

Results of Directional Survey

API number:	30-025-40436		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	HALLERTAU 5 FEDERAL # 1H

surface	ULSTR:	P	05	T 26S	R 32E
				330 FSL	330 FEL

BH Loc	ULSTR:	A	05	T 26S	R 32E
15091	MD	10541.9	TVD	272 FNL	676 FEL
				5008 FSL	

Top Perf/OH	ULSTR:	P	05	T 26S	R 32E
10600	MD	10450.1	TVD	543 FSL	348 FEL

Bot Perf/OH	ULSTR:	A	05	T 26S	R 32E
15037	MD	10541.9	TVD	326 FNL	673 FEL
				4954 FSL	

	MD	N/S	E/W	VD
	10582	196.86	-15.70	10442.01
TOP PERFS/OH	10600	212.76	-17.93	10450.14
	10613	224.25	-19.54	10456.01
	15025	4611.64	-342.04	10541.93
BOT PERFS/OH	15037	4623.62	-342.69	10541.92
	15091	4677.54	-345.64	10541.85

NEXT TO LAST	15025	4611.64	-342.04	10541.93
LAST READING	15091	4677.54	-345.64	10541.85
TD	15091	4677.54	-345.64	10541.85

Surface Location	330	FS	330	FE
Projected BHL	5008	FS	676	FE
Location of				
Top Perfs/OH	543	FS	348	FE
Bottom Perfs/OH	4954	FS	673	FE

SUMMARY of Subsurface Locations

Surface Location	P-05-26S-32E	330	FS	330	FE	Vert. Depth
Top Perfs/OH	P-05-26S-32E	543	FS	348	FE	10450.14
Bottom Perfs/OH	A-05-26S-32E	4954	FS	673	FE	10541.92
Projected TD	A-05-26S-32E	5008	FS	676	FE	10541.85

OCT 03 2013

**Reservoir Development**

Drilling & Measurements (Anadrill)
4301 SW 44th St
Oklahoma City, Oklahoma 73119 USA
Phone: (405) 682-2284
Fax: (405) 682-3937

HOBBS OCD

May 16, 2013

HOBBS OCD**SEP 09 2013**

Cimarex
600 N MARIENFELD STREET SUITE 600
MIDLAND, TX 79701

SEP 09 2013**RECEIVED****RECEIVED**

Re:

Sec 5, T26S, R32E Lea NM
N 32.06584 W 103.68971

CLIENT: Cimarex Energy Co. of Colorado
WELL: Hallertau 5 Federal 1H ST01
FIELD: Bone Spring Wildcat
RIG: Noram 23
COUNTY: Lea
API NO: 30-025-40436-01
JOB NO: 13MLD0029

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>
Steven Durham MWD	Hallertau 5 Federal 1H ST01 Side Track	10111.00 Ft to 15025.00 Ft	March 13, 2013 to March 22, 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

HOBBS OCD

SEP 09 2013

RECEIVED

Schlumberger

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 5, T26S, R32E Lea NM
N 32.06584 W 103.68971

I, Steven Durham certify that; I am employed by Drilling & Measurements (formerly Anadrill), a division of Schlumberger Technology Corporation; that I did on the day(s) of March 13, 2013 through March 22, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 10111.00 feet to a depth of 15025.00 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 Hallertau 5 Federal 1H ST01 Well (Side Track) API No. 30-025-40436-01 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 Kyle Ducote
Kyle Ducote

On behalf of
Steven Durham
MWD

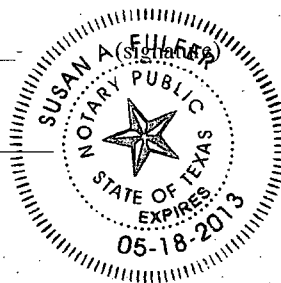
Subscribed and Sworn to before me this May 16th day of _____ (month) 2013 (yr)

My Commission expires:

05-18-13

Susan A. Fuller
Notary Public

Mullana Texas
(County State)



