UMHVERFIS
STOFNUN

Umhverfisstofnun
Áb.
16. jan. 2018
Tilv. UST201702-226

Olíudreifing ehf.
Gestur Guðjónsson
Hólmaslóð 8 - 10
101 Reykjavík

Reykjavík 16. janúar 2018
~~UST201703-132~~/gf
08.06.02

Varðar botnþykktarmælingu á geymum T1050 og T1052 í olíubirgðastöð Olíudreifingar ehf. í Krossanesi á Akureyri

Umhverfisstofnun barst tölvupóstur þann 8. janúar sl. með skýrslu um niðurstöður botnþykktarmælinga á geymi nr. T1050 (600.06.00) og T1052 (600.05.00) í stöðinni í Krossanesi, Akureyri. Mælingar voru framkvæmdar af NDT ehf. og notaður var MFE MK IV Tank Floor Scanner, ser# MK4-0016-A-TFS og þykktarmælir af gerðinni Olympus 45MG.5 Mhz Serial nr. 130177407 kvarðaður með 3 mm, 6 mm, 9 mm, 12 mm og 18 mm stilliklossum.

Í skýrslu NDT ehf. kemur fram að geymarnir eru í slæmu ástandi að innanverðu. Gólf er með tæringu og á einstaka stað má finna pytti. Gólfið hefur verið sandblásið og málað fyrir þónokkru síðan. Málningin er illa farin og gólfið óslétt. Líklega hefur þó náðst að stöðva tæringuna að mestu.

Niðurstöður mælinga sýna að botnar og hliðar geymanna standast kröfur um málmþykktir (sjá meðfylgjandi skýrslu)

Umhverfisstofnun samþykkir áframhaldandi notkun á geymunum.

Virðingarfyllst,

Gottskálk Friðgeirsson

G. Stella Árnadóttir
Guðbjörg Stella Árnadóttir
teymisstjóri

Afrit:
Heilbrigðisnefnd Norðurlands eystra

OLÍUDREIFING EHF
B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

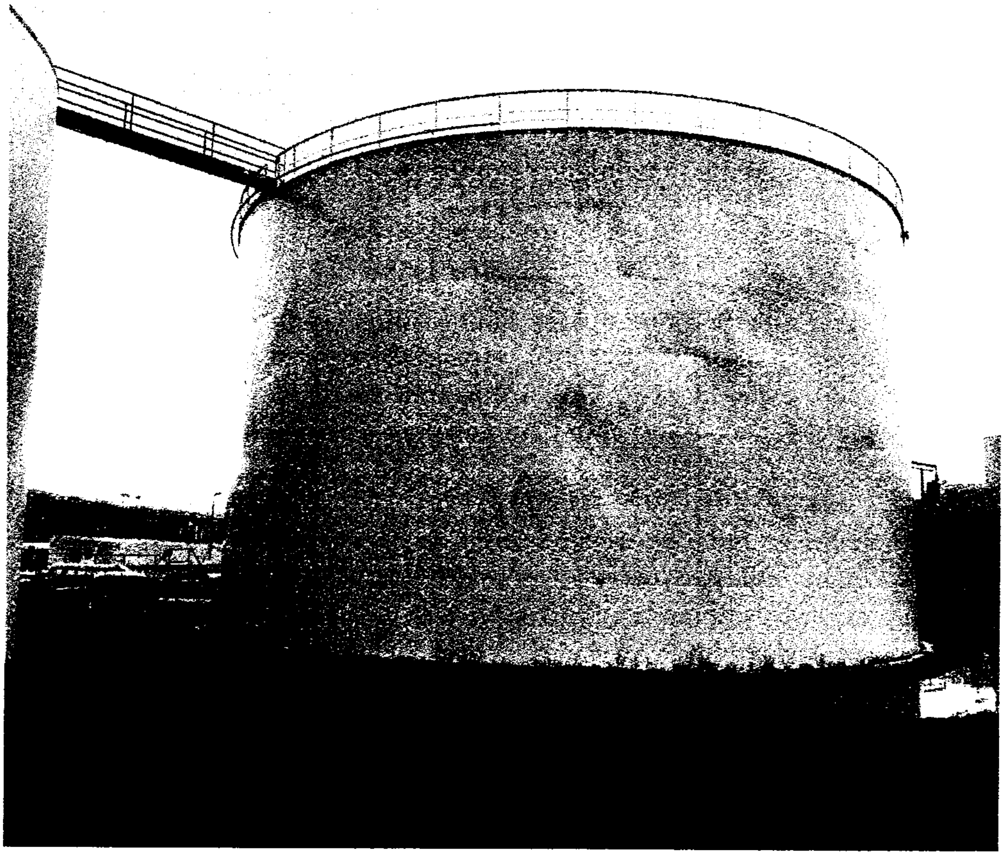
NON DESTRUCTIVE TESTINGS - ICELAND

SKÝRSLA

ÞYKKTARMÆLINGAR Á OLÍUGEYMI 6 Í KROSSANESI

ULTRASONIC THICKNESS MEASUREMENT

UTM SKÝRSLA NR. 1732



OKTOBER 2017

FASTANÚMER: T1050

MÆLINGAR FRAMKVÆMDAR , STAÐUR: AKUREYRI, KROSSANES

EIGANDANÚMER: 600.06.00

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ndt@internet.is
+354 8440313

Samgöngustofa

OLÍUDREIFING EHF
B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

NON DESTRUCTIVE TESTINGS - ICELAND

Framkvæmd mælinga
Þykktarmælingu framkvæmdi Gísli A. Guðmundsson hjá NDT ehf á Akureyri. Upplýsingar varðandi aðstæður, notkun geyma o.fl. veitti Gunnar Jónsson og Guðjón Páll Jóhannsson hjá Olíudreifingu ehf.
Framkvæmd þykktarmælinga og segulsviðskönnunar á geyminum fór fram þann 27-29 ágúst 2017 Geymirinn er standandi stálgeymir og var botn hans mældur ásamt neðsta umfari.

Þykktarmælingar
Varðandi staðsetningu mælistaða og niðurstöður þykktarmælinga á geyminum er hér vísað á meðfylgjandi teikningar (1 stk.). Allar gólfplötur eru mældar á svipaðan hátt þ.e.a.s. miðast er við að hafa mælinguna i miðri plötu, aðeins var tekin einn punktur í plötu.

Segulsviðsmælingar
Gólfskanninn er kvarðaður á 6mm plötu. 8mm, 10mm, 14mm og 18mm göt eru boruð í plötuna þar til 3mm efnisþykkt er eftir. Hugbúnaðurinn er stilltur þar til götin gefa rautt/appelsínugult merki á skjá. Gólfskannanum er rennt yfir alla fleti sem hann kemst yfir. Svelgir, rör eða ójafn botn gera gólfskannanum ókleift til mælingar.

Niðurstöður
Geymir er málaður að hluta að innan. Umfar er í góðu ásigkomulagi, geymir virðist nýmálaður að utanverðu. Geymir er í slæmu ásigkomulagi að innanverðu, gólf er tært að innan og á einstaka stöðum má finna pytti sem geta náð tæplega 3mm dýpt. Gólfið hefur líklega verið sandblásið og málað fyrir þónokkru síðan, málningin er afar illa farinn víða og gólfið óslétt. Líklega hefur náðst að stöðva tæringuna að mestu að ofanverðu nema þar sem binding málningar hefur náð að rofna. Eigandi geymis látin vita. Sjá meðf. niðurstöður mælingar. Öll uppgefin mál á teikningum eru í mm.
Sjá teikningar og ljósmyndir.

Akureyri, 02 oktober 2017

Virðingarfyllst.

PCN
G. A. GUDMUNDSSON
PCN No. 307004
www.bindt.org/PCN
UT. PT & WI

Gísli Arnar Guðmundsson

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Samgöngustofa

OLÍUDREIFING EHF
B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

VANDT
NON DESTRUCTIVE TESTINGS - ICELAND

STAÐFESTING ÞYKKTARMÆLINGA

SKÝRSLA NR.:	1732
DAGS. SKÝRSLU:	02 október 2017
EIGANDI GEYMIS:	Olíudreifing ehf
REKSTRARAÐILI:	Olíudreifing ehf
DAGS. FRAMKV.:	27-29 október 2017
STAÐUR	Krossanes Akureyri
HVAÐ MÆLT:	Geymir 6
FASTANÚMER:	T1050
EIGENDANÚMER:	600.06.00
SMÍÐAÁR:	1952

MÆLIBÚNAÐUR: Olympus 45MG. 5 Mhz Serial nr: 130177407, skoðað og vottað þann 30.08.2016
Stilliklossar (Calibration blocks): 3mm, 6mm 9mm 12mm og 18mm.
MFE MK IV Tank Floor Scanner. Serial No.MK4 0016-A-TFS

FRAMKV. MÆLINGA: Gísli Arnar Guðmundsson

SKÍRTEINI (CERTIFICATE): Ultrasonic Inspection – Level II
PCN GEN ISS 6 2010/ n.r. 52140
10/03/2017 - 10/043/2022
Ultrasonic Inspection – Level II
PCN Cert no: E013S3329037 (UT, PA,TOFD)
10/07/2013-09/07/2018

Hér staðfestist að framkvæmdar hafa verið þykktarmælingar á ofangreindum geymi, í eigu og rekstri Olíudreifingar ehf, að ósk rekstraraðila.
Niðurstöður mælinga eru skráðar á meðfylgjandi blaðsíður (teikningar) og eru öll mál í mm. Alls eru þar skráðar 165 niðurstöður.
Þykktarmælir, gólfskanni og nemar tengdir búnaðinum voru sannreyndir og prófaðir með mælingum á stilliklossum fyrir, á meðan og að loknum mælingum.

Skoðað/dags./af: 02/10/2017

PCN
G. A. GUDMUNDSSON
PCN No. 307004
www.bindt.org/PCN
UT, PT & WI

G. A. Gíslason

Samþykkt/dags./af:

16. janúar 2018

UMHVERFISSTOFNUN
Mengunarvarnaeftirlit

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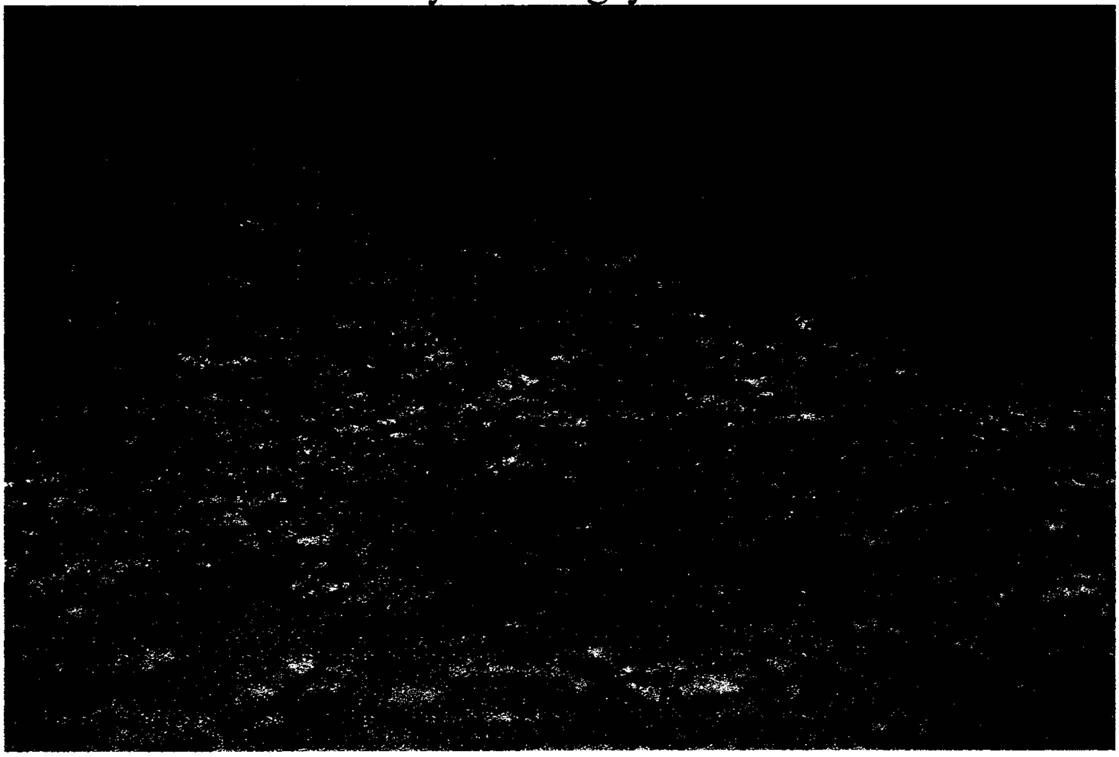
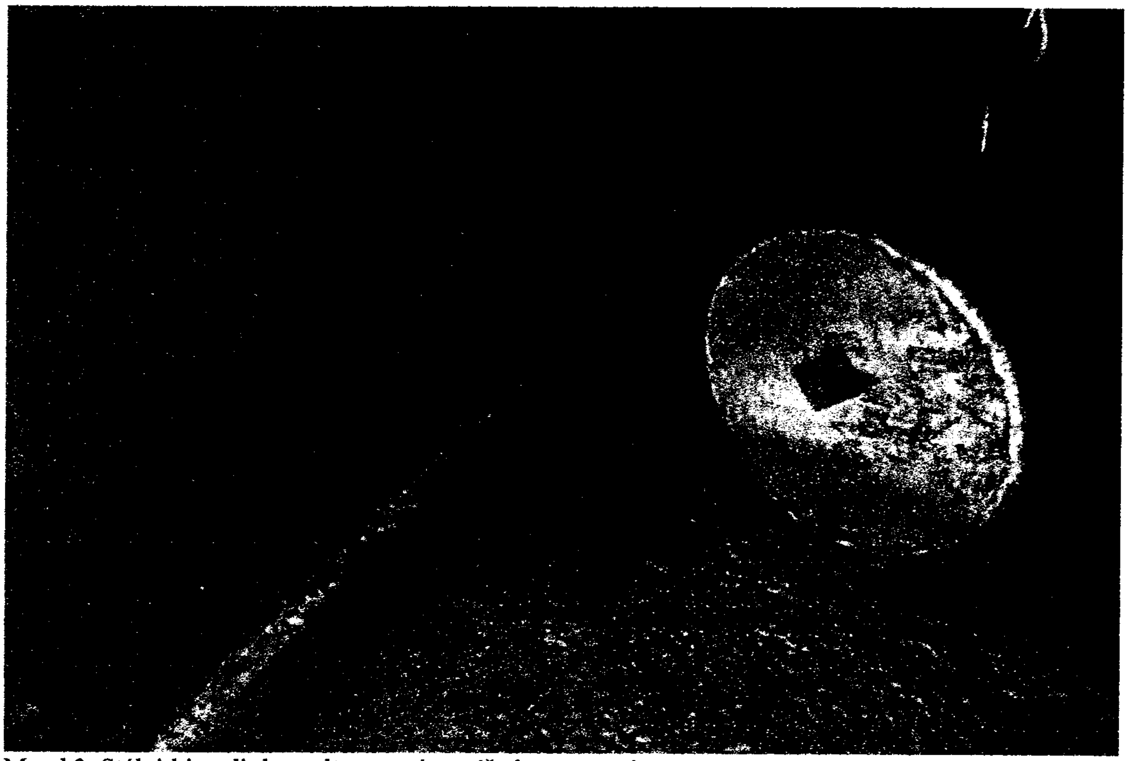
Samgöngustofa

Myndir frá geymi 6

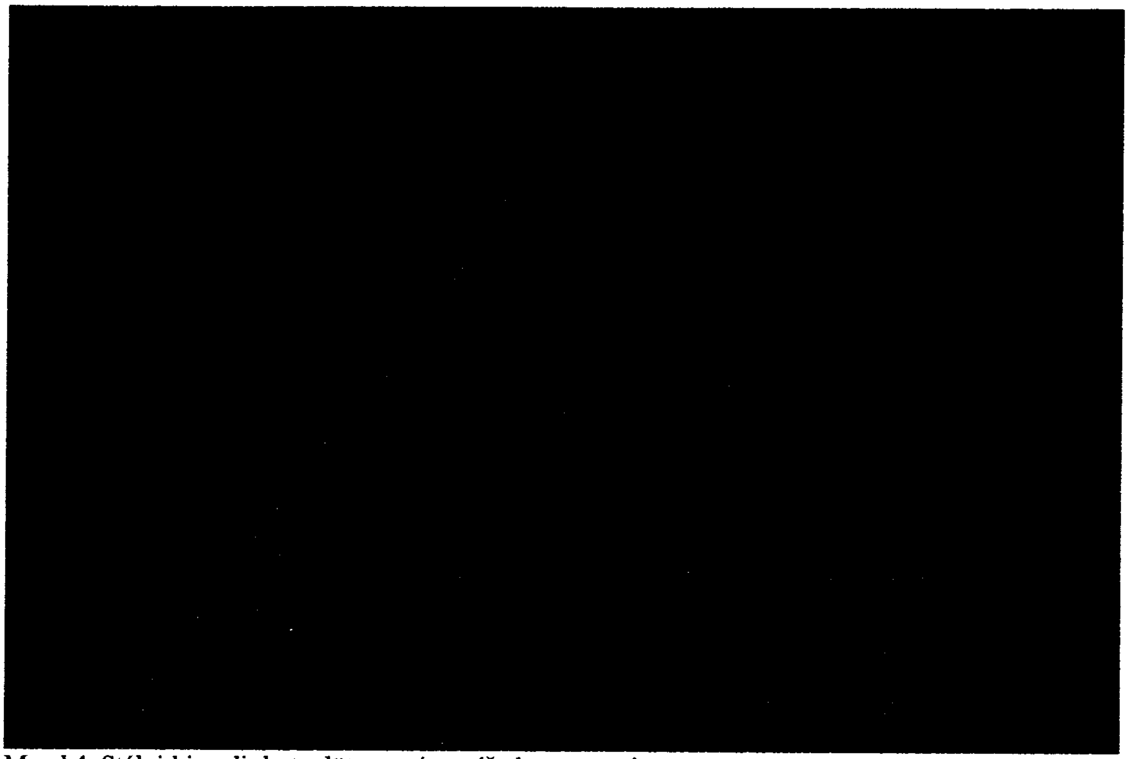


Mynd 1. Yfirborð geymis er alsett 1-3 mm pyttum.

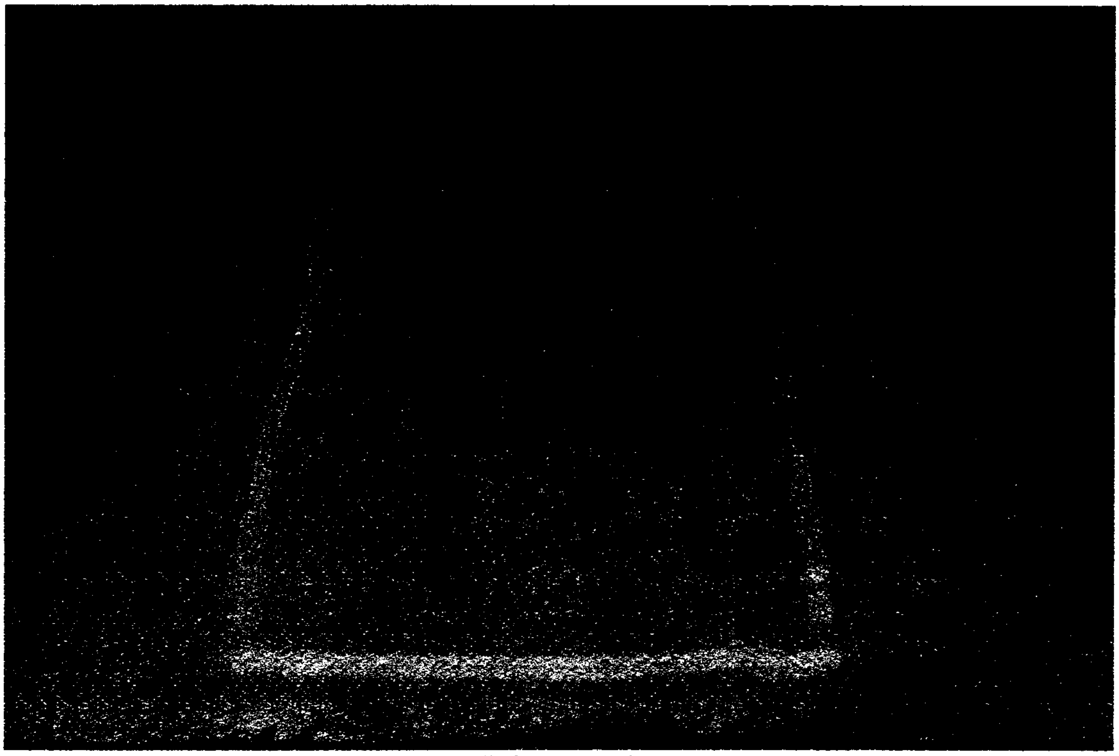
Mynd 2. Stálvirki undir botnplötum mótar víða botn geymis.



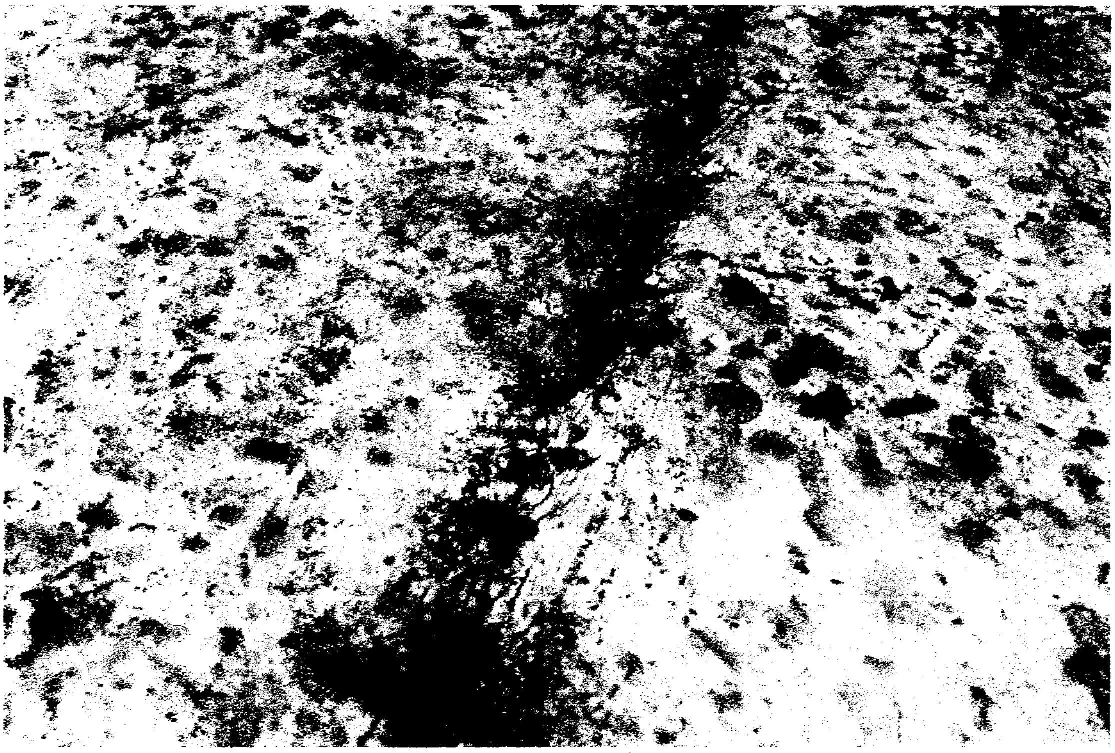
Mynd 3. Stálvirki undir botnplötum mótar víða botn geymis.



Mynd 4. Stálvirki undir botnplötum mótar víða botn geymis.

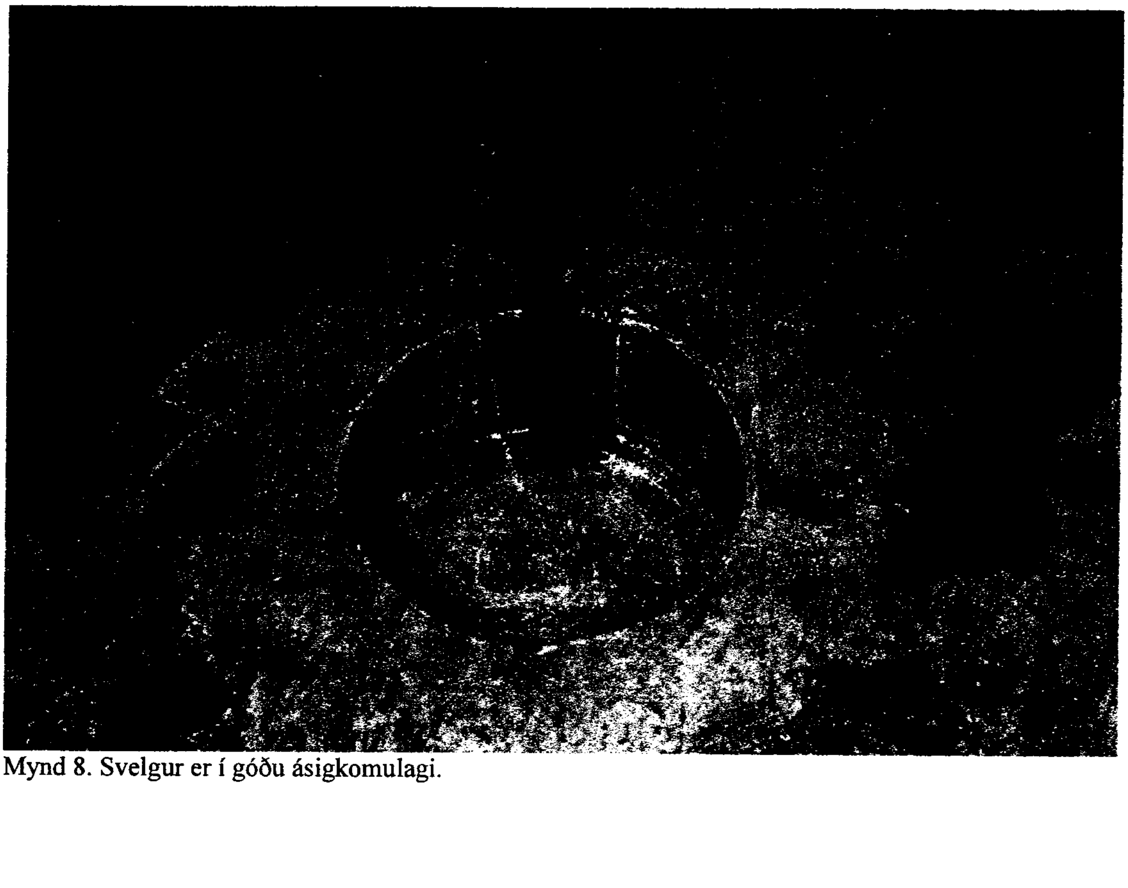


Mynd 5. Stálvirki undir botnplötum mótar víða botn geymis.

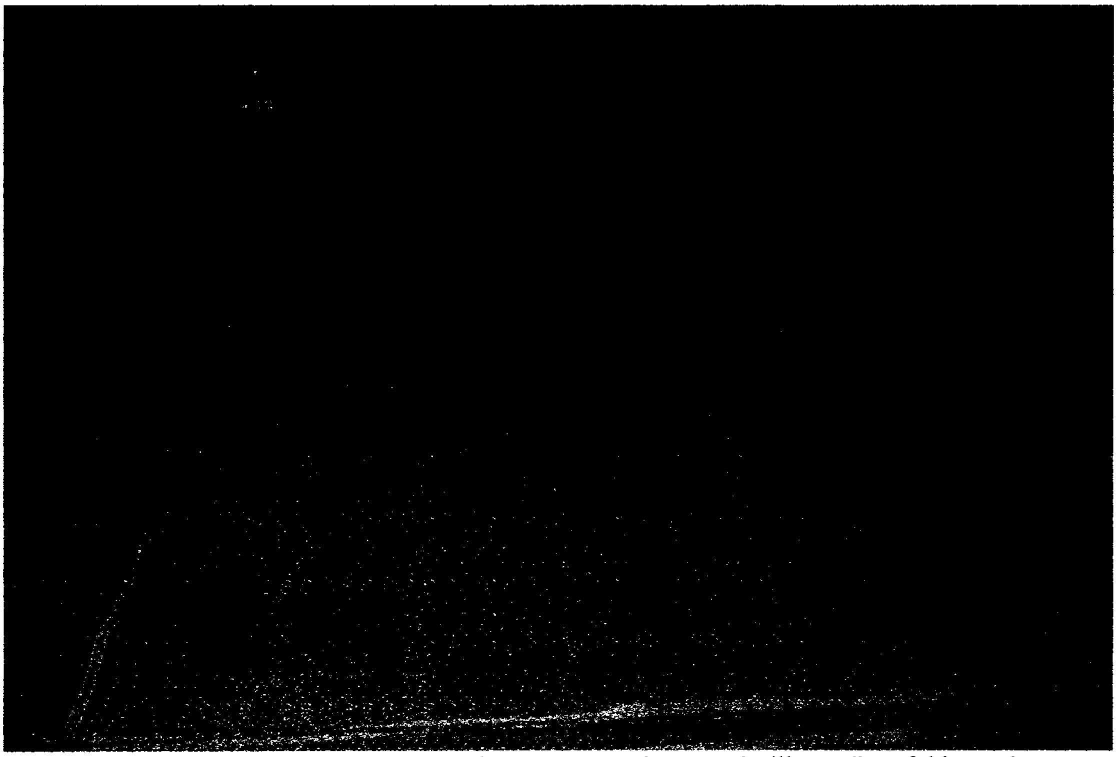


Mynd 6. Stálvirki undir botnplötum mótar víða botn geymis.

