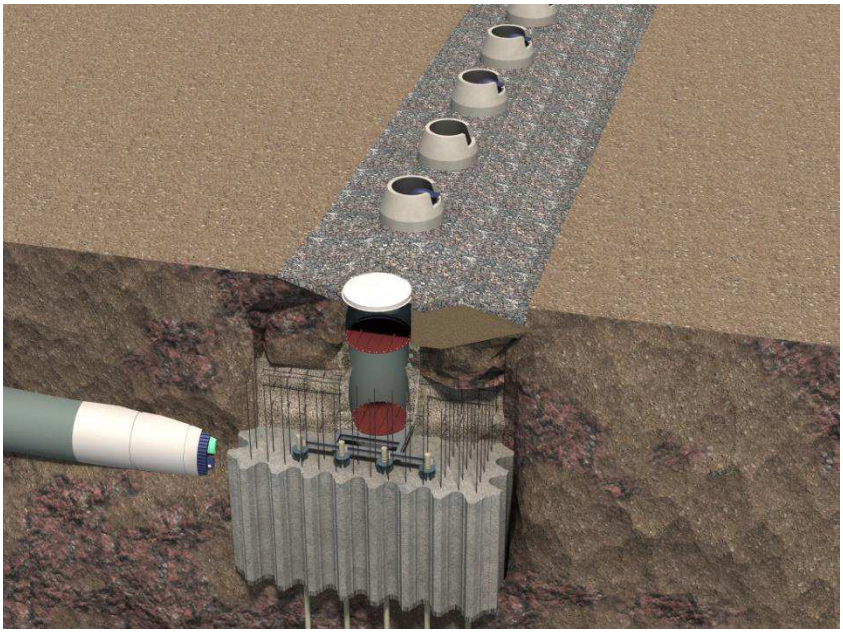
APPENDIX B
GEOTECHNICAL REPORTS

B.1: Geotechnical Data Report

Part G: Appendix E

Annacis Island WWTP New Outfall System

Vancouver Fraser Port Authority
Project and Environmental Review Application



metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

CDM Smith

Golder Associates

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APPENDIX E

Nilcon and Electric Vane Raw Traces

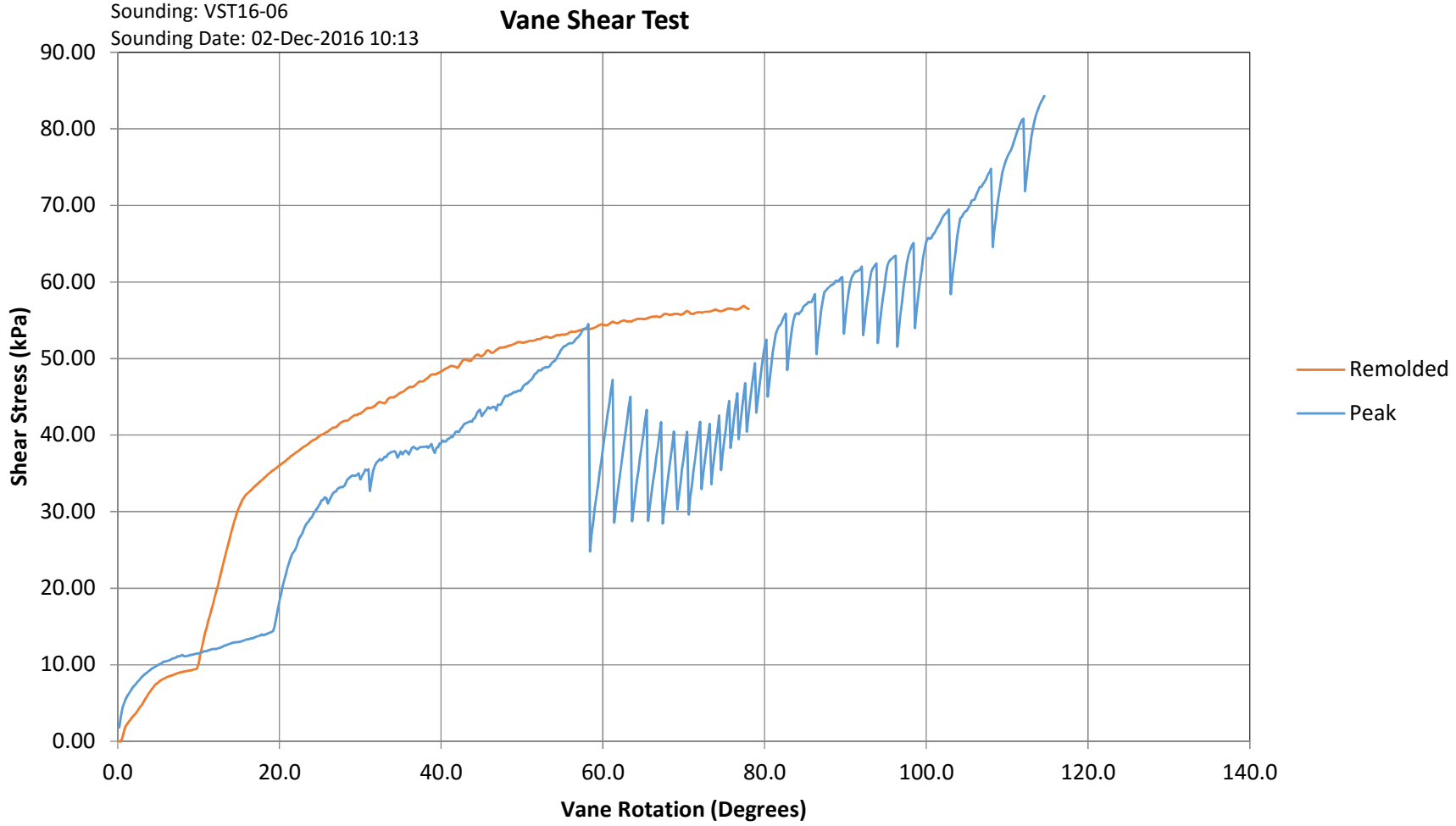
Electronic Field Vane Shear Test Plots

CONETEC

Job Number: 16-02063
Client: Golder Associates
Project: Annacis Island Wastewater Treatment Plant
Sounding: VST16-06
Sounding Date: 02-Dec-2016 10:13

Test Depth (m): 55.47
Vane Type: Double tapered 50 x 100 mm

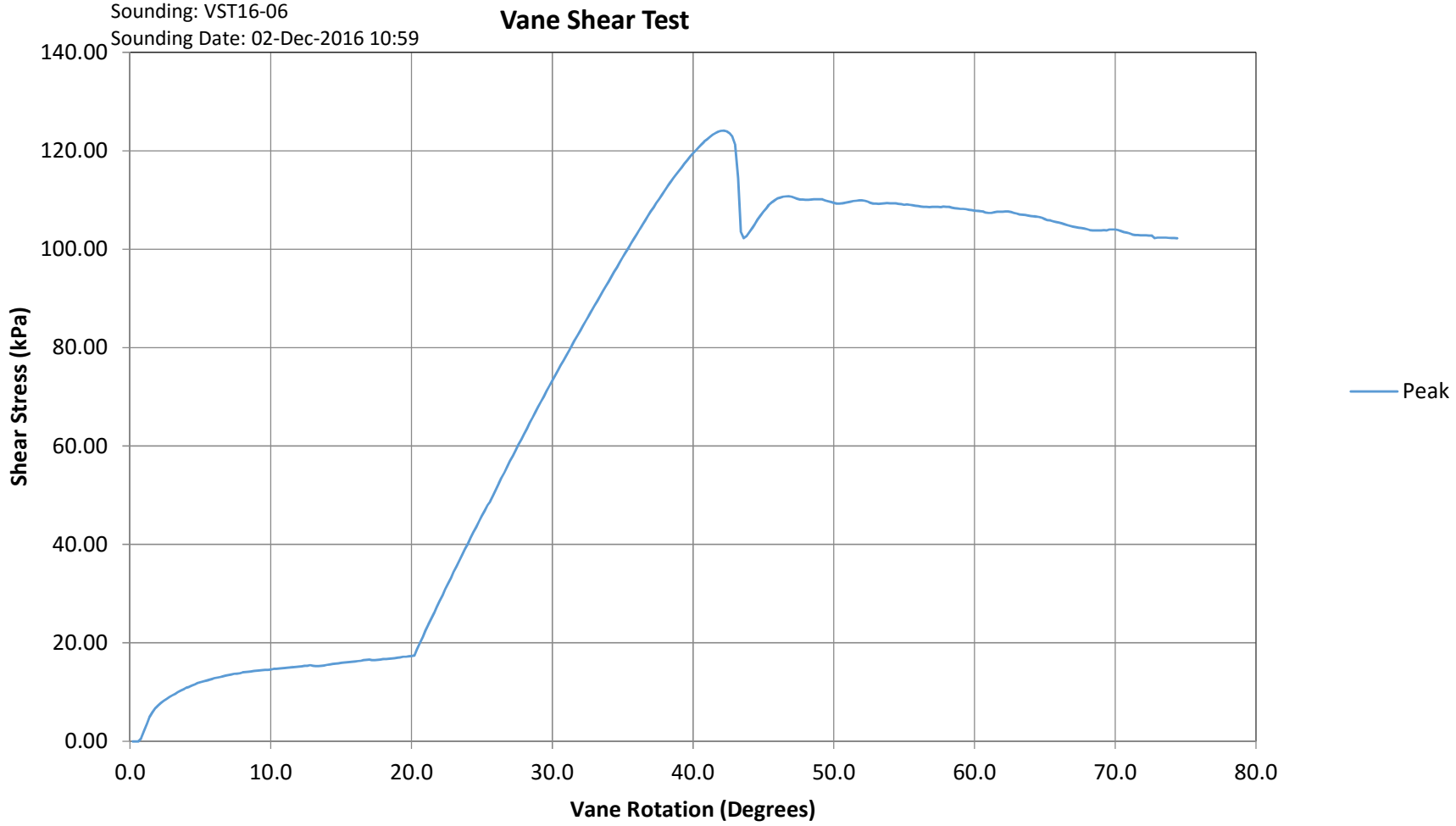
Coordinate System: UTM (WGS84)
Northing (m): 5445530
Easting (m): 503468



Job Number: 16-02063
Client: Golder Associates
Project: Annacis Island Wastewater Treatment Plant
Sounding: VST16-06
Sounding Date: 02-Dec-2016 10:59

Test Depth (m): 56.08
Vane Type: Double tapered 50 x 100 mm

Coordinate System: UTM (WGS84)
Northing (m): 5445530
Easting (m): 503468

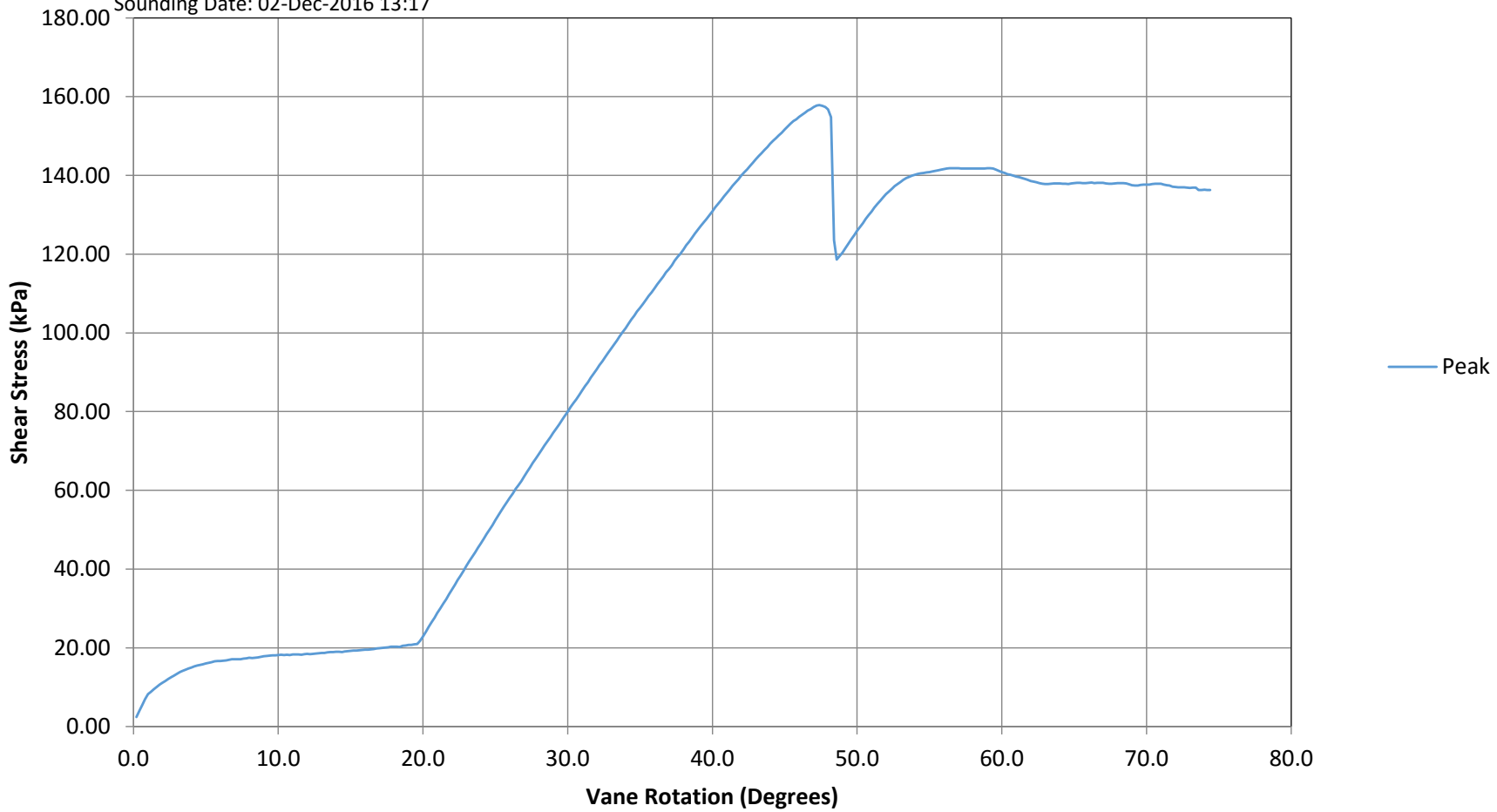


Job Number: 16-02063
Client: Golder Associates
Project: Annacis Island Wastewater Treatment Plant
Sounding: VST16-06
Sounding Date: 02-Dec-2016 13:17

Test Depth (m): 58.21
Vane Type: Double tapered 50 x 100 mm

Coordinate System: UTM (WGS84)
Northing (m): 5445530
Easting (m): 503468

Vane Shear Test

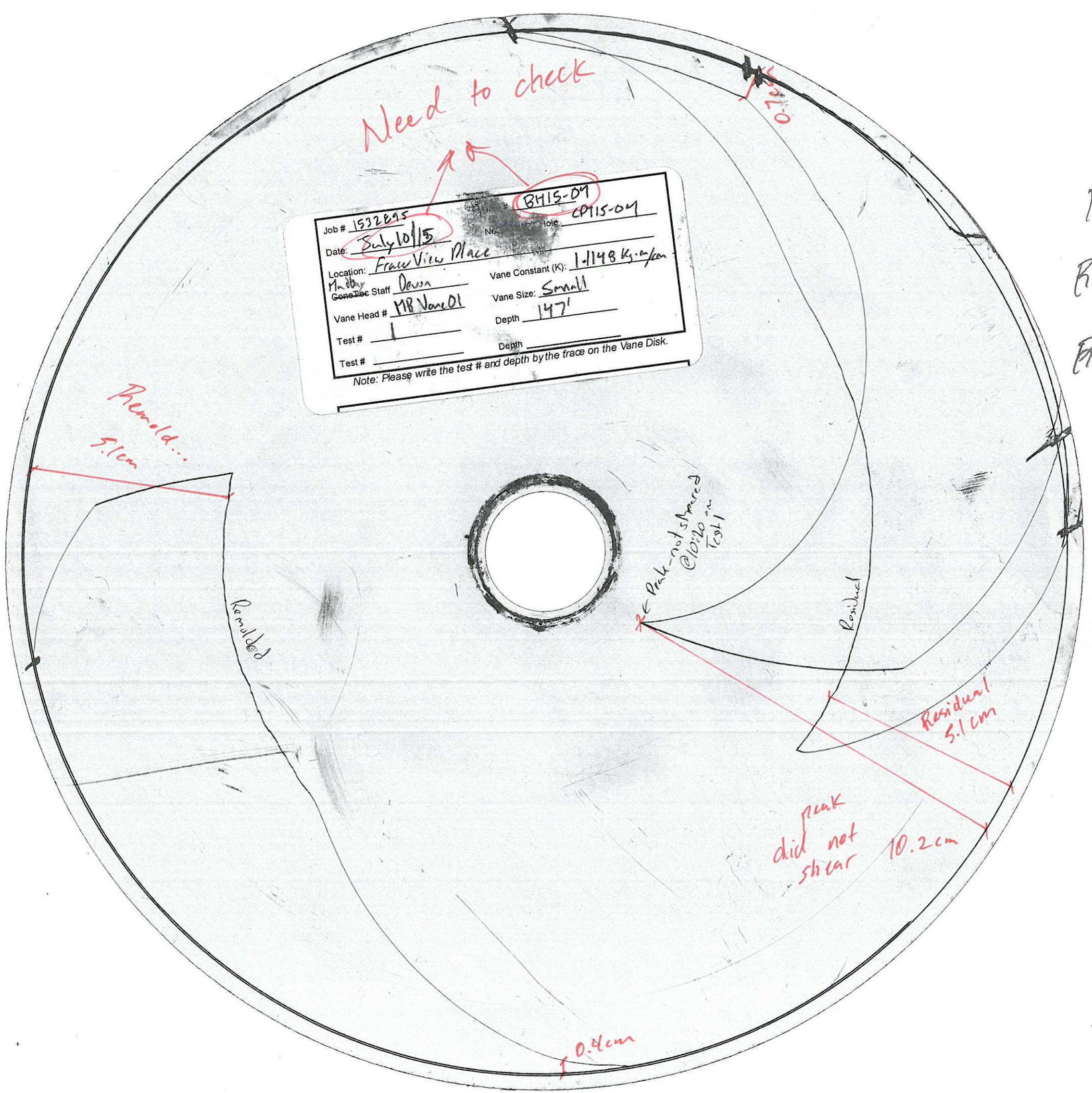


Nilcon Field Vane Shear Test Plots

1525010
BH15-01
Small-size
K=1.0602
10810"

peak


1525010
BH 15-01B
Small size
K = 1.0602
101' bl. ML.



Peak: $(10.2 - 0.7) \times 21.93 = 208.335$ kPa

Residual: $(5.1 - 0.7) \times 21.93 = 96.5$ kPa

Remold: $(5.1 - 0.4) \times 21.93 = 103.07$ kPa

Need to check

Job # 1532EA5(1002)
Date: July 11/15
Hole # BH15-04
Location: Arrau's Island - Fraser view place
Nearest CPT Hole CPT15-04
~~Mabey~~ Geotec Staff Dan T.
Vane Head # MB Vane01
Vane Constant (K): 1.1184 Kg.m/rad
Test # 1
Vane Size: Small
Test # _____
Depth 12'8"
Depth _____
Note: Please write the test # and depth by the trace on the Vane Disk.

Check Residual: Does not have clear peak...

Residual 3.0cm

Residual

Remolded

Peak at 12'3" depth

Peak 5.45cm

1.6cm Remold

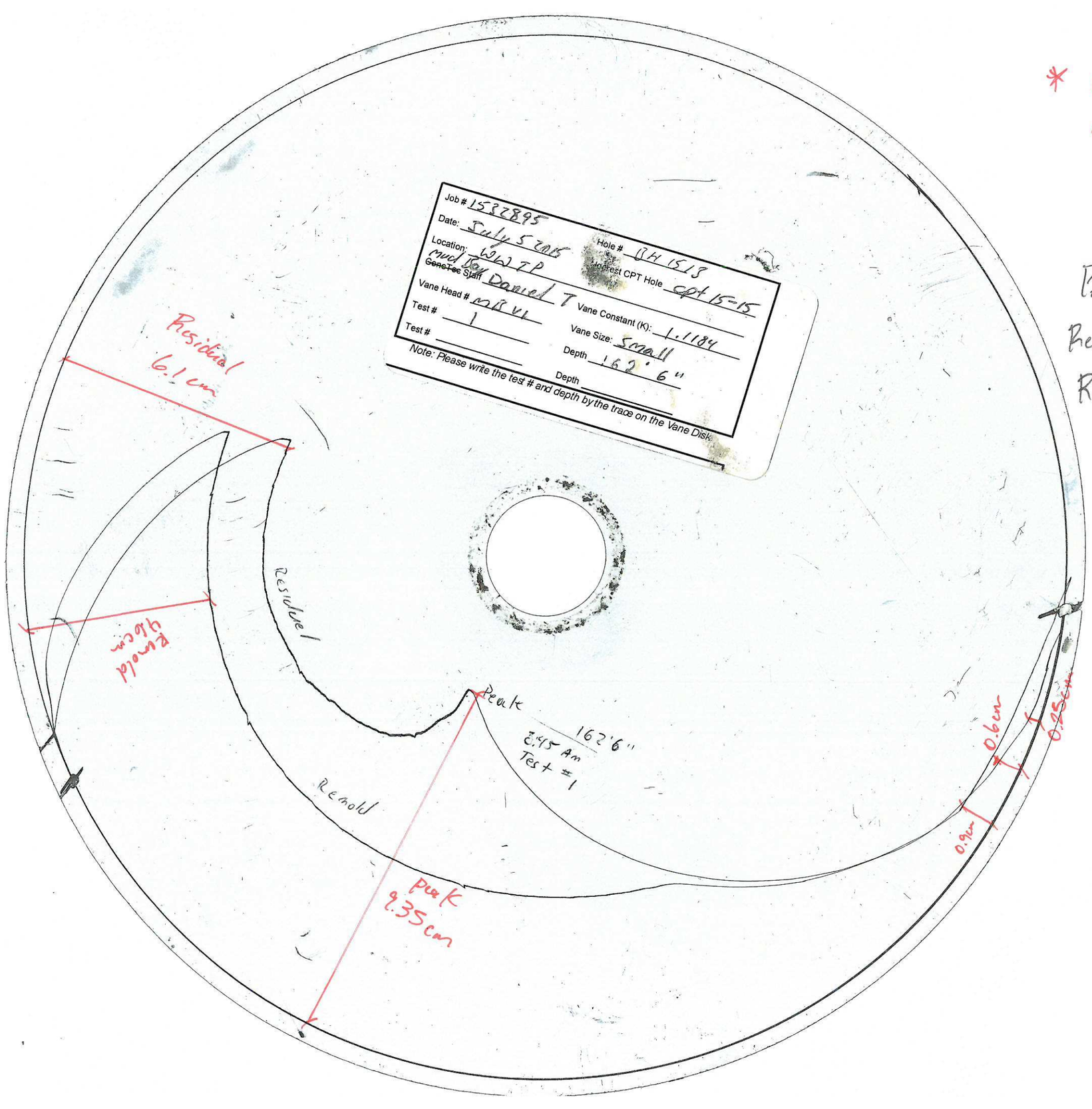
0.4cm

0.2cm

peak : $(5.45 - 0.4) \times 21.93 = 110.74\,kPa$

residual : $(3.0 - 0.4) \times 21.93 = 57.02\,kPa$

Remold : $(1.6 - 0.2) \times 21.93 = 30.70\,kPa$



* Check / Review Residual and Rod friction values..... Strange curve.

Peak (9.35 - 0.9) x 21.93 = 185.3 KPa

Resid (6.1 - 0.9) x 21.93 = 114.036 KPa

Remold (4.6 - 0.6) x 21.93 = 87.72 KPa

Job # 1532695
Date: July 5/15
Location: AIWWTP
Staff Dan Taylor
Vane Head # MB Vane 01
Test # 2
Test # _____

Hole # BM15-13
Nearest CPT Hole CPT15-15
Vane Constant (K): 1.1184
Vane Size: Small
Depth 174' 6"
Depth _____

Note: Please write the test # and depth by the trace on the Vane Disk

1.0 cm

Peak 174'6"
1400 μm
Test #2

Remold
4.9cm

Residual

Remolded

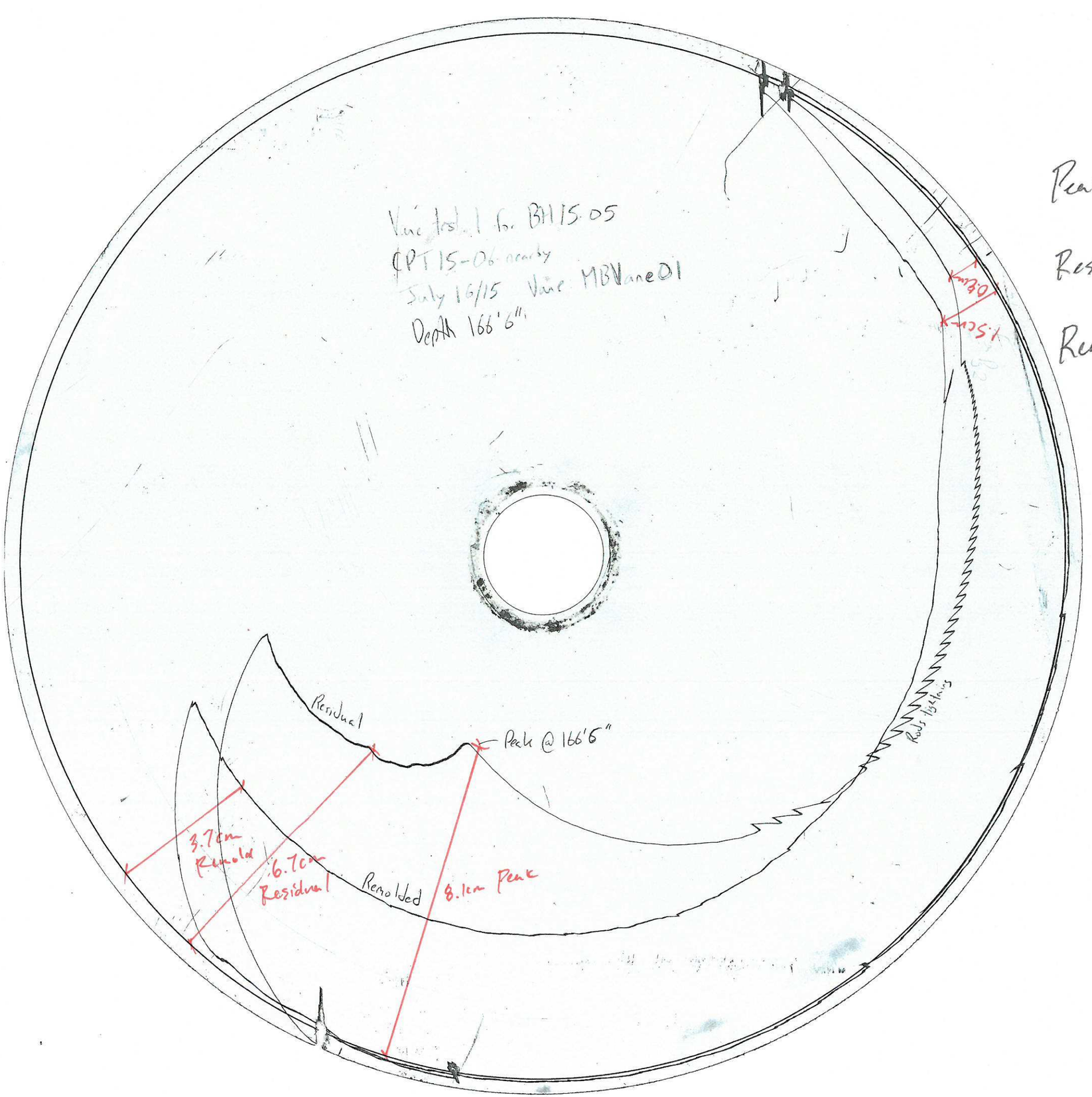
7.3 cm
peak

residual
5.2cm

Peak : (7.3 - 1.0) × 21.93 = 138.159

Remold : (4.9 - 1.0) × 21.93 = 85.527

Residual : (5.2 - 1.0) × 21.93 = 92.106



Peak: $(8.1 - 0.8) \times 21.93 = 160$ KPa

Residual: $(6.7 - 0.8) \times 21.93 = 129.38$ KPa

Remold: $(3.7 - 0.5) \times 21.93 = 48.24$ KPa

Peak

RENOLDS

1525010
B416-01
Small vane @ 17'6" (tip)
April 8, 2016 10:30-11:00
K = 0.9143 kg.m/cm
S/N 89-123


29 MAR 16
152 5010
BH 16-02
1 of 1


NVT - SMALL VANE
unit GC07-002
S/N 89-123
K = 0.9145 Kg·m/rad
1525010
1 Apr 16
STI 16-02
170-6


152507D
BH16-02
29 march 16
177 1/2
UNIT: ~~66702~~-002
S/N: 89,123
K=0.9143 kohm/cm

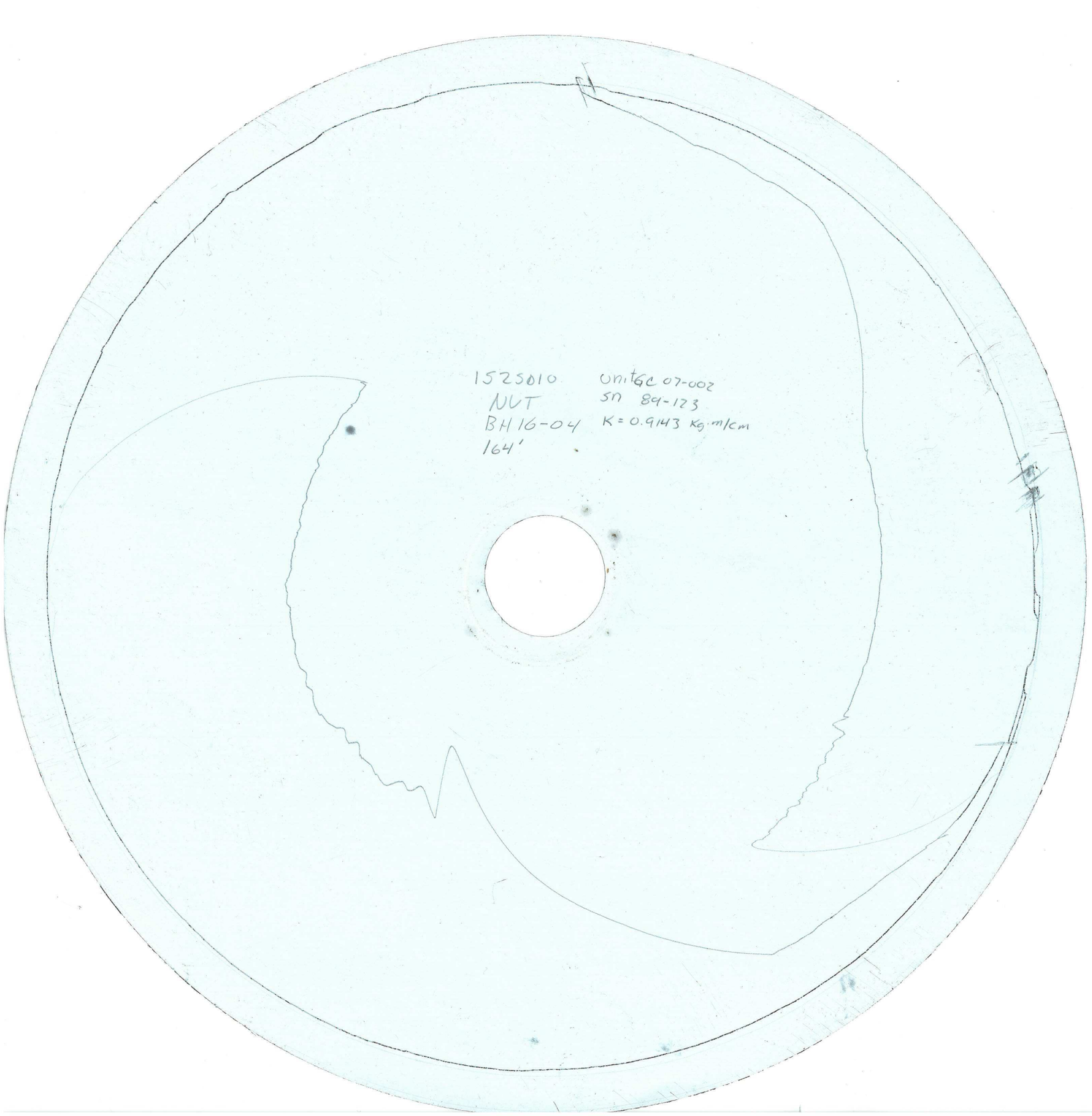
24MARCH 16
BH16-02
1525010
186'

UNIT# GC07-002
S/N: 89-123
K = 0.9148 kg·m/cm

198 FT.
24 MARCH 16
1525010
UNIT № : EC07.002
SN: 89-123
k= 0.9148 kg.m/cm

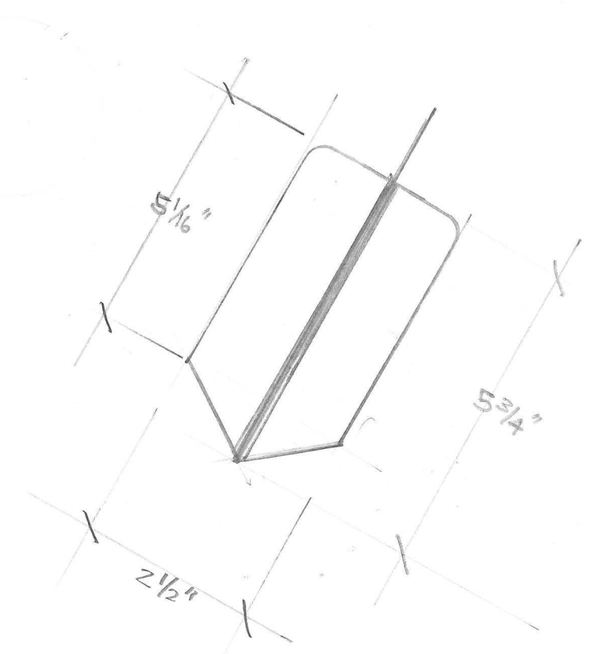

1525010
BH16-03
13'
29 Mar 16
Unit GC07-002
S/N 88-123
K= 0.9143 Kg m/cm
FIXED VANE

152010
21 MARCH 2016
Time 10:38 - 11:05 / 12 Feet belowgrade
K = 0.9143 K@ml
UNIT #: GC17 002
S/N = 89-123


1525010
NUT
BH16-04
164'
Unitec 07-002
SN 84-123
K = 0.9143 kg·m/cm


1525101
BH16-04
1771
unit GC07-002
S/N 89-123
K=0.9143 Kgf·m/km

22 MARCH 2016
BH16-024 @ 190 ft
6" VANE
UNIT: GC07-002
S/N: 89-123
K = 0.9145 kg·m/cm



UNIT: GC07.002
S/N: 89.123
K=0,9143 kg·m/cm
22 MARCH 2016
BH15-05
DEPTH: 11'6"

23 MAR 16
1525 ΦΦΦ
BH 16-05
147.5'

SMALL VANE
Unit GC 07-002
S/N 89-123
K = 0.9143 Kgm/cm


1525010 Small VANE
BH16-05 unit GC 07-002
154.5' S/N 89-123
K=0.9143 Kg m/k m

23 MARCH 2016
1525010 / EH16-05
@ 182.5'
UNIT: GC07.002
S/N: 89.123
K = 0.9143 kg/m
cm

PEAK

1525010
BH16-06
Small
Vane tip @ 173'8"
Dec 1, 2016
RB

REMOLDED

1525010
BH16-07
Small Vane
Tip @ 18'
Dec 3, 2016
RB

K=1.1143 Kg.m/cm

Peak

1525010
BH16-07
Small Nilton vane
Tip @ 122'
11:45 - 11:55
Dec 4, 2016
RB


153010
BH16-07
small vane
Tip @ 197
4:20
Dec 5, 2016
K = 1.1143
Rock


1525010
BH 16-07
Small vane
Tip @ 198'
4:40
Dec 5, 2016

NVT - SMALL VANE

Unit GC97-002

S/N 89-123

K = 0.9145 Kg.m/km

1525010

1 Apr 16

SH 16-02

170 6 =


3" VANE TEST
SMALL VANE
Unit GE07-002
S/N 89-123
K = 0.91431KG
1 APR 16
15-25010
SH16-02
16 8 6

NVT Unit GC 07-002
1525010 S/N 88173
SH 16-02 K = 0.9143 Kg m/cm
175° SMALL VANE
2 April


Peak
152010
SH1606
Small Vane
Tip @ 169'6"
Nov. 26, 2016
10:18 - 10:25
RB
slip
slip
slip

1525010
5416-06
small vane
Tip @ 170'6"
11:22-11:27
Nov 26, 2016


1525010
SH16-06
Small vane,
Tip @ 178
1:01-1:06
Nov 26, 2016
RB
K=1.1113 kg m/cm

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CDM Smith

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