MICRO IMAGER
DIPMETER PRINT

COMPANY	SUNCOR ENERGY INC.
WELL	SUNCOR LEWIS 3-8-92-7
FIELD	LEWIS
PROVINCE/COUNTY	ALBERTA
COUNTRY/STATE	CANADA
LOCATION	1AA030809207W400
SURFACE	03-08-092-07W4

LSD	SEC	TWP	RGE
03	08	092	07W4

Licence Number 0486896

Other Services
DIPOLE SONIC — ARRAY INDUCTION
PHOTO DENSITY — DUAL SPACED NEUTRON

Permanent Datum GROUND, Elevation 477.4 metres
Log Measured From KB, 1.20 metres above Permanent Datum
Drilling Measured From KB @1.2m

Elevations:	metres
KB	478.60
DF	
GL	477.40

Date	25-JAN-2018			
Run Number	1			
Service Order	8310-204072557			
Depth Driller	230.00	metres		
Depth Logger	230.10	metres		
First Reading	223.60	metres		
Last Reading	88.60	metres		
Casing Driller	88.30	metres		
Casing Logger	88.30	metres		
Bit Size	159.000	mm		
Hole Fluid Type	POLYMER			
Density / Viscosity	1050.0 kg/M3	42.00 sec/L		
PH / Fluid Loss	7.00	8.00 ml/30Min		
Sample Source	N/A			
Rm @ Measured Temp	4.45 @ 9.8	ohm-m		
Rmf @ Measured Temp	---			
Rmc @ Measured Temp	---			
Source Rmf / Rmc	N/A	N/A		
Rm @ BHT	4.65 @ 9.0	ohm-m		
Time Since Circulation	5 HRS			
Max Recorded Temp	9.00	deg C		
Equipment / Base	14265	LLD		
Recorded By	ELLIOT KANE			
Witnessed By	CLARK HUBER			
Time on Bottom	09:45; 25-JAN-2018		12:10 ; 25-JAN-2018	

BOREHOLE RECORD

Last Edited: 25-JAN-2018 09:56

Bit Size millimetres	Depth From metres	Depth To metres
251.000	0.00	88.30
159.000	88.30	230.10

CASING RECORD

Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight Kg/metre
SURFACE	177.800	0.00	88.30	25.30

REMARKS

1) Run 1: MCB, SHA, MCG, MIM, MIE, MFE, MDM, MRD, MTD, HFS; Run in Combination
   Run 2: MCB, SHA, MCG, MTC, MGS, ISC, MDN, MPD, SKJ, MFE, MAI ; Run in Combination
2) Hardware: MDN: One Dual Neutron Bowspring
   MAI: Two 12.7 mm standoffs with Bottom Hole Finder Assembly
   MCG: One 6-leaf centralizer
   MIE: Two 6-leaf centralizers
   MSD: Two 6-leaf centralizers
3) Total Hole Volume from TD to Surface Casing = 2.7 CuM
4) Hole Volume calculated with Micro Imager calipers
5) Logging requested from KB @ 478.6 m.
6) Tool zero requested from KB.
7) Magnetic Declanation: 13.39 EAST
8) Easting: 494056.00 ; Northing: 6313159.00

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

MAIN PASS 1:240

Depth Based Data - Merged File — Plotted on 20-FEB-2018 11:48

Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge — Merged on 31-JAN-2018 13:27

System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

Timing Marks
every 60.0 sec

MIE Caliper X
millimetres
100 225 350

MIE Caliper Y
millimetres
100 225 350

MGS Gamma Ray
API
0 75 150

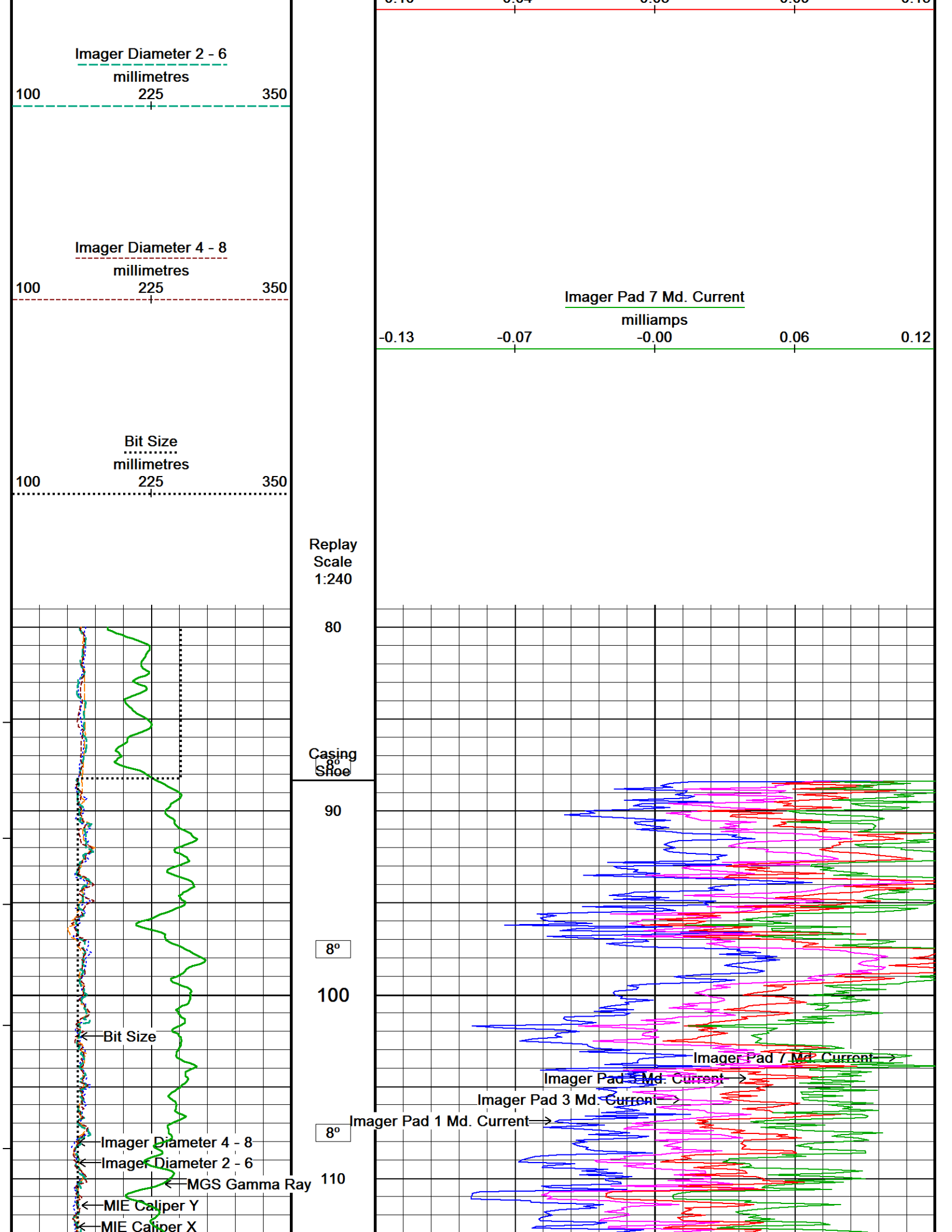
Depth in Metres

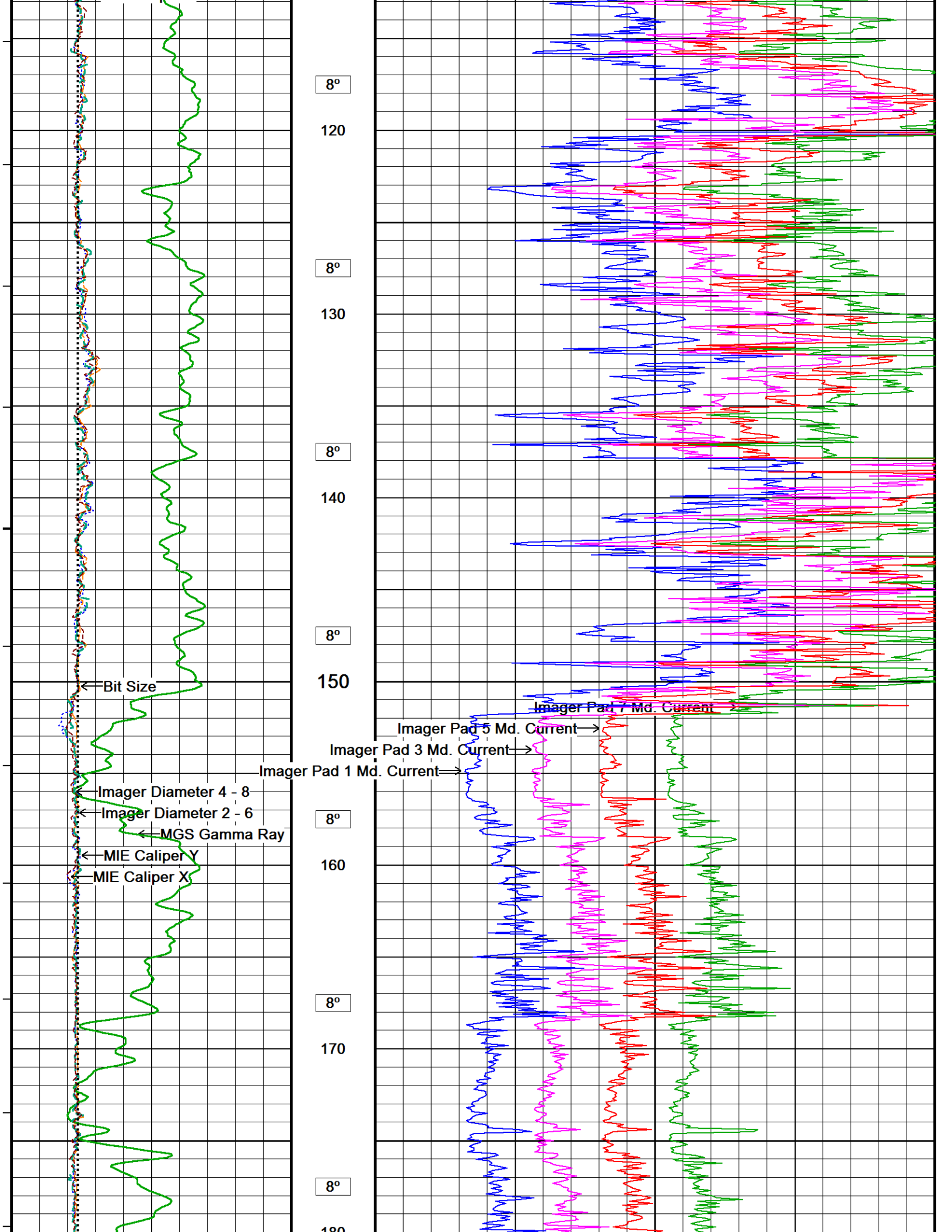
Borehole Temp in deg C

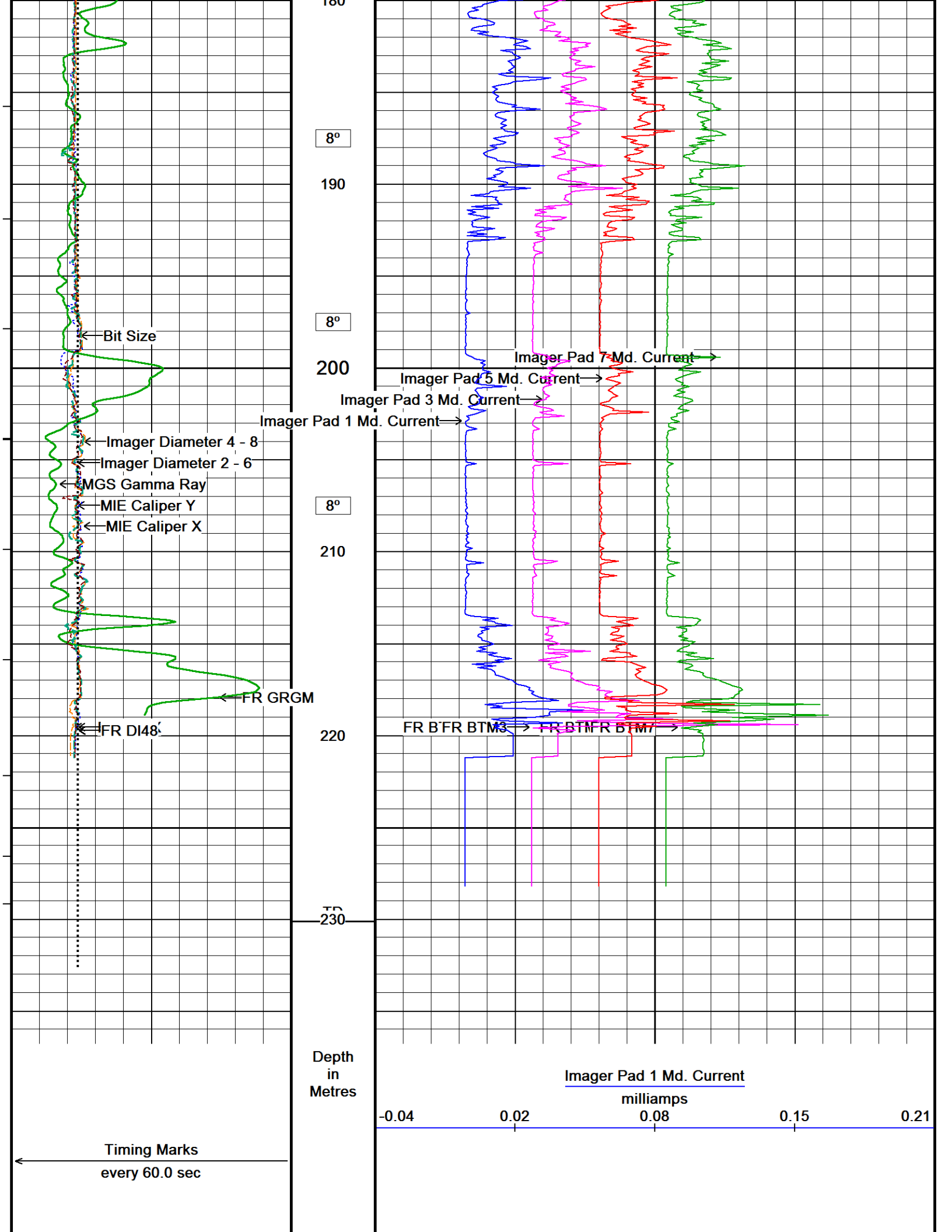
Imager Pad 1 Md. Current
milliamps
-0.04 0.02 0.08 0.15 0.21

