75	SlimPulse	0
139	11243.00	87.15	182.23	33.00	10935.29	645.70	-645.79	-24.61	646.26	182.18	11.82	SlimPulse	0
140	11307.00	90.14	182.30	64.00	10936.80	709.62	-709.72	-27.14	710.24	182.19	4.67	SlimPulse	0
141	11402.00	89.73	178.39	95.00	10936.92	804.60	-804.70	-27.70	805.18	181.97	4.14	SlimPulse	0
142	11496.00	89.76	176.09	94.00	10937.34	898.50	-898.58	-23.17	898.88	181.48	2.45	SlimPulse	0
143	11591.00	89.97	176.76	95.00	10937.57	993.33	-993.40	-17.25	993.55	180.99	0.74	SlimPulse	0
144	11686.00	90.03	176.13	95.00	10937.57	1088.17	-1088.21	-11.36	1088.27	180.60	0.67	SlimPulse	0
145	11781.00	89.86	173.54	95.00	10937.65	1182.80	-1182.82	-2.81	1182.82	180.14	2.73	SlimPulse	0
146	11877.00	90.00	175.60	96.00	10937.77	1278.40	-1278.38	6.26	1278.4	179.72	2.15	SlimPulse	0
147	11972.00	89.28	180.29	95.00	10938.37	1373.32	-1373.29	9.66	1373.33	179.60	5.00	SlimPulse	0
148	12067.00	89.62	181.56	95.00	10939.28	1468.30	-1468.28	8.13	1468.3	179.68	1.38	SlimPulse	0
149	12162.00	90.31	179.67	95.00	10939.34	1563.28	-1563.27	7.11	1563.28	179.74	2.12	SlimPulse	0
150	12257.00	90.86	179.72	95.00	10938.37	1658.28	-1658.26	7.61	1658.28	179.74	0.58	SlimPulse	0
151	12352.00	91.00	180.17	95.00	10936.83	1753.26	-1753.25	7.70	1753.26	179.75	0.50	SlimPulse	0
152	12447.00	90.65	180.19	95.00	10935.46	1848.25	-1848.24	7.40	1848.25	179.77	0.36	SlimPulse	0
153	12542.00	90.38	185.03	95.00	10934.60	1943.10	-1943.10	3.07	1943.11	179.91	5.11	SlimPulse	0
154	12637.00	89.90	184.35	95.00	10934.38	2037.76	-2037.78	-4.70	2037.79	180.13	0.88	SlimPulse	0
155	12732.00	89.04	181.35	95.00	10935.26	2132.61	-2132.65	-9.43	2132.67	180.25	3.29	SlimPulse	0
156	12827.00	90.31	181.46	95.00	10935.80	2227.56	-2227.62	-11.76	2227.65	180.30	1.34	SlimPulse	0
157	12922.00	89.86	180.94	95.00	10935.66	2322.54	-2322.60	-13.74	2322.64	180.34	0.72	SlimPulse	0
158	13017.00	89.86	175.14	95.00	10935.89	2417.45	-2417.50	-10.50	2417.52	180.25	6.10	SlimPulse	0
159	13111.00	89.21	174.99	94.00	10936.65	2511.13	-2511.15	-2.42	2511.15	180.06	0.71	SlimPulse	0
160	13206.00	89.69	177.31	95.00	10937.56	2605.92	-2605.92	3.96	2605.93	179.91	2.50	SlimPulse	0
161	13301.00	89.52	177.54	95.00	10938.22	2700.84	-2700.83	8.23	2700.84	179.83	0.30	SlimPulse	0
162	13413.00	90.72	178.38	112.00	10937.98	2812.78	-2812.75	12.22	2812.78	179.75	1.31	SlimPulse	0
163	13508.00	90.79	178.13	95.00	10936.73	2907.73	-2907.70	15.11	2907.74	179.70	0.27	SlimPulse	0
164	13603.00	91.27	176.81	95.00	10935.02	3002.64	-3002.59	19.31	3002.65	179.63	1.48	SlimPulse	0
165	13698.00	91.17	176.59	95.00	10932.99	3097.48	-3097.41	24.78	3097.51	179.54	0.25	SlimPulse	0
166	13793.00	90.65	176.39	95.00	10931.49	3192.31	-3192.22	30.59	3192.37	179.45	0.58	SlimPulse	0
167	13888.00	90.82	175.39	95.00	10930.26	3287.08	-3286.97	37.41	3287.18	179.35	1.06	SlimPulse	0
168	13982.00	90.31	175.87	94.00	10929.33	3380.82	-3380.69	44.57	3380.98	179.24	0.75	SlimPulse	0
169	14077.00	89.04	179.98	95.00	10929.87	3475.75	-3475.60	48.01	3475.93	179.21	4.54	SlimPulse	0
170	14172.00	89.00	179.46	95.00	10931.50	3570.73	-3570.58	48.47	3570.91	179.22	0.55	SlimPulse	0
171	14267.00	89.45	177.76	95.00	10932.78	3665.70	-3665.54	50.77	3665.9	179.21	1.86	SlimPulse	0
172	14362.00	89.48	177.73	95.00	10933.66	3760.63	-3760.47	54.51	3760.86	179.17	0.04	SlimPulse	0
173	14457.00	89.55	177.35	95.00	10934.46	3855.56	-3855.38	58.58	3855.82	179.13	0.41	SlimPulse	0
174	14552.00	90.10	178.02	95.00	10934.74	3950.49	-3950.30	62.42	3950				