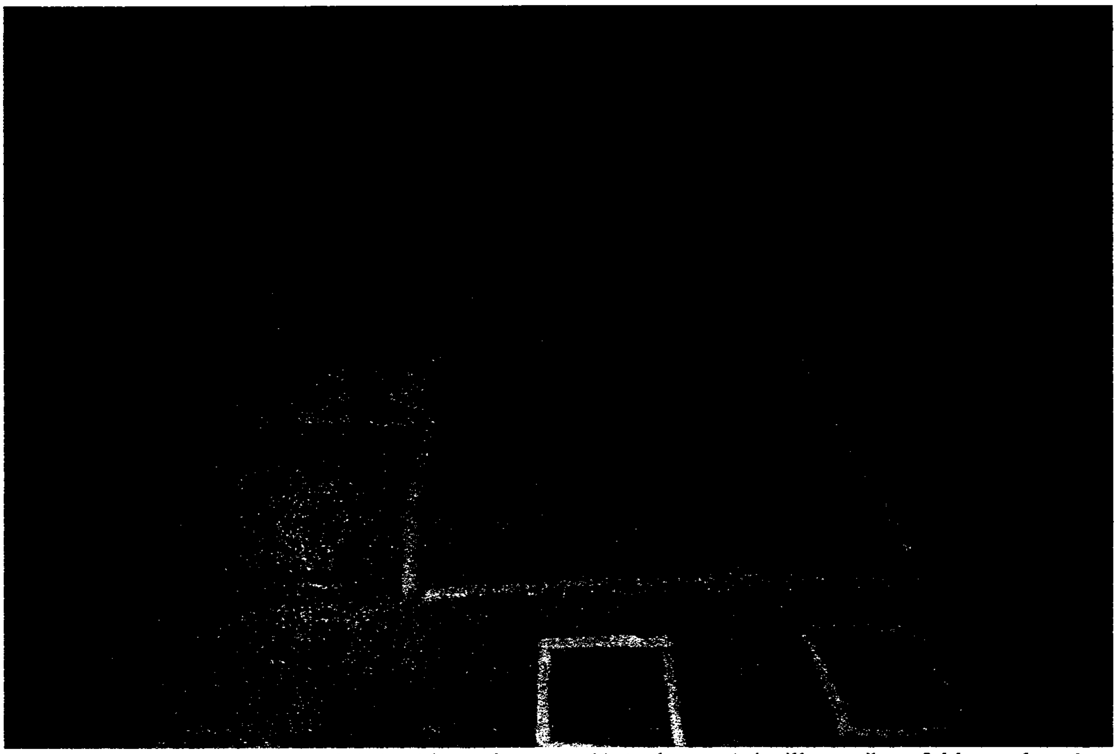
Mynd 7. Stálvirki undir botnplötum mótar víða botn geymis.



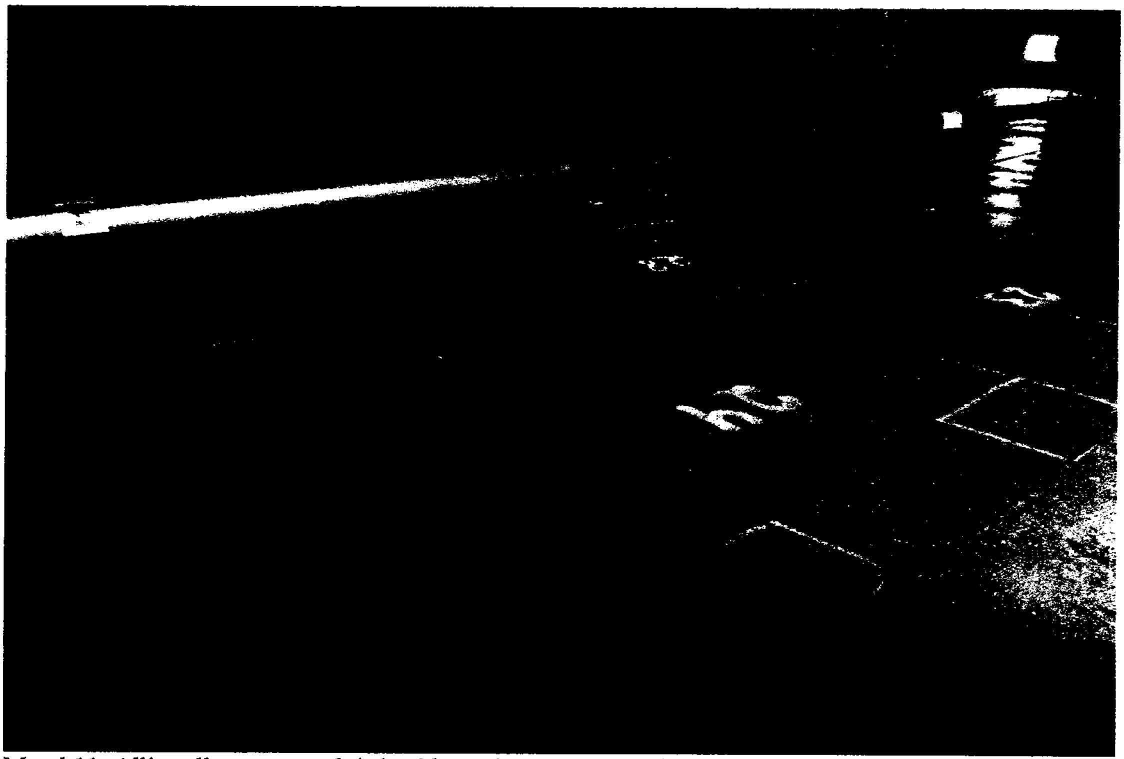
Mynd 8. Svelgur er í góðu ásigkomulagi.



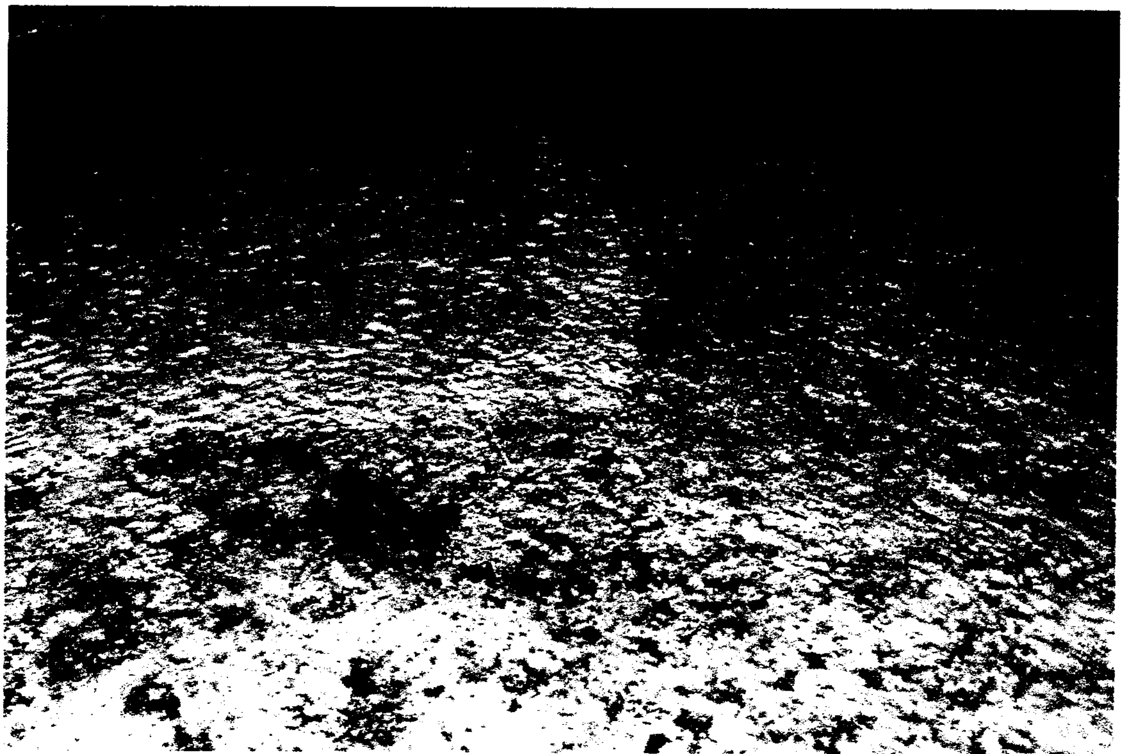
Mynd 9. Allir gallar voru merktir inná botnplöturnar. Hvíta línan sýnir tillögu að tvöföldunarplötu á plötu nr 42. (Sjá teikn)



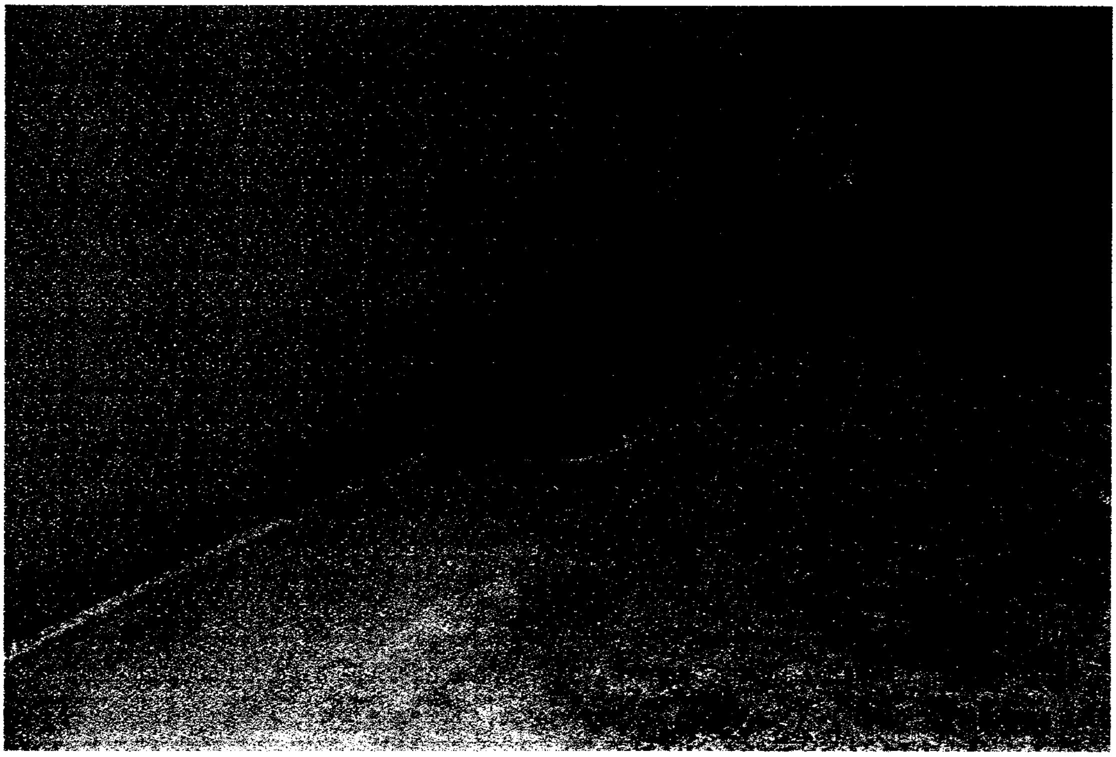
Mynd 10. Allir gallar voru merktir inná botnplöturnar. Hvíta línan sýnir tillögu að tvöföldunarplötu á plötu nr 32. (Sjá teikn)



Mynd 11. Allir gallar voru merktir inná botnplöturnar. Hvíta línurnar eru tillögur að tvöföldunarplötum.



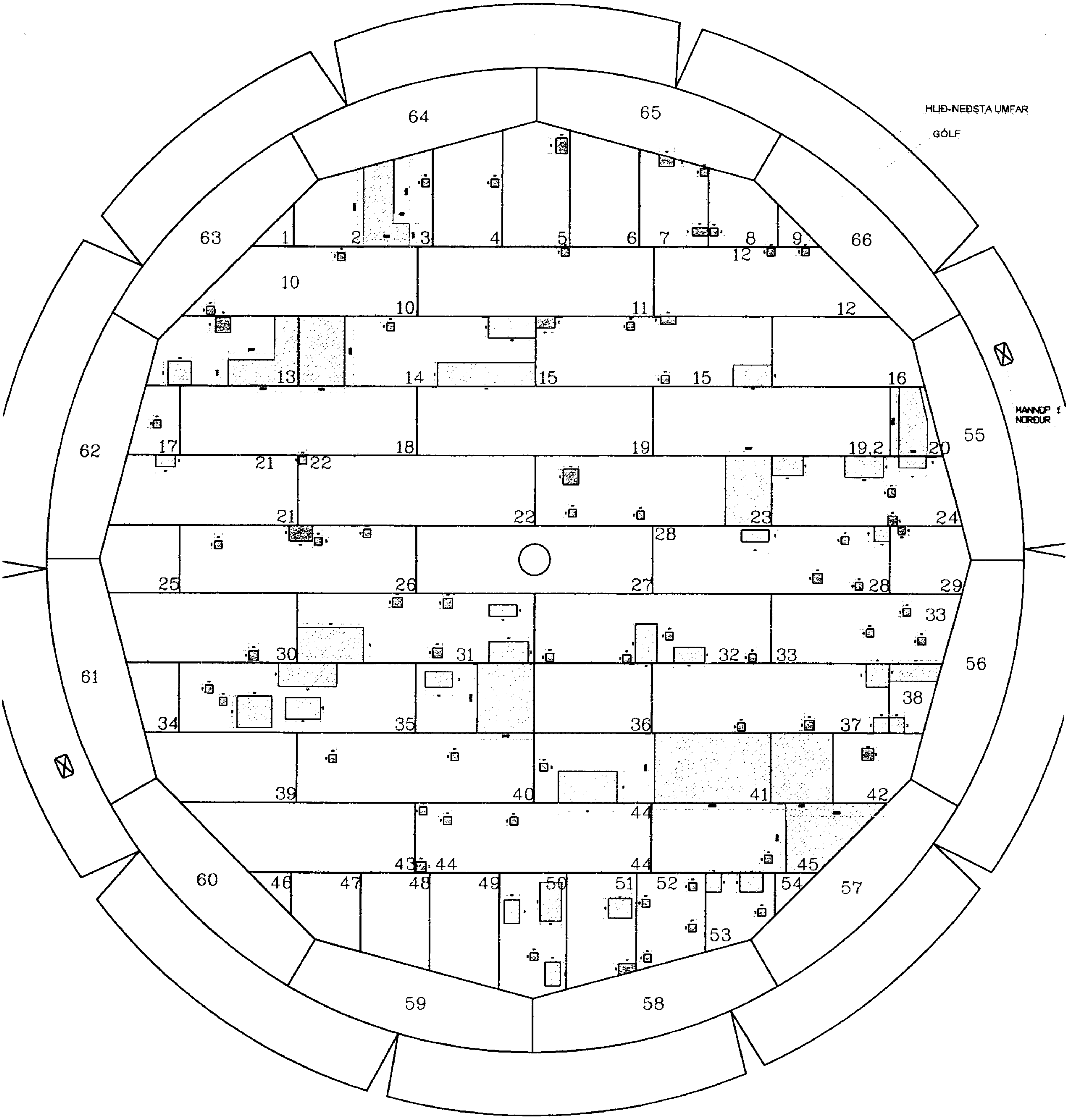
Mynd 12. Dæmigert ástand á botnplötu. Yfirborð alsett djúpum pyttum. Málning í slæmu ástandi en þó ver hann ennþá að stórum hluta fyrir frekari tæringu að ofanverðu.



Mynd 13. Hliðar geymis eru í mjög góðu ástandi.

Mynd 14. Þak geymis virðist í góðu ástandi.

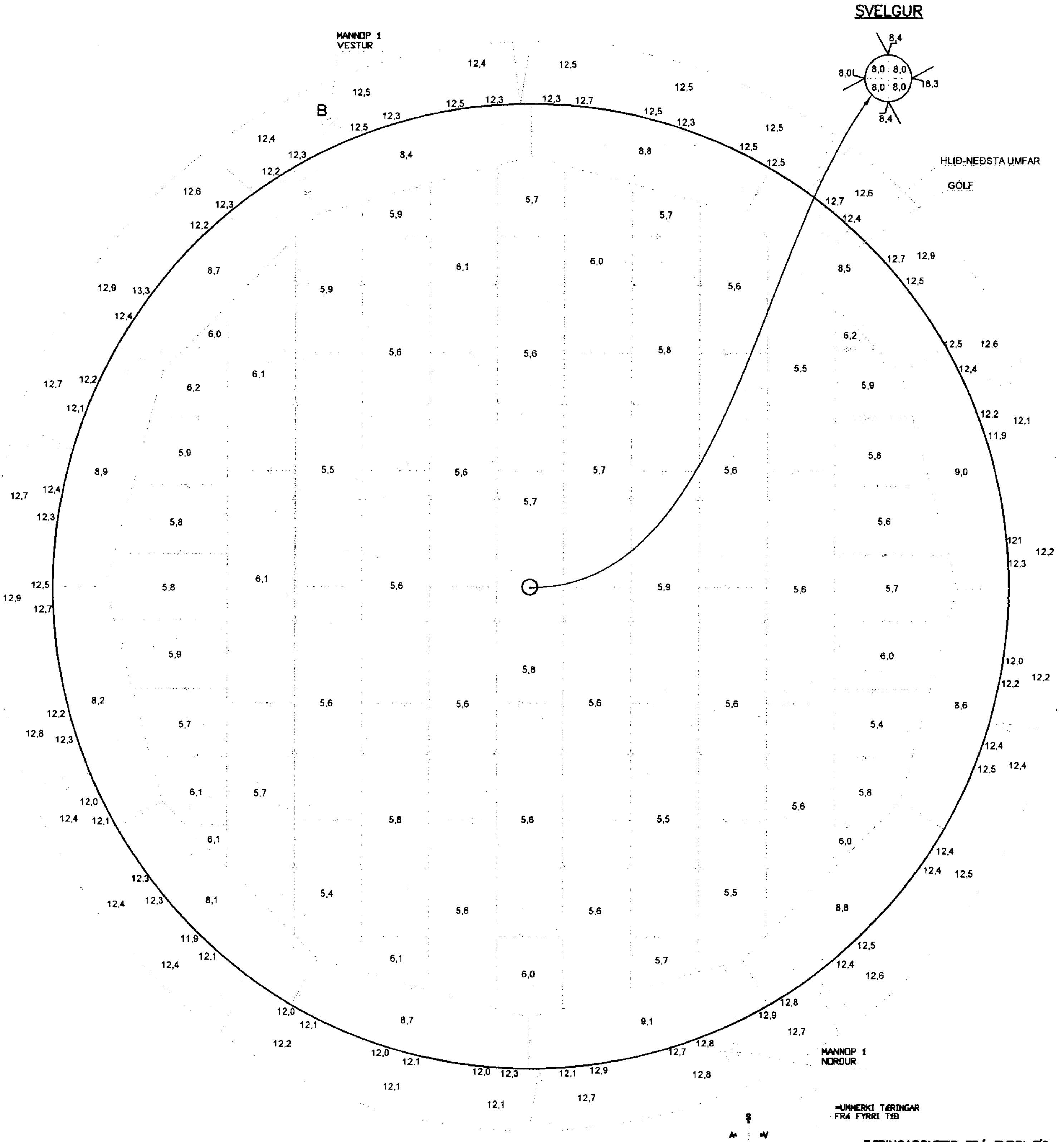
TILLAGA AÐ TVÖFÖLDUNARPLÖTUM Á BOTNI GEYMIS.
ATH: STÆRÐIR EKKI HEILAGAR EN LEITAST SKAL FREKAR
VIÐ AÐ STÆKKA FLÖTINN SEM SKAL TVÖFALDA.



VANDT
NON DESTRUCTIVE TESTINGS - ICELAND
ÞYKKTARMÆLING SKIPA
SPRUNGULEIT Á STÁLI
HLJÓÐBYLGJUPRÓFUN
SEGULAGNAPRÓFUN
LITAPRÓFUN

ÞYKKTARMÆLINGAR (UTM)	
REKSTRARAÐILI:	OLÍUDREIFING EHF
TILVÍSUN OKKAR.:	1732/GAG
MÆLINGAR FRAMKV.	28-09-2017
STAÐUR:	AKUREYRI KROSSANES
HLUTUR MÆLDUR:	GEYMIR NR. 6
FASTANÚMER:	T1050

TEIKNING ER EKKI Í MÆLIKVARÐA

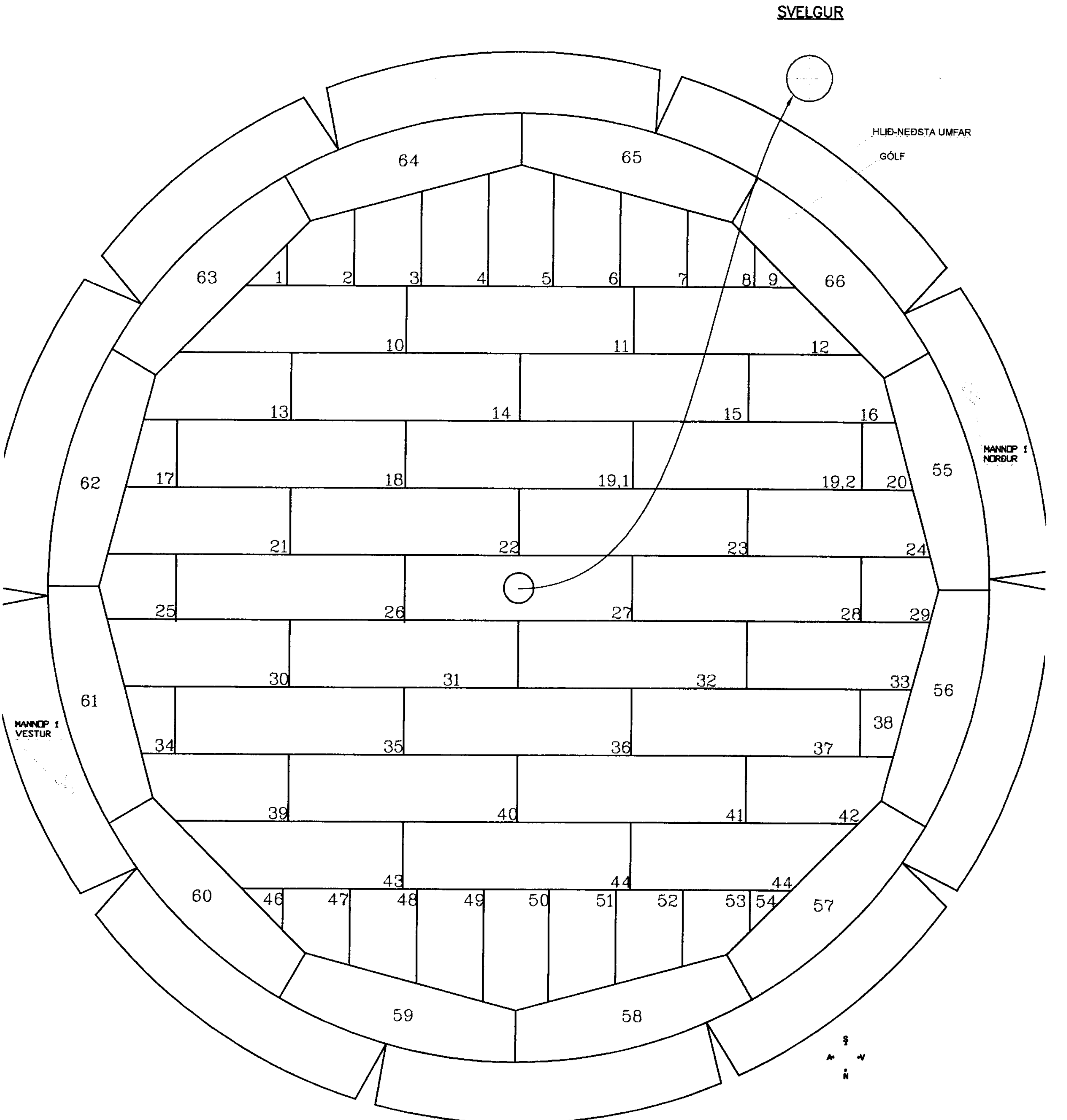


TÆRINGARPYTTIR FRÁ FYRRI TÍÐ SJÁST VEL Í GÓLFPLÖTUM. TÆRIN STÖÐVUÐ AÐ MESTULEITI OFANFRÁ MEÐ SANDBLÆSTRI OG MÁLNINGU

VANDT
NON DESTRUCTIVE TESTINGS - ICELAND
ÞYKKTARMÆLING SKIPA
SPRUNGULEIT Á STÁLI
HLJÓÐBYLGJUPRÓFUN
SEGULAGNAPRÓFUN
LITAPRÓFUN

ÞYKKTARMÆLINGAR (UTM)	
REKSTRARAÐILI:	OLÍUDREIFING EHF
TILVÍSUN OKKAR.:	1732/GAG
MÆLINGAR FRAMKV.	28-09-2017
STAÐUR:	AKUREYRI KROSSANES
HLUTUR MÆLDUR:	GEYMIR NR. 6
FASTANÚMER:	T1050

TEIKNING ER EKKI Í MÆLIKVARÐA



PLÖTUR MERKTAR MEÐ NÚMERI FREKARI AUÐKENNINGAR.