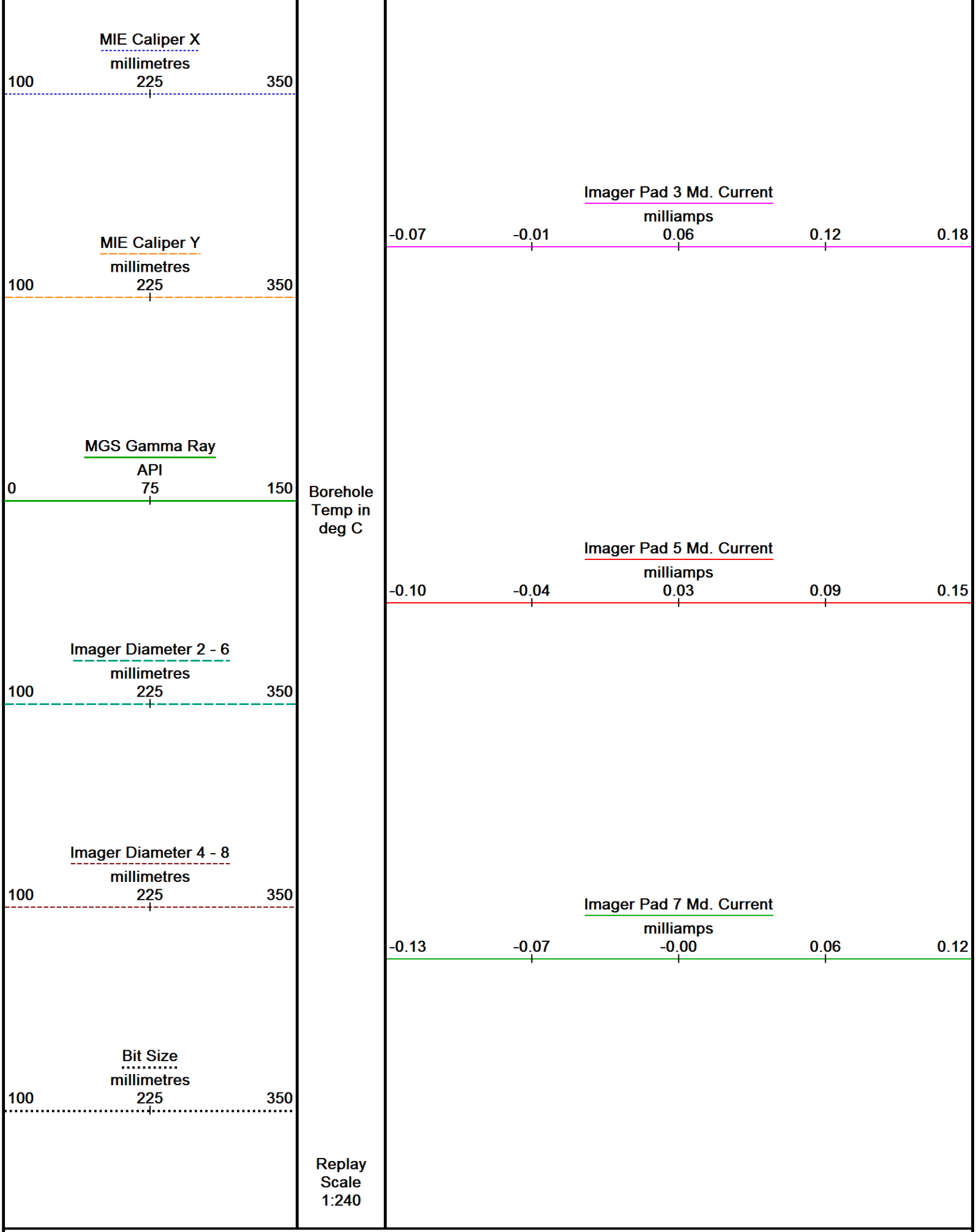
Imager Pad 3 Md. Current
milliamps
-0.07 -0.01 0.06 0.12 0.18

Imager Pad 5 Md. Current
milliamps
-0.10 -0.04 0.03 0.09 0.15


Imager Diameter 2 - 6
millimetres
100
225
350
Imager Diameter 4 - 8
millimetres
100
225
350
Bit Size
millimetres
100
225
350
Imager Pad 7 Md. Current
milliamps
-0.13
-0.07
-0.00
0.06
0.12
Replay
Scale
1:240
80
Casing
Shoe
8º
90
8º
100
8º
110
Bit Size
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
Imager Pad 7 Md. Current
Imager Pad 3 Md. Current
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current


8º
120
8º
130
8º
140
8º
150
8º
160
8º
170
8º
180
Bit Size
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current


180
8°
190
8°
Bit Size
200
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8°
210
FR GRGM
FR DI48
220
FR BTM3
FR BTM7
230
Depth
in
Metres
Timing Marks
every 60.0 sec
Imager Pad 1 Md. Current
milliamps
-0.04
0.02
0.08
0.15
0.21



Depth Based Data - Merged File
Plotted on 20-FEB-2018 11:48
Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge
Merged on 31-JAN-2018 13:27
System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

MAIN PASS 1:240

REPEAT PASS 1:240
MAIN PASS 1:240

Depth Based Data - Merged File — Plotted on 20-FEB-2018 11:48
Filename: C:\Users\e107546\AppData\L...\WL_0486896_AA-03-08-092-07W4-00_REPEAT_PASS.mge — Merged on 31-JAN-2018 13:27
Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge — Merged on 31-JAN-2018 13:27
System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

Timing Marks
every 60.0 sec

MIE Caliper X
millimetres
100 225 350

MIE Caliper Y
millimetres
100 225 350

MGS Gamma Ray
API
0 75 150

Imager Diameter 2 - 6
millimetres
100 225 350

Imager Diameter 4 - 8
millimetres

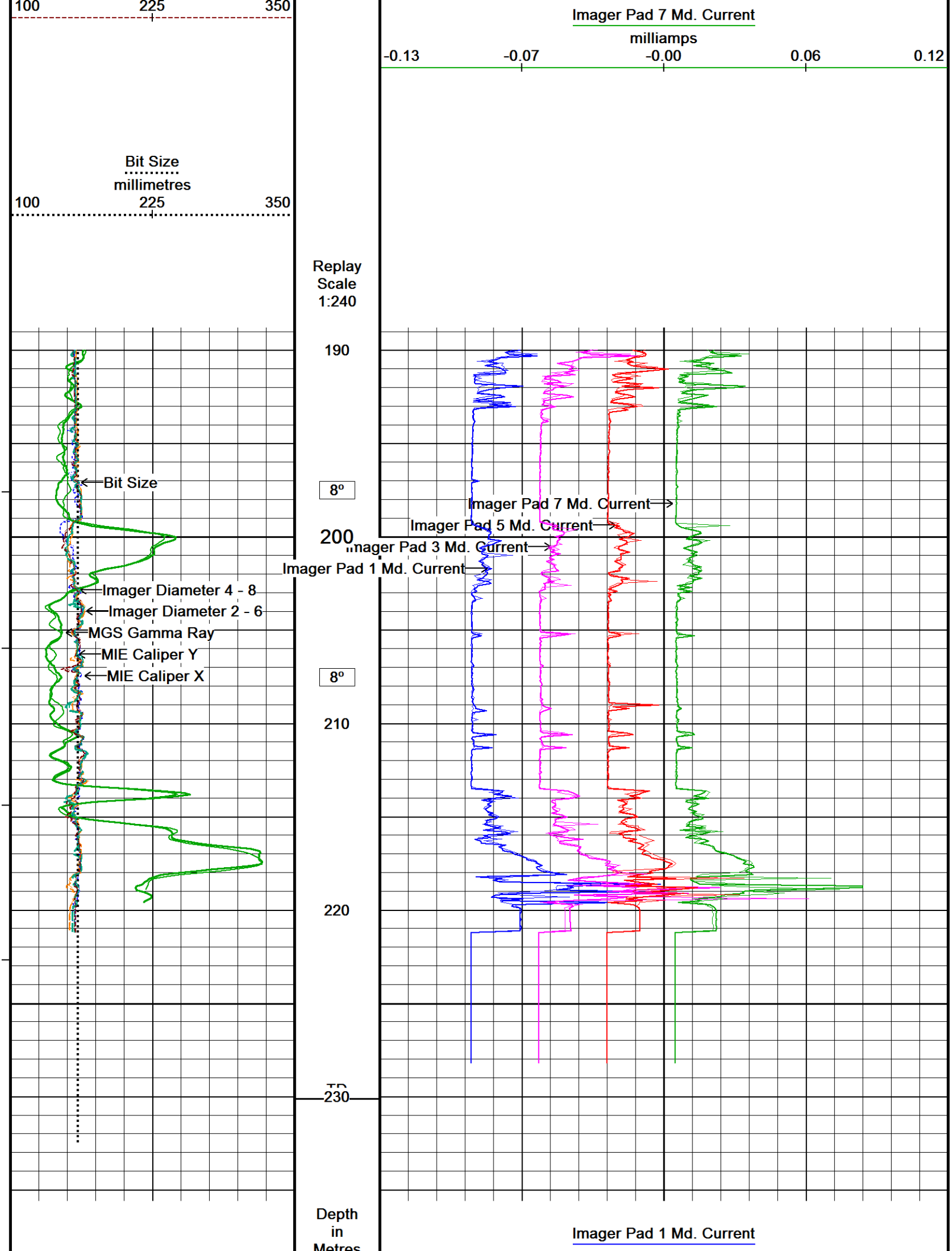
Depth in Metres

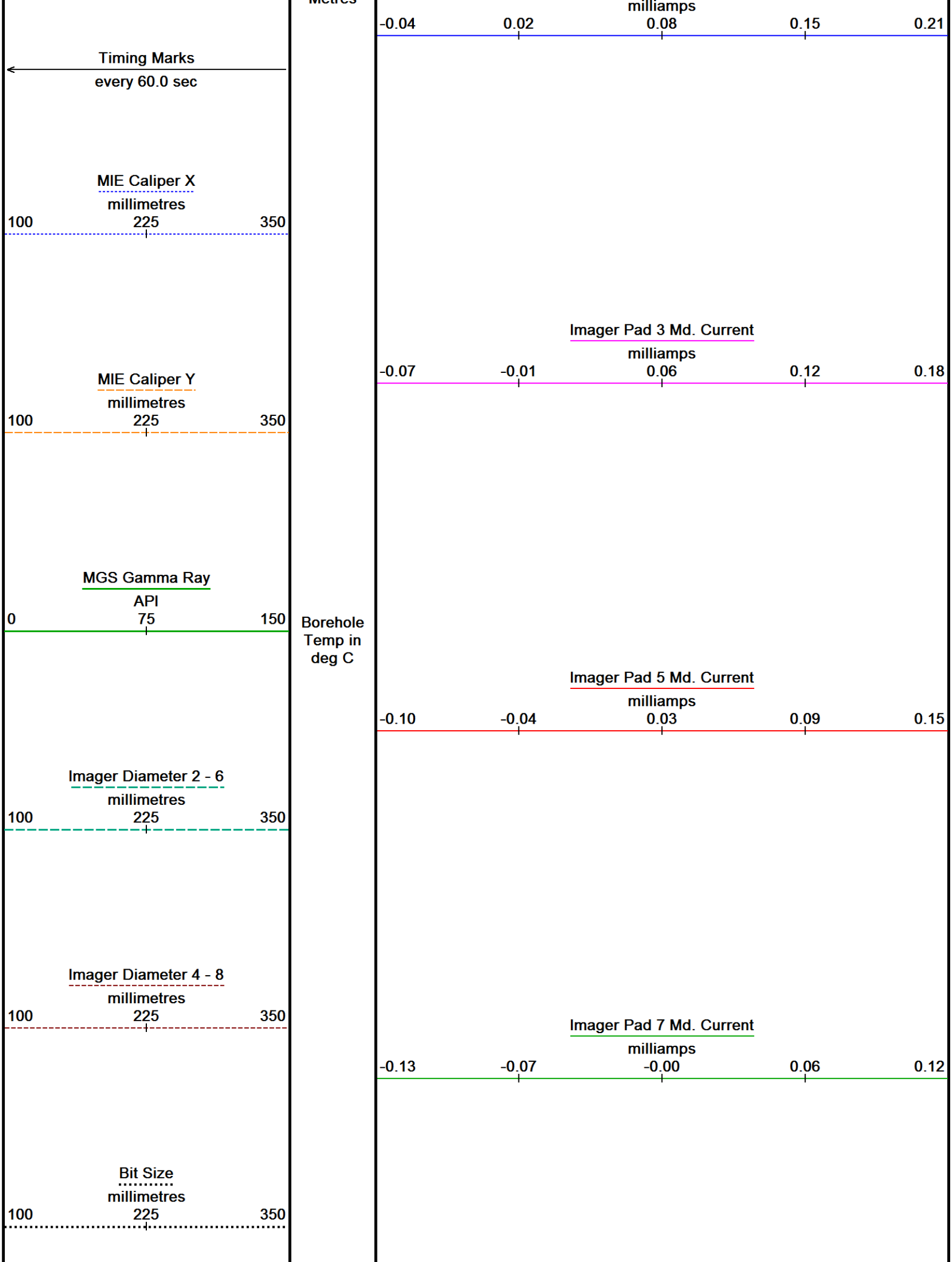
Borehole Temp in deg C

Imager Pad 1 Md. Current
milliamps
-0.04 0.02 0.08 0.15 0.21

Imager Pad 3 Md. Current
milliamps
-0.07 -0.01 0.06 0.12 0.18

Imager Pad 5 Md. Current
milliamps
-0.10 -0.04 0.03 0.09 0.15


100
225
350
Bit Size
millimetres
100
225
350
Bit Size
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
Replay
Scale
1:240
190
8°
200
210
8°
220
TD
230
Depth
in
Metres
Imager Pad 7 Md. Current
milliamps
-0.13
-0.07
-0.00
0.06
0.12
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current
Imager Pad 1 Md. Current