SCHLUMBERGER

Survey Report

17-May-2013

Client.....: Cimarex Energy Co. of Col
Field.....: Wildcat Bone Spring

Well.....: Hallertau 5 Federal 1H ST01
API number.....: 30-025-40436-01
Engineer.....: Steven Durham

County.....: LEA
State.....: NM
Rig.....: Noram 23

Spud date.....: 20-Feb-13
Last survey date.....: 21-Mar-13
Total accepted surveys...: 69
MD of first survey.....: 10111.00 ft
MD of last survey.....: 15025.00 ft

Latitude.....: 32° 3' 57.03" N
Longitude.....: 103° 41' 21.96" 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.....: 3253.00
KB above permanent.....: 3281.00
DF above permanent.....: 3281.00

----- 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.....: 388284.96 ft
Y.....: 740711.94 ft

Azimuth from Vsect Origin to target: 355.52 degrees

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

-----Run1----- Calculation Date: 12-Mar-2013
Location G.....: 998.94325 mgn Tolerance G...: 2.50 mgn
Location B.....: 48315.11 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.932 degrees Tolerance Dip: 0.45 degrees

-----Run2----- Calculation Date: 17-Mar-2013
Location G.....: 998.94325 mgn Tolerance G...: 2.50 mgn
Location B.....: 48320.7 nT Tolerance B...: 300.00 nT
Magnetic Dip: 59.934 degrees Tolerance Dip: 0.45 degrees

BGGM Model: 2012

-----Run1-----

Magnetic dec (+E/W-).....: 7.522 degrees
Grid Conv (+E/W-).....: 0.342 degrees
Total Azim Corr (+E/W-)..: 7.18 degrees

-----Run2-----

Magnetic dec (+E/W-).....: 7.527 degrees
Grid Conv (+E/W-).....: 0.337 degrees
Total Azim Corr (+E/W-)..: 7.19 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	156.40	0.08	269.62	156.40	156.40	0.01	0.00	-0.11	0.11	269.62	0.05	GyroTool	0
3	251.00	0.06	261.38	94.60	251.00	0.01	-0.01	-0.22	0.22	267.81	0.02	GyroTool	0
4	345.70	0.06	260.42	94.70	345.70	0.00	-0.02	-0.32	0.32	265.69	0.00	GyroTool	0
5	440.30	0.06	190.41	94.60	440.30	-0.05	-0.08	-0.38	0.39	257.93	0.07	GyroTool	0
6	535.00	0.10	193.64	94.70	535.00	-0.18	-0.21	-0.41	0.46	242.75	0.04	GyroTool	0
7	629.60	0.01	32.32	94.60	629.60	-0.25	-0.28	-0.42	0.51	236.19	0.12	GyroTool	0
8	724.20	0.07	288.87	94.60	724.20	-0.22	-0.26	-0.47	0.54	241.43	0.08	GyroTool	0
9	818.90	0.11	269.42	94.70	818.90	-0.19	-0.24	-0.62	0.66	248.81	0.05	GyroTool	0
10	913.50	0.10	298.47	94.60	913.50	-0.14	-0.20	-0.78	0.81	255.55	0.06	GyroTool	0