VANDT NON DESTRUCTIVE TESTINGS · ICELAND ÞYKKTARMÆLING SKIPA SPRUNGULEIT Á STÁLI HLJÓÐBYLGJUPRÓFUN SEGULAGNAPRÓFUN LITAPRÓFUN	ÞYKKTARMÆLINGAR (UTM)	
	REKSTRARAÐILI:	OLÍUDREIFING EHF
	TILVÍSUN OKKAR.:	1732/GAG
	MÆLINGAR FRAMKV.	28-09-2017
	STAÐUR:	AKUREYRI KROSSANES
	HLUTUR MÆLDUR:	GEYMIR NR. 6
	FASTANÚMER:	T1050

TEIKNING ER EKKI Í MÆLIKVARÐA

ENTERPRISES INCORPORATED

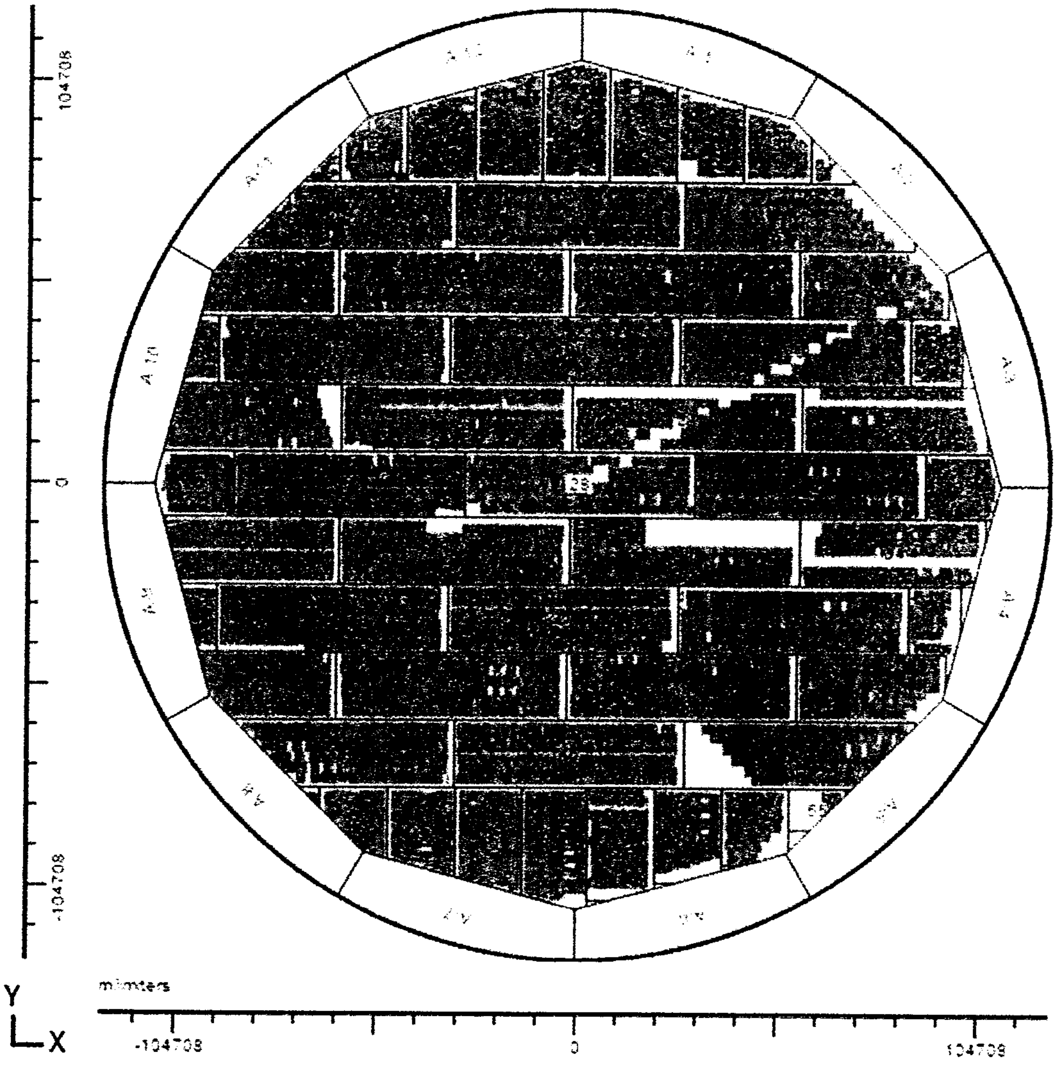
Non Destructive Testings

MFE Scan Survey Report

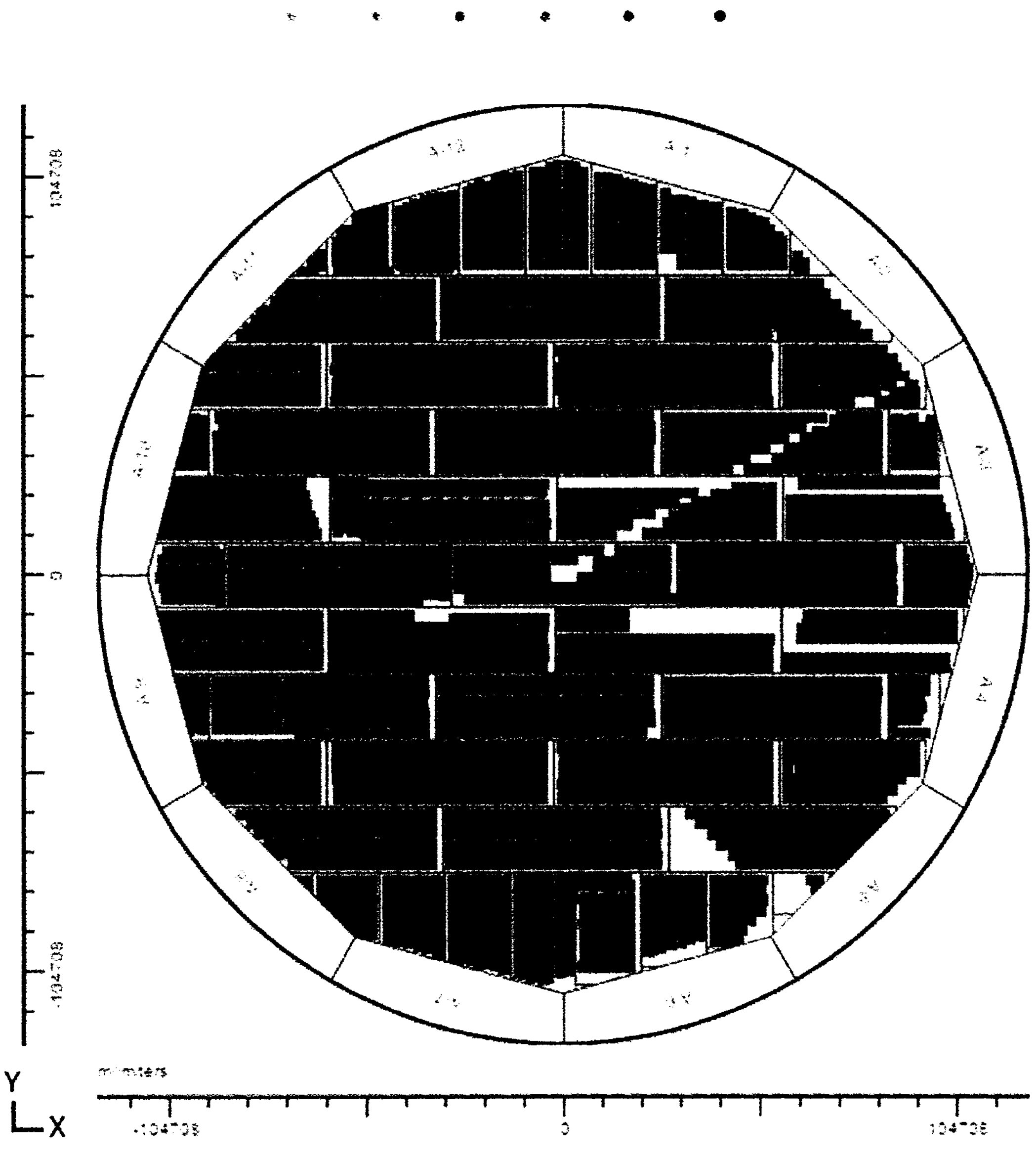
Project: TM_1732_T1050_6_2017

Customer:	Olíudreifing ehf	**Date of Survey**:	28 Sep 2017
Prepared By:	Gísli A. Guðmundsson	**Date of Report**:	02 Okt 2017
Company:	NDT ehf	**Revision**:	3mV and 350mV

Tank Overview



Track Coverage Overview



Maximum Defect by Plate

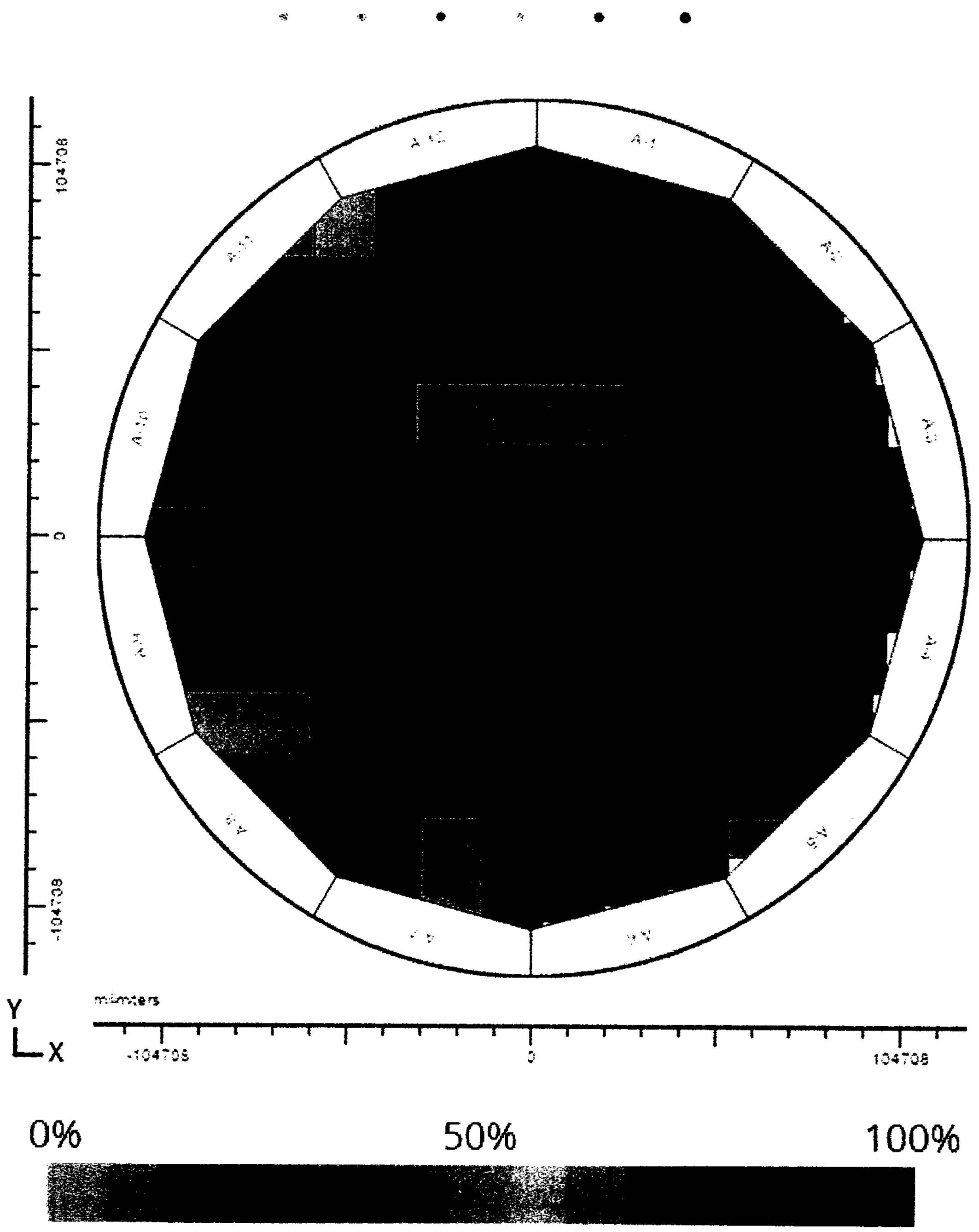


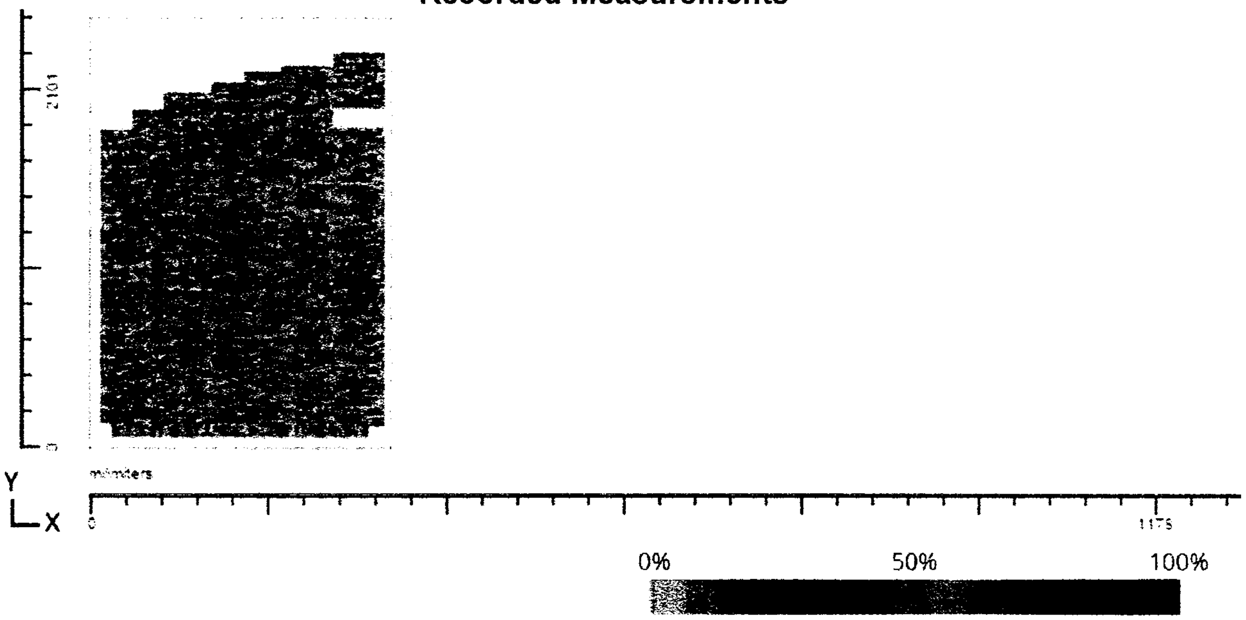
Plate Number 3

Maximum Signal Height: 100%

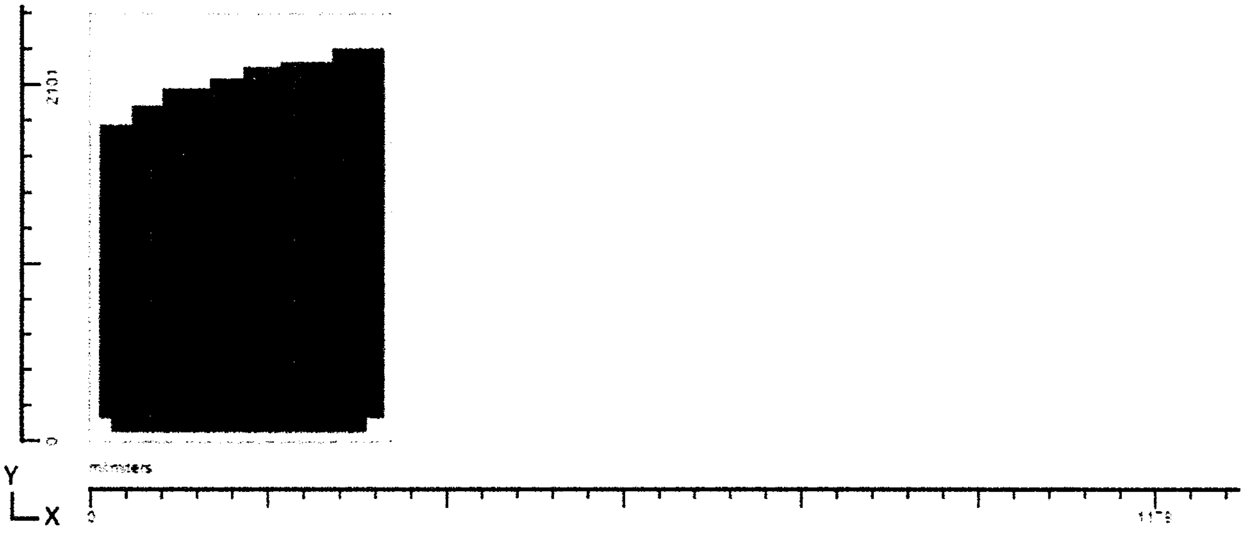
Plate Width: 1780.03mm

Plate Height: 2520.7mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

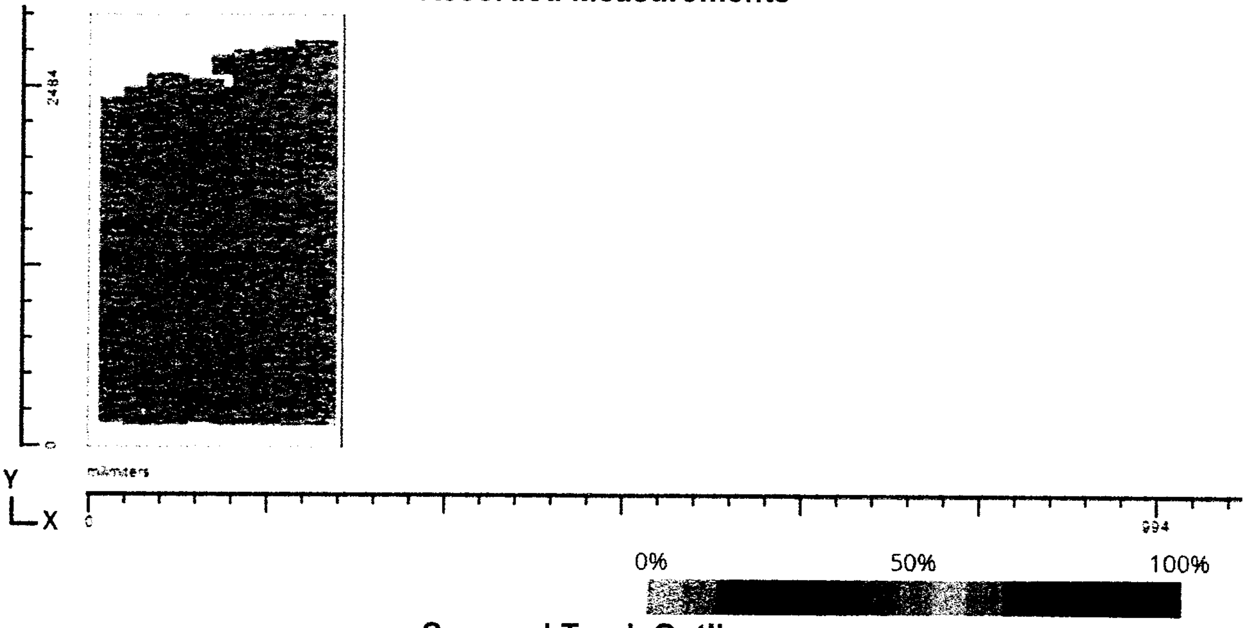
Plate Number 4

Maximum Signal Height: 100%

Plate Width: 1780.03mm

Plate Height: 2980.94mm

Recorded Measurements



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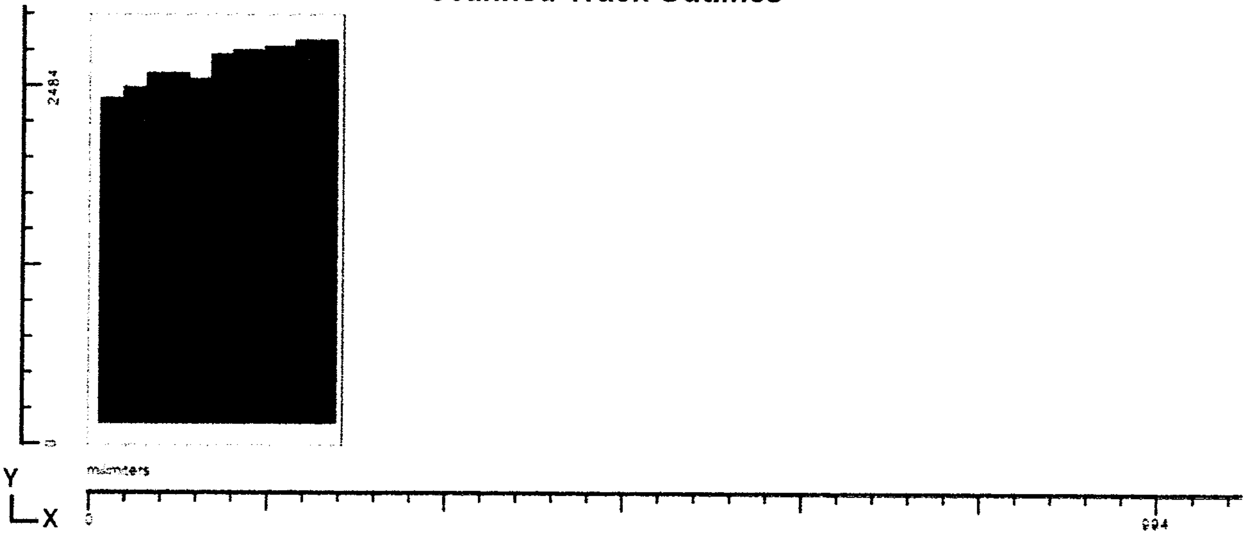


MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

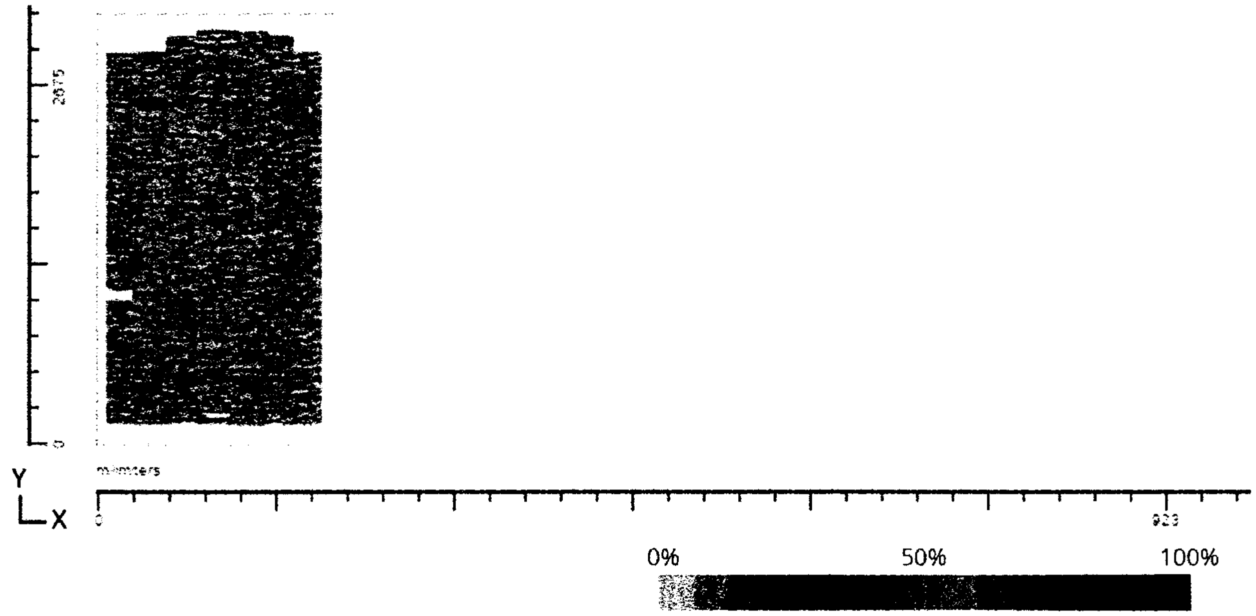
Plate Number 5

Maximum Signal Height: 100%

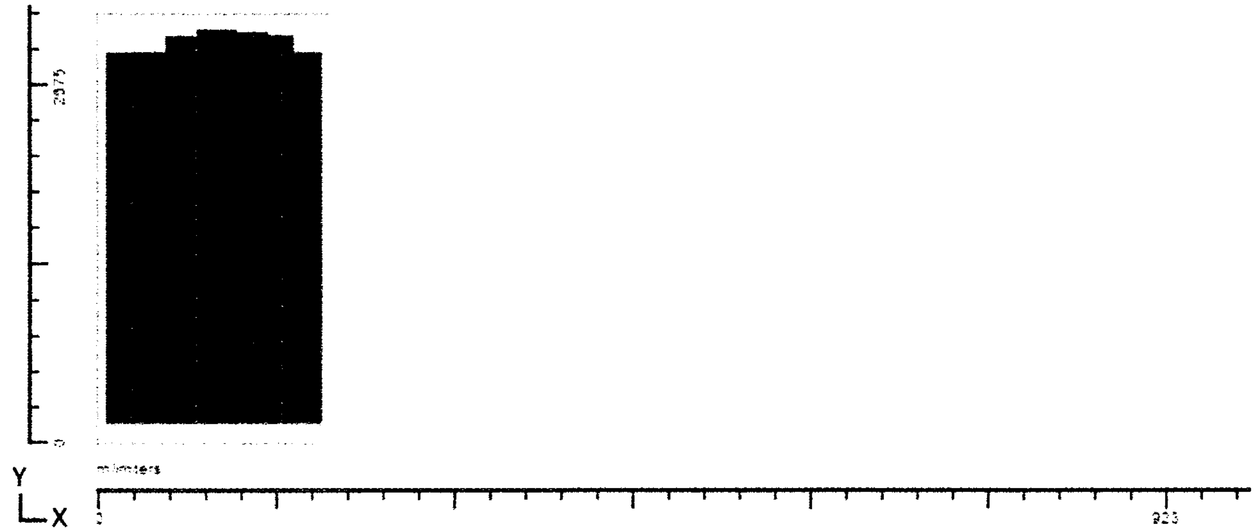
Plate Width: 1780.03mm

Plate Height: 3209.54mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES
INCORPORATED