Timing Marks
every 60.0 sec
MIE Caliper X
millimetres
100
225
350
MIE Caliper Y
millimetres
100
225
350
MGS Gamma Ray
API
0
75
150
Imager Diameter 2 - 6
millimetres
100
225
350
Imager Diameter 4 - 8
millimetres
100
225
350
Bit Size
millimetres
100
225
350
Borehole Temp in deg C
milliamps
-0.04
0.02
0.08
0.15
0.21
Imager Pad 3 Md. Current
milliamps
-0.07
-0.01
0.06
0.12
0.18
Imager Pad 5 Md. Current
milliamps
-0.10
-0.04
0.03
0.09
0.15
Imager Pad 7 Md. Current
milliamps
-0.13
-0.07
-0.00
0.06
0.12

Replay
Scale
1:240

Depth Based Data - Merged File — Plotted on 20-FEB-2018 11:48
Filename: C:\Users\e107546\AppData\L...\WL_0486896_AA-03-08-092-07W4-00_REPEAT_PASS.mge — Merged on 31-JAN-2018 13:27
Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge — Merged on 31-JAN-2018 13:27
System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

REPEAT PASS 1:240
MAIN PASS 1:240

MAIN PASS 1:100

Depth Based Data - Merged File — Plotted on 20-FEB-2018 11:48
Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge — Merged on 31-JAN-2018 13:27
System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

Timing Marks
every 60.0 sec

MIE Caliper X
millimetres
100 225 350

MIE Caliper Y
millimetres
100 225 350

MGS Gamma Ray
API
0 75 150

Imager Diameter 2 - 6
millimetres
100 225 350

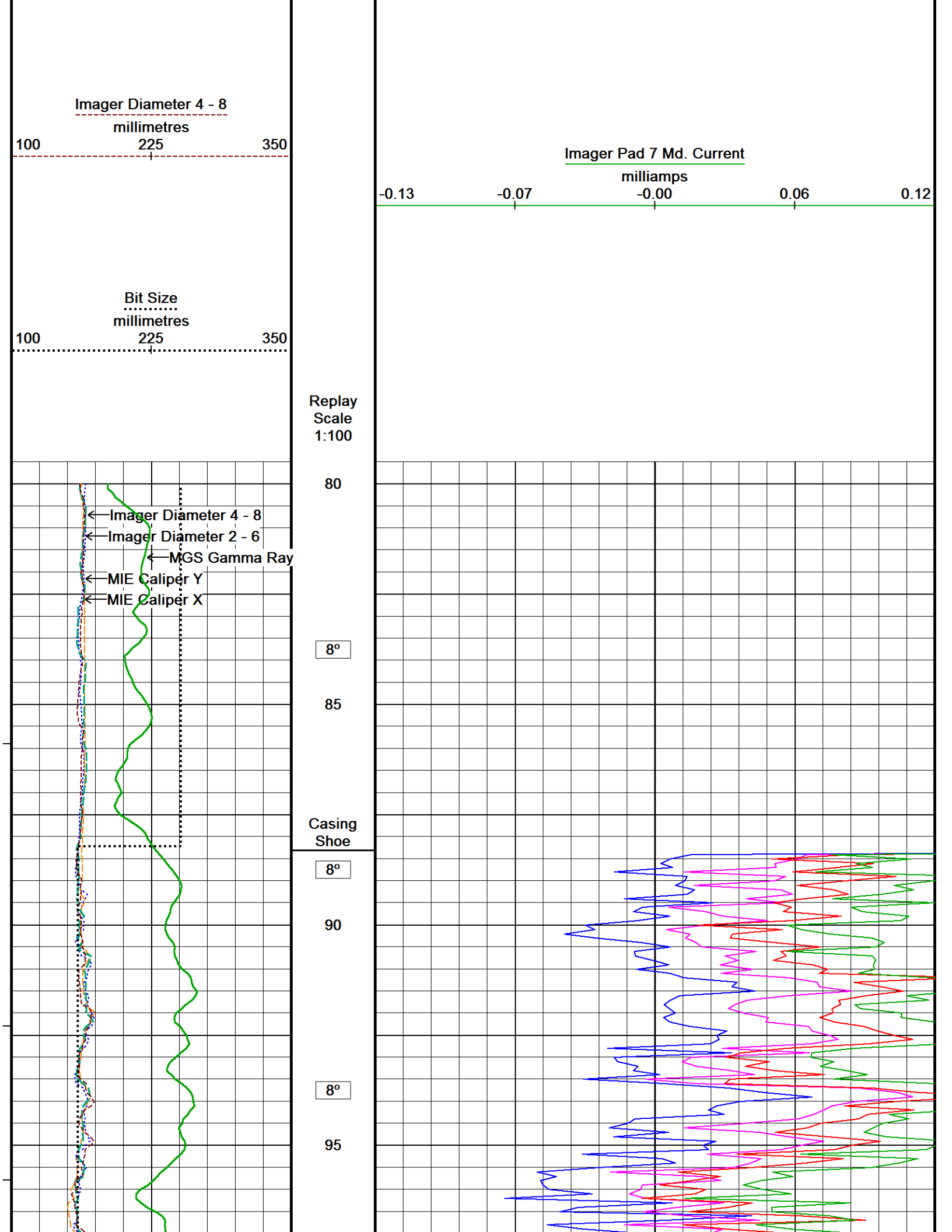
Depth
in
Metres

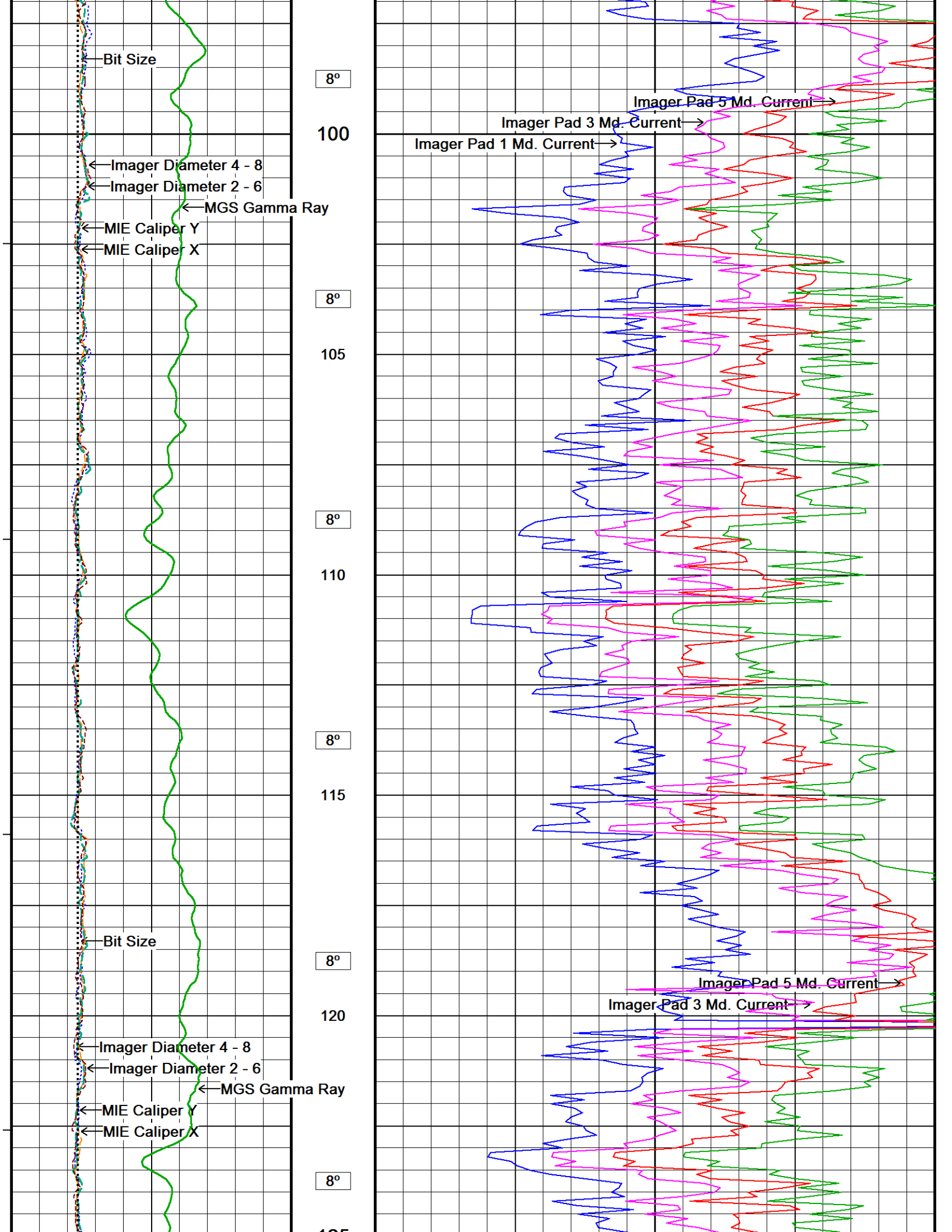
Borehole
Temp in
deg C

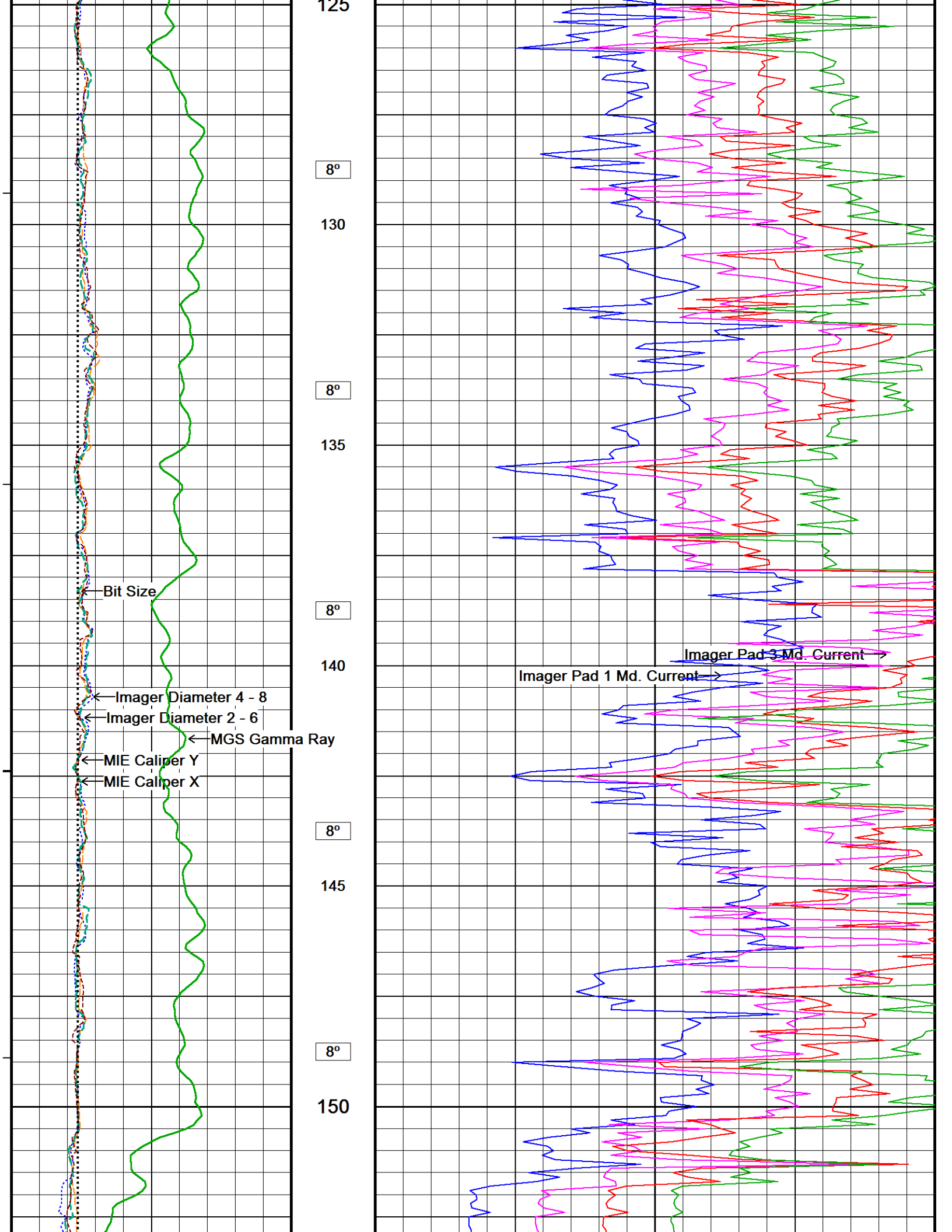
Imager Pad 1 Md. Current
milliamps
-0.04 0.02 0.08 0.15 0.21