11	1008.20	0.13	257.56	94.70	1008.20	-0.11	-0.19	-0.96	0.98	259.07	0.09	GyroTool	0
12	1102.80	0.21	321.55	94.60	1102.80	0.02	-0.07	-1.17	1.18	266.45	0.20	GyroTool	0
13	1197.40	0.26	264.37	94.60	1197.40	0.16	0.04	-1.49	1.49	271.61	0.24	GyroTool	0
14	1292.10	0.55	231.61	94.70	1292.10	-0.10	-0.26	-2.06	2.08	262.78	0.38	GyroTool	0
15	1386.70	0.51	174.96	94.60	1386.69	-0.77	-0.96	-2.38	2.57	248.00	0.53	GyroTool	0
16	1481.40	0.46	72.25	94.70	1481.39	-1.11	-1.27	-1.98	2.35	237.45	0.80	GyroTool	0
17	1576.00	0.49	337.53	94.60	1575.99	-0.64	-0.78	-1.78	1.94	246.38	0.74	GyroTool	0
18	1670.60	0.50	210.59	94.60	1670.59	-0.59	-0.76	-2.14	2.27	250.49	0.94	GyroTool	0
19	1765.30	0.45	112.68	94.70	1765.28	-1.10	-1.26	-2.01	2.37	237.95	0.76	GyroTool	0
20	1859.90	0.54	334.12	94.60	1859.88	-0.85	-1.00	-1.86	2.11	241.75	0.98	GyroTool	0
21	1954.60	0.74	223.20	94.70	1954.58	-0.85	-1.04	-2.47	2.69	247.12	1.12	GyroTool	0
22	2049.20	0.64	132.41	94.60	2049.18	-1.64	-1.85	-2.50	3.11	233.58	1.04	GyroTool	0
23	2143.80	0.48	8.51	94.60	2143.77	-1.64	-1.81	-2.05	2.74	228.60	1.05	GyroTool	0
24	2238.50	0.82	247.63	94.70	2238.47	-1.47	-1.68	-2.62	3.11	237.41	1.21	GyroTool	0
25	2333.10	1.05	155.44	94.60	2333.06	-2.49	-2.72	-2.89	3.97	226.69	1.43	GyroTool	0
26	2427.80	0.56	39.74	94.70	2427.76	-2.97	-3.16	-2.23	3.86	215.26	1.47	GyroTool	0
27	2522.40	0.67	235.42	94.60	2522.35	-2.92	-3.11	-2.39	3.93	217.51	1.29	GyroTool	0
28	2617.00	0.75	194.75	94.60	2616.95	-3.78	-4.03	-3.00	5.02	216.72	0.53	GyroTool	0
29	2711.70	0.85	141.01	94.70	2711.64	-4.94	-5.17	-2.72	5.84	207.74	0.77	GyroTool	0
30	2806.30	0.87	133.89	94.60	2806.23	-6.06	-6.21	-1.76	6.46	195.81	0.11	GyroTool	0
31	2901.00	0.90	131.25	94.70	2900.92	-7.13	-7.20	-0.68	7.24	185.42	0.05	GyroTool	0
32	2995.60	0.91	135.02	94.60	2995.51	-8.23	-8.23	0.41	8.24	177.17	0.06	GyroTool	0
33	3090.20	0.93	137.00	94.60	3090.09	-9.40	-9.32	1.46	9.43	171.09	0.04	GyroTool	0
34	3184.90	0.98	139.02	94.70	3184.78	-10.66	-10.49	2.52	10.79	166.51	0.06	GyroTool	0
35	3279.50	1.02	139.42	94.60	3279.37	-11.99	-11.74	3.59	12.28	162.98	0.04	GyroTool	0
36	3374.20	1.07	135.60	94.70	3374.05	-13.35	-13.01	4.76	13.86	159.90	0.09	GyroTool	0
37	3468.80	1.22	122.34	94.60	3468.63	-14.63	-14.18	6.23	15.49	156.28	0.32	GyroTool	0
38	3563.40	1.20	120.35	94.60	3563.21	-15.80	-15.22	7.94	17.17	152.46	0.05	GyroTool	0
39	3658.10	1.05	125.20	94.70	3657.89	-16.92	-16.22	9.50	18.8	149.65	0.19	GyroTool	0