Non Destructive Testings

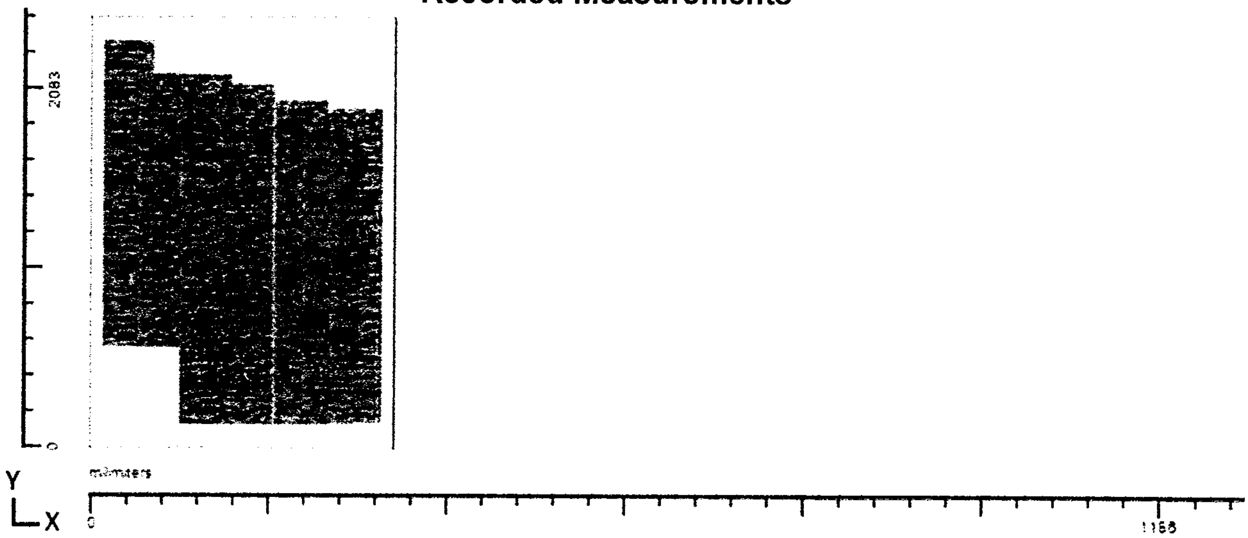
Plate Number 7

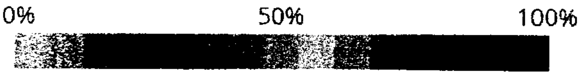
Maximum Signal Height: 100%

Plate Width: 1780.03mm

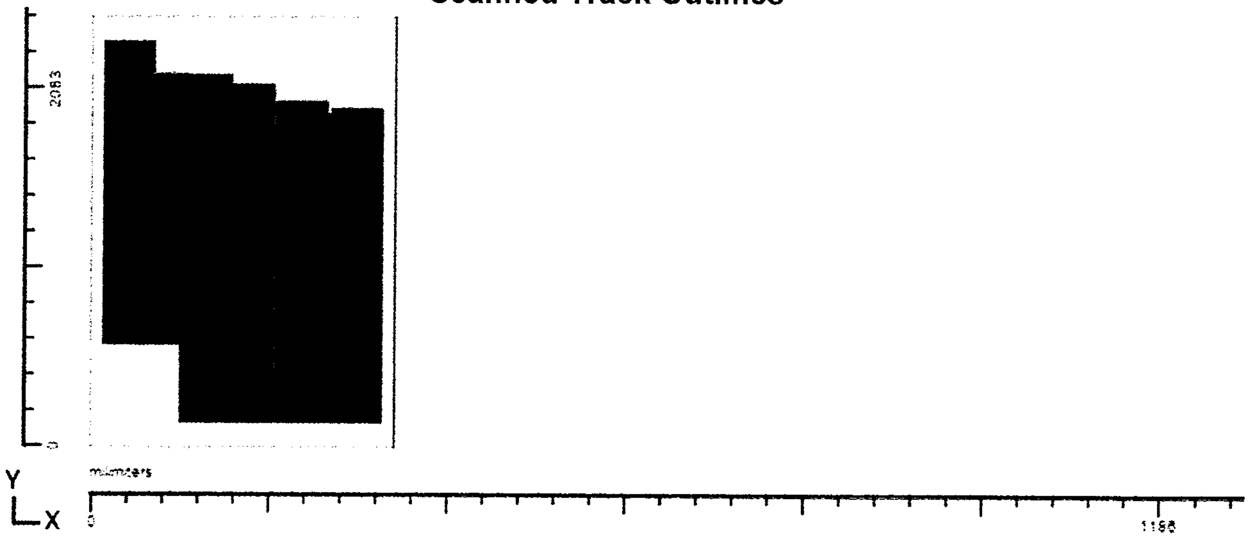
Plate Height: 2499.36mm

Recorded Measurements





Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

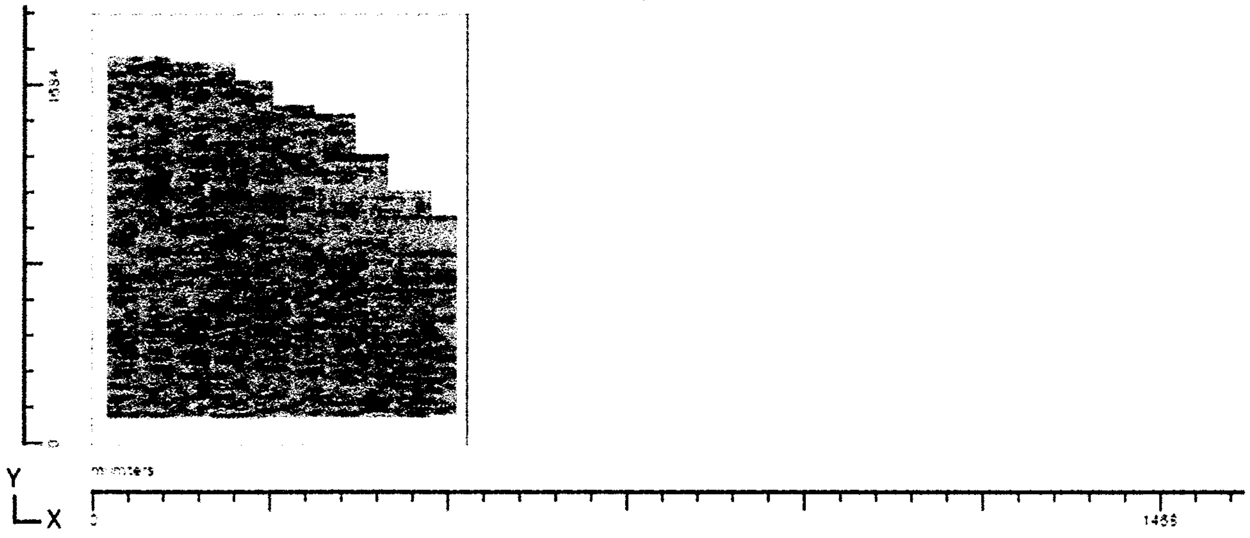
Plate Number 8

Maximum Signal Height: 80%

Plate Width: 1780.03mm

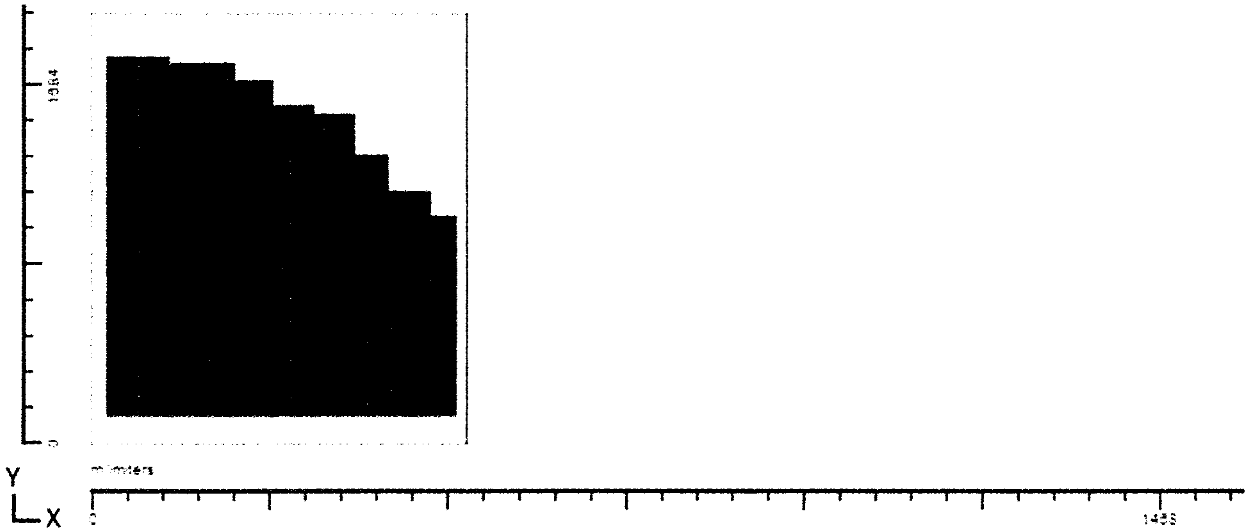
Plate Height: 2020.82mm

Recorded Measurements



0% 50% 100%

Scanned Track Outlines



ENTERPRISES INCORPORATED

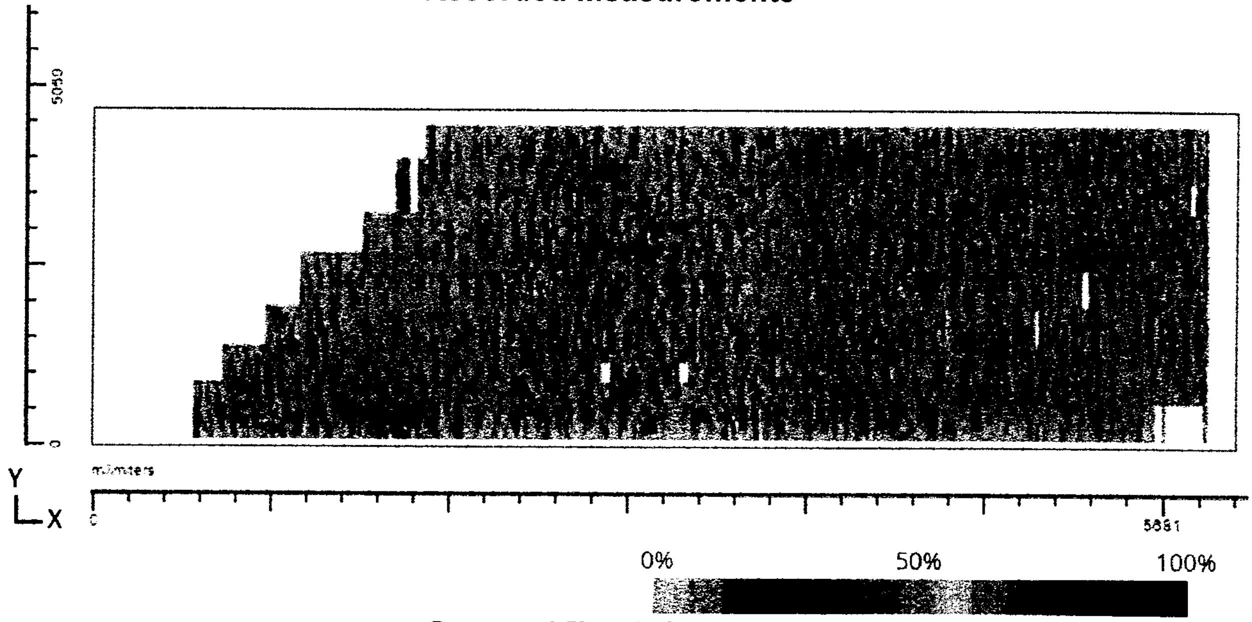
Plate Number 10

Maximum Signal Height: 100%

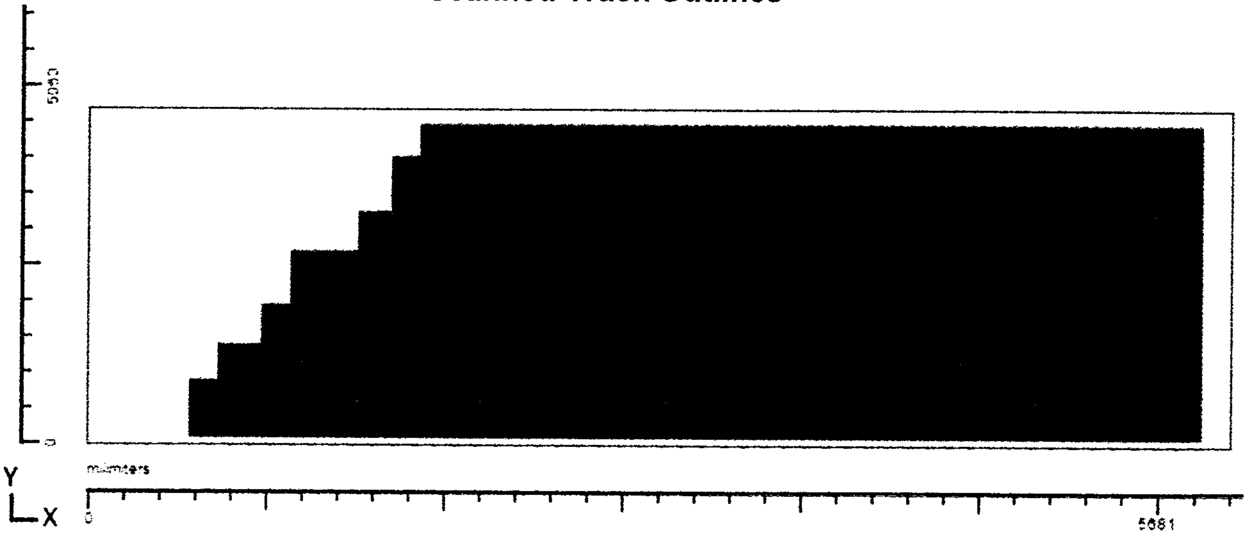
Plate Width: 6059.42mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES
INCORPORATED

Non Destructive Testings

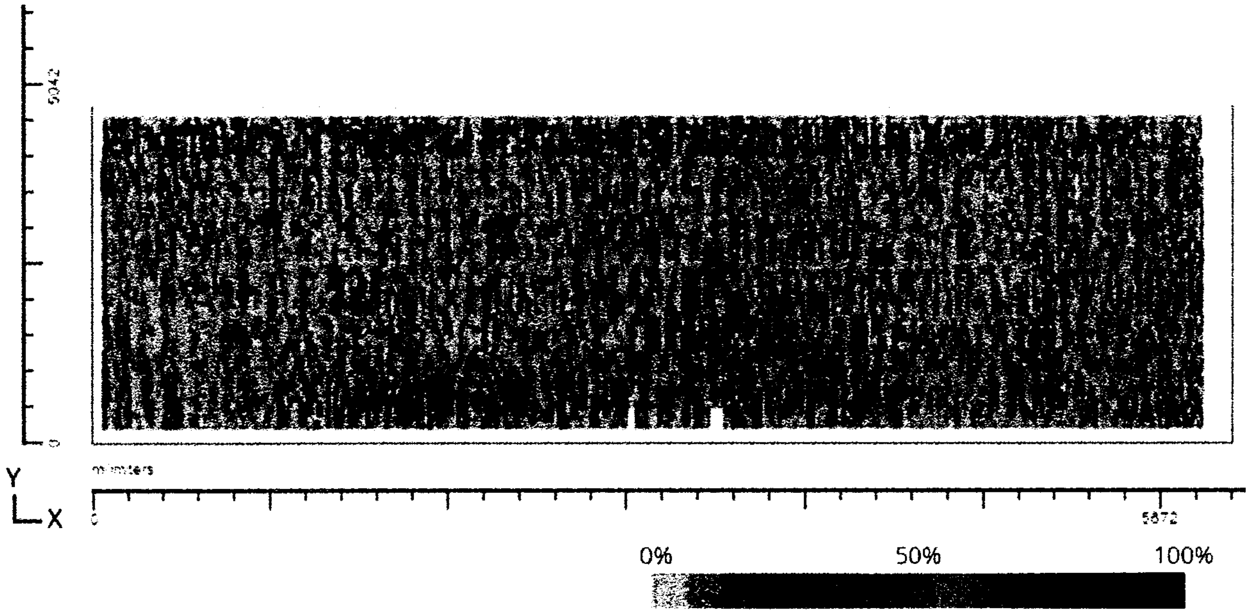
Plate Number 11

Maximum Signal Height:
86.7%

Plate Width:
6050.28mm

Plate Height:
1780.03mm

Recorded Measurements



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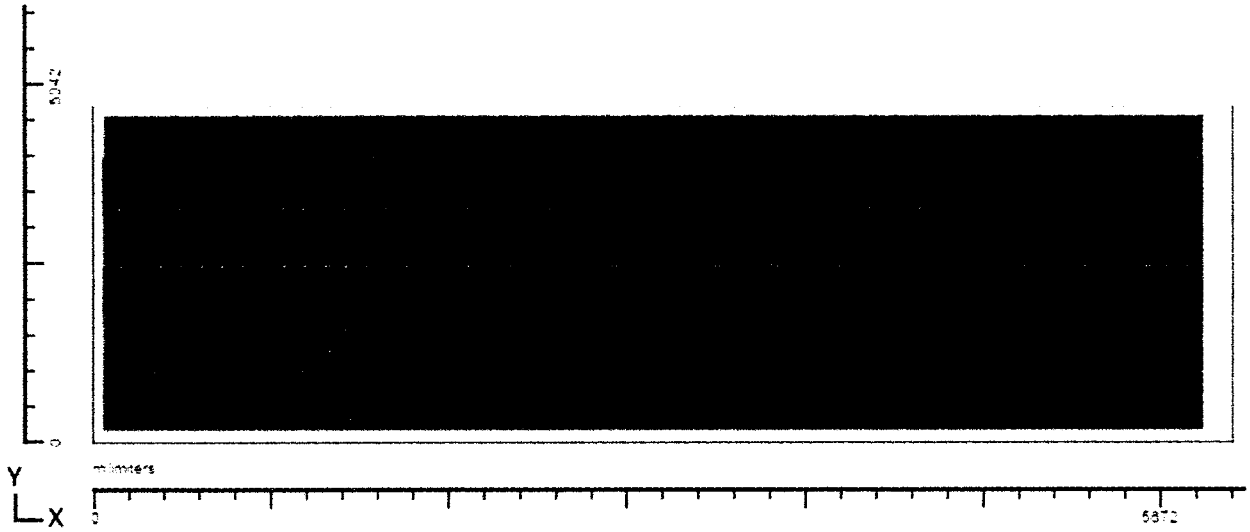


ENTERPRISES
INCORPORATED

Non Destructive Testings

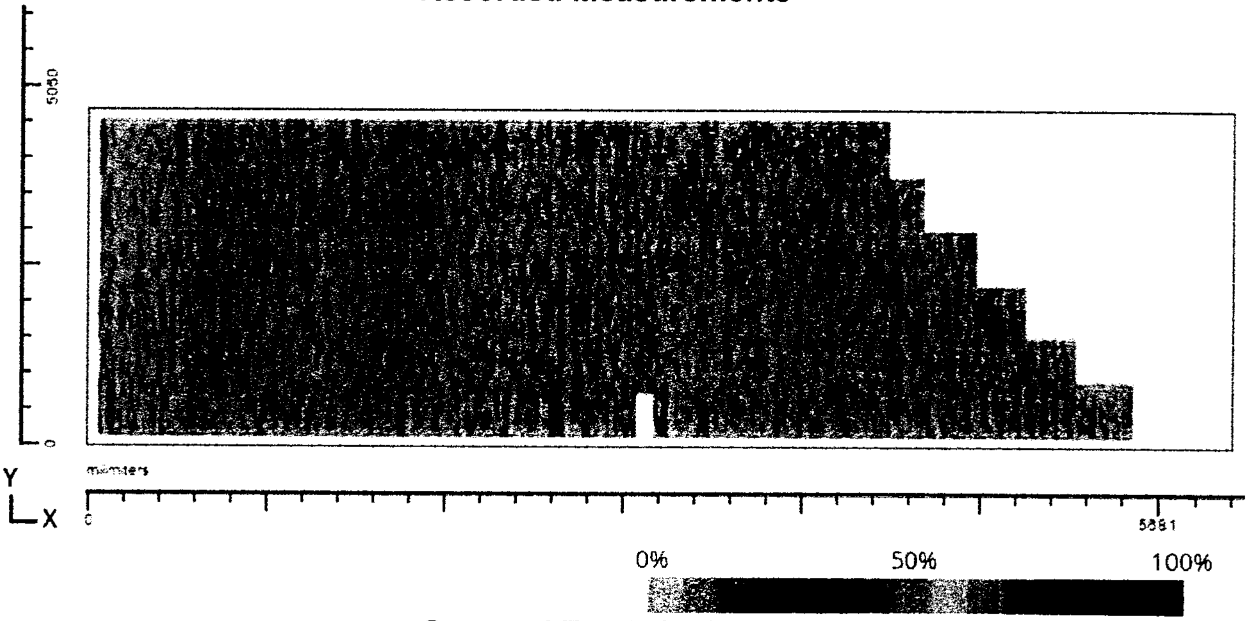
Plate Number 12

Maximum Signal Height: 93.3%

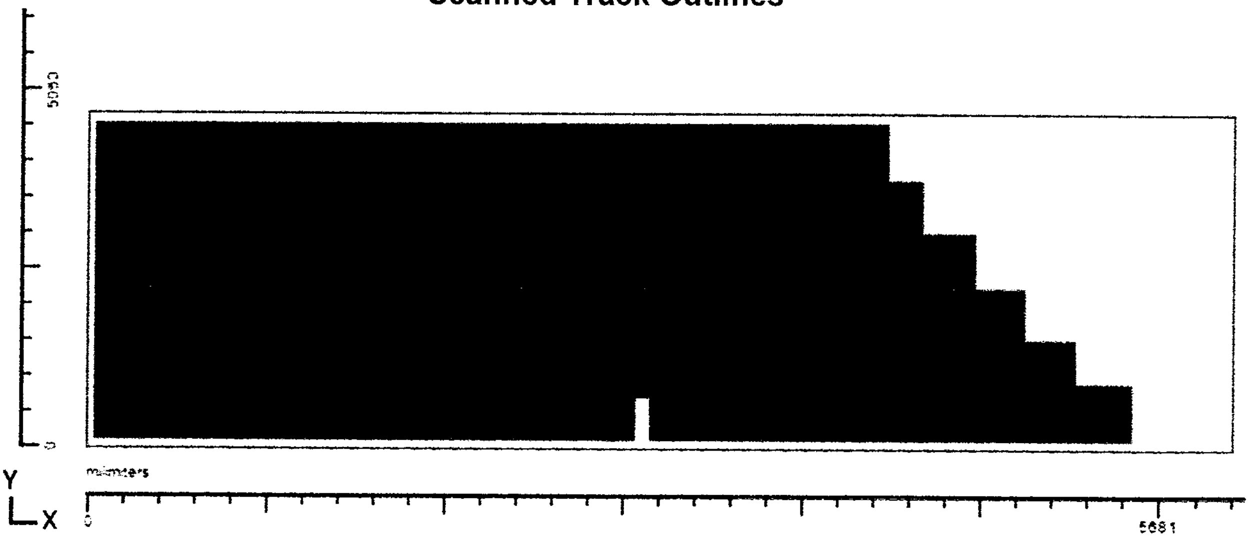
Plate Width: 6059.42mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

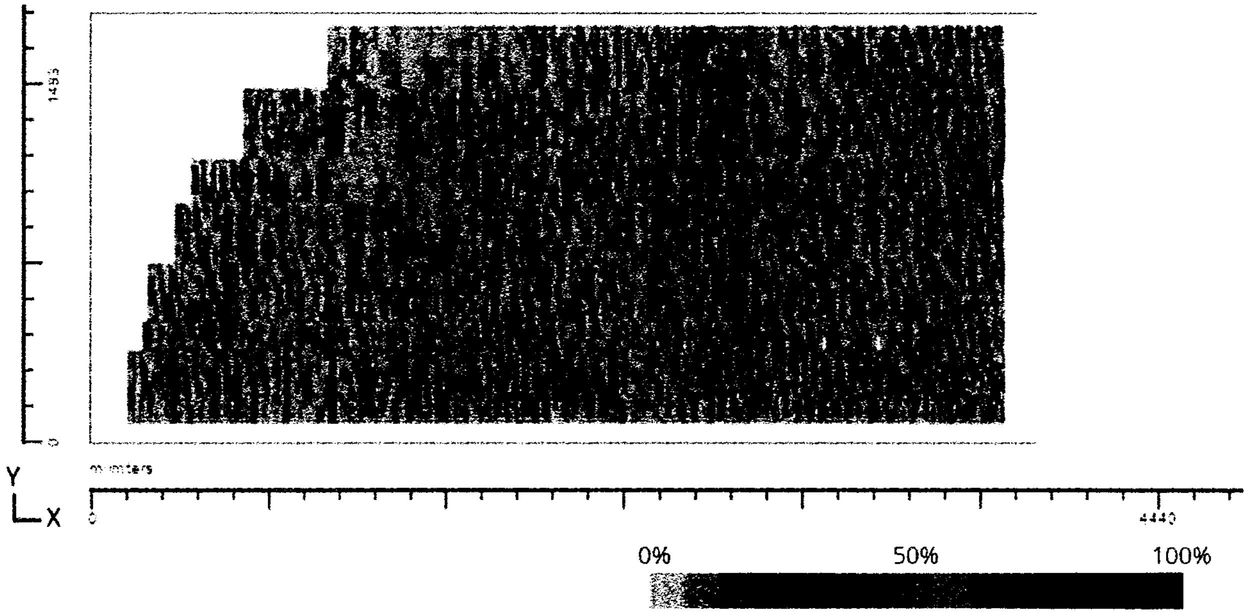
Plate Number 13

Maximum Signal Height: 100%

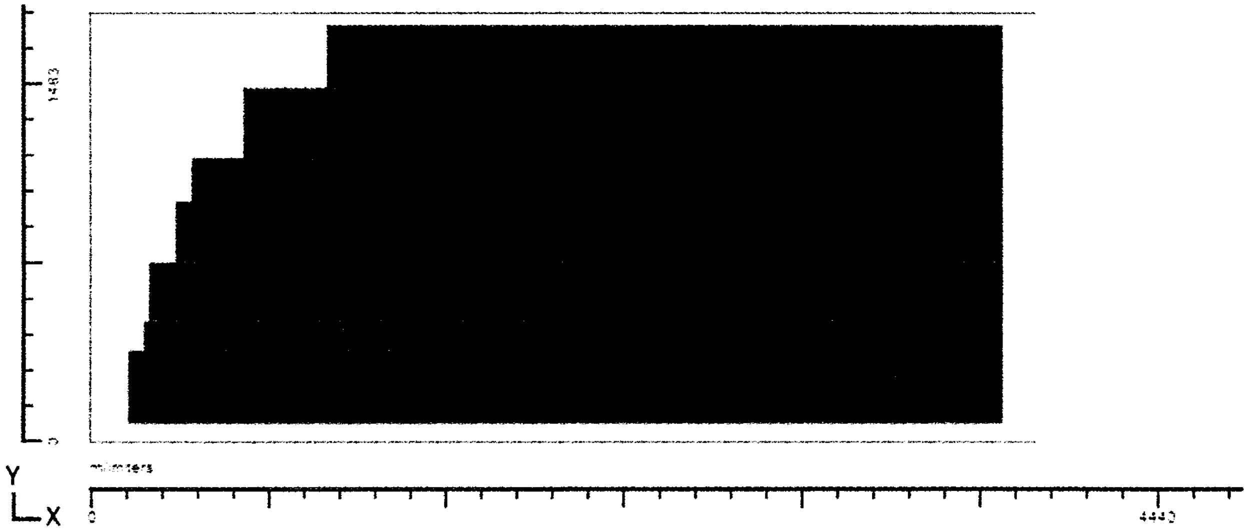
Plate Width: 3928.87mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

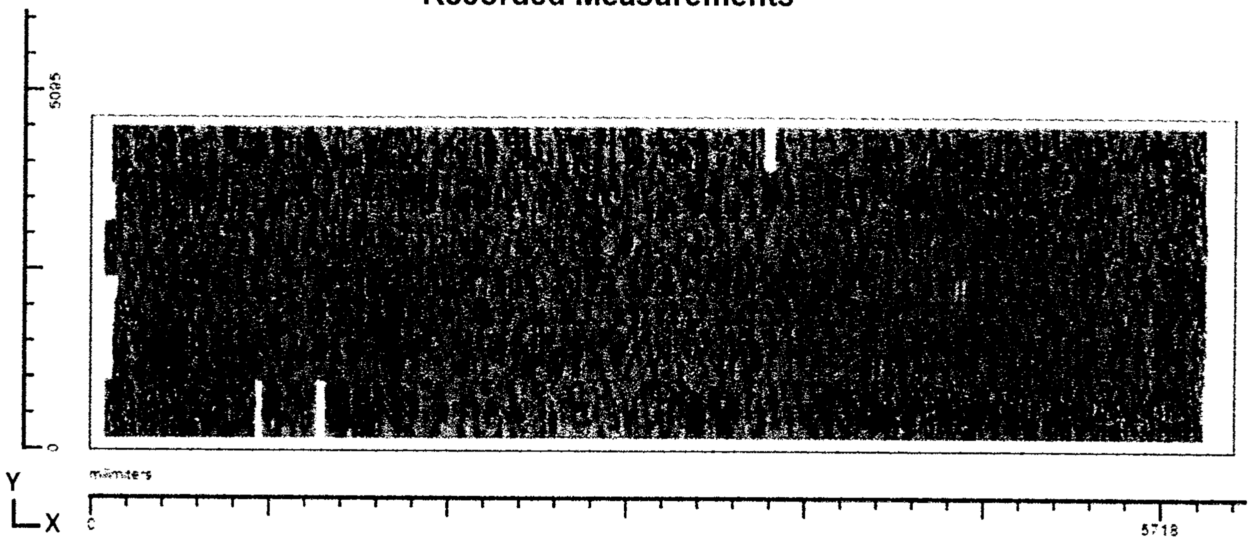
Plate Number 14

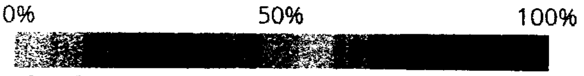
Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements





Scanned Track Outlines

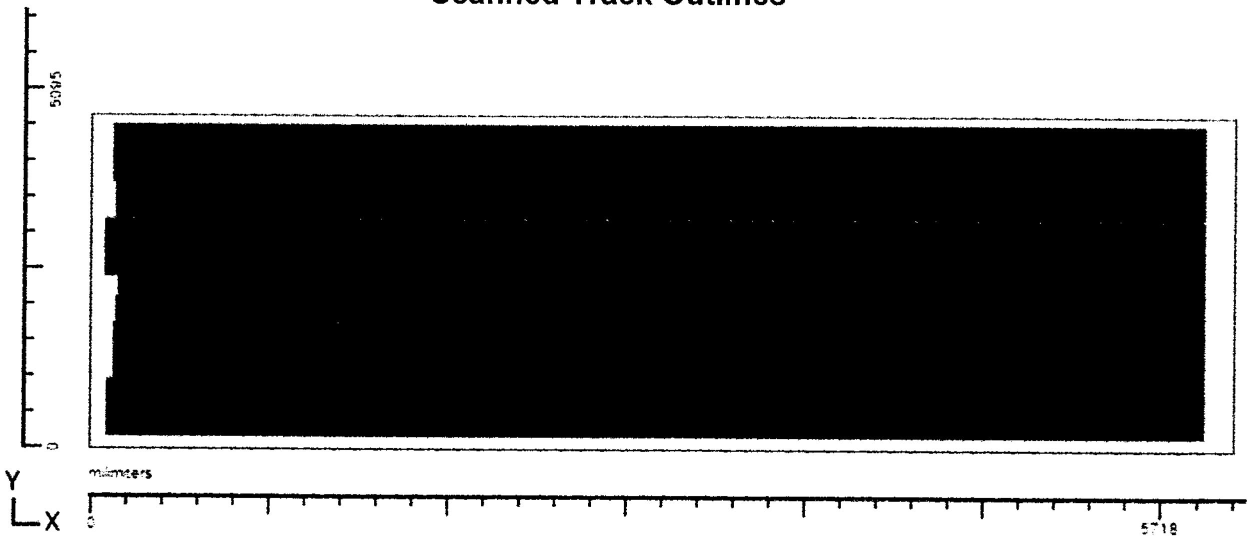


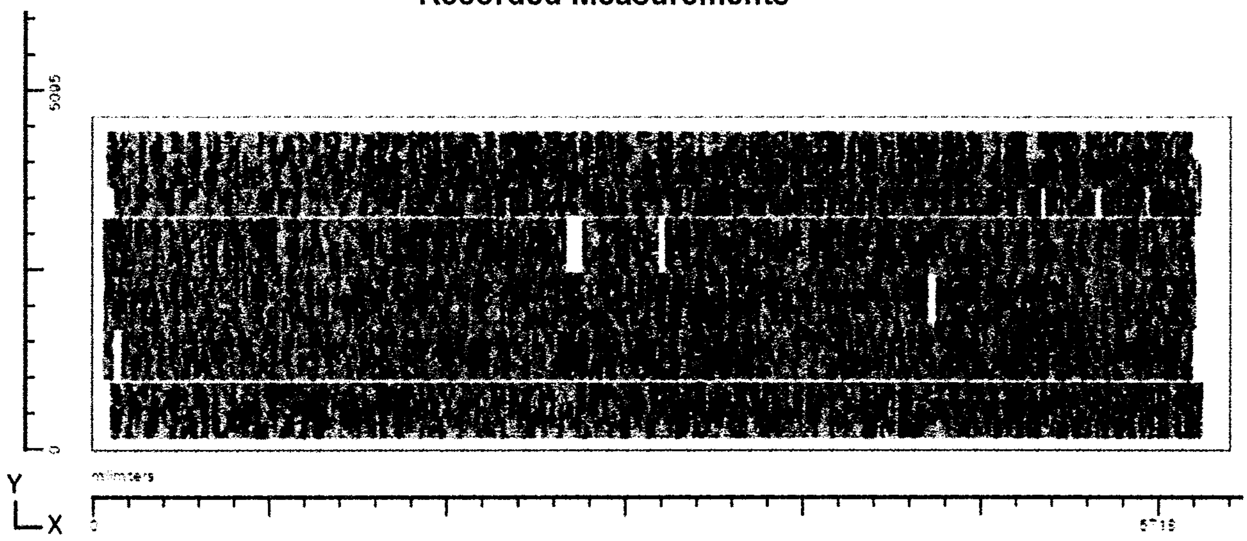
Plate Number 15

Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



0% 50% 100%

Scanned Track Outlines

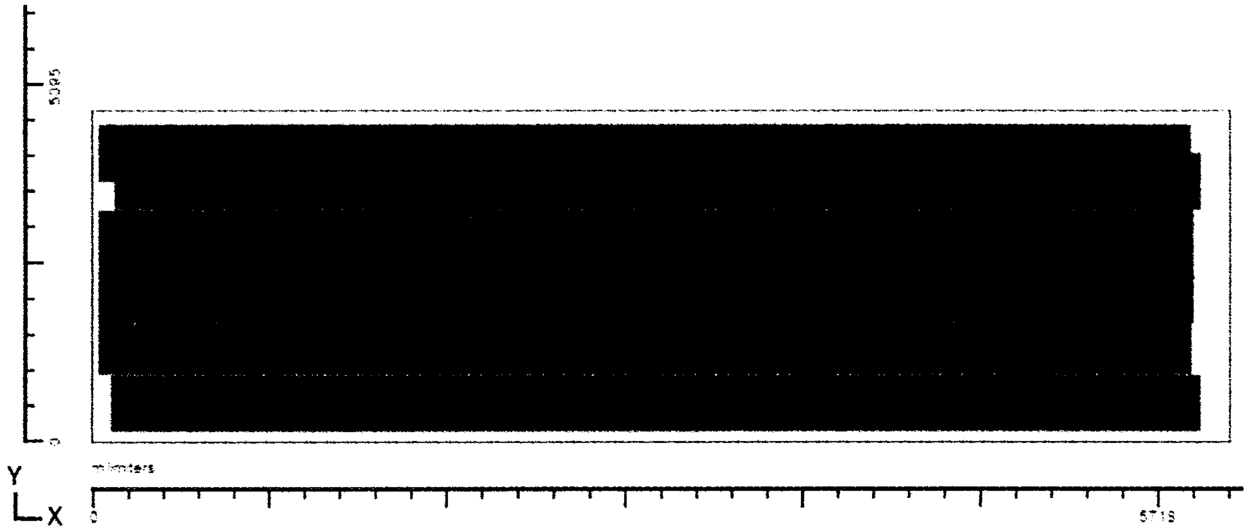
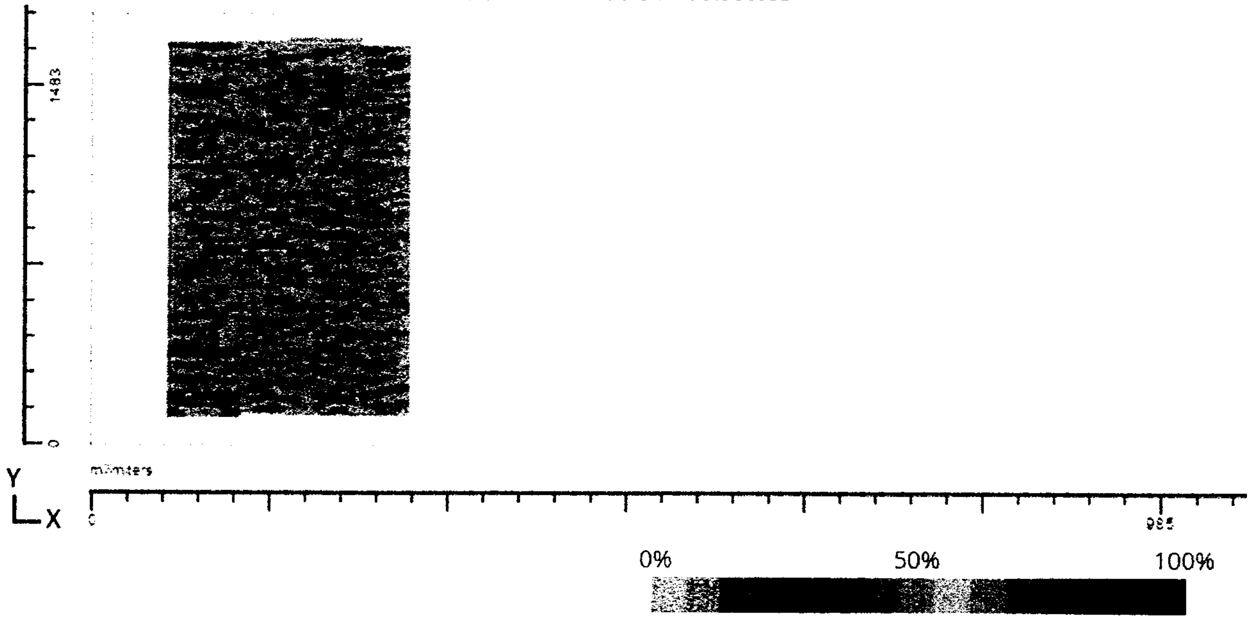


Plate Number 17

Maximum Signal Height:	Plate Width:	Plate Height:
86.7%	1368.55mm	1780.03mm

Recorded Measurements



Scanned Track Outlines

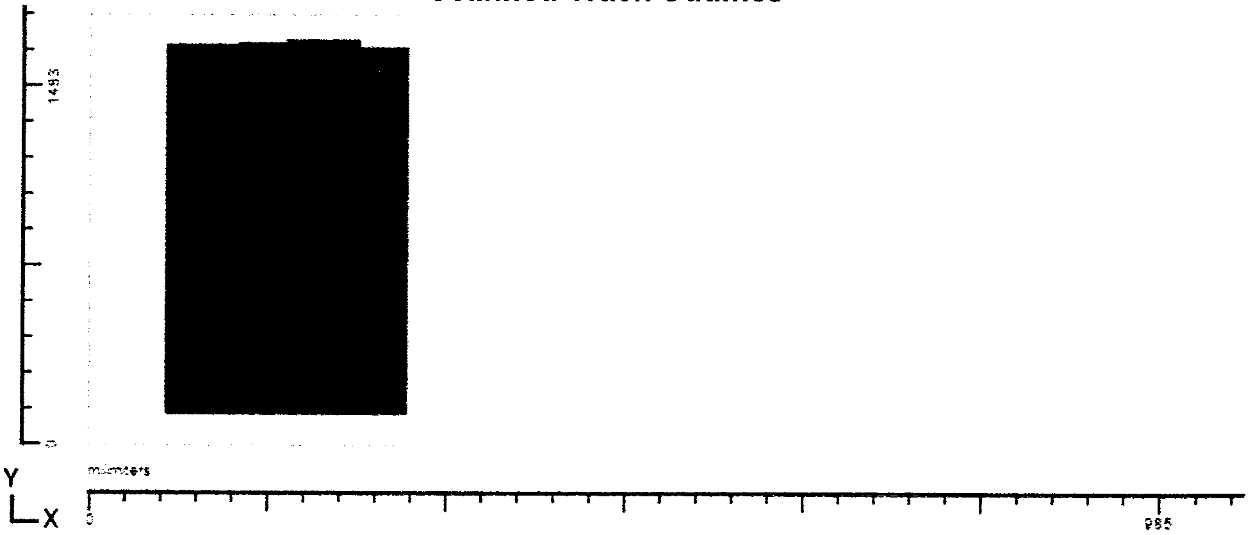


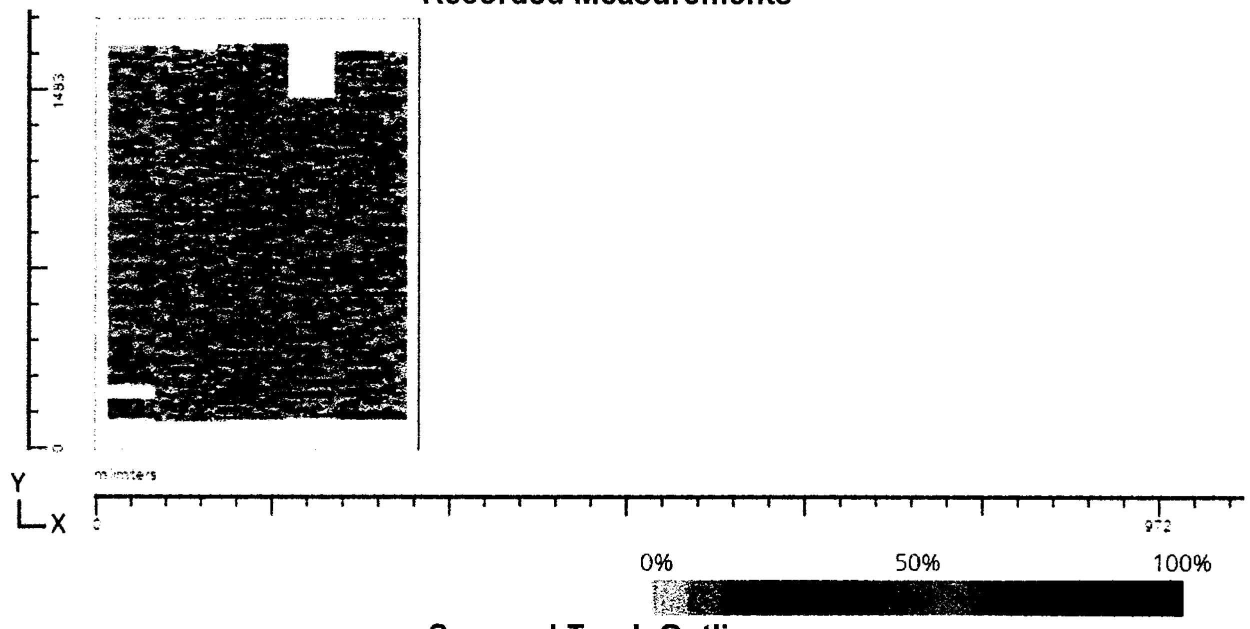
Plate Number 20

Maximum Signal Height: 100%

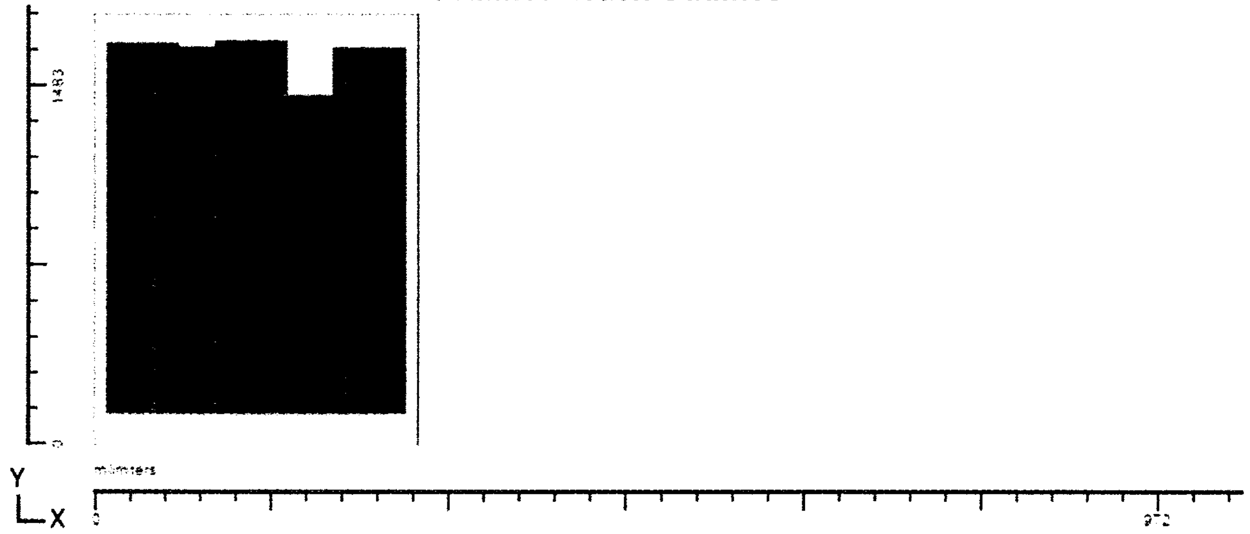
Plate Width: 1359.41mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

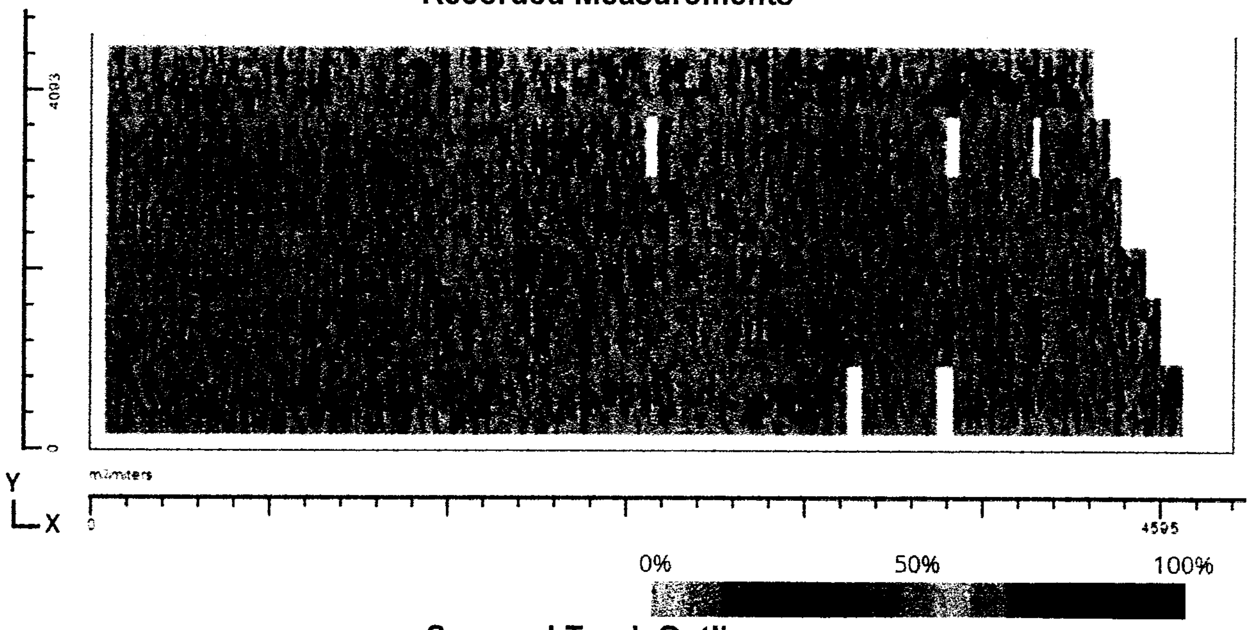
Plate Number 21

Maximum Signal Height: 100%

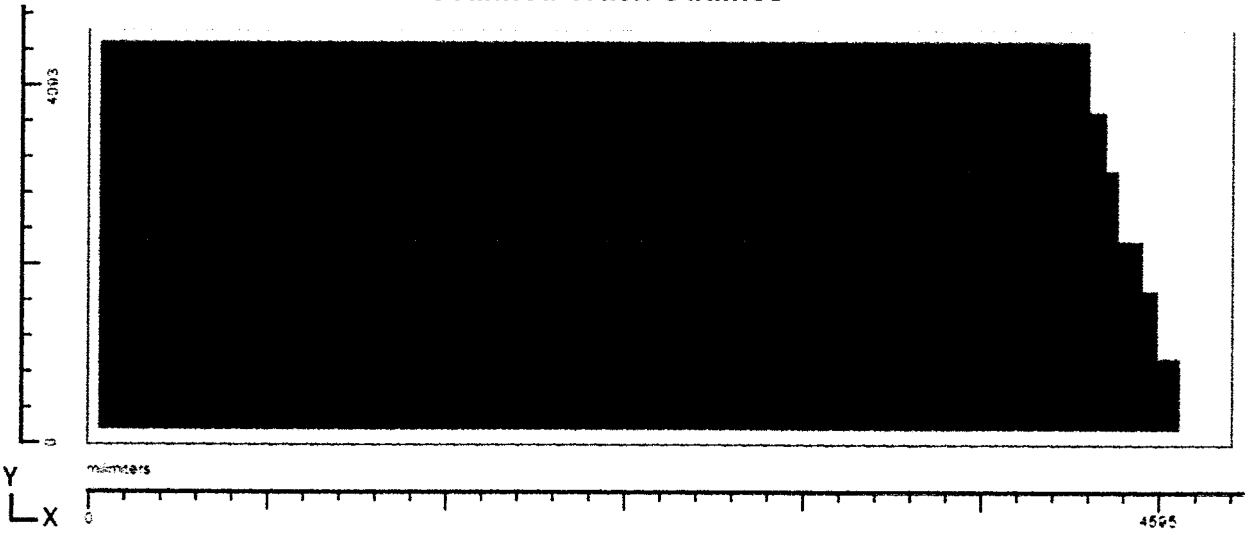
Plate Width: 4901.18mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



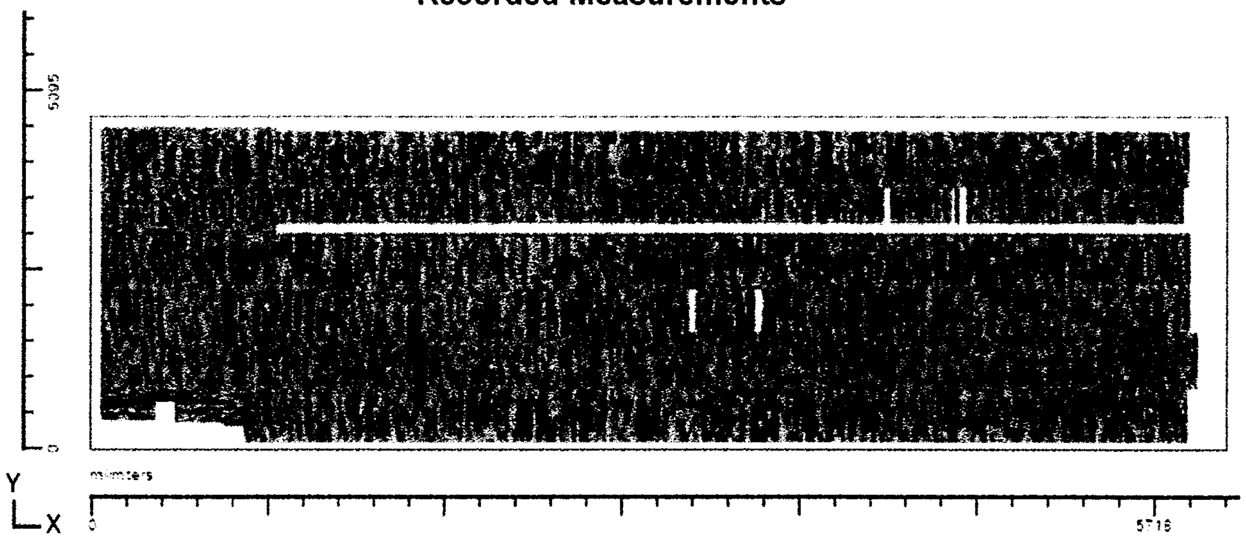
ENTERPRISES INCORPORATED

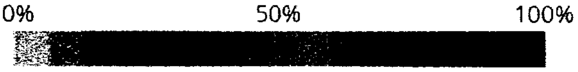
Non Destructive Testings

Plate Number 22

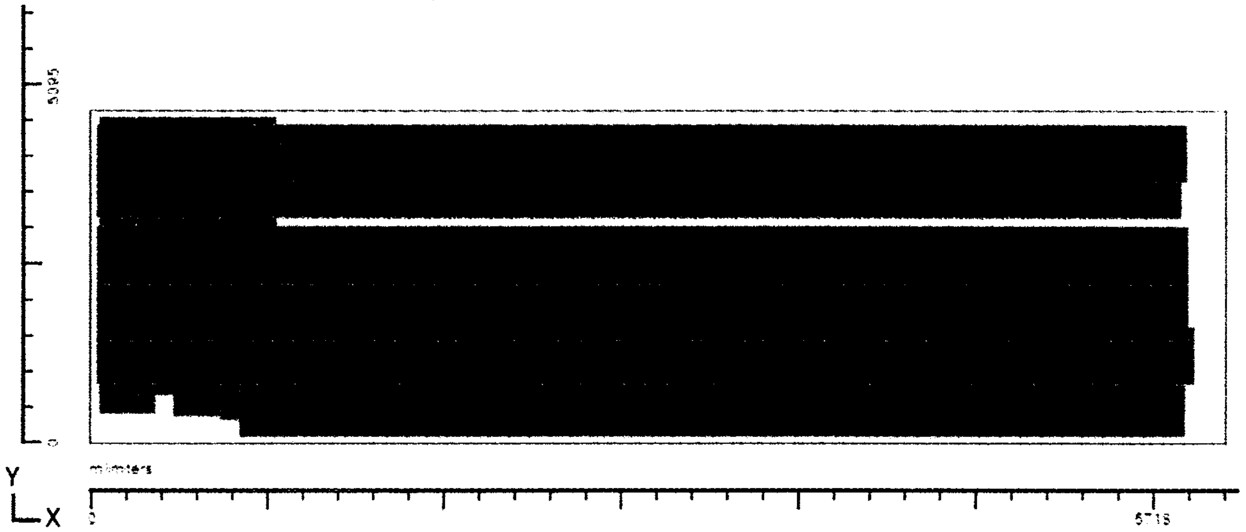
Maximum Signal Height:	**Plate Width:**	**Plate Height:**
86.7%	6099.05mm	1780.03mm

Recorded Measurements





Scanned Track Outlines



ENTERPRISES INCORPORATED

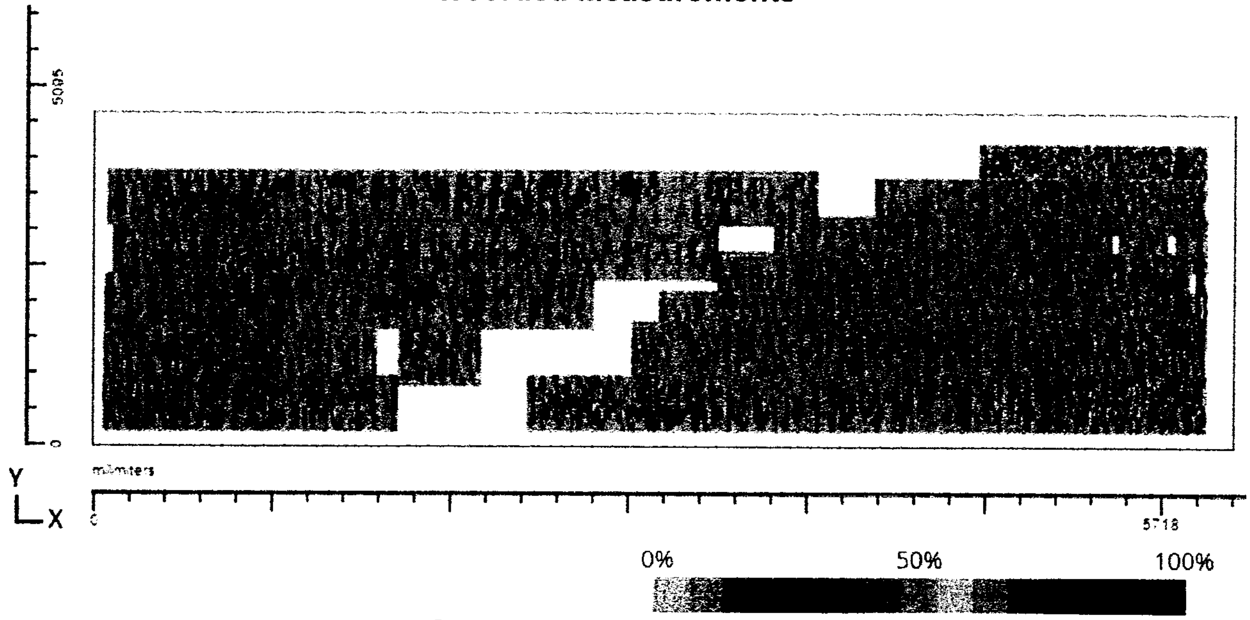
Plate Number 23

Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines

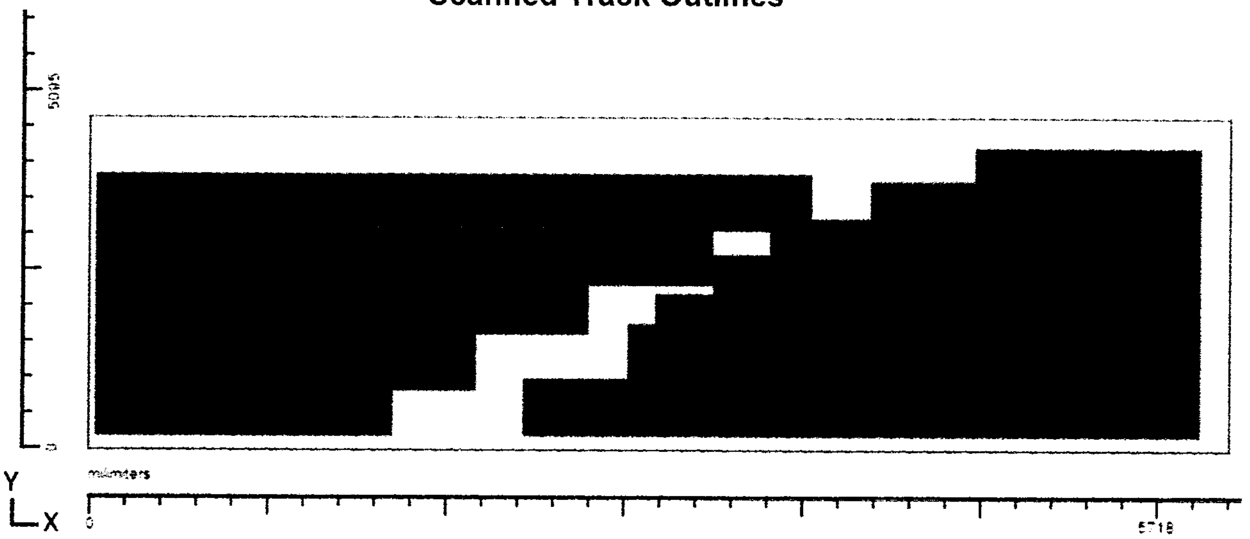


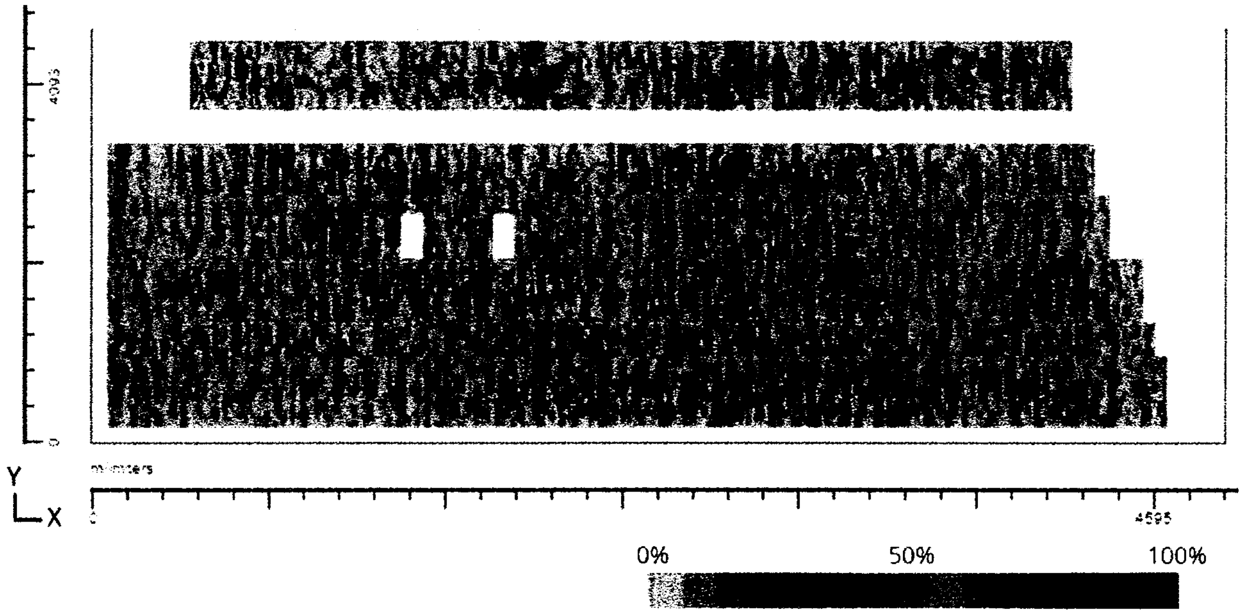
Plate Number 24

Maximum Signal Height: 100%

Plate Width: 4901.18mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines

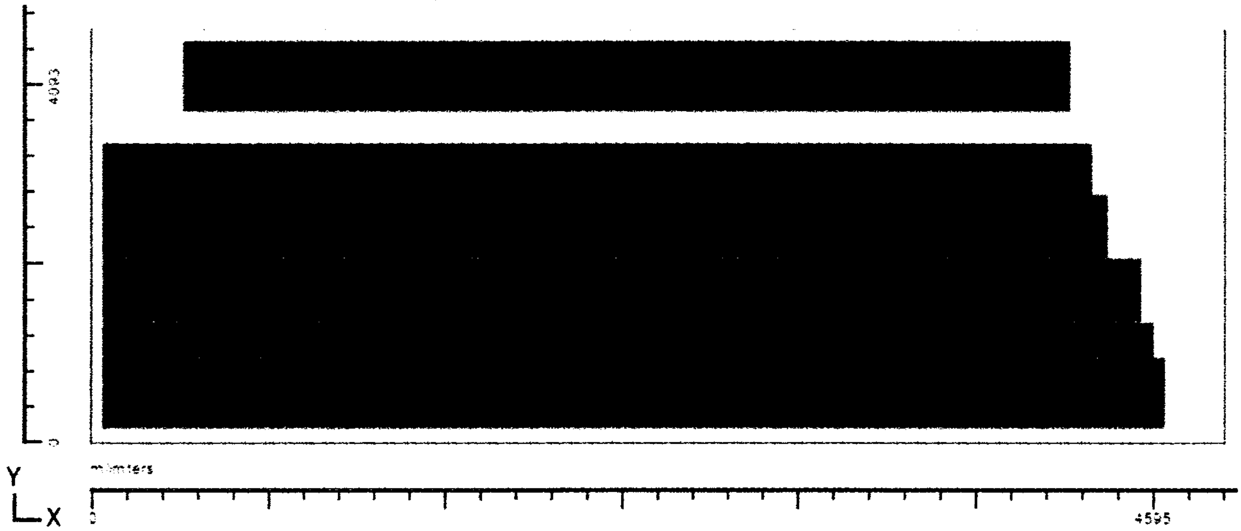
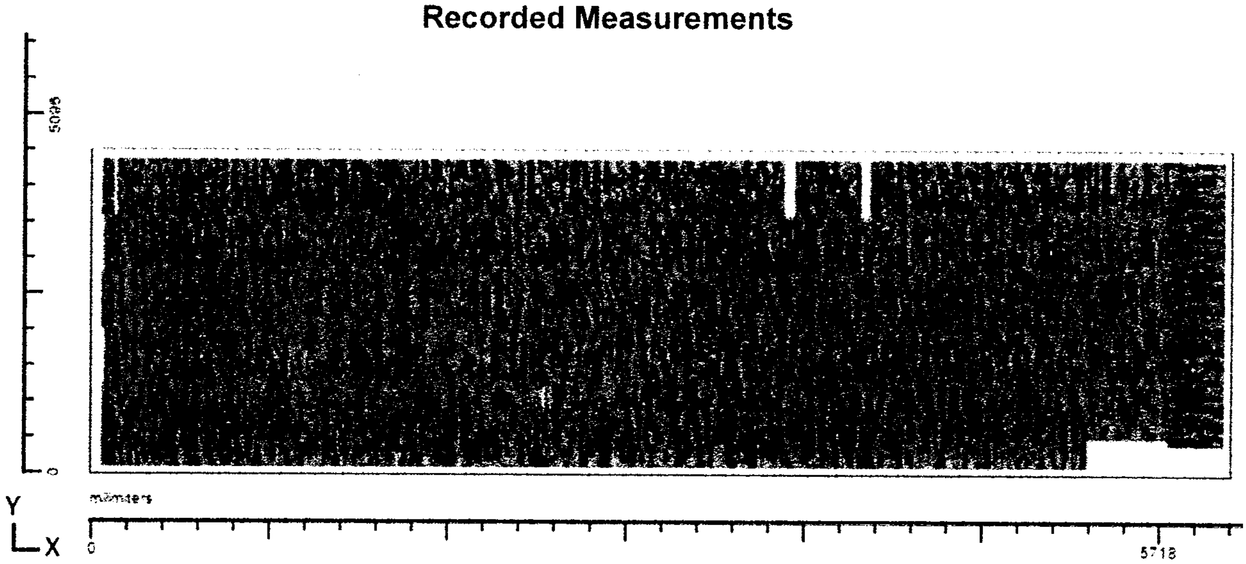