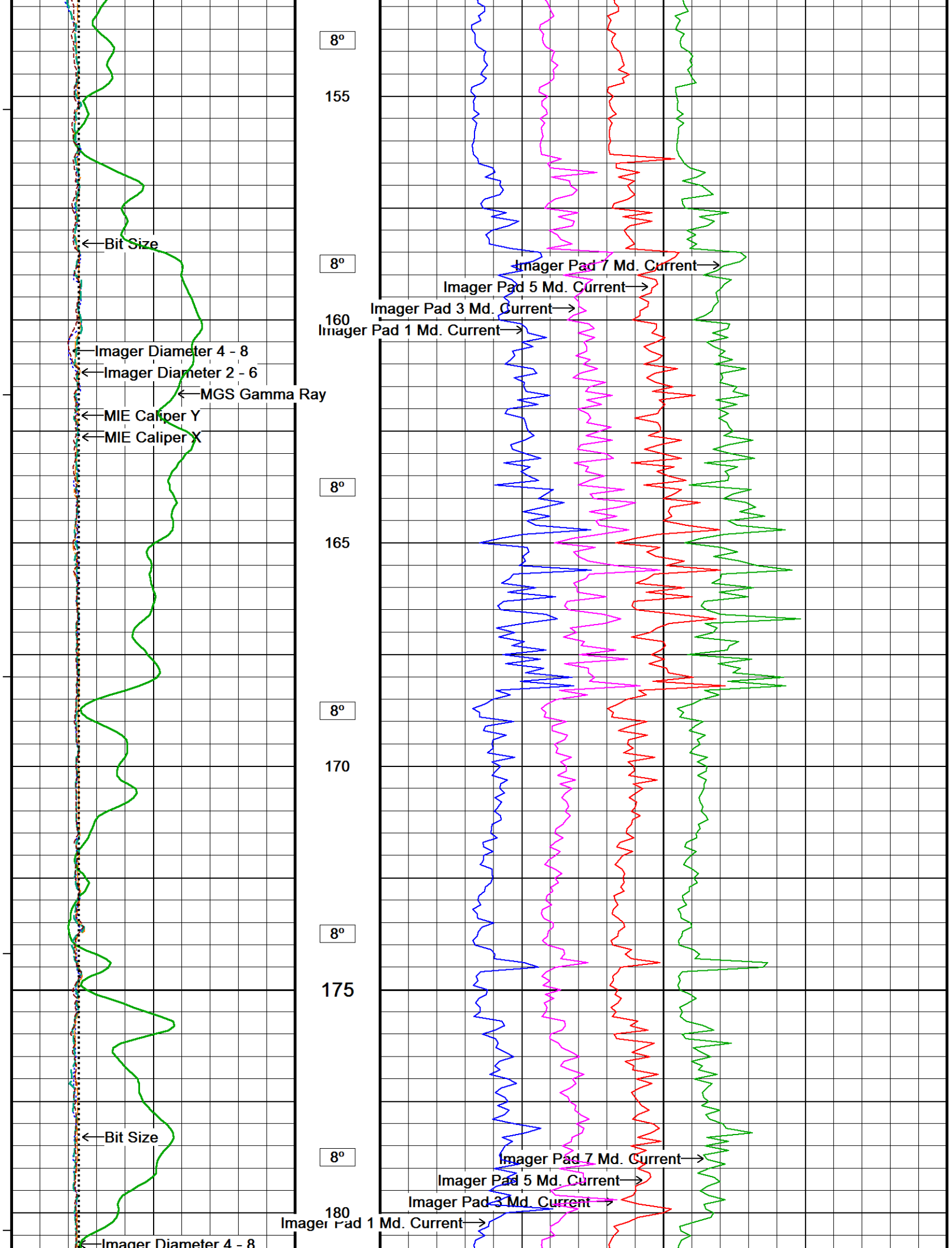
Imager Pad 3 Md. Current
milliamps
-0.07 -0.01 0.06 0.12 0.18

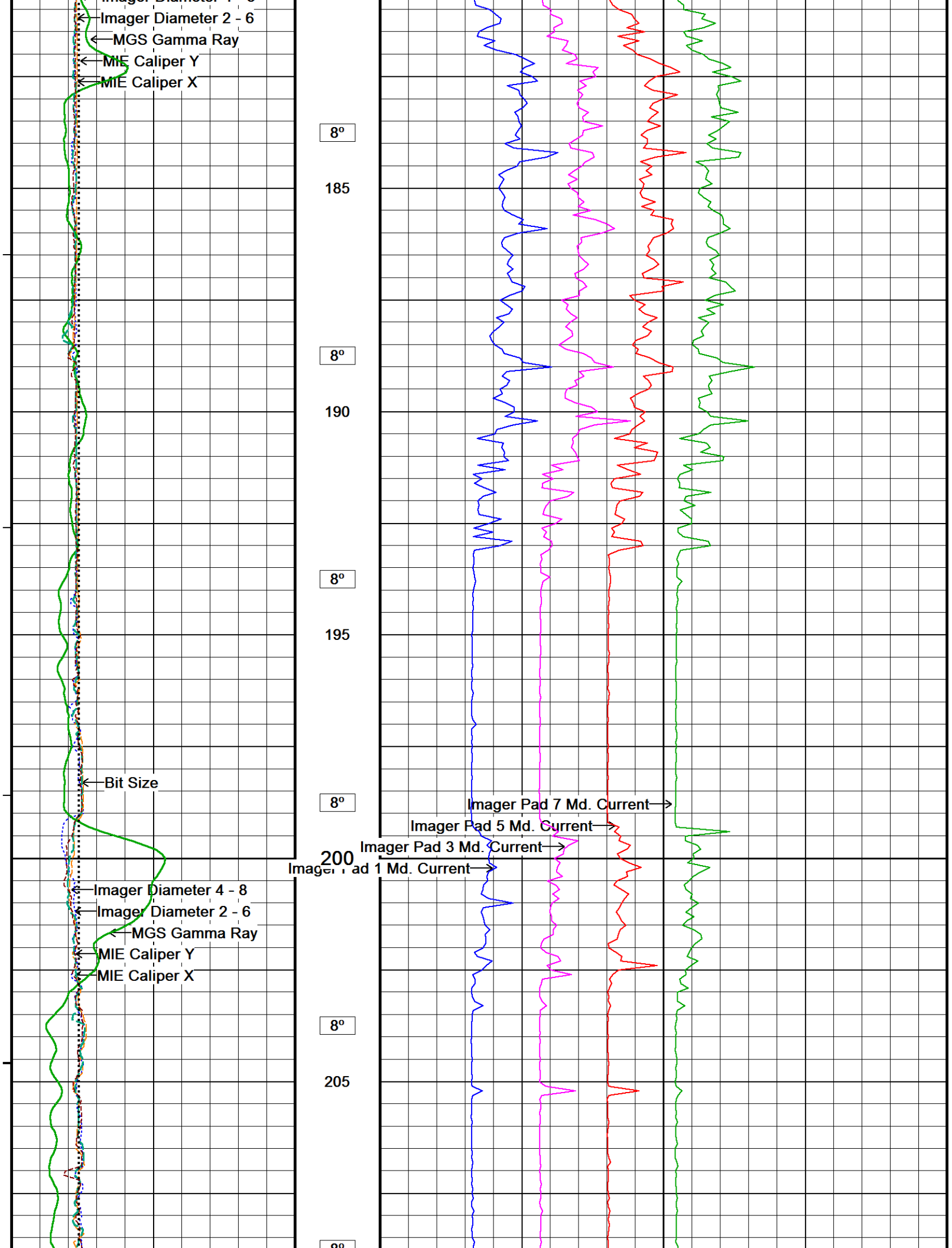
Imager Pad 5 Md. Current
milliamps
-0.10 -0.04 0.03 0.09 0.15

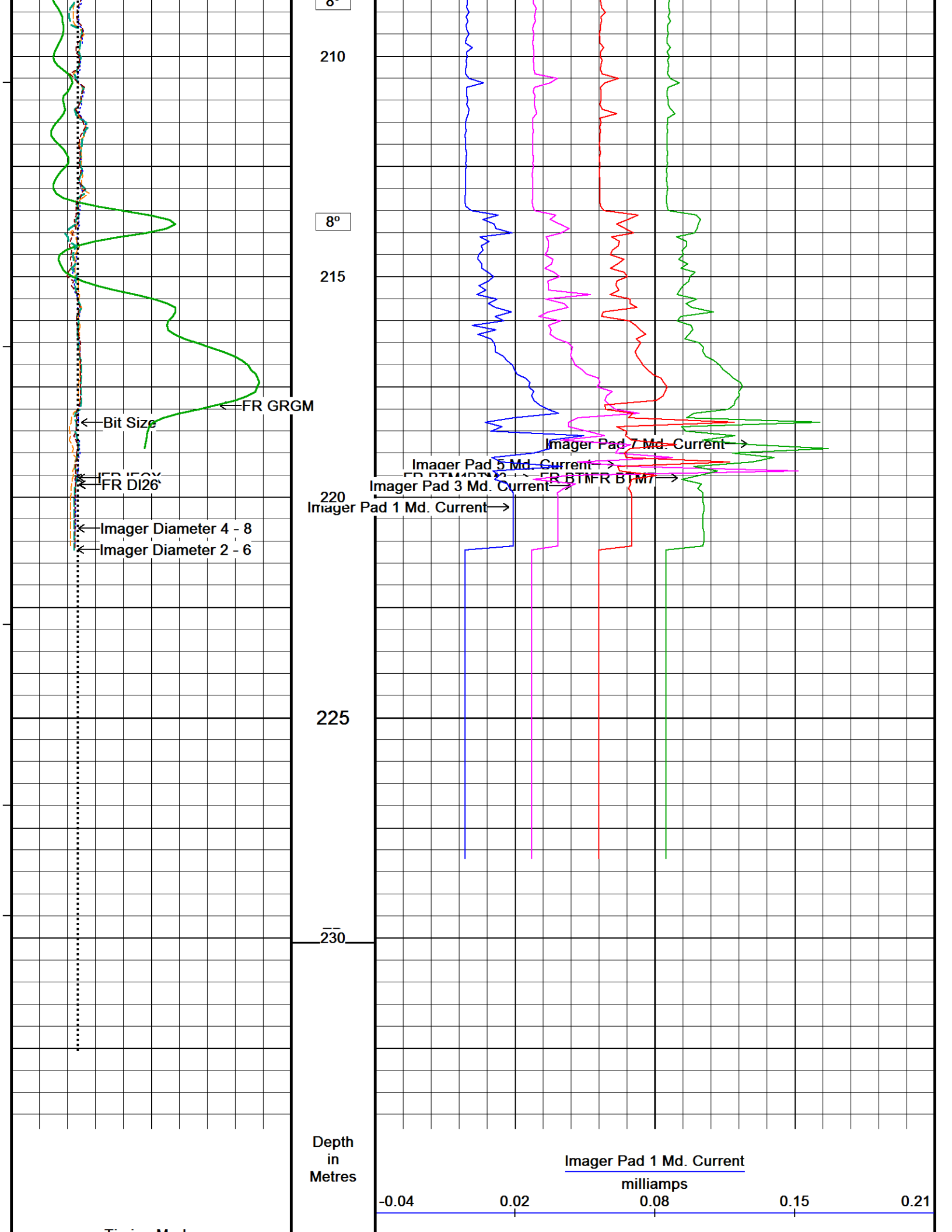

Imager Diameter 4 - 8
millimetres
100
225
350
Bit Size
millimetres
100
225
350
Imager Pad 7 Md. Current
milliamps
-0.13
-0.07
-0.00
0.06
0.12
Replay
Scale
1:100
80
85
90
95
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
8º
8º
Casing
Shoe

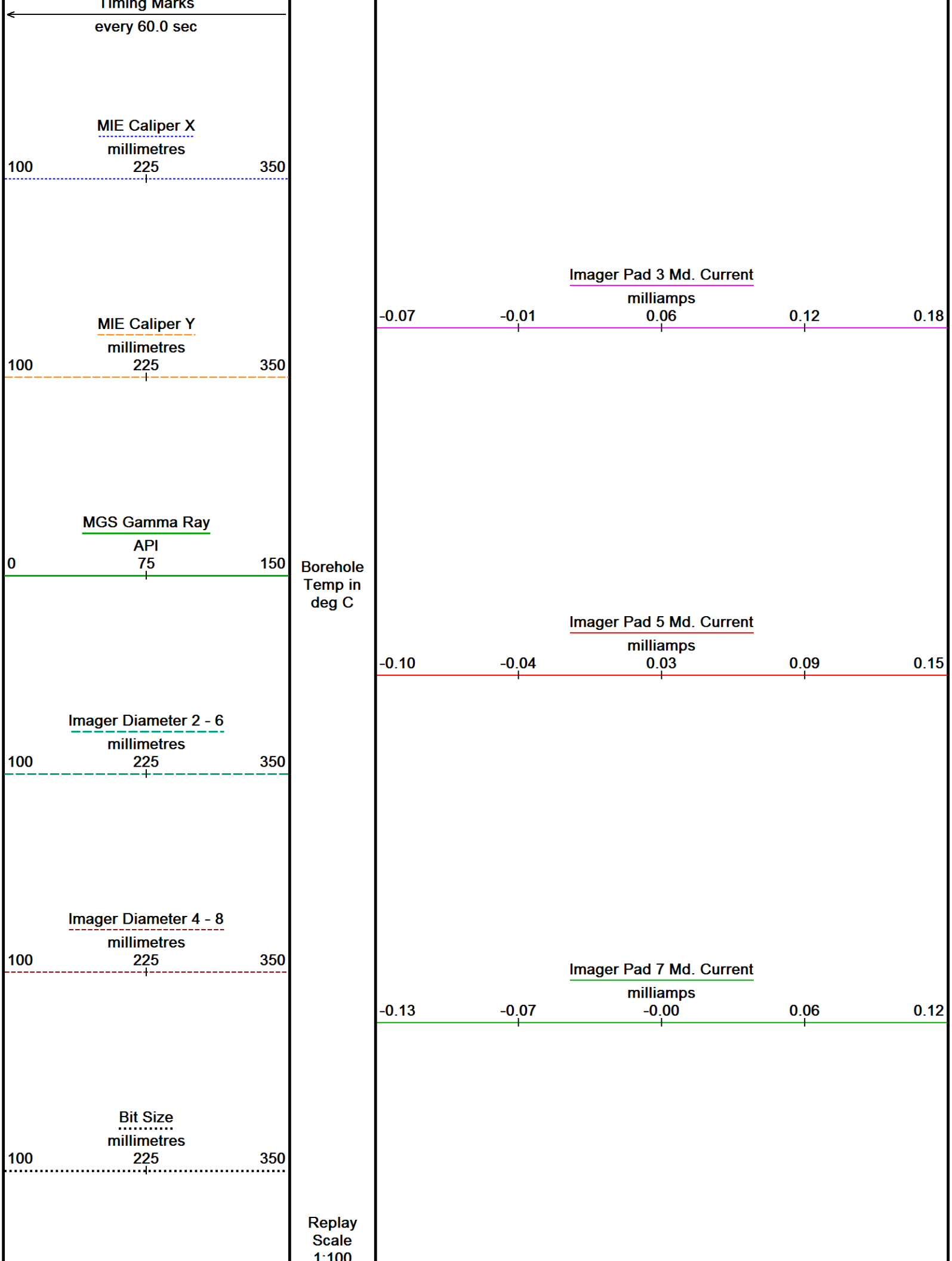

Bit Size
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
100
105
110
115
120
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current