40	3752.70	1.06	131.29	94.60	3752.48	-18.10	-17.30	10.87	20.43	147.87	0.12	GyroTool	0
41	3847.40	1.21	131.07	94.70	3847.16	-19.44	-18.54	12.28	22.23	146.48	0.16	GyroTool	0
42	3942.00	1.44	125.96	94.60	3941.73	-20.92	-19.89	13.99	24.32	144.87	0.27	GyroTool	0
43	4036.60	1.53	128.82	94.60	4036.30	-22.56	-21.38	15.94	26.67	143.29	0.12	GyroTool	0
44	4131.30	1.90	129.86	94.70	4130.96	-24.52	-23.18	18.13	29.43	141.97	0.39	GyroTool	0
45	4225.90	2.49	133.89	94.60	4225.49	-27.15	-25.61	20.81	33	140.90	0.64	GyroTool	0
46	4320.60	2.78	135.22	94.70	4320.09	-30.44	-28.66	23.92	37.33	140.16	0.31	GyroTool	0
47	4415.20	2.78	133.11	94.60	4414.58	-33.89	-31.86	27.21	41.9	139.51	0.11	GyroTool	0
48	4509.80	2.68	134.65	94.60	4509.07	-37.25	-34.98	30.45	46.38	138.96	0.13	GyroTool	0
49	4604.50	2.60	134.11	94.70	4603.67	-40.54	-38.03	33.57	50.73	138.57	0.09	GyroTool	0
50	4699.10	2.49	132.77	94.60	4698.17	-43.66	-40.92	36.62	54.92	138.18	0.13	GyroTool	0
51	4793.80	2.38	131.96	94.70	4792.79	-46.59	-43.63	39.59	58.92	137.78	0.12	GyroTool	0
52	4888.40	2.27	133.26	94.60	4887.31	-49.40	-46.23	42.42	62.74	137.46	0.13	GyroTool	0
53	4983.00	2.31	130.53	94.60	4981.84	-52.14	-48.75	45.23	66.5	137.15	0.12	GyroTool	0
54	5077.70	2.19	130.55	94.70	5076.46	-54.77	-51.17	48.06	70.2	136.80	0.13	GyroTool	0
55	5172.30	2.21	129.17	94.60	5170.99	-57.30	-53.50	50.84	73.8	136.46	0.06	GyroTool	0
56	5267.00	2.22	131.01	94.70	5265.62	-59.87	-55.85	53.64	77.44	136.16	0.08	GyroTool	0
57	5361.60	2.20	131.09	94.60	5360.15	-62.47	-58.25	56.39	81.08	135.93	0.02	GyroTool	0
58	5456.20	2.25	131.81	94.60	5454.68	-65.11	-60.68	59.15	84.74	135.73	0.06	GyroTool	0
59	5550.90	2.16	130.72	94.70	5549.31	-67.72	-63.09	61.89	88.37	135.55	0.10	GyroTool	0
60	5645.50	2.10	131.45	94.60	5643.85	-70.23	-65.40	64.54	91.88	135.38	0.07	GyroTool	0
61	5740.20	2.07	132.21	94.70	5738.48	-72.72	-67.69	67.10	95.32	135.25	0.04	GyroTool	0
62	5834.80	2.05	130.45	94.60	5833.02	-75.16	-69.94	69.66	98.71	135.12	0.07	GyroTool	0
63	5929.40	2.06	129.21	94.60	5927.56	-77.53	-72.11	72.26	102.09	134.94	0.05	GyroTool	0
64	6024.10	1.99	127.24	94.70	6022.20	-79.80	-74.18	74.89	105.41	134.73	0.10	GyroTool	0
65	6118.70	1.86	125.91	94.60	6116.75	-81.89	-76.08	77.44	108.56	134.49	0.15	GyroTool	0
66	6213.40	1.83	124.35	94.70	6211.40	-83.83	-77.83	79.93	111.57	134.24	0.06	GyroTool	0
67	6308.00	1.72	129.04	94.60	6305.95	-85.76	-79.58	82.28	114.47	134.04	0.19	GyroTool	0
68	6402.60	1.67	123.92	94.60	6400.51	-87.59	-81.24	84.53	117.24	133.86	0.17	GyroTool	0
69	6497.30	1.65	126.15	94.70	6495.17	-89.34	-82.82	86.78	119.95	133.66	0.07	GyroTool	0
70	6591.90	1.64	125.13	94.60	6589.73	-91.08	-84.40	88.98	122.64	133.49	0.03	GyroTool	0
71	6686.60	1.67	125.70	94.70	6684.39	-92.84	-85.98	91.21	125.35	133.31	0.04	GyroTool	0
72	6781.20	1.65	129.83	94.60	6778.95	-94.68	-87.66	93.38	128.08	133.19	0.13	GyroTool	0
73	6875.80	1.53	132.77	94.60	6873.52	-96.56	-89.39	95.35	130.7	133.15	0.15	GyroTool	0
74	6970.50	1.50	143.23	94.70	6968.19	-98.53	-91.24	97.02	133.18	133.24	0.29	GyroTool	0
75	7065.10	0.99	150.09	94.60	7062.76	-100.32	-92.94	98.17	135.19	133.43	0.56	GyroTool	0
76	7159.80	0.85	160.88	94.70	7157.45	-101.74	-94.31	98.81	136.59	133.67	0.23	GyroTool	0
77	7254.40	0.54	182.83	94.60	7252.04	-102.86	-95.42	99.01	137.51	133.94	0.43	GyroTool	0
78	7349.00	0.65	214.67	94.60	7346.64	-103.72	-96.31	98.69	137.89	134.30	0.36	GyroTool	0
79	7443.70	0.72	210.24	94.70	7441.33	-104.62	-97.26	98.08	138.13	134.76	0.09	GyroTool	0
80	7538.30	0.60	199.70	94.60	7535.93	-105.56	-98.24	97.62	138.49	135.18	0.18	GyroTool	0
81	7633.00	0.63	188.80	94.70	7630.62	-106.52	-99.23	97.37	139.02	135.54	0.13	GyroTool	0
82	7727.60	0.60	186.79	94.60	7725.21	-107.51	-100.23	97.23	139.64	135.87	0.04	GyroTool	0
83	7822.20	0.61	182.19	94.60	7819.81	-108.50	-101.23	97.15	140.3	136.18	0.05	GyroTool	0
84	7916.90	0.76	183.52	94.70	7914.50	-109.62	-102.36	97.09	141.08	136.51	0.16	GyroTool	0
85	8011.50	0.88	185.32	94.60	8009.09	-110.96	-103.71	96.99	141.99	136.92	0.13	GyroTool	0
86	8106.20	1.02	189.31	94.70	8103.78	-112.50	-105.26	96.79	143	137.40	0.16	GyroTool	0
87	8200.80	1.02	199.61	94.60	8198.36	-114.08	-106.89	96.37	143.91	137.96	0.19	GyroTool	0
88	8295.40	1.17	197.75	94.60	8292.95	-115.74	-108.60	95.79	144.81	138.59	0.16	GyroTool	0
89	8390.10	1.11	205.26	94.70	8387.63	-117.44	-110.35	95.10	145.68	139.24	0.17	GyroTool	0
90	8484.70	1.11	212.56	94.60	8482.21	-118.96	-111.95	94.22	146.32	139.92	0.15	GyroTool	0
91	8579.40	1.13	214.37	94.70	8576.89	-120.42	-113.50	93.20	146.86	140.61	0.04	GyroTool	0
92	8674.00	1.19	226.63	94.60	8671.47	-121.77	-114.94	91.96	147.2	141.34	0.27	GyroTool	0
93	8768.60	1.36	237.63	94.60	8766.05	-122.91	-116.22	90.30	147.17	142.15	0.31	GyroTool	0