Plate Number 26

Maximum Signal Height:	Plate Width:	Plate Height:
93.3%	6099.05mm	1731.26mm

Recorded Measurements



Scanned Track Outlines

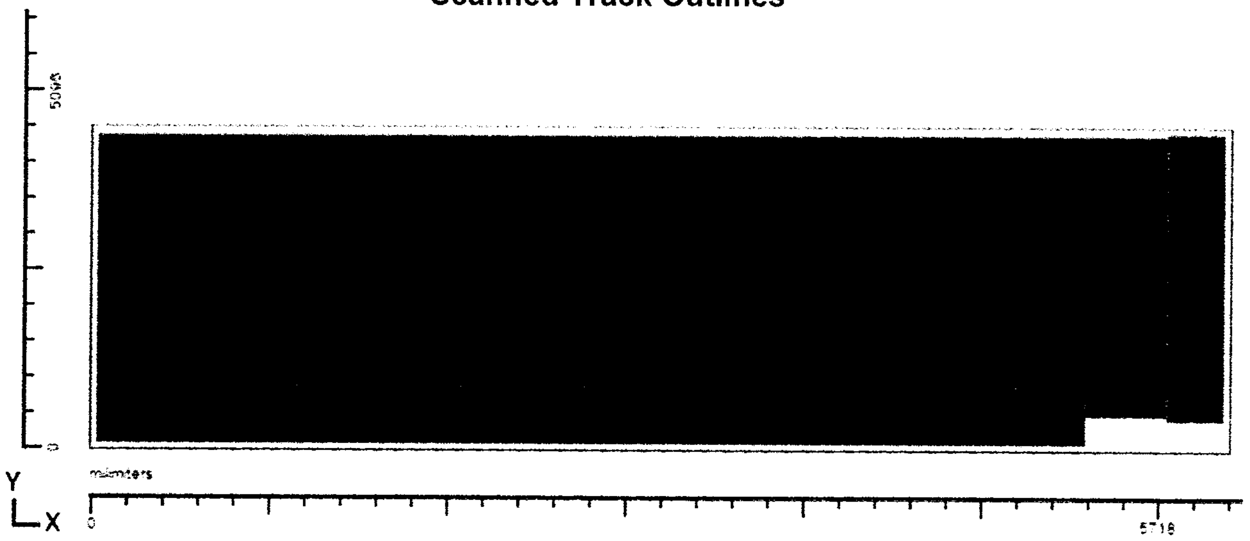


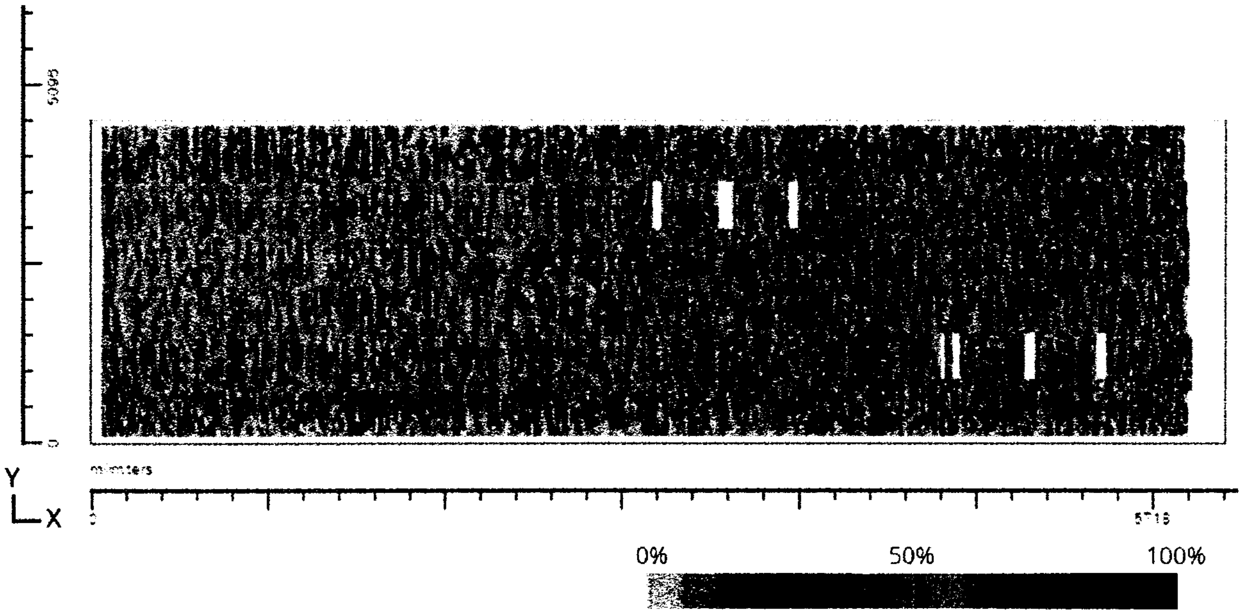
Plate Number 28

Maximum Signal Height: 100%

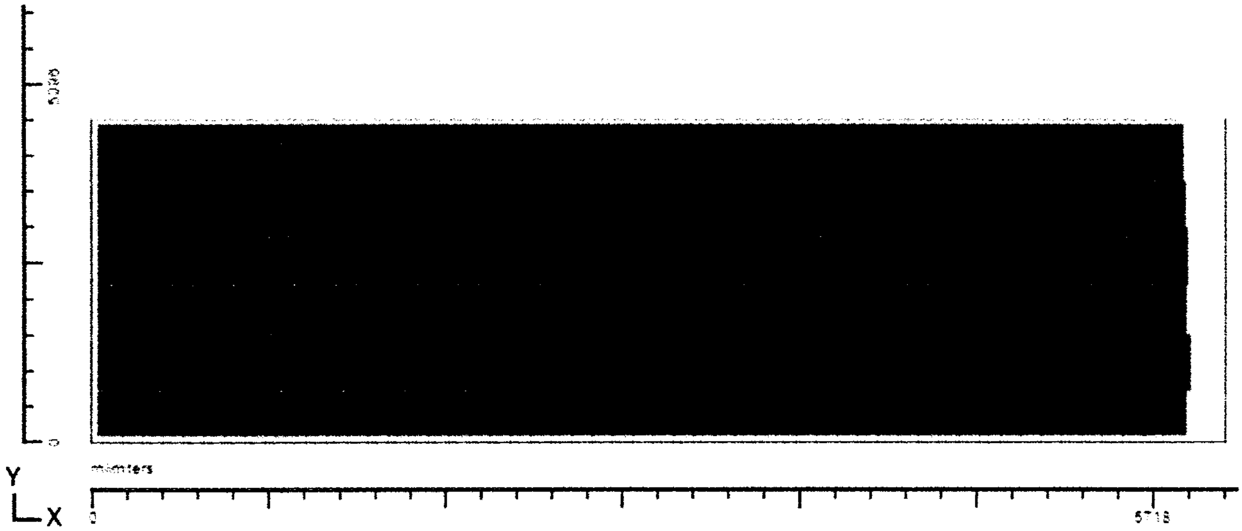
Plate Width: 6099.05mm

Plate Height: 1731.26mm

Recorded Measurements



Scanned Track Outlines



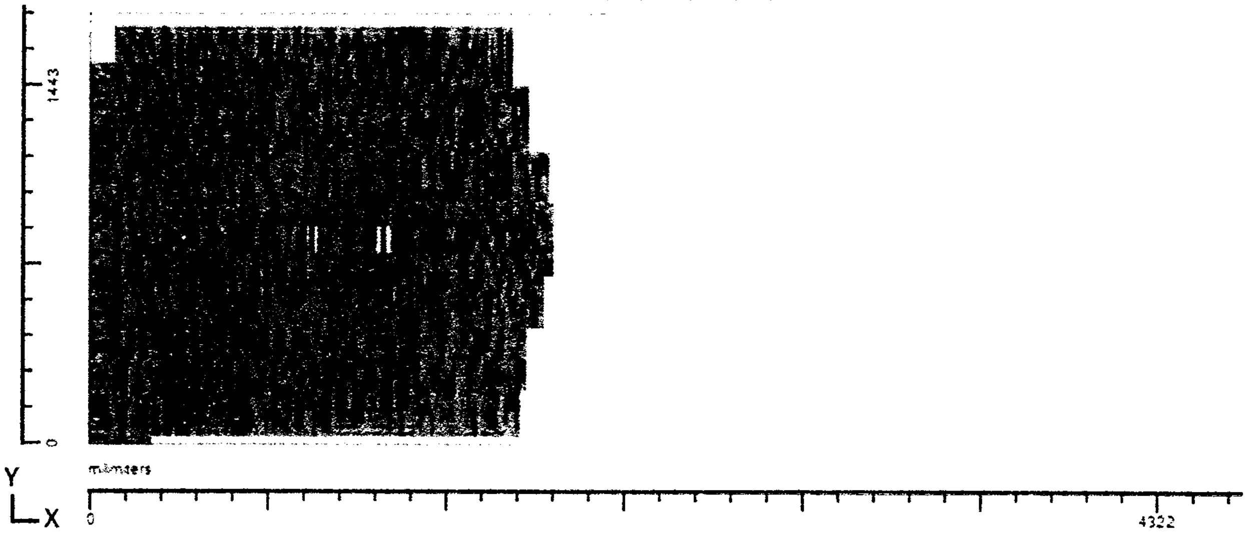
ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

Plate Number 29

Maximum Signal Height:	Plate Width:	Plate Height:
93.3%	2078.74mm	1731.26mm

Recorded Measurements



0% 50% 100%

Scanned Track Outlines

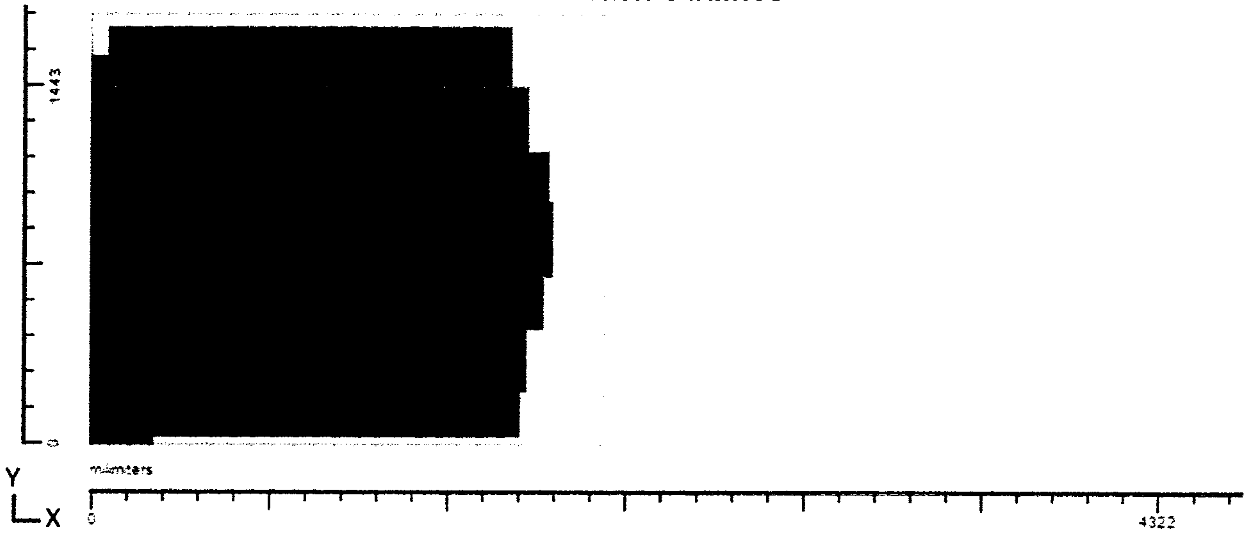


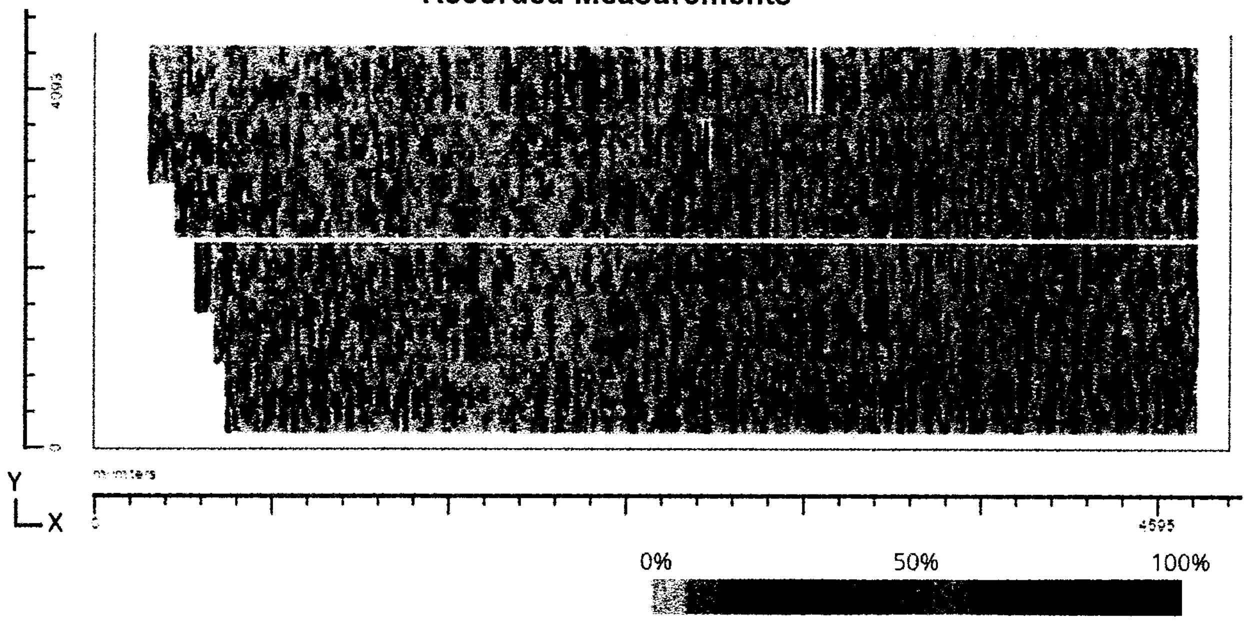
Plate Number 30

Maximum Signal Height: 100%

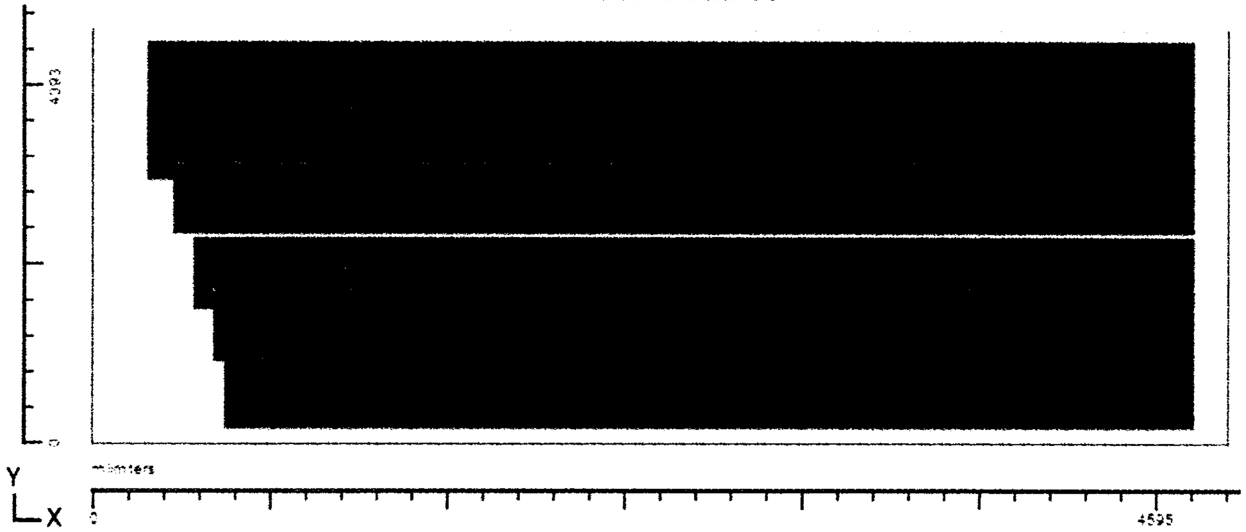
Plate Width: 4901.18mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES
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Non Destructive Testings