125
8º
130
8º
135
Bit Size
8º
140
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
145
8º
150
Imager Pad 3 Md. Current
Imager Pad 1 Md. Current


8º
155
Bit Size
8º
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
160
Imager Pad 1 Md. Current
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
165
8º
170
8º
175
Bit Size
8º
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
180
Imager Pad 1 Md. Current
Imager Diameter 4 - 8


Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
185
8º
190
8º
195
Bit Size
8º
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
200
Imager Pad 1 Md. Current
Imager Diameter 4 - 8
Imager Diameter 2 - 6
MGS Gamma Ray
MIE Caliper Y
MIE Caliper X
8º
205


8°
210
8°
215
FR GRGM
Bit Size
FR DI26
Imager Diameter 4 - 8
Imager Diameter 2 - 6
Imager Pad 7 Md. Current
Imager Pad 5 Md. Current
Imager Pad 3 Md. Current
220
Imager Pad 1 Md. Current
225
230
Depth
in
Metres
Imager Pad 1 Md. Current
milliamps
-0.04
0.02
0.08
0.15
0.21


Timing Marks
every 60.0 sec
MIE Caliper X
millimetres
100
225
350
MIE Caliper Y
millimetres
100
225
350
MGS Gamma Ray
API
0
75
150
Borehole Temp in deg C
Imager Diameter 2 - 6
millimetres
100
225
350
Imager Diameter 4 - 8
millimetres
100
225
350
Bit Size
millimetres
100
225
350
Replay Scale 1:100
Imager Pad 3 Md. Current
milliamps
-0.07
-0.01
0.06
0.12
0.18
Imager Pad 5 Md. Current
milliamps
-0.10
-0.04
0.03
0.09
0.15
Imager Pad 7 Md. Current
milliamps
-0.13
-0.07
-0.00
0.06
0.12

Depth Based Data - Merged File
Filename: C:\Users\e107546\AppData\Loca...\WL_0486896_AA-03-08-092-07W4-00_MAIN_PASS.mge
System Versions: Merged with 13.03.7779 Plotted with 17.05.5802

Plotted on 20-FEB-2018 11:48
Merged on 31-JAN-2018 13:27

MAIN PASS 1:100

Verticality Analysis Interpretation Notes

25-JAN-2018 10:20

All plotted output is automatically scaled to obtain the best visual effect within the physical space available. The maximum scales being 1:50000(metric) and 1:48000(imperial), and the minimum 1:1.

The analysis is derived by integrating 10cm sampled data down the borehole. The listing supplied will contain a maximum of 200 points in multiples of 1, 2, 5, 10, 20, 50 or 100 metres/feet depending on the total range of the analysis. However, the analysis is calculated for the entire range of the borehole and the final borehole position is included in the listing.

Computed verticality may only be fully derived in open sections of the borehole, away from the influence of any unusual magnetic effects, (as the azimuth calculations are derived from three solid state magnetometers). So the analysis will generally begin at the end of the casing and all borehole positional information will relate to this depth.

Up to ten cross sections may be requested for any borehole to be displayed at any scale, (the default scale is that of the cross-section for the entire hole).

Borehole positional error is derived assuming the following parameters.

	TILT (degrees)	AZIMUTH (degrees)
Typical Error	+/- 0.1000	+/- 5.0000
Maximum Error	+/- 0.2000	+/- 8.0000

Error analysis may be calculated and plotted from the data listing as follows:

a) Plot the four coordinates from the error listing (based upon zero azimuth error) on a target plot. Origin at the start of the analysis.

b) Describe arcs of +/- 10.00 degrees and +/- 15.00 degrees (centre at the origin) through the inner and outer points respectively.

c) Connect the respective arcs together with straight lines to give the typical and maximum borehole positional error.

Given below is a full description of the parameters displayed on the ensuing listing:

LOG DEPTH	The depth recorded on the field logs for the borehole.
TRUE DEPTH	The true vertical depth corresponding to the above depth. Corrected from the start of the analysis.
HOLE TILT AND AZIMUTH	The sampled borehole orientation. Tilt measured from Vertical.
AXIAL COORDINATES	The coordinates North and East from the target origin.
POLAR COORDINATES	The polar or radial coordinates of the borehole.
ERROR COORDINATES	The polar coordinates corresponding to the typical and maximum tilt error.

N.B. The reference point for all bearing angles on this listing is given at the top of each sheet.

Verticality Data Listing

D:\logs\SUNCOR 2018\LEWIS\RAMI\SUNCOR 3-8-92-7\WL_0486896_AA-03-08-092-07W4-00_RUN1_MAIN_PASS.dta
All Co-ordinates With Respect To True North, all depths in metres

Date Processed: 25-JAN-2018

First Depth 72.30, 0.00 North, 0.00 East of Origin Date Logged: 25-JAN-2018

DEPTHS		BOREHOLE		AXIAL CO-ORDS		POLAR		POLAR ERROR CO-ORDINATES (MAXIMUM & TYPICAL)							
Log	True	Tilt	Azi	North	East	Brg	Radius	Brg	Radius	Brg	Radius	Brg	Radius	Brg	Radius
72.30	72.30	0.7	272.6	0.00	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
73.00	73.00	0.7	257.2	-0.00	-0.01	257	0.01	257	0.01	257	0.01	257	0.01	257	0.01
74.00	74.00	0.7	136.8	-0.00	-0.01	251	0.01	251	0.01	251	0.00	251	0.01	251	0.01
75.00	75.00	0.8	86.9	-0.00	-0.00	236	0.00	236	0.01	56	0.01	236	0.01	56	0.00
76.00	76.00	0.8	128.0	-0.01	0.00	161	0.01	161	0.02	341	0.01	161	0.01	161	0.00
77.00	77.00	0.8	145.1	-0.01	0.01	149	0.01	149	0.03	329	0.00	149	0.02	149	0.00
78.00	78.00	0.8	210.0	-0.02	0.00	179	0.02	179	0.04	179	0.00	179	0.03	179	0.01
79.00	79.00	0.8	272.5	-0.02	-0.01	196	0.02	196	0.04	16	0.00	196	0.03	196	0.01
80.00	80.00	0.8	278.7	-0.02	-0.02	225	0.03	225	0.05	45	0.00	225	0.04	225	0.01
81.00	81.00	0.8	160.5	-0.03	-0.02	211	0.03	211	0.06	211	0.00	211	0.05	211	0.02
82.00	82.00	0.7	170.9	-0.03	-0.01	205	0.03	205	0.07	205	0.00	205	0.05	205	0.02
83.00	83.00	0.7	158.6	-0.04	-0.01	199	0.04	199	0.08	199	0.00	199	0.06	199	0.02
84.00	84.00	0.6	155.7	-0.04	-0.01	194	0.04	194	0.08	194	0.00	194	0.06	194	0.02
85.00	85.00	0.6	35.4	-0.04	-0.01	194	0.04	194	0.09	14	0.00	194	0.06	194	0.02
86.00	86.00	0.6	146.9	-0.05	-0.01	187	0.05	187	0.09	7	0.00	187	0.07	187	0.02
87.00	87.00	0.6	161.2	-0.06	-0.00	182	0.06	182	0.11	182	0.00	182	0.08	182	0.03
88.00	88.00	0.6	134.8	-0.06	0.01	175	0.06	175	0.12	175	0.01	175	0.09	175	0.04
89.00	89.00	0.6	80.9	-0.06	0.01	171	0.06	171	0.12	171	0.01	171	0.09	171	0.04
90.00	90.00	0.6	202.2	-0.07	0.01	175	0.07	175	0.13	175	0.01	175	0.10	175	0.04
91.00	91.00	0.6	133.1	-0.08	0.01	170	0.08	170	0.15	170	0.02	170	0.11	170	0.05
92.00	92.00	0.7	106.7	-0.08	0.02	164	0.09	164	0.16	164	0.02	164	0.12	164	0.05
93.00	93.00	0.6	108.7	-0.09	0.03	159	0.09	159	0.17	159	0.02	159	0.13	159	0.06
94.00	94.00	0.6	130.2	-0.09	0.04	156	0.10	156	0.18	156	0.03	156	0.14	156	0.06
95.00	95.00	0.6	124.1	-0.10	0.05	153	0.11	153	0.19	153	0.03	153	0.15	153	0.07
96.00	96.00	0.5	115.8	-0.10	0.06	150	0.12	150	0.20	150	0.04	150	0.16	150	0.08
97.00	97.00	0.6	126.0	-0.11	0.07	148	0.13	148	0.21	148	0.04	148	0.17	148	0.08
98.00	98.00	0.7	117.2	-0.11	0.08	146	0.14	146	0.23	146	0.05	146	0.18	146	0.09
99.00	99.00	0.4	114.0	-0.12	0.08	144	0.14	144	0.24	144	0.05	144	0.19	144	0.10
100.00	100.00	0.4	127.8	-0.12	0.09	144	0.15	144	0.25	144	0.05	144	0.20	144	0.10
101.00	101.00	0.4	119.3	-0.12	0.09	143	0.16	143	0.26	143	0.06	143	0.21	143	0.11
102.00	102.00	0.4	144.0	-0.13	0.10	143	0.16	143	0.27	143	0.06	143	0.21	143	0.11
103.00	103.00	0.5	130.8	-0.14	0.11	142	0.17	142	0.28	142	0.06	142	0.23	142	0.12
104.00	104.00	0.5	131.3	-0.14	0.11	142	0.18	142	0.29	142	0.07	142	0.24	142	0.13
105.00	105.00	0.5	125.1	-0.15	0.12	141	0.19	141	0.30	141	0.08	141	0.25	141	0.13
106.00	106.00	0.4	112.2	-0.15	0.13	140	0.20	140	0.31	140	0.08	140	0.25	140	0.14
107.00	107.00	0.4	121.3	-0.15	0.13	139	0.20	139	0.32	139	0.08	139	0.26	139	0.14
108.00	108.00	0.3	124.0	-0.16	0.14	139	0.21	139	0.33	139	0.08	139	0.27	139	0.14
109.00	109.00	0.3	132.8	-0.16	0.14	139	0.21	139	0.34	139	0.08	139	0.28	139	0.15
110.00	110.00	0.4	132.5	-0.16	0.15	138	0.22	138	0.35	138	0.09	138	0.29	138	0.15
111.00	111.00	0.4	152.3	-0.17	0.15	139	0.23	139	0.36	139	0.09	139	0.29	139	0.16
112.00	112.00	0.4	139.2	-0.17	0.15	139	0.23	139	0.37	139	0.09	139	0.30	139	0.16
113.00	113.00	0.5	135.7	-0.18	0.16	139	0.24	139	0.38	139	0.10	139	0.31	139	0.17
114.00	114.00	0.3	148.1	-0.18	0.16	139	0.25	139	0.39	139	0.10	139	0.32	139	0.17
115.00	115.00	0.2	114.0	-0.19	0.17	139	0.25	139	0.40	139	0.10	139	0.32	139	0.17
116.00	116.00	0.3	104.2	-0.19	0.17	138	0.25	138	0.41	138	0.10	138	0.33	138	0.18
117.00	117.00	0.3	124.4	-0.19	0.17	138	0.26	138	0.41	138	0.10	138	0.34	138	0.18
118.00	118.00	0.5	110.6	-0.19	0.18	137	0.27	137	0.42	137	0.11	137	0.34	137	0.19
119.00	119.00	0.5	122.2	-0.20	0.19	136	0.27	136	0.44	136	0.11	136	0.35	136	0.19
120.00	120.00	0.4	121.1	-0.20	0.19	136	0.28	136	0.45	136	0.11	136	0.36	136	0.20
121.00	121.00	0.4	136.6	-0.21	0.20	136	0.29	136	0.46	136	0.12	136	0.37	136	0.20
122.00	122.00	0.4	133.4	-0.21	0.20	136	0.29	136	0.47	136	0.12	136	0.38	136	0.21
123.00	123.00	0.5	129.9	-0.22	0.21	136	0.30	136	0.48	136	0.12	136	0.39	136	0.21
124.00	124.00	0.7	142.9	-0.23	0.22	136	0.31	136	0.49	136	0.13	136	0.40	136	0.22
125.00	125.00	0.5	124.5	-0.23	0.22	136	0.32	136	0.51	136	0.14	136	0.41	136	0.23
126.00	126.00	0.6	124.3	-0.24	0.23	135	0.33	135	0.52	135	0.14	135	0.43	135	0.24
127.00	127.00	0.4	153.3	-0.24	0.24	136	0.34	136	0.53	136	0.15	136	0.44	136	0.24
128.00	128.00	0.4	143.1	-0.25	0.24	136	0.35	136	0.54	136	0.15	136	0.44	136	0.25
129.00	129.00	0.4	154.4	-0.25	0.24	136	0.35	136	0.55	136	0.15	136	0.45	136	0.25
130.00	130.00	0.5	139.7	-0.26	0.25	136	0.36	136	0.56	136	0.16	136	0.46	136	0.26
131.00	131.00	0.5	147.3	-0.27	0.25	137	0.37	137	0.58	137	0.17	137	0.47	137	0.27
132.00	132.00	0.4	130.0	-0.27	0.26	136	0.38	136	0.59	136	0.17	136	0.48	136	0.27
133.00	133.00	0.5	149.1	-0.28	0.27	137	0.39	137	0.60	137	0.18	137	0.49	137	0.28
134.00	134.00	0.6	167.5	-0.29	0.27	138	0.40	138	0.61	138	0.18	138	0.50	138	0.29
135.00	135.00	0.6	161.4	-0.30	0.27	138	0.41	138	0.62	138	0.19	138	0.51	138	0.30
136.00	136.00	0.8	165.4	-0.32	0.27	139	0.42	139	0.64	139	0.20	139	0.53	139	0.31
137.00	137.00	0.7	158.3	-0.33	0.28	140	0.43	140	0.66	140	0.20	140	0.54	140	0.32
138.00	138.00	0.7	156.3	-0.34	0.28	140	0.44	140	0.67	140	0.21	140	0.56	140	0.33