94	8863.30	1.33	239.56	94.70	8860.72	-123.91	-117.37	88.40	146.94	143.02	0.06	GyroTool	0
95	8957.90	1.07	231.58	94.60	8955.30	-124.89	-118.48	86.76	146.85	143.79	0.33	GyroTool	0
96	9052.60	0.95	239.99	94.70	9049.99	-125.72	-119.42	85.39	146.81	144.43	0.20	GyroTool	0
97	9147.20	1.35	251.95	94.60	9144.57	-126.32	-120.16	83.65	146.41	145.16	0.49	GyroTool	0
98	9241.80	1.90	268.74	94.60	9239.13	-126.49	-120.54	81.02	145.24	146.09	0.76	GyroTool	0
99	9336.50	2.07	269.72	94.70	9333.78	-126.28	-120.58	77.74	143.47	147.19	0.18	GyroTool	0
100	9431.10	2.02	263.34	94.60	9428.32	-126.22	-120.78	74.38	141.85	148.38	0.25	GyroTool	0
101	9525.80	1.57	261.13	94.70	9522.97	-126.38	-121.18	71.44	140.67	149.48	0.48	GyroTool	0
102	9620.40	1.67	255.83	94.60	9617.53	-126.71	-121.71	68.82	139.82	150.51	0.19	GyroTool	0
103	9715.00	1.60	252.18	94.60	9712.09	-127.25	-122.46	66.23	139.22	151.59	0.13	GyroTool	0
104	9809.70	1.56	247.52	94.70	9806.76	-127.95	-123.35	63.78	138.86	152.66	0.14	GyroTool	0
105	9904.30	1.52	240.90	94.60	9901.32	-128.87	-124.46	61.49	138.82	153.71	0.19	GyroTool	0
106	9999.00	1.28	239.39	94.70	9995.99	-129.86	-125.60	59.48	138.98	154.66	0.26	GyroTool	0
107	10111.00	16.45	343.67	112.00	10106.48	-114.79	-110.92	53.91	123.32	154.08	15.01	SlimPulse	0
108	10141.00	21.75	344.66	30.00	10134.82	-105.16	-101.47	51.24	113.68	153.21	17.71	SlimPulse	0
109	10172.00	26.84	345.28	31.00	10163.06	-92.63	-89.16	47.94	101.23	151.73	16.42	SlimPulse	0
110	10204.00	31.19	345.50	32.00	10191.04	-77.35	-74.14	44.03	86.23	149.30	13.60	SlimPulse	0
111	10236.00	35.15	345.56	32.00	10217.82	-60.11	-57.19	39.65	69.59	145.27	12.39	SlimPulse	0
112	10266.00	38.70	345.82	30.00	10241.80	-42.35	-39.73	35.20	53.08	138.46	11.85	SlimPulse	0
113	10298.00	41.77	345.63	32.00	10266.23	-21.99	-19.70	30.10	35.98	123.20	9.58	SlimPulse	0
114	10329.00	44.20	345.35	31.00	10288.90	-1.18	0.76	24.81	24.82	88.25	7.86	SlimPulse	0
115	10361.00	46.19	345.68	32.00	10311.45	21.18	22.74	19.13	29.72	40.08	6.26	SlimPulse	0
116	10392.00	48.73	346.45	31.00	10332.41	43.70	44.91	13.64	46.93	16.89	8.39	SlimPulse	0
117	10424.00	51.30	347.52	32.00	10352.98	67.95	68.79	8.12	69.27	6.73	8.43	SlimPulse	0
118	10456.00	53.08	347.95	32.00	10372.59	93.00	93.49	2.75	93.54	1.68	5.69	SlimPulse	0
119	10487.00	54.45	348.67	31.00	10390.91	117.80	117.98	-2.31	118	358.88	4.80	SlimPulse	0
120	10519.00	56.10	349.65	32.00	10409.14	143.94	143.81	-7.26	144	357.11	5.73	SlimPulse	0
121	10550.00	58.23	351.10	31.00	10425.95	169.88	169.49	-11.61	169.89	356.08	7.89	SlimPulse	0
122	10582.00	61.50	351.89	32.00	10442.01	197.48	196.86	-15.70	197.48	355.44	10.45	SlimPulse	0
123	10613.00	64.81	352.15	31.00	10456.01	225.09	224.25	-19.54	225.1	355.02	10.69	SlimPulse	0
124	10645.00	67.31	352.16	32.00	10468.99	254.28	253.22	-23.53	254.31	354.69	7.81	SlimPulse	0
125	10677.00	69.99	352.50	32.00	10480.64	284.04	282.75	-27.51	284.09	354.44	8.43	SlimPulse	0
126	10708.00	73.32	353.47	31.00	10490.40	313.43	311.95	-31.10	313.5	354.31	11.15	SlimPulse	0
127	10740.00	76.50	354.16	32.00	10498.73	344.31	342.66	-34.43	344.39	354.26	10.15	SlimPulse	0
128	10772.00	78.12	354.94	32.00	10505.76	375.52	373.74	-37.39	375.61	354.29	5.61	SlimPulse	0
129	10803.00	80.33	355.41	31.00	10511.56	405.97	404.08	-39.95	406.05	354.35	7.27	SlimPulse	0
130	10835.00	83.49	355.48	32.00	10516.06	437.65	435.66	-42.47	437.73	354.43	9.89	SlimPulse	0
131	10866.00	86.28	354.87	31.00	10518.82	468.52	466.42	-45.06	468.6	354.48	9.21	SlimPulse	0
132	10957.00	88.42	355.19	91.00	10523.03	559.41	556.98	-52.94	559.49	354.57	2.38	SlimPulse	0
133	11052.00	88.59	354.80	95.00	10525.51	654.38	651.59	-61.23	654.46	354.63	0.45	SlimPulse	0
134	11147.00	88.52	354.22	95.00	10527.90	749.33	746.12	-70.32	749.42	354.62	0.61	SlimPulse	0
135	11242.00	88.38	352.36	95.00	10530.47	844.22	840.43	-81.41	844.36	354.47	1.96	SlimPulse	0
136	11337.00	89.11	352.18	95.00	10532.55	939.04	934.54	-94.18	939.28	354.25	0.78	SlimPulse	0
137	11432.00	89.21	353.63	95.00	10533.95	1033.93	1028.80	-105.91	1034.24	354.12	1.52	SlimPulse	0
138	11526.00	89.14	354.76	94.00	10535.30	1127.90	1122.31	-115.42	1128.23	354.13	1.20	SlimPulse	0
139	11621.00	89.18	355.77	95.00	10536.70	1222.88	1216.97	-123.27	1223.2	354.22	1.07	SlimPulse	0
140	11716.00	89.07	356.26	95.00	10538.15	1317.87	1311.73	-129.87	1318.15	354.35	0.53	SlimPulse	0
141	11810.00	89.18	355.85	94.00	10539.59	1411.85	1405.50	-136.34	1412.1	354.46	0.46	SlimPulse	0
142	11905.00	88.86	355.60	95.00	10541.21	1506.84	1500.22	-143.42	1507.06	354.54	0.42	SlimPulse	0
143	12000.00	89.72	355.11	95.00	10542.38	1601.83	1594.90	-151.11	1602.04	354.59	1.04	SlimPulse	0
144	12094.00	91.10	355.12	94.00	10541.70	1695.82	1688.55	-159.11	1696.03	354.62	1.46	SlimPulse	0
145	12189.00	91.10	354.96	95.00	10539.88	1790.80	1783.18	-167.32	1791.01	354.64	0.17	SlimPulse	0
146	12283.00	90.28	355.24	94.00	10538.75	1884.79	1876.83	-175.35	1885	354.66	0.93	SlimPulse	0
147	12378.00	89.07	356.10	95.00	10539.29	1979.79	1971.55	-182.52	1979.99	354.71	1.56	SlimPulse	0
148	12473.00	88.59	357.04	95.00	10541.23	2074.75	2066.36	-188.20	2074.92	354.80	1.12	SlimPulse	0
149	12568.00	88.73	358.62	95.00	10543.45	2169.64	2161.27	-191.80	2169.76	354.93	1.66	SlimPulse	0
150	12663.00	88.63	359.27	95.00	10545.65	2264.45	2256.22	-193.54	2264.51	355.10	0.70	SlimPulse	0
151	12758.00	88.56	358.82	95.00	10547.98	2359.24	2351.18	-195.13	2359.27	355.26	0.49	SlimPulse	0
152	12853.00	90.10	358.30	95.00	10549.09	2454.10	2446.14	-197.51	2454.1	355.38	1.72	SlimPulse	0
153	12948.00	89.73	356.83	95.00	10549.24	2549.03	2541.05	-201.55	2549.03	355.46	1.60	SlimPulse	0
154	13043.00	89.72	355.78	95.00	10549.69	2644.02	2635.85	-207.67	2644.02	355.50	1.11	SlimPulse	0
155	13138.00	89.79	356.66	95.00	10550.09	2739.01	2730.65	-213.94	2739.01	355.52	0.93	SlimPulse	0
156	13232.00	90.38	357.41	94.00	10549.95	2832.98	2824.52	-218.81	2832.98	355.57	1.01	SlimPulse	0
157	13327.00	90.17	357.57	95.00	10549.49	2927.92	2919.43	-222.97	2927.93	355.63	0.28	SlimPulse	0
158	13422.00	90.10	357.65	95.00	10549.27	3022.86	3014.34	-226.94	3022.87	355.69	0.11	SlimPulse	0
159	13517.00	90.89	356.48	95.00	10548.44	3117.82	3109.21	-231.80	3117.84	355.74	1.48	SlimPulse	0
160	13612.00	91.31	353.34	95.00	10546.61	3212.78	3203.81	-240.23	3212.8	355.71	3.34	SlimPulse	0
161	13707.00	89.79	351.17	95.00	10545.70	3307.62	3297.93	-253.03	3307.62	355.61	2.79	SlimPulse	0
162	13802.00	89.48	352.32	95.00	10546.30	3402.41	3391.94	-266.68	3402.41	355.50	1.25	SlimPulse	0
163	13897.00	89.48	354.02	95.00	10547.16	3497.32	3486.26	-277.98	3497.32	355.44	1.79	SlimPulse	0
164	13992.00	89.72	355.21	95.00	10547.81	3592.30	3580.83	-286.90	3592.31	355.42	1.27	SlimPulse	0
165	14087.00	90.31	354.02	95.00	10547.78	3687.29	3675.41	-295.81	3687.3	355.40	1.39	SlimPulse	0
166	14181.00	89.62	353.63	94.00	10547.84	3781.25	3768.87	-305.92	3781.26	355.36	0.84	SlimPulse	0
167	14277.00	89.48	354.81	96.00	10548.59	3877.22	3864.37	-315.58	3877.24	355.33	1.24	SlimPulse	0
168	14372.00	89.45	356.04	95.00	10549.47	3972.21	3959.07	-323.16	3972.23	355.33	1.29	SlimPulse	0
169	14466.00	90.27	358.26	94.00	10549.70	4066.17	4052.94	-327.83	4066.18	355.38	2.51	SlimPulse	0
170	14561.00	90.48	359.35	95.00	10549.07	4161.01	4147.92	-329.81	4161.01	355.45	1.17	SlimPulse	0
171	14657.00	90.34	359.10	96.00	10548.38	4256.80	4243.91	-331.11	4256.8	355.54	0.30	SlimPulse	0
172	14751.00	90.96	359.40	94.00	10547.31	4350.60	4337.89	-332.33	4350.6	355.62	0.73	SlimPulse	0
173	14846.00	91.31	358.39	95.00	10545.43	4445.41	4432.85	-334.16	4445.43	355.69	1.13	SlimPulse	0
174	14941.00	91.51	357.28	95.00	10543.09	4540.31	4527.76	-337.75	4540.34	355.73	1.19	SlimPulse	0
175	15025.00	90.07	356.87	84.00	10541.93	4624.27	4611.64	-342.04	4624.3	355.76	1.79	SlimPulse	0
176	15091.00	90.07	356.87	66.00	10541.85	4690.25	4677.54	-345.64	4690.29	355.77	0.00	Proj. to Bit	7