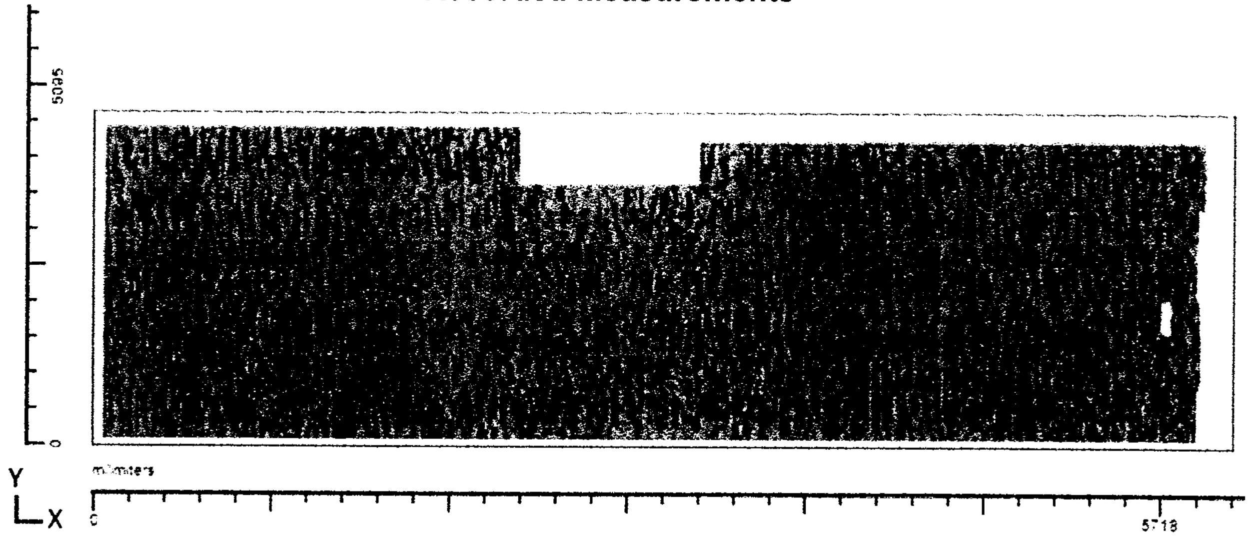
Plate Number 31

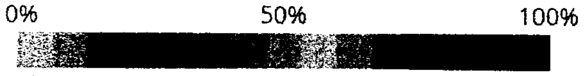
Maximum Signal Height: 100%

Plate Width:
6099.05mm

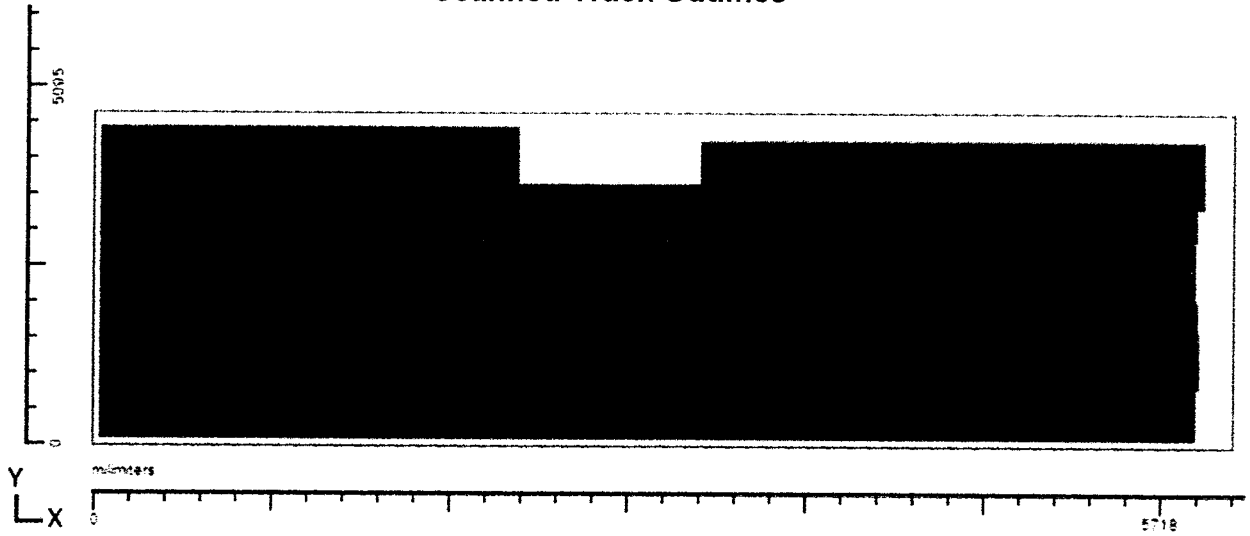
Plate Height:
1780.03mm

Recorded Measurements





Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

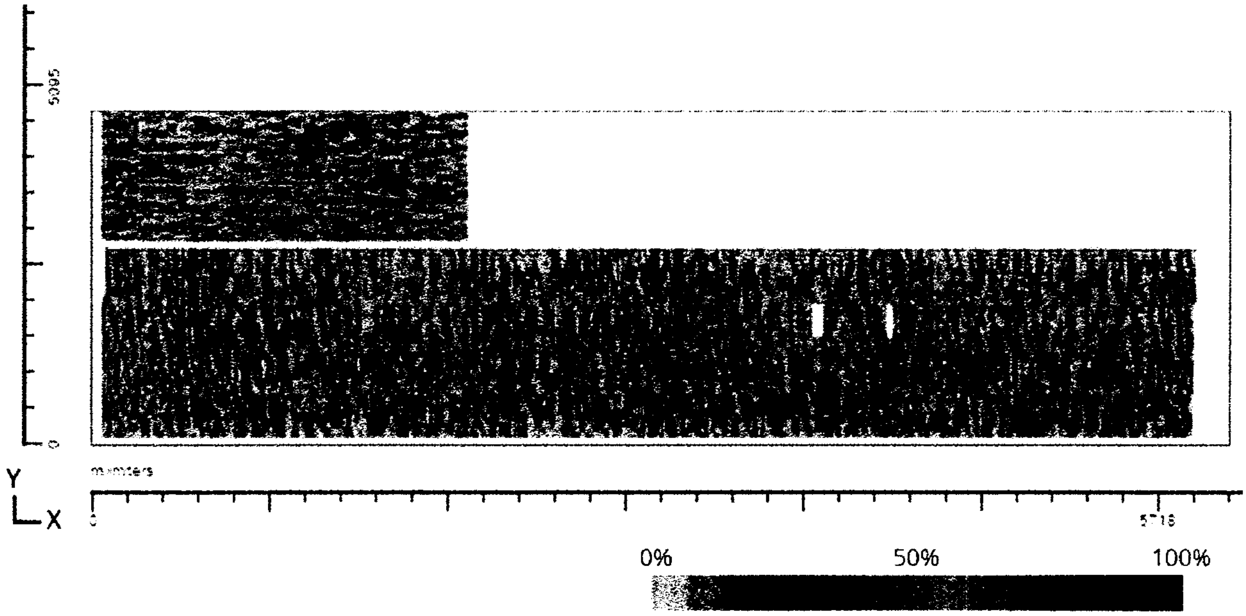
Plate Number 32

Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines

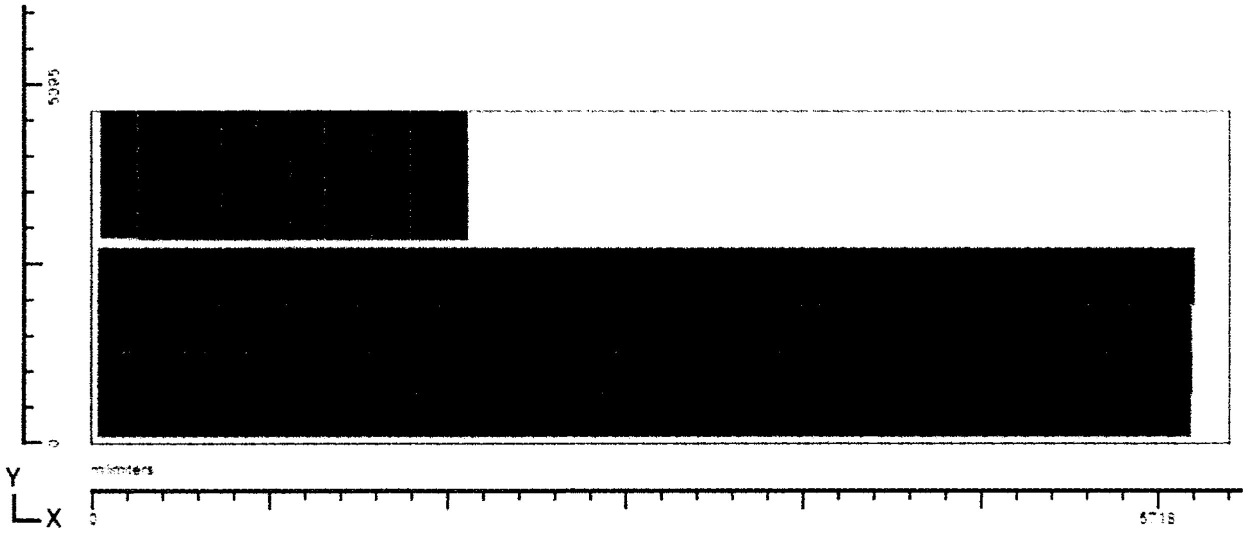


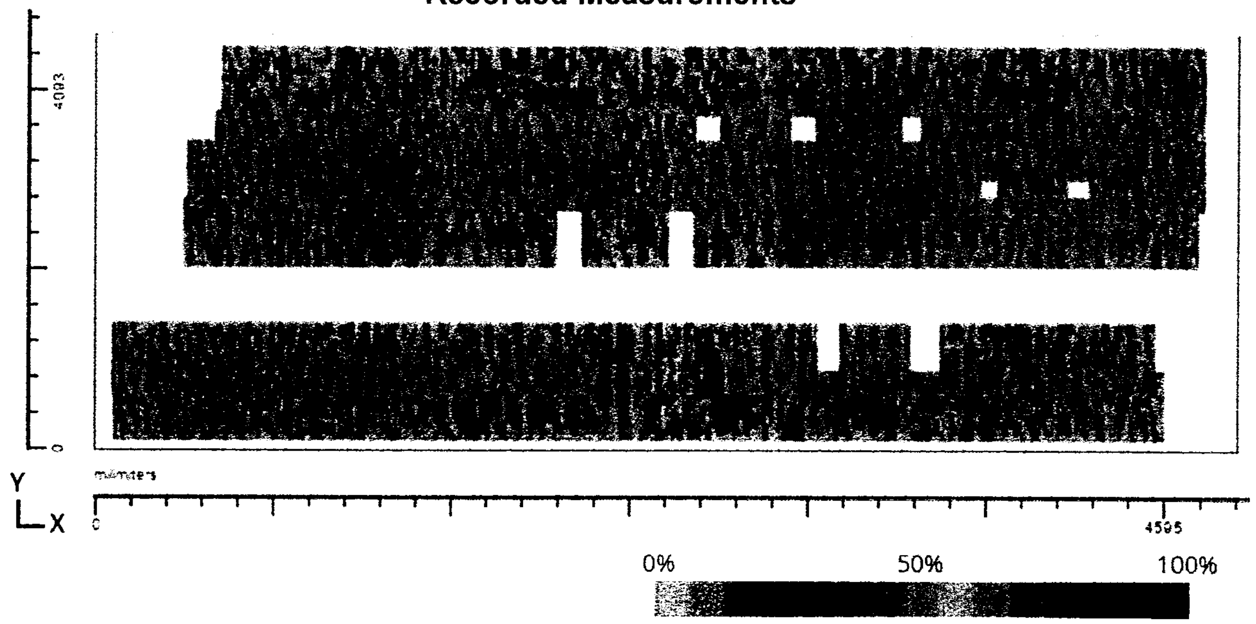
Plate Number 33

Maximum Signal Height: 100%

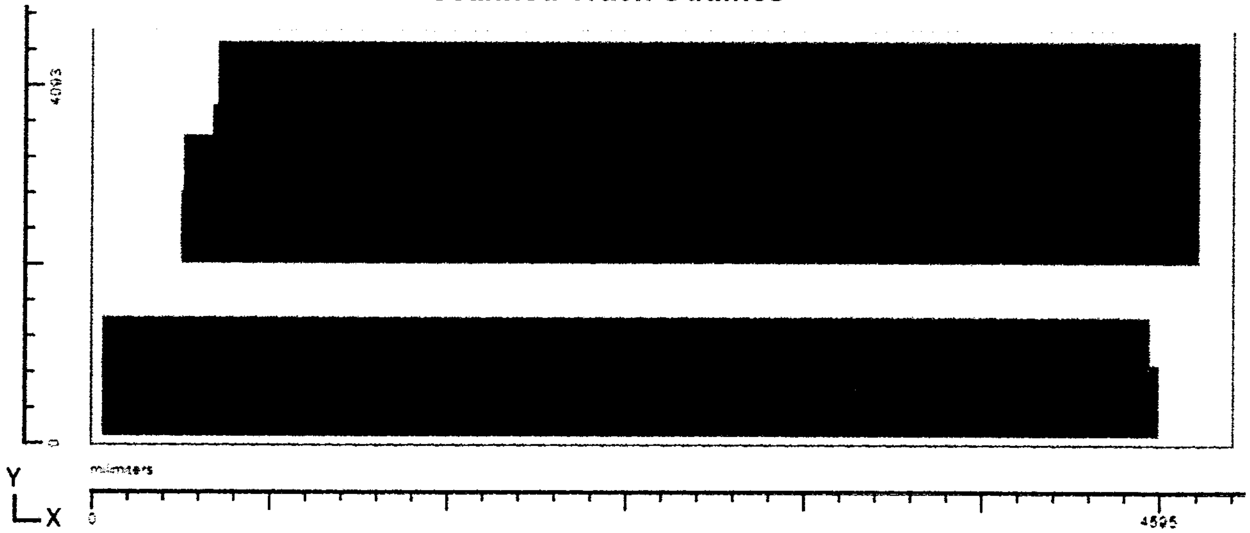
Plate Width: 4901.18mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

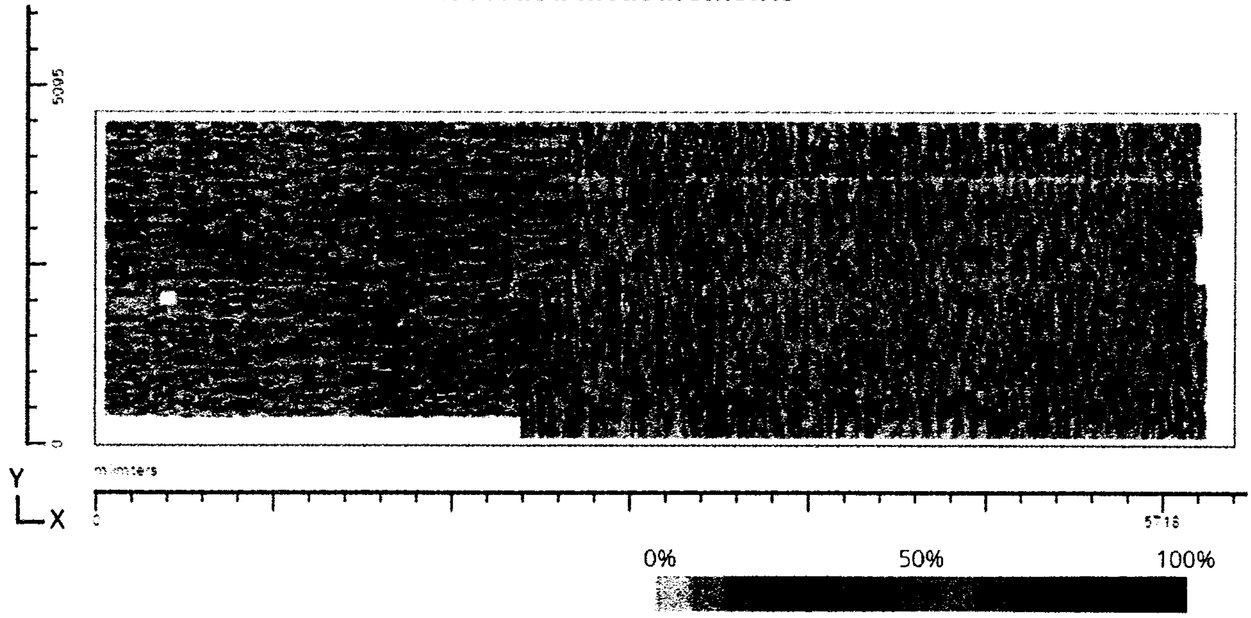
Plate Number 35

Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines

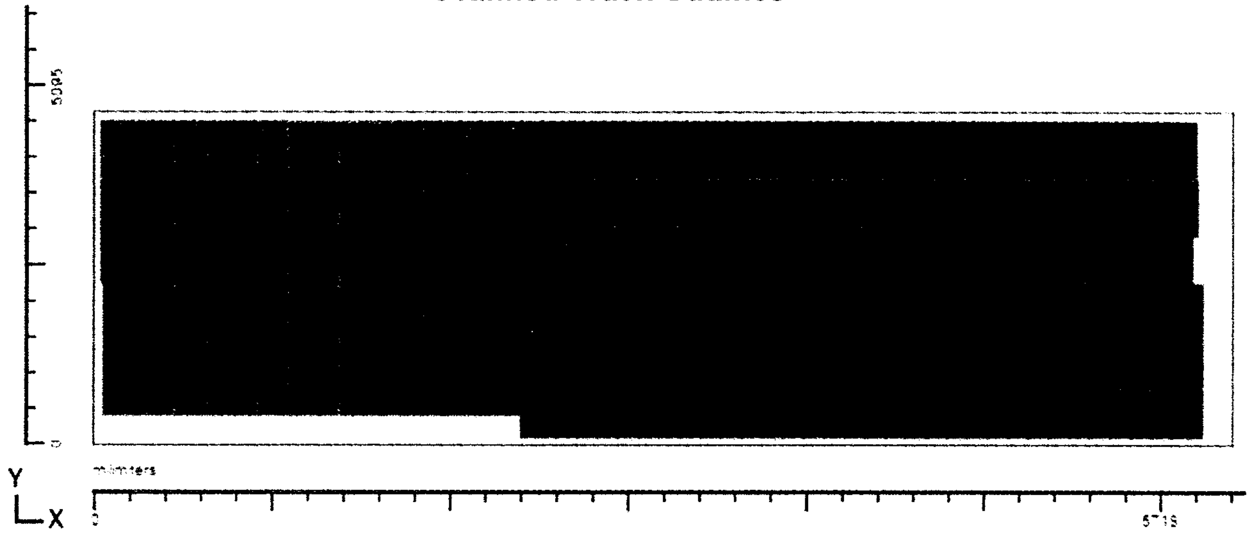


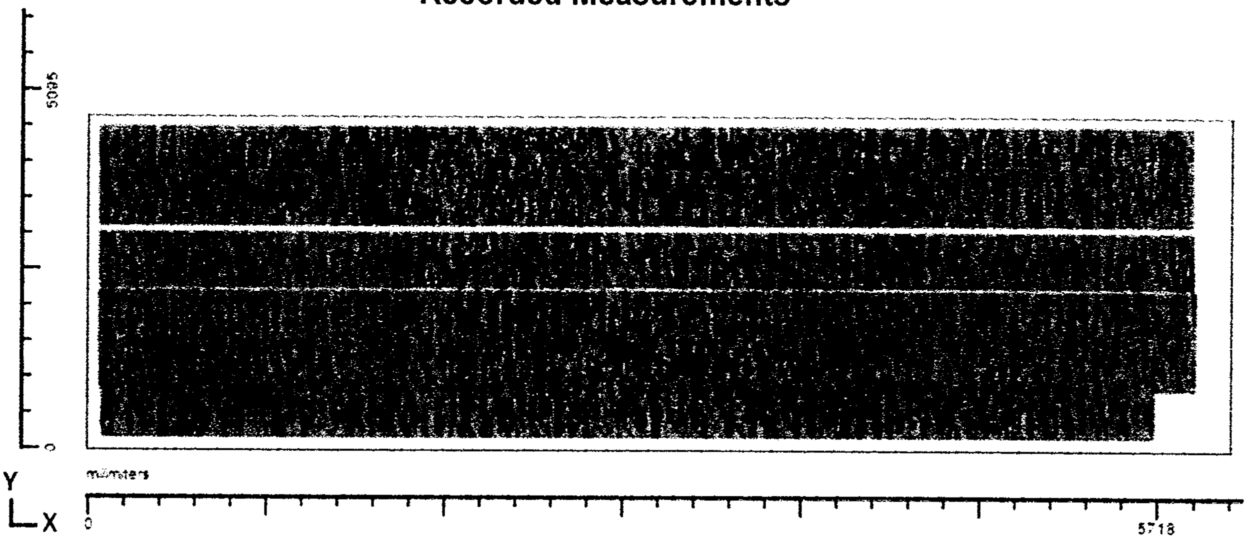
Plate Number 36

Maximum Signal Height: 100%

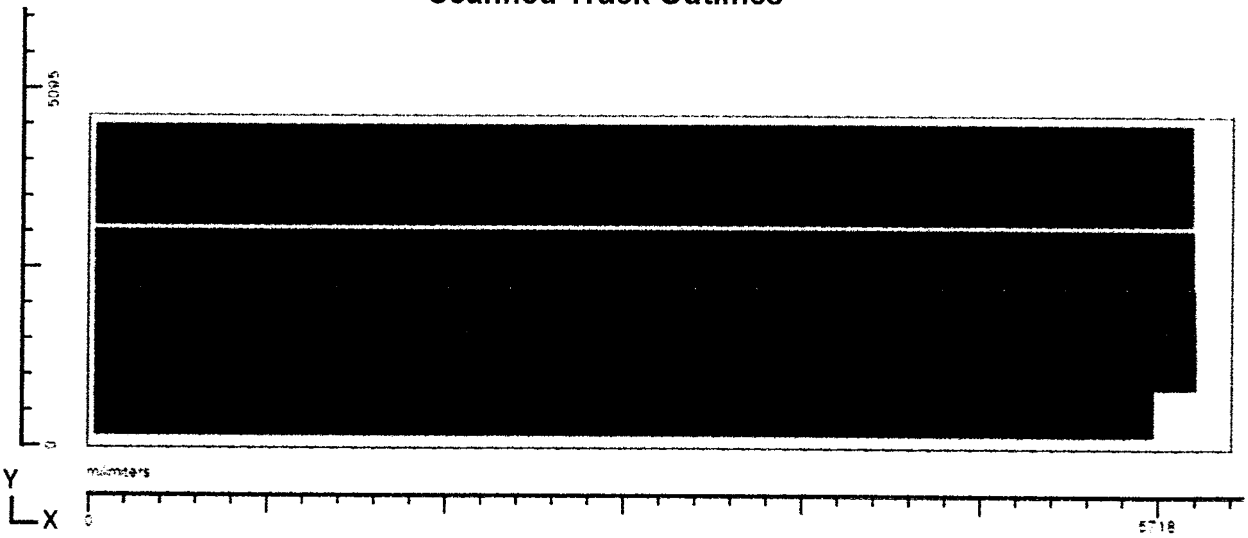
Plate Width:
6099.05mm

Plate Height:
1780.03mm

Recorded Measurements



Scanned Track Outlines



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VANDT Non Destructive Testings

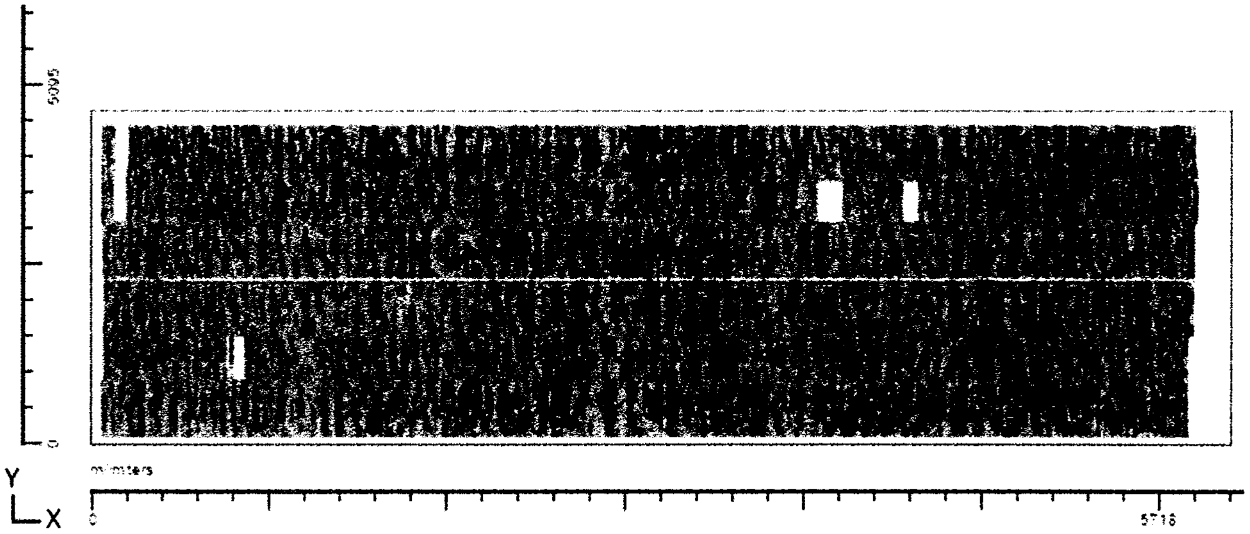
Plate Number 37

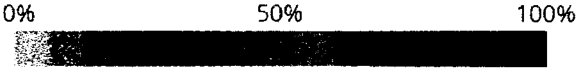
Maximum Signal Height: 100%

Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements





Scanned Track Outlines

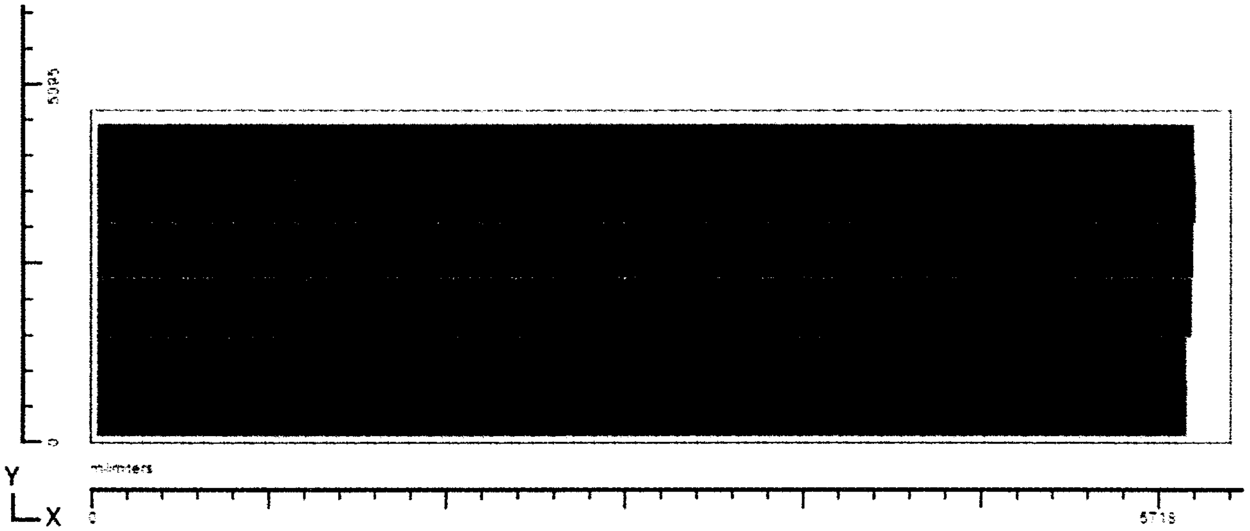


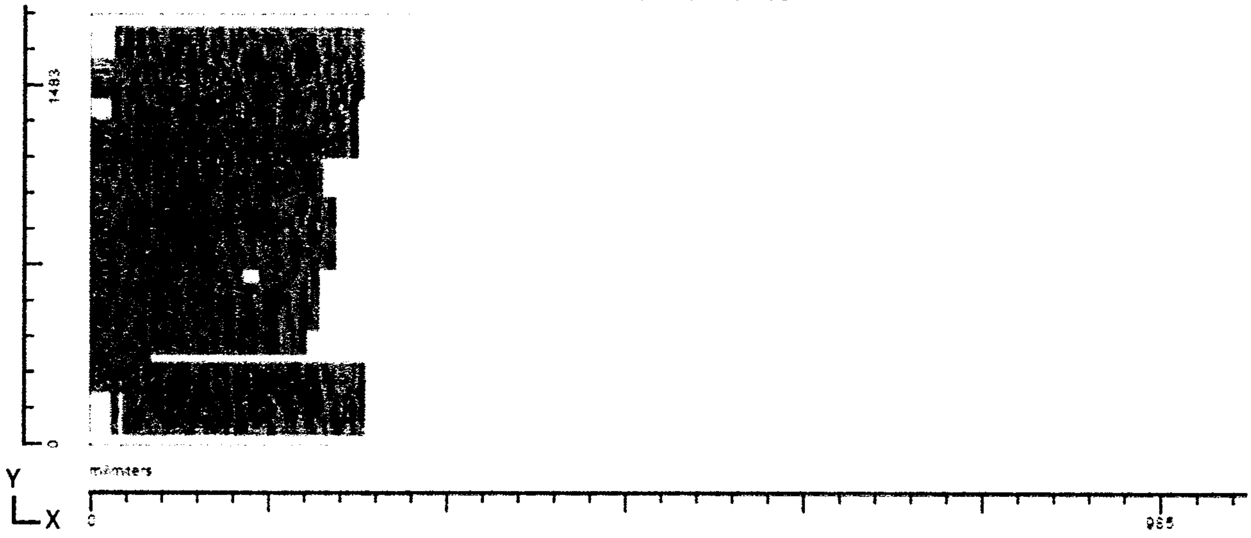
Plate Number 38

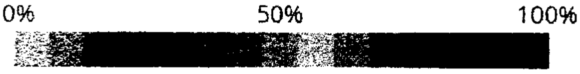
Maximum Signal Height: 100%

Plate Width: 1368.55mm

Plate Height: 1780.03mm

Recorded Measurements





Scanned Track Outlines

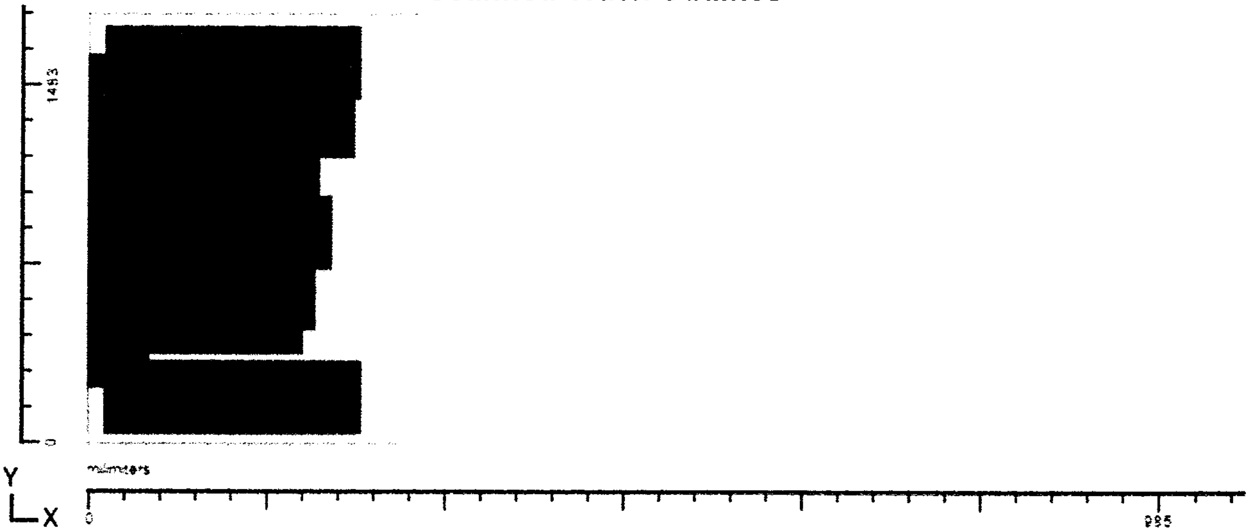


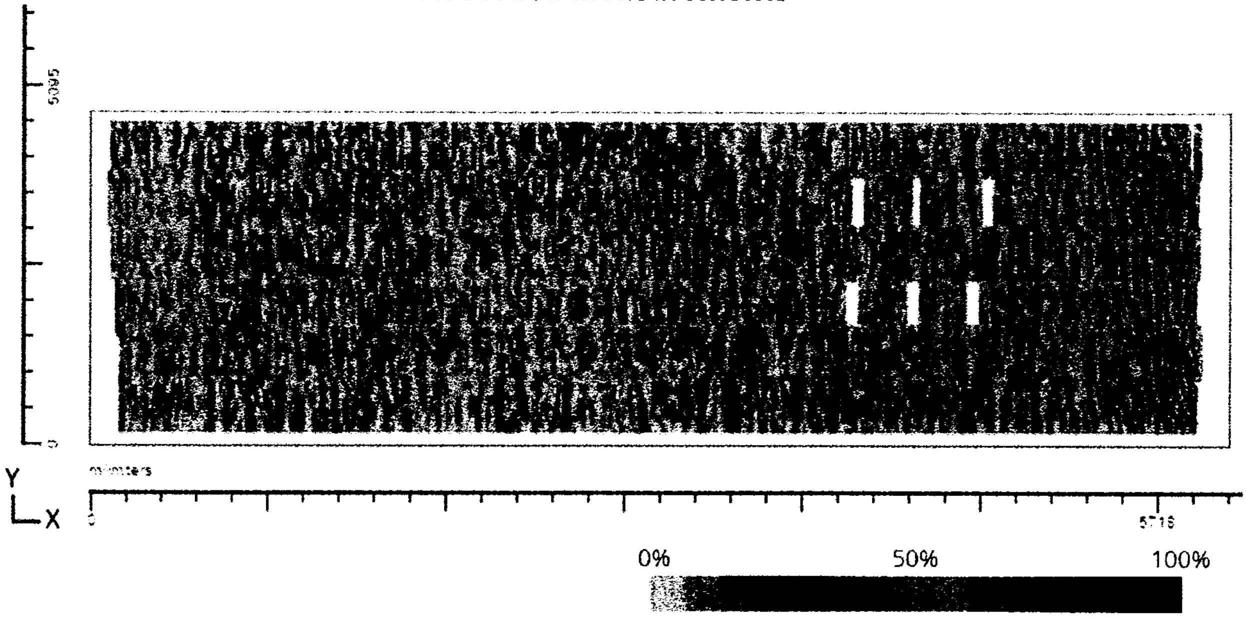
Plate Number 40

Maximum Signal Height: 93.3%

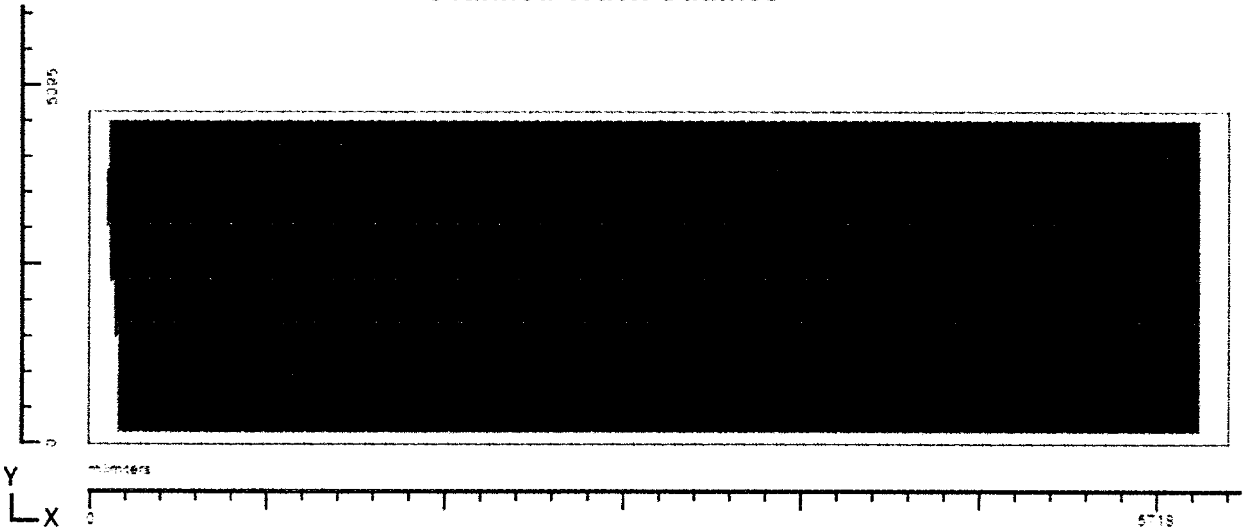
Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