139.00	139.00	0.5	149.4	-0.35	0.29	140	0.45	140	0.68	140	0.22	140	0.57	140	0.33
140.00	140.00	0.5	142.2	-0.35	0.29	140	0.46	140	0.69	140	0.22	140	0.58	140	0.34
141.00	141.00	0.5	148.7	-0.36	0.30	140	0.47	140	0.71	140	0.23	140	0.59	140	0.35
142.00	142.00	0.5	160.1	-0.37	0.30	141	0.47	141	0.72	141	0.23	141	0.60	141	0.35
143.00	143.00	0.6	144.9	-0.38	0.31	141	0.49	141	0.73	141	0.24	141	0.61	141	0.36
144.00	144.00	0.7	158.3	-0.39	0.31	141	0.50	141	0.75	141	0.25	141	0.62	141	0.37
145.00	145.00	0.6	155.7	-0.40	0.31	142	0.51	142	0.76	142	0.25	142	0.63	142	0.38
146.00	146.00	0.7	139.8	-0.41	0.32	141	0.52	141	0.78	141	0.26	141	0.65	141	0.39
147.00	147.00	0.7	153.2	-0.42	0.33	142	0.53	142	0.79	142	0.27	142	0.66	142	0.40
148.00	148.00	0.5	152.6	-0.42	0.33	142	0.54	142	0.80	142	0.27	142	0.67	142	0.41
149.00	149.00	0.7	150.8	-0.43	0.34	142	0.55	142	0.82	142	0.28	142	0.68	142	0.42
150.00	150.00	0.6	163.5	-0.44	0.34	142	0.56	142	0.83	142	0.29	142	0.70	142	0.42
151.00	151.00	0.6	158.3	-0.45	0.35	143	0.57	143	0.85	143	0.30	143	0.71	143	0.43
152.00	152.00	0.7	158.8	-0.47	0.35	143	0.58	143	0.86	143	0.30	143	0.72	143	0.44
153.00	153.00	0.6	157.3	-0.47	0.35	143	0.59	143	0.87	143	0.31	143	0.73	143	0.45
154.00	154.00	0.6	156.1	-0.48	0.36	144	0.60	144	0.89	144	0.32	144	0.74	144	0.46
155.00	155.00	0.6	156.0	-0.49	0.36	144	0.61	144	0.90	144	0.32	144	0.76	144	0.47
156.00	156.00	0.5	155.6	-0.50	0.37	144	0.62	144	0.91	144	0.33	144	0.77	144	0.47
157.00	157.00	0.6	155.7	-0.51	0.37	144	0.63	144	0.93	144	0.34	144	0.78	144	0.48
158.00	158.00	0.6	157.4	-0.52	0.37	144	0.64	144	0.94	144	0.34	144	0.79	144	0.49
159.00	159.00	0.6	159.4	-0.53	0.38	145	0.65	145	0.95	145	0.35	145	0.80	145	0.50
160.00	160.00	0.6	161.0	-0.54	0.38	145	0.66	145	0.97	145	0.35	145	0.81	145	0.51
161.00	161.00	0.5	166.9	-0.55	0.38	145	0.67	145	0.98	145	0.36	145	0.82	145	0.51
162.00	162.00	0.6	162.3	-0.56	0.39	145	0.68	145	0.99	145	0.36	145	0.83	145	0.52
163.00	163.00	0.5	162.7	-0.57	0.39	146	0.69	146	1.00	146	0.37	146	0.84	146	0.53
164.00	164.00	0.5	162.5	-0.57	0.39	146	0.69	146	1.02	146	0.37	146	0.86	146	0.53
165.00	165.00	0.5	160.9	-0.58	0.39	146	0.70	146	1.03	146	0.38	146	0.87	146	0.54
166.00	166.00	0.5	161.3	-0.59	0.40	146	0.71	146	1.04	146	0.39	146	0.88	146	0.55
167.00	167.00	0.5	166.4	-0.60	0.40	146	0.72	146	1.05	146	0.39	146	0.89	146	0.55
168.00	168.00	0.5	170.4	-0.61	0.40	147	0.73	147	1.06	147	0.39	147	0.90	147	0.56
169.00	169.00	0.5	172.0	-0.62	0.40	147	0.74	147	1.07	147	0.40	147	0.91	147	0.57
170.00	170.00	0.5	174.6	-0.63	0.40	147	0.75	147	1.09	147	0.40	147	0.92	147	0.57
171.00	171.00	0.6	175.3	-0.64	0.40	148	0.75	148	1.10	148	0.41	148	0.93	148	0.58
172.00	172.00	0.5	177.1	-0.65	0.40	148	0.76	148	1.11	148	0.41	148	0.94	148	0.59
173.00	173.00	0.5	174.4	-0.66	0.40	148	0.77	148	1.12	148	0.42	148	0.95	148	0.59
174.00	174.00	0.5	177.0	-0.66	0.41	149	0.78	149	1.13	149	0.42	149	0.96	149	0.60
175.00	175.00	0.5	177.5	-0.67	0.41	149	0.79	149	1.14	149	0.43	149	0.97	149	0.61
176.00	176.00	0.5	178.2	-0.68	0.41	149	0.79	149	1.16	149	0.43	149	0.97	149	0.61
177.00	177.00	0.5	177.8	-0.69	0.41	150	0.80	150	1.17	150	0.44	150	0.98	150	0.62
178.00	178.00	0.5	178.3	-0.70	0.41	150	0.81	150	1.18	150	0.44	150	0.99	150	0.62
179.00	178.99	0.5	178.3	-0.71	0.41	150	0.82	150	1.19	150	0.44	150	1.00	150	0.63
180.00	179.99	0.6	176.0	-0.72	0.41	150	0.83	150	1.20	150	0.45	150	1.01	150	0.64
181.00	180.99	0.6	176.0	-0.73	0.41	151	0.83	151	1.21	151	0.46	151	1.02	151	0.65
182.00	181.99	0.6	175.6	-0.74	0.41	151	0.84	151	1.23	151	0.46	151	1.04	151	0.65
183.00	182.99	0.6	172.2	-0.75	0.41	151	0.85	151	1.24	151	0.47	151	1.05	151	0.66
184.00	183.99	0.6	171.6	-0.76	0.41	151	0.86	151	1.25	151	0.47	151	1.06	151	0.67
185.00	184.99	0.6	171.0	-0.77	0.41	152	0.87	152	1.27	152	0.48	152	1.07	152	0.68
186.00	185.99	0.6	170.9	-0.78	0.41	152	0.88	152	1.28	152	0.48	152	1.08	152	0.68
187.00	186.99	0.6	170.1	-0.79	0.42	152	0.89	152	1.29	152	0.49	152	1.09	152	0.69
188.00	187.99	0.6	171.0	-0.80	0.42	152	0.90	152	1.30	152	0.50	152	1.10	152	0.70
189.00	188.99	0.6	171.7	-0.81	0.42	153	0.91	153	1.32	153	0.50	153	1.11	153	0.71
190.00	189.99	0.6	173.0	-0.82	0.42	153	0.92	153	1.33	153	0.51	153	1.13	153	0.72
191.00	190.99	0.6	172.6	-0.83	0.42	153	0.93	153	1.34	153	0.52	153	1.14	153	0.72
192.00	191.99	0.6	174.6	-0.84	0.42	153	0.94	153	1.36	153	0.52	153	1.15	153	0.73
193.00	192.99	0.6	174.7	-0.85	0.42	153	0.95	153	1.37	153	0.53	153	1.16	153	0.74
194.00	193.99	0.6	175.5	-0.86	0.43	154	0.96	154	1.38	154	0.53	154	1.17	154	0.75
195.00	194.99	0.6	178.8	-0.87	0.43	154	0.97	154	1.40	154	0.54	154	1.18	154	0.75
196.00	195.99	0.5	179.4	-0.88	0.43	154	0.98	154	1.41	154	0.54	154	1.19	154	0.76
197.00	196.99	0.5	180.8	-0.89	0.43	154	0.98	154	1.42	154	0.55	154	1.20	154	0.77
198.00	197.99	0.5	181.4	-0.90	0.43	155	0.99	155	1.43	155	0.55	155	1.21	155	0.77
199.00	198.99	0.5	180.3	-0.91	0.43	155	1.00	155	1.44	155	0.56	155	1.22	155	0.78
200.00	199.99	0.5	184.2	-0.92	0.42	155	1.01	155	1.45	155	0.56	155	1.23	155	0.79
201.00	200.99	0.5	177.9	-0.92	0.42	155	1.02	155	1.47	155	0.57	155	1.24	155	0.79
202.00	201.99	0.5	179.3	-0.93	0.42	156	1.03	156	1.48	156	0.57	156	1.25	156	0.80
203.00	202.99	0.5	177.9	-0.94	0.43	156	1.03	156	1.49	156	0.58	156	1.26	156	0.80
204.00	203.99	0.4	176.4	-0.95	0.43	156	1.04	156	1.50	156	0.58	156	1.27	156	0.81
205.00	204.99	0.4	181.2	-0.96	0.43	156	1.05	156	1.51	156	0.58	156	1.28	156	0.81
206.00	205.99	0.3	189.9	-0.96	0.42	156	1.05	156	1.52	156	0.58	156	1.28	156	0.82
207.00	206.99	0.3	186.5	-0.97	0.42	156	1.06	156	1.53	156	0.59	156	1.29	156	0.82
208.00	207.99	0.3	190.7	-0.97	0.42	157	1.06	157	1.53	157	0.59	157	1.30	157	0.82

210.00	209.99	0.4	200.5	-0.98	0.42	157	1.07	157	1.55	157	0.59	157	1.31	157	0.83
211.00	210.99	0.5	201.8	-0.99	0.42	157	1.08	157	1.56	157	0.59	157	1.32	157	0.83
212.00	211.99	0.5	207.1	-1.00	0.41	158	1.08	158	1.57	158	0.59	158	1.33	158	0.84
213.00	212.99	0.5	206.5	-1.01	0.41	158	1.09	158	1.58	158	0.60	158	1.33	158	0.84
214.00	213.99	0.5	205.2	-1.02	0.40	158	1.09	158	1.59	158	0.60	158	1.34	158	0.85
215.00	214.99	0.6	211.8	-1.03	0.40	159	1.10	159	1.60	159	0.60	159	1.35	159	0.85
216.00	215.99	0.4	217.8	-1.03	0.39	159	1.10	159	1.61	159	0.60	159	1.35	159	0.85
217.00	216.99	0.4	217.6	-1.04	0.39	159	1.11	159	1.61	159	0.60	159	1.36	159	0.85
218.00	217.99	0.3	220.6	-1.04	0.39	160	1.11	160	1.62	160	0.60	160	1.36	160	0.86
219.00	218.99	0.3	229.5	-1.04	0.38	160	1.11	160	1.62	160	0.60	160	1.37	160	0.86
220.00	219.99	0.4	217.2	-1.05	0.38	160	1.11	160	1.63	160	0.60	160	1.37	160	0.86
221.00	220.99	0.4	218.7	-1.05	0.37	160	1.12	160	1.64	160	0.60	160	1.38	160	0.86

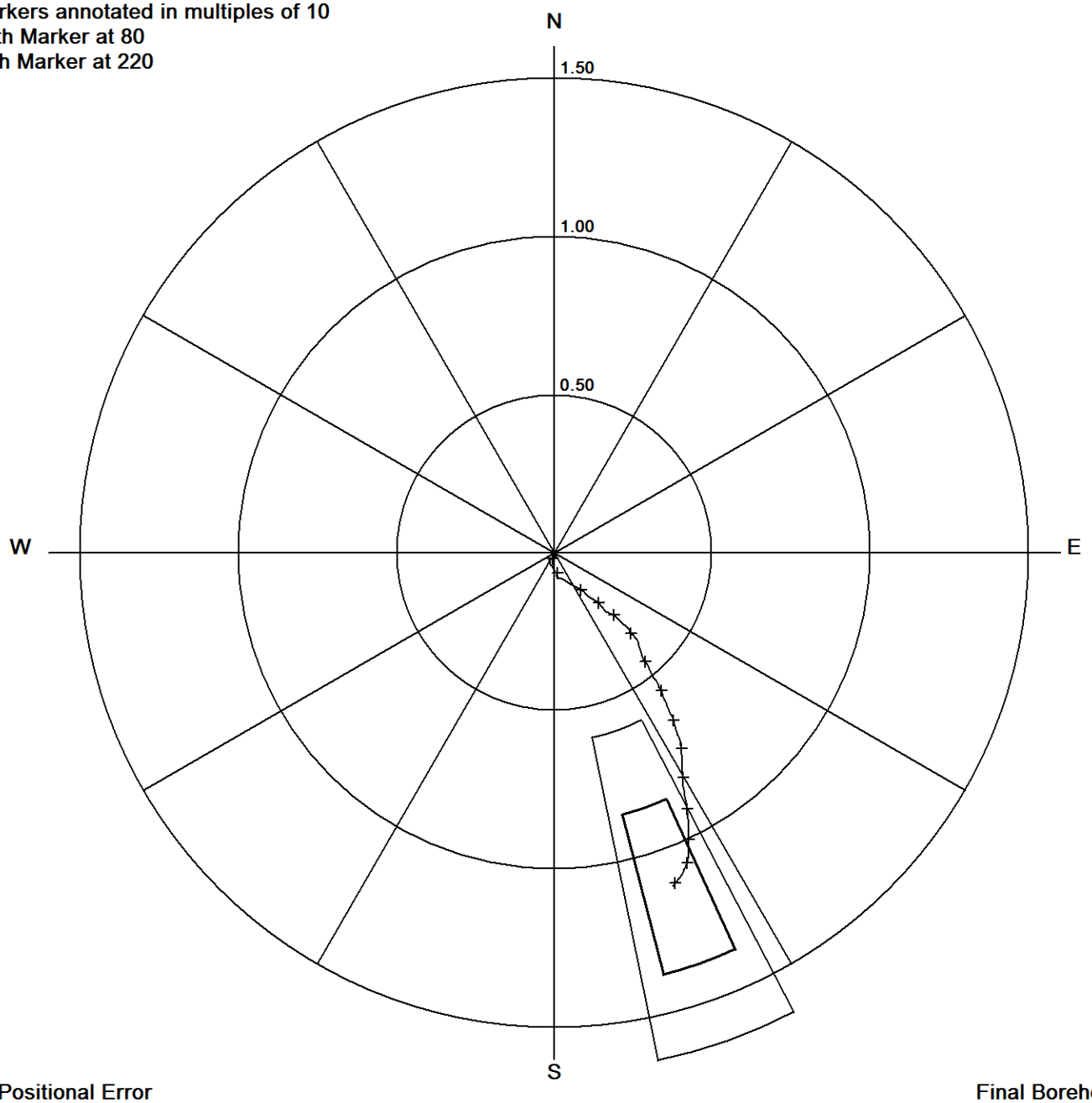
Cross Section

All Figures are Log Depths in metres

Plot With Respect to True North

Target Origin Depth 72.30
Last Plotted Depth 221.23
Depth Markers annotated in multiples of 10
First Depth Marker at 80
Last Depth Marker at 220

Scale 1:20
Declination 14.0 deg East



Borehole Positional Error

The two boxes surrounding the last plotted depth show the typical and maximum positional

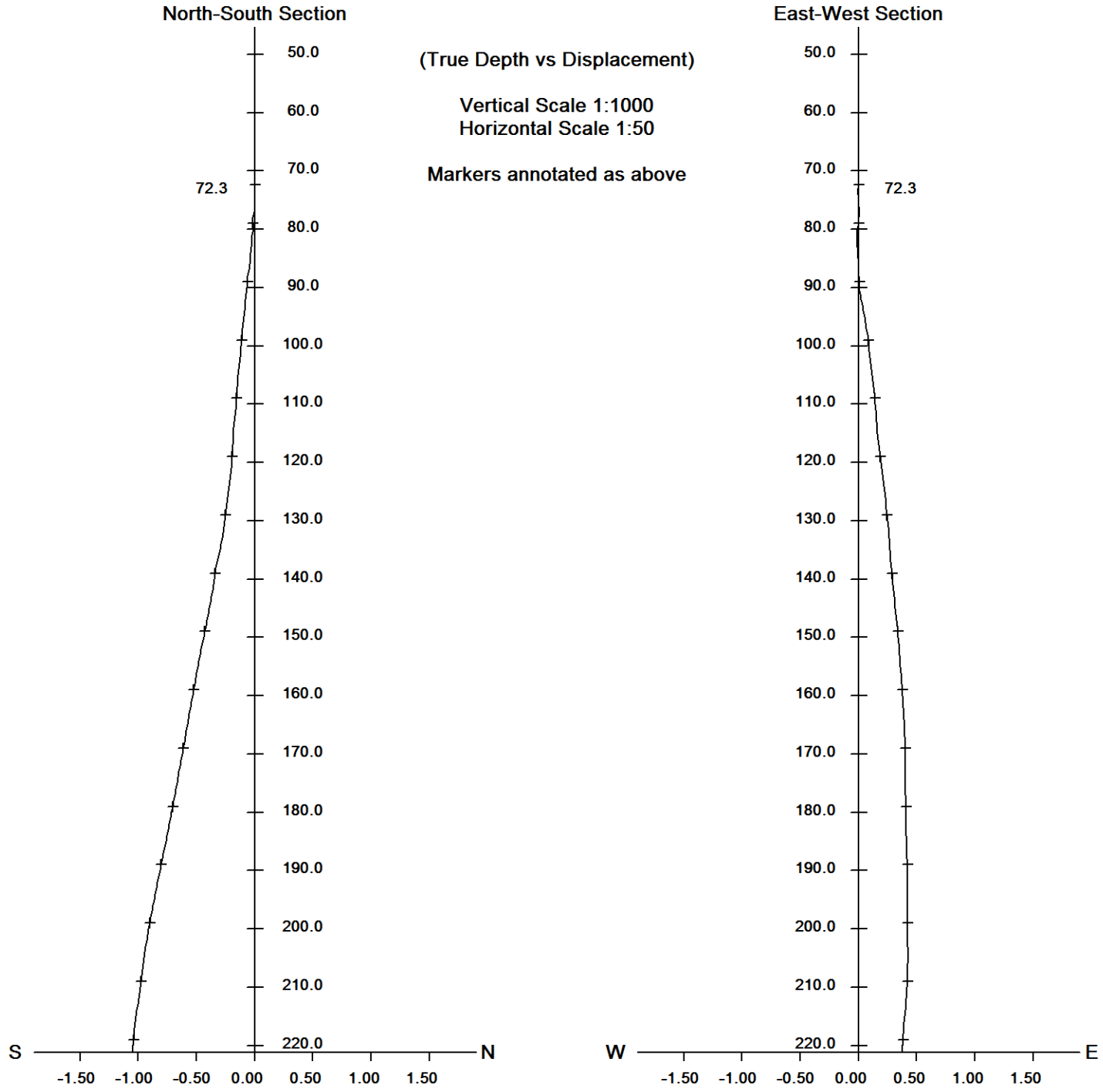
Final Borehole Position

The last plotted depth is at
1.05 metres South
0.37 metres East

typical and maximum positional
error at that depth.

0.37 metres East
ie 1.12 metres from the origin
160 deg from True North

Vertical Sections

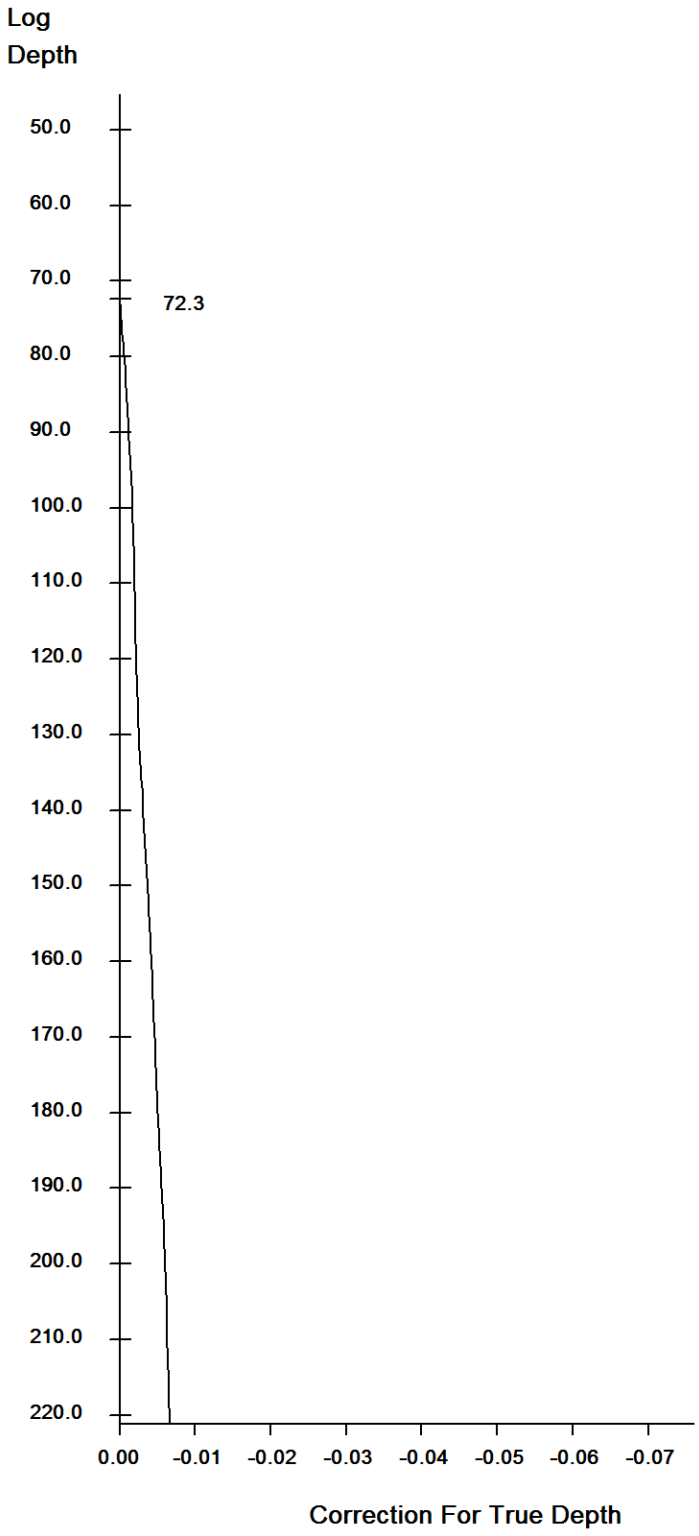


Depth Correction Analysis

Vertical Scale 1:1000

Depths Log	True	Depths Log	True	Depths Log	True
72.30	72.30	139.00	139.00	206.00	205.99
73.00	73.00	140.00	140.00	207.00	206.99

Horizontal Scale 1:1

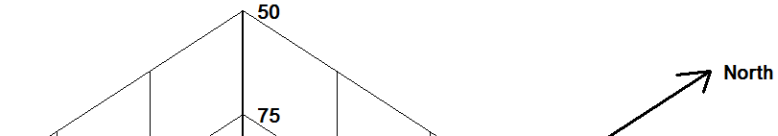


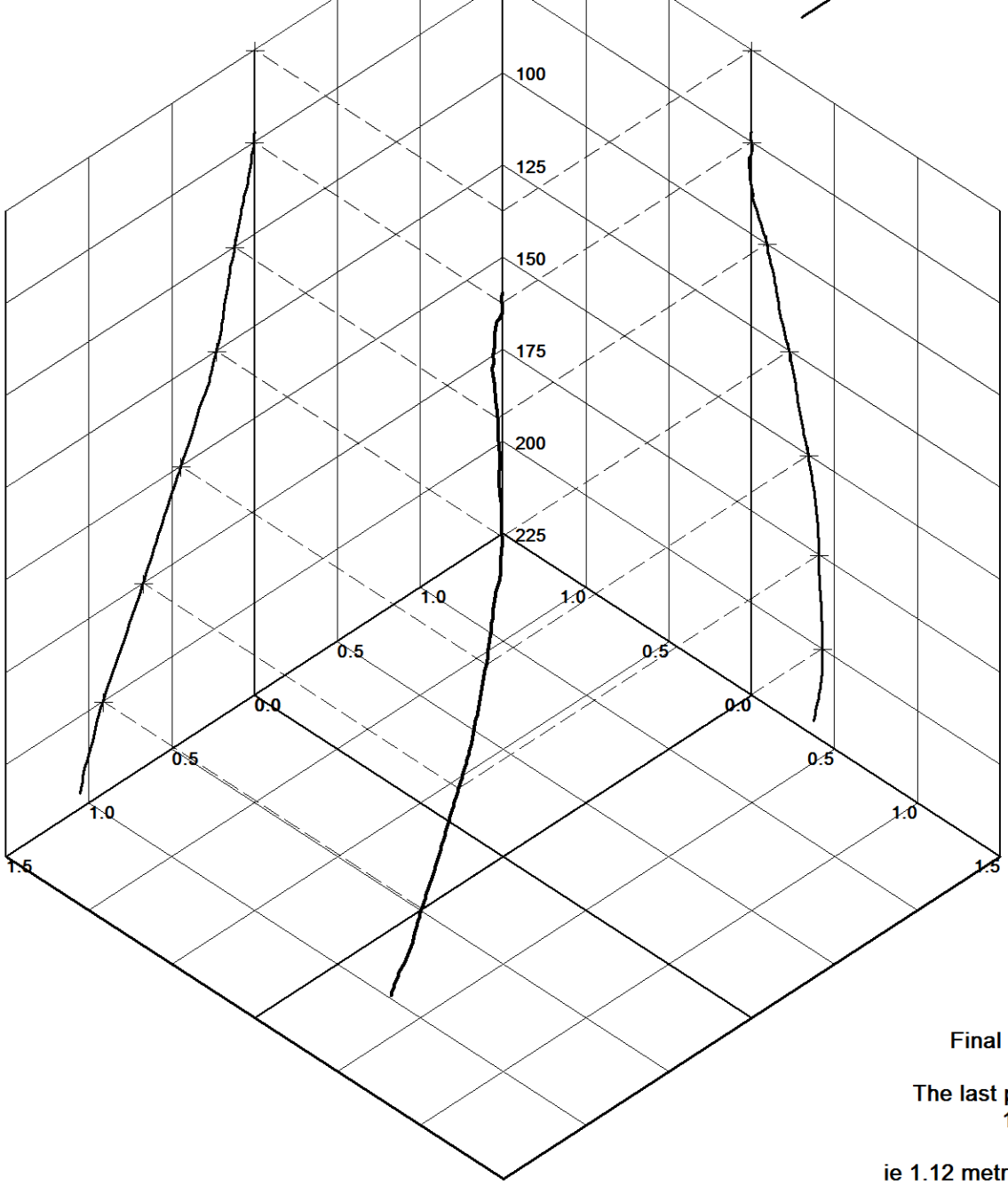
74.00	74.00	141.00	141.00	208.00	207.99
75.00	75.00	142.00	142.00	209.00	208.99
76.00	76.00	143.00	143.00	210.00	209.99
77.00	77.00	144.00	144.00	211.00	210.99
78.00	78.00	145.00	145.00	212.00	211.99
79.00	79.00	146.00	146.00	213.00	212.99
80.00	80.00	147.00	147.00	214.00	213.99
81.00	81.00	148.00	148.00	215.00	214.99
82.00	82.00	149.00	149.00	216.00	215.99
83.00	83.00	150.00	150.00	217.00	216.99
84.00	84.00	151.00	151.00	218.00	217.99
85.00	85.00	152.00	152.00	219.00	218.99
86.00	86.00	153.00	153.00	220.00	219.99
87.00	87.00	154.00	154.00	221.00	220.99
88.00	88.00	155.00	155.00		
89.00	89.00	156.00	156.00		
90.00	90.00	157.00	157.00		
91.00	91.00	158.00	158.00		
92.00	92.00	159.00	159.00		
93.00	93.00	160.00	160.00		
94.00	94.00	161.00	161.00		
95.00	95.00	162.00	162.00		
96.00	96.00	163.00	163.00		
97.00	97.00	164.00	164.00		
98.00	98.00	165.00	165.00		
99.00	99.00	166.00	166.00		
100.00	100.00	167.00	167.00		
101.00	101.00	168.00	168.00		
102.00	102.00	169.00	169.00		
103.00	103.00	170.00	170.00		
104.00	104.00	171.00	171.00		
105.00	105.00	172.00	172.00		
106.00	106.00	173.00	173.00		
107.00	107.00	174.00	174.00		
108.00	108.00	175.00	175.00		
109.00	109.00	176.00	176.00		
110.00	110.00	177.00	177.00		
111.00	111.00	178.00	178.00		
112.00	112.00	179.00	178.99		
113.00	113.00	180.00	179.99		
114.00	114.00	181.00	180.99		
115.00	115.00	182.00	181.99		
116.00	116.00	183.00	182.99		
117.00	117.00	184.00	183.99		
118.00	118.00	185.00	184.99		
119.00	119.00	186.00	185.99		
120.00	120.00	187.00	186.99		
121.00	121.00	188.00	187.99		
122.00	122.00	189.00	188.99		
123.00	123.00	190.00	189.99		
124.00	124.00	191.00	190.99		
125.00	125.00	192.00	191.99		
126.00	126.00	193.00	192.99		
127.00	127.00	194.00	193.99		
128.00	128.00	195.00	194.99		
129.00	129.00	196.00	195.99		
130.00	130.00	197.00	196.99		
131.00	131.00	198.00	197.99		
132.00	132.00	199.00	198.99		
133.00	133.00	200.00	199.99		
134.00	134.00	201.00	200.99		
135.00	135.00	202.00	201.99		
136.00	136.00	203.00	202.99		
137.00	137.00	204.00	203.99		
138.00	138.00	205.00	204.99		

3D Borehole Deviation

All figures are True Depths / displacements in metres
Origin Depth 72.30
Last Plotted Depth 221.23

Plot With Respect to True North
Declination 14.0 deg East





Final Borehole Position

The last plotted depth is at
1.05 metres South
0.37 metres East
ie 1.12 metres from the origin
160 deg from True North

BEFORE SURVEY CALIBRATION

C:\Users\e107546\AppData\Local\Temp\Weatherford PreView50\0\WL_0486896_AA-03-08-092-07W4-00_RUN1_MAIN_PASS.dta

General Constants All 000 — Last Edited on 25-JAN-2018,06:57

General Parameters		
Mud Resistivity	4.450	ohm-metres
Mud Resistivity Temperature	9.800	degrees C
Water Level	0.000	metres
Borehole Fluid Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	8 Arm CMI	
HVOL Caliper 1	N/A	
HVOL Caliper 2	N/A	
Annular Volume Diameter	0.000	mm
Caliper for Differential Caliper	MIE Diam. X Armswing	
Rwa Parameters		

Porosity used	N/A
Resistivity used	N/A
RWA Constant A	N/A
RWA Constant M	N/A
SW/APOR Tool Source	

High Resolution Temperature Constants MCG-E.A 586

Pre-filter Length	11

Accelerometer Parameters MIE-D.A 252

Date Of Last Accelerometer Calibration 18-APR-2017,13:59

	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.102127	-1.108270	-1.096913
Offset	-0.000464	0.001513	-0.005308

Accelerometer Constants MIE-D.A 252

Last Edited on 09-JAN-2017,11:53

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number	979			
Calibration Date	20-Jan-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+00	-1.10469e-05	3.38660e-08	-1.18773e-10
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+00	2.42361e-04	5.00046e-07	-8.67174e-11

Y Accelerometer

Serial Number	967			
Calibration Date	19-Jan-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+00	2.11153e-06	-2.69338e-08	2.00096e-10
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+00	2.42497e-04	4.48331e-07	3.69002e-10

Z Accelerometer

Serial Number	987			
Calibration Date	20-Jan-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+00	3.60142e-05	8.78720e-09	-1.32853e-10
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+00	2.64009e-04	3.58431e-07	4.76839e-10

Magnetometer Parameters MIE-D.A 252

Date Of Last Magnetometer Calibration 23-OCT-2017,15:17

	X Magnetometer	Y Magnetometer	Z Magnetometer
Slope	-1.000000	-1.000673	-0.994686
Offset	0.011707	-0.017127	0.014255

Magnetometer Constants MIE-D.A 252

Magnetometer Calibrator Number 000

Imager Pad Check MIE-D.A 252

Pad 1	Pad Not Tested	Pad 5	Pad Not Tested
Pad 2	Pad Not Tested	Pad 6	Pad Not Tested
Pad 3	Pad Not Tested	Pad 7	Pad Not Tested
Pad 4	Pad Not Tested	Pad 8	Pad Not Tested

Compact Micro Imager Constants MIE-D.A 252

Last Edited on 04-DEC-2017,16:19

Sonde Configuration	Imager Mode	
Arm-Pad Kit	Normal Pads (12.25 in)	
Arm-Pad Kit Serial Number		
Centre Pad 1 Rotational Offset	0.00	degrees
Image/Borehole Ovality Reference	Azimuth of Pad 1	
Non Active Buttons	Omit	
Search Angle	0.00	degrees

Correlation Interval	1.00	metres
Correlation Step	0.50	metres
Current Offset	0.000005	mAmp
Image Processing	Enabled	mAmp

Navigation Constants MIE-D.A 252

Last Edited on 07-JAN-2018,02:22

Magnetic Declination	13.96	degrees	East

Caliper Calibration MIE-D.A 252

Base Calibration on 16-NOV-2017,14:06
Field Calibration on 04-DEC-2017,16:20

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (mm)
1	26690	26340	152.64
2	37348	36300	203.58
3	47569	46915	254.32
4	59018	57963	304.22
5	0	0	0.00

Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (mm)
1	25871	26057	25814	25424	152.64
2	34505	34493	34151	34519	203.58
3	43324	43398	42679	43130	254.32
4	53015	52553	51838	52711	304.22
5	0	0	0	0	0.00

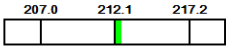
Field Calibration

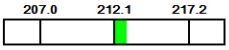
Measured Pads 1-5 Caliper(mm)	Measured Pads 3-7 Caliper(mm)	Actual Caliper(mm)
212.58	212.95	212.09

Measured Pad 2 Caliper(mm)	Measured Pad 4 Caliper(mm)	Measured Pad 6 Caliper(mm)	Measured Pad 8 Caliper(mm)	Actual Caliper(mm)
106.16	106.77	106.34	106.38	212.09

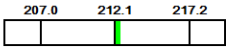
Caliper Calibration Tolerances MIE-D.A 252

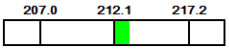
Upper

Short Arm X Field Cal. 212.6 mm 

Short Arm Y Field Cal. 212.9 mm 

Lower

Short Arm X Field Cal. 212.5 mm 

Short Arm Y Field Cal. 213.2 mm 

Caliper Constants MIE-D.A 252

Last Edited on 27-JUL-2017,16:11

Caliper Difference for BRKT	3.050	millimetres

DOWNHOLE EQUIPMENT

C:\Users\e107546\AppData\Local\Temp\Weatherford PreView50\0\WL_0486896_AA-03-08-092-07W4-00_RUN1_MAIN_PASS.dta

Mono-Cablehead
MCH-AA 0 LG: 0.31 m WT: 1.0 kg OD: 36.0 mm

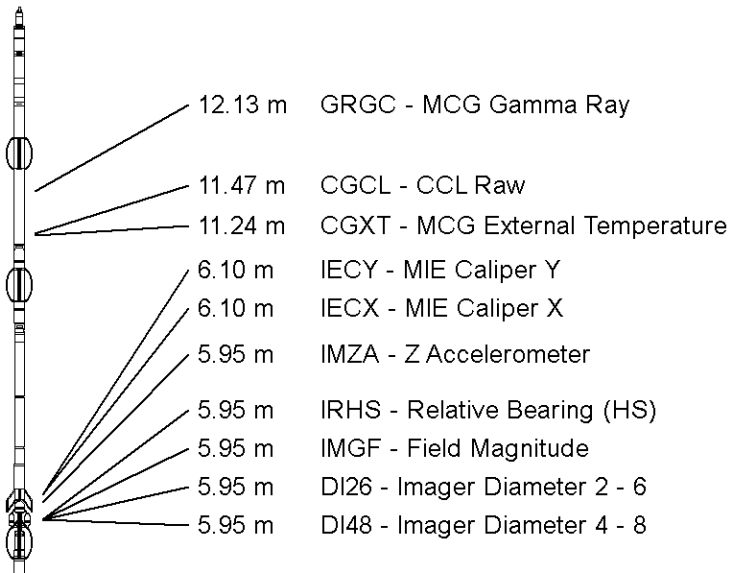
G/H-11B Compact Tool Adaptor
MTA-P.A 16 LG: 0.34 m WT: 4.0 kg OD: 57.0 mm

Compact Swivel Head Adaptor
SHA-J.B 712 LG: 0.70 m WT: 10.0 kg OD: 57.0 mm

Compact Comms Gamma
MCG-E.A 586 LG: 2.65 m WT: 29.0 kg OD: 57.0 mm

Compact MMI Memory Section
MIM-B.A 252 LG: 1.42 m WT: 12.0 kg OD: 57.0 mm

Compact MMI Electrode Section
MIE-D.A 252 LG: 4.25 m WT: 45.0 kg OD: 104.0 mm



Compact Focussed Electric
MFE-B.A 229 LG: 1.84 m WT: 22.0 kg OD: 57.0 mm

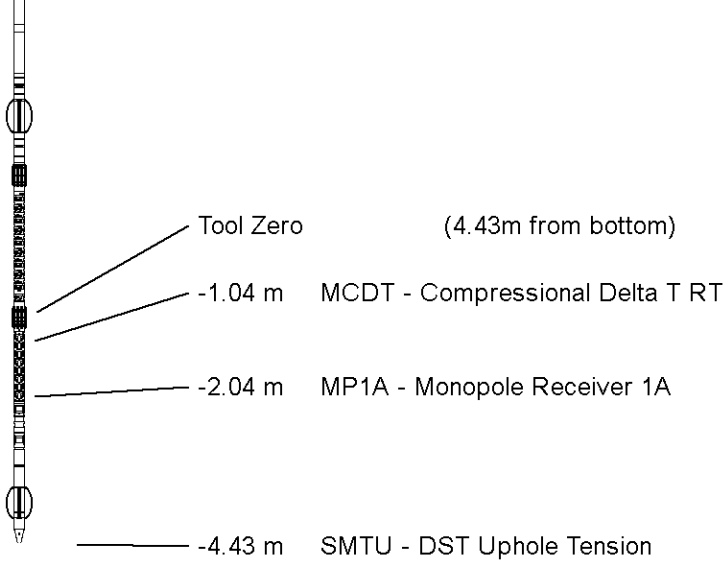
Compact Dipole Memory
MDM-B.A 188 LG: 1.36 m WT: 18.0 kg OD: 57.0 mm

Compact Dipole Receiver
MRD-B.A 188 LG: 2.71 m WT: 40.0 kg OD: 57.0 mm

Compact Dipole Transmitter
MTD-B.A 188 LG: 3.85 m WT: 50.0 kg OD: 57.0 mm

Compact Pressure Bung
HFS 2 LG: 0.04 m WT: 2.0 kg OD: 57.0 mm

Total Length: 19.48 m Weight: 233.0 kg



All measurements relative to tool zero.

COMPANY	SUNCOR ENERGY INC.
WELL	SUNCOR LEWIS 3-8-92-7
FIELD	LEWIS
PROVINCE/COUNTY	ALBERTA
COUNTRY/STATE	CANADA

Elevation Kelly Bushing	478.6	metres	First Reading	223.60	metres
Elevation Drill Floor		metres	Depth Driller	230.00	metres
Elevation Ground Level	477.4	metres	Depth Logger	230.10	metres

Weatherford®

MICRO IMAGER
DIPMETER PRINT