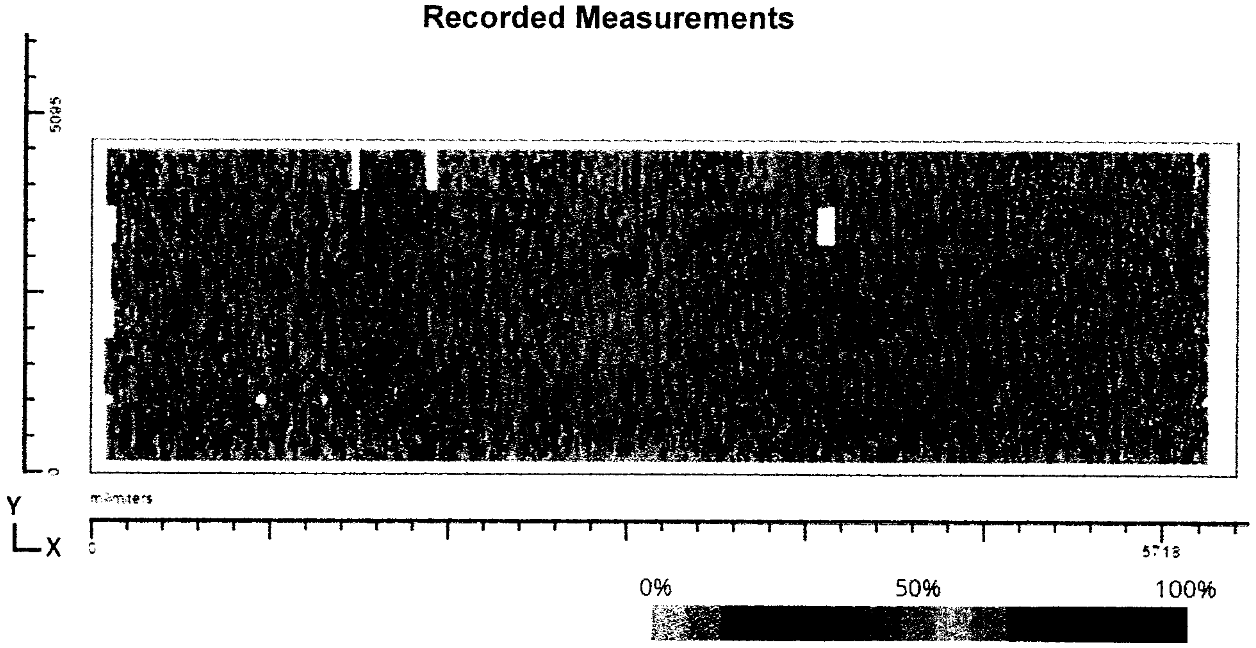
Plate Number 41

Maximum Signal Height: 100%

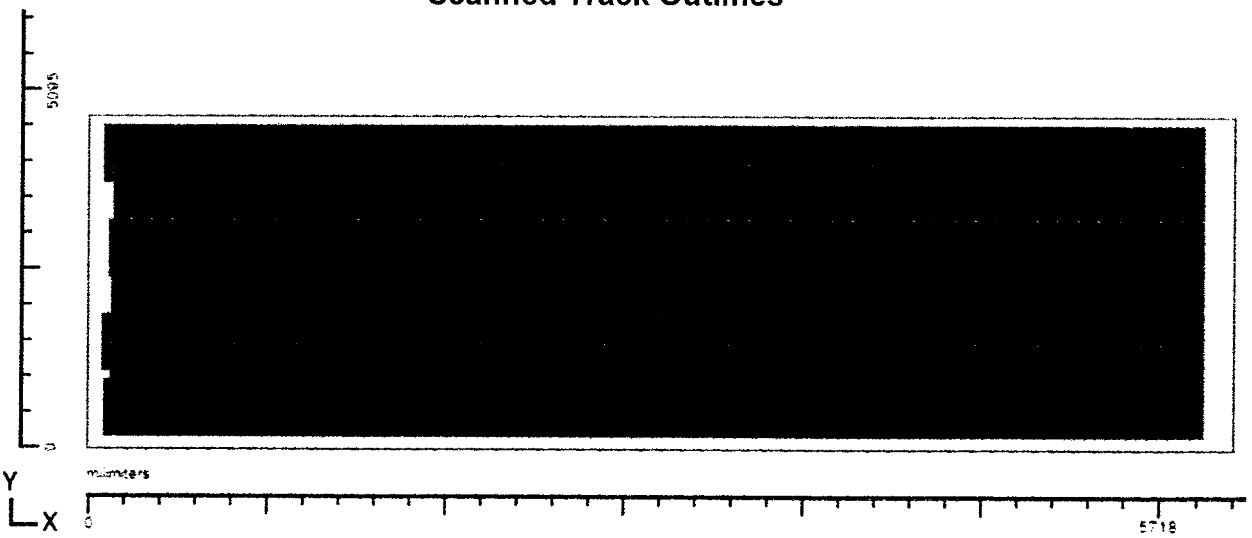
Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

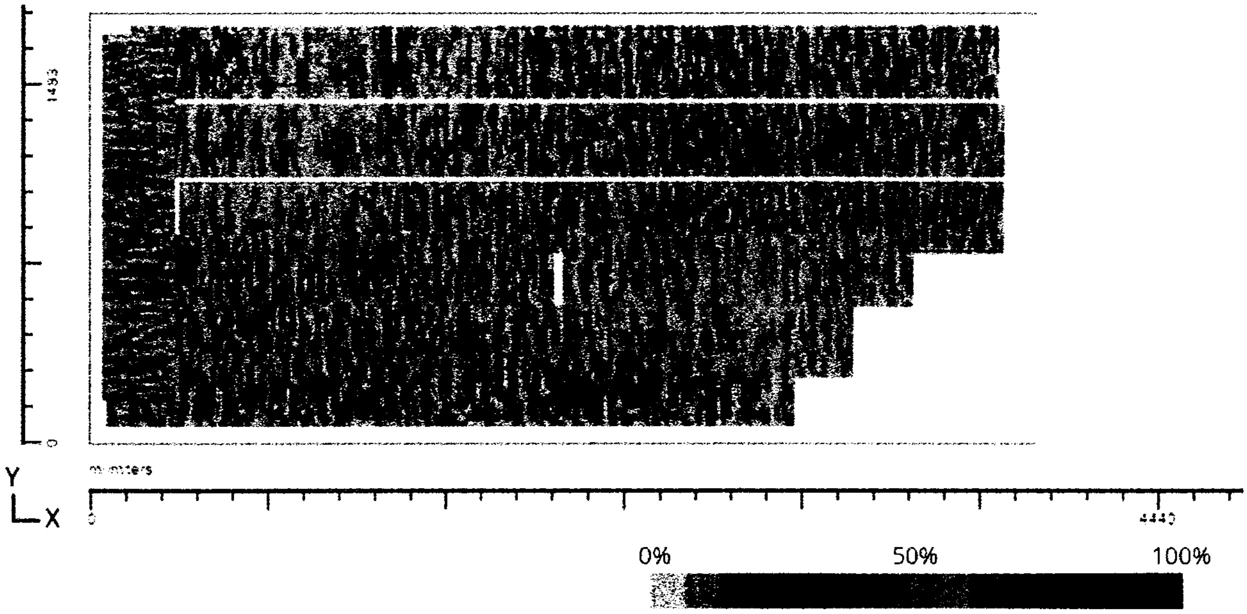
Plate Number 42

Maximum Signal Height: 100%

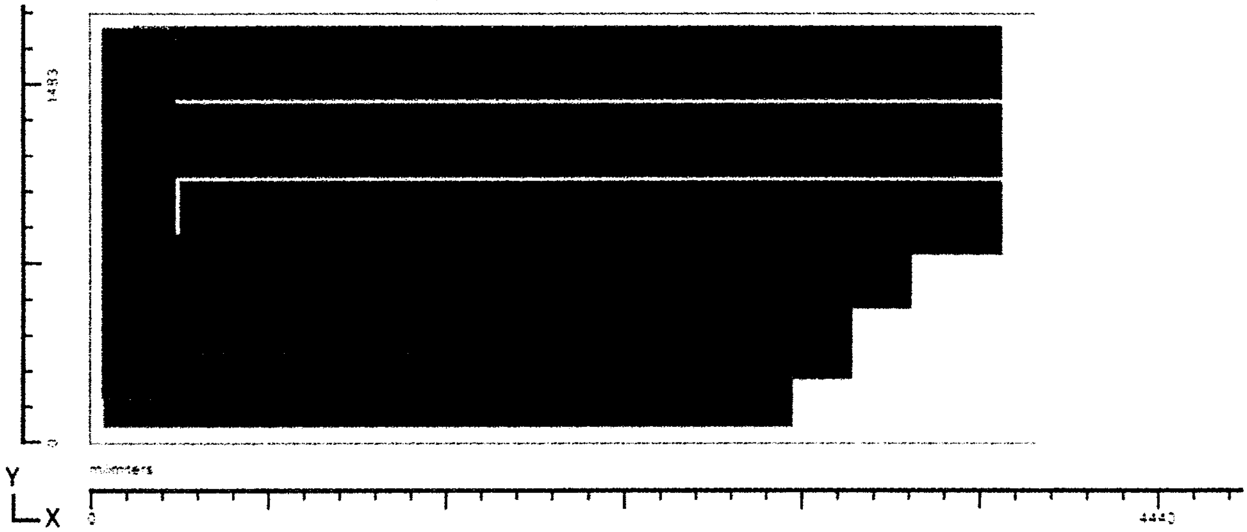
Plate Width: 3928.87mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



ENTERPRISES INCORPORATED

Non Destructive Testings

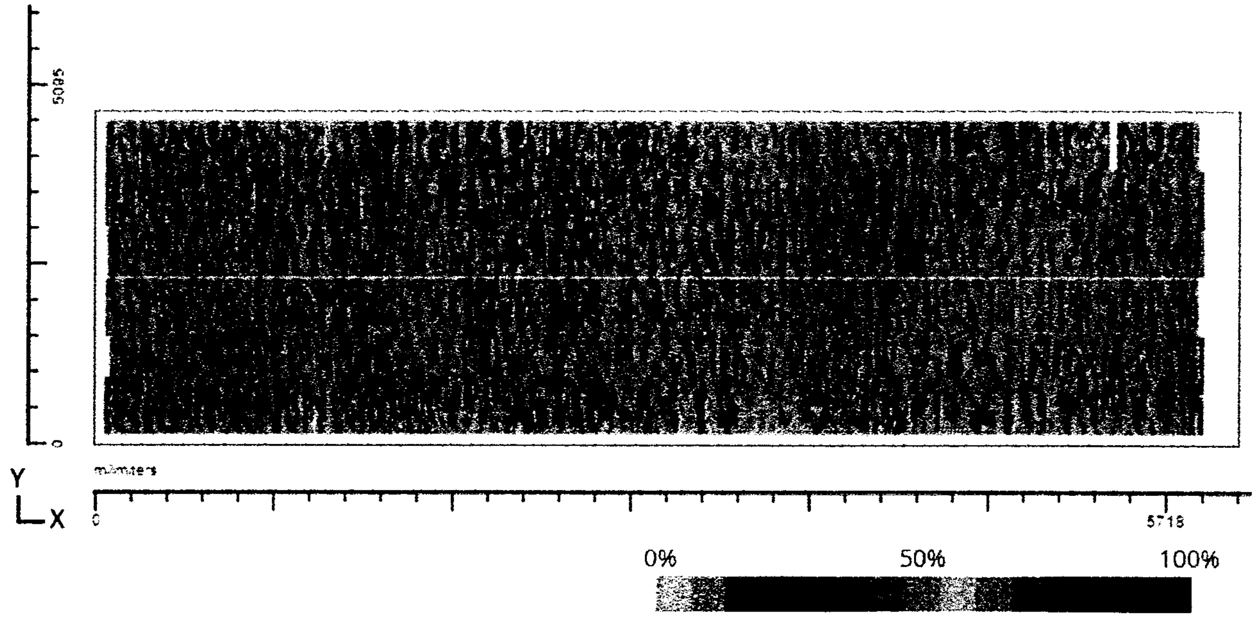
Plate Number 44

Maximum Signal Height: 86.7%

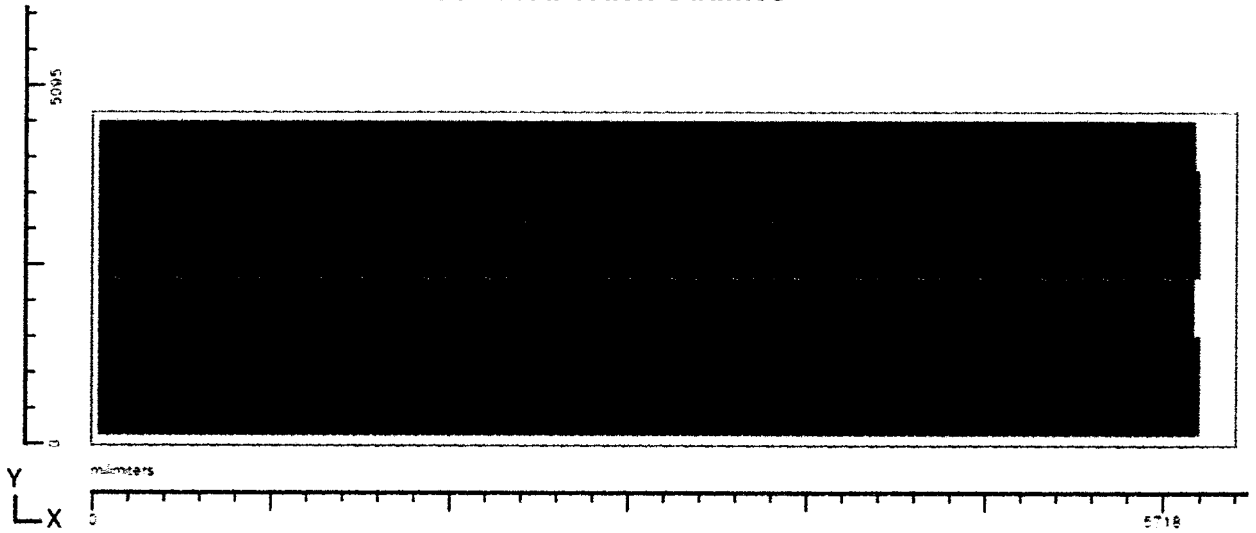
Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

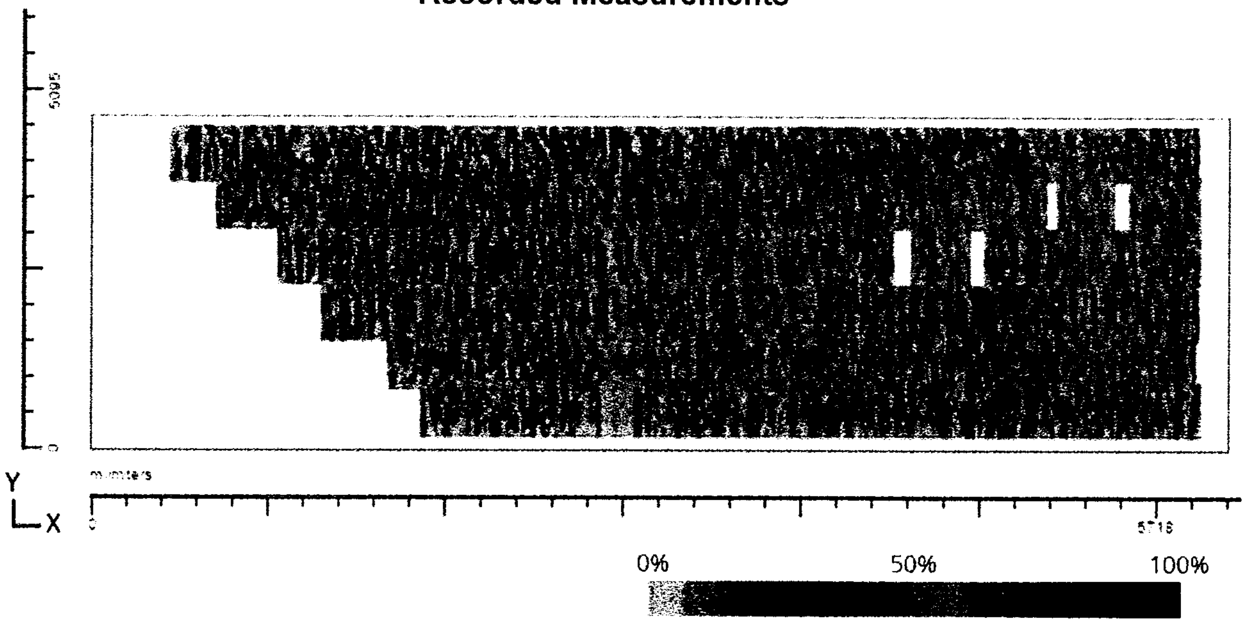
Plate Number 45

Maximum Signal Height: 100%

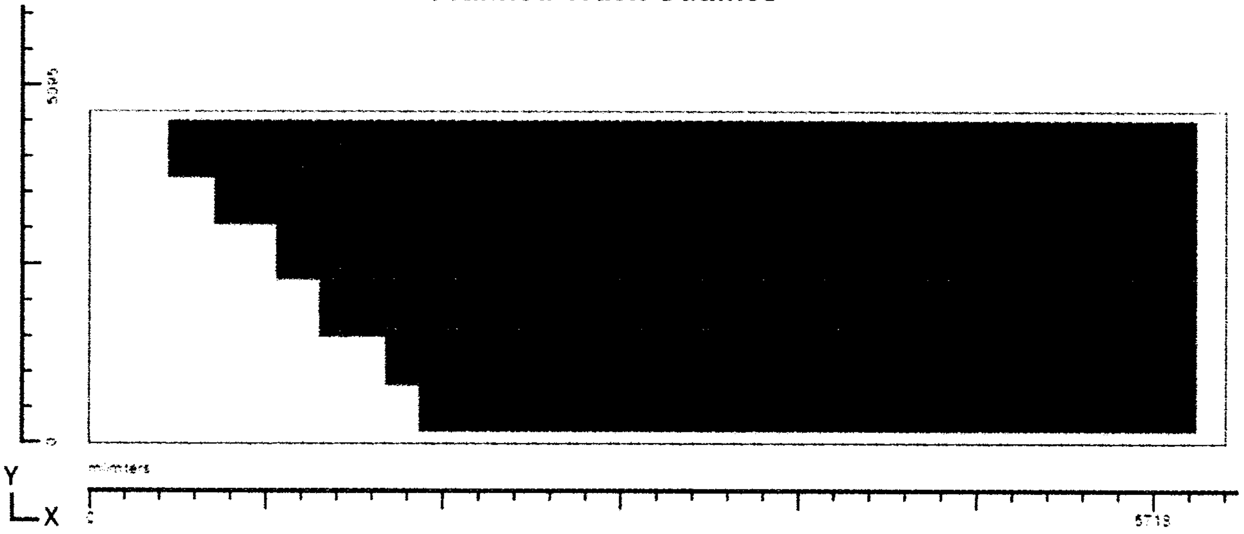
Plate Width: 6099.05mm

Plate Height: 1780.03mm

Recorded Measurements



Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

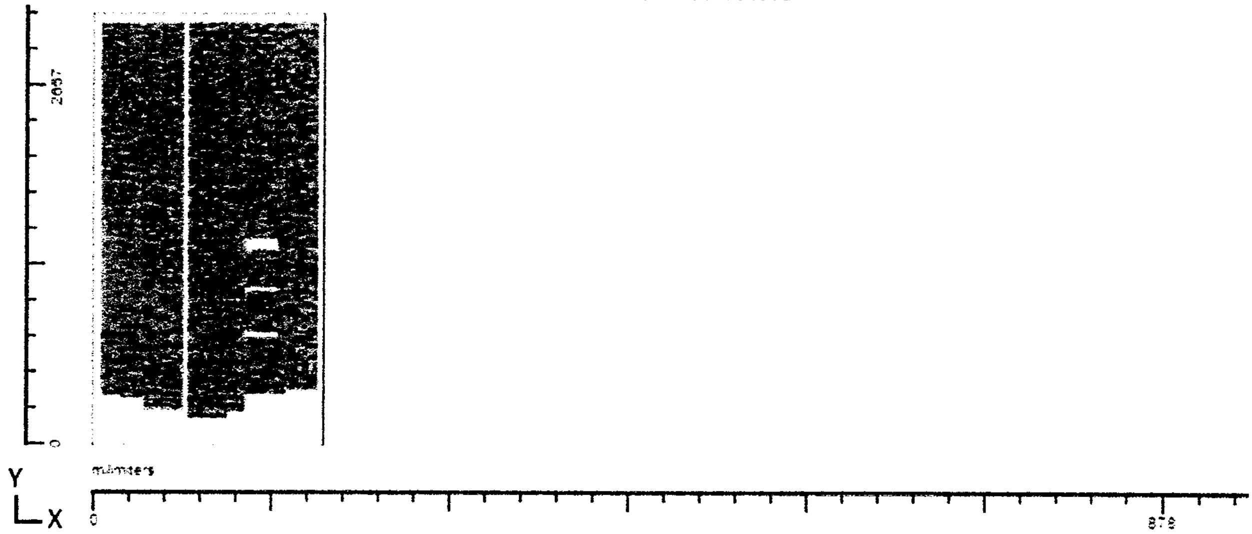
Plate Number 50

Maximum Signal Height: 100%

Plate Width: 1731.26mm

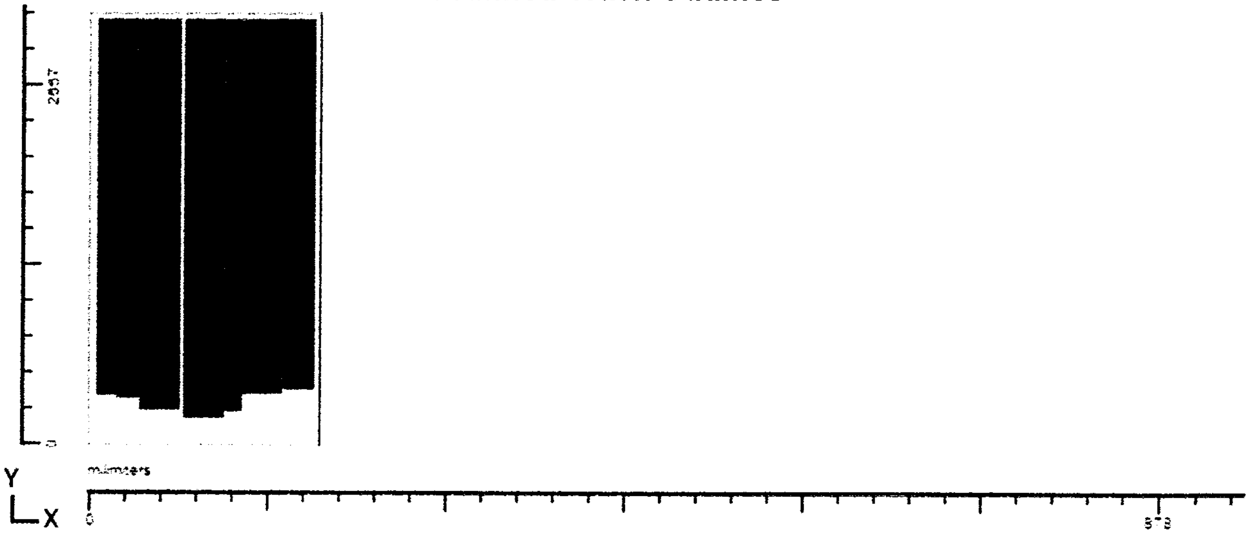
Plate Height: 3200.4mm

Recorded Measurements



0% 50% 100%

Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

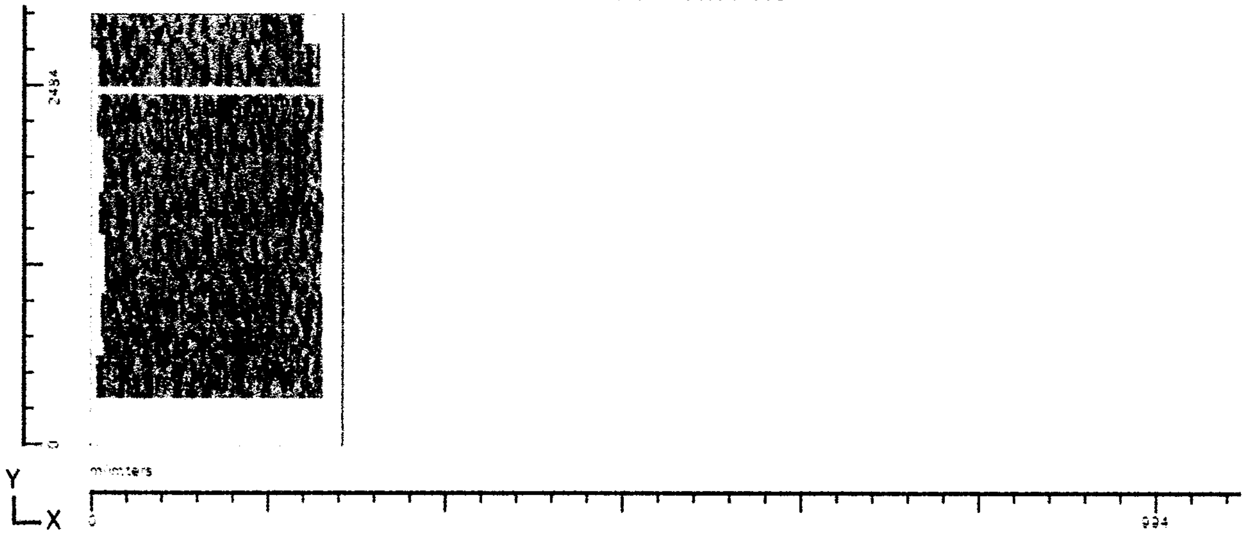
Plate Number 51

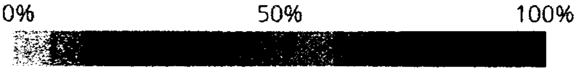
Maximum Signal Height: 100%

Plate Width: 1780.03mm

Plate Height: 2980.94mm

Recorded Measurements





Scanned Track Outlines

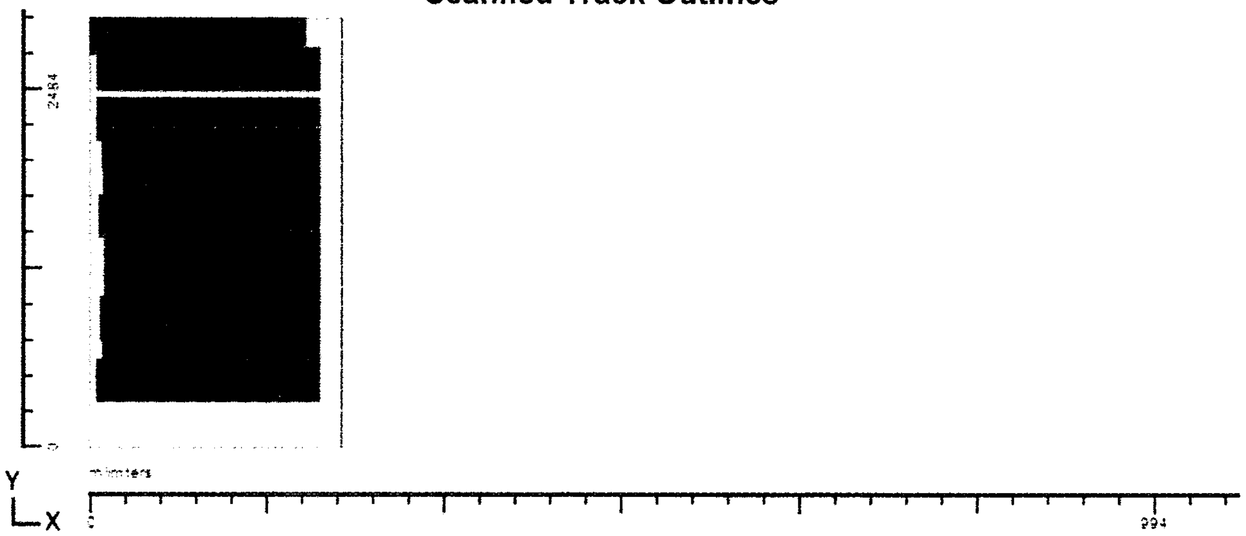


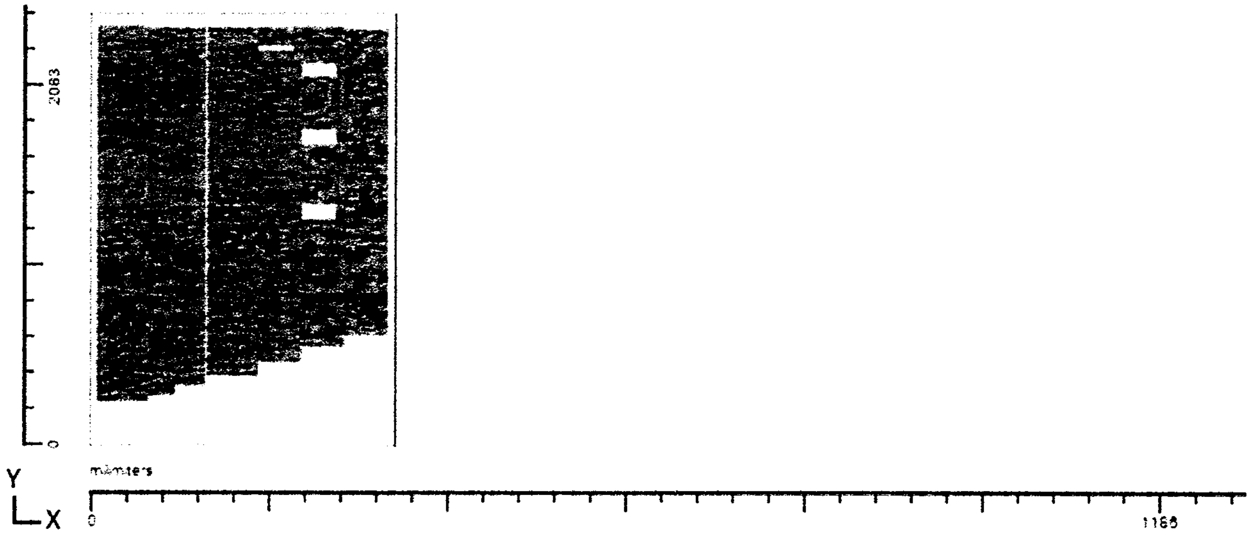
Plate Number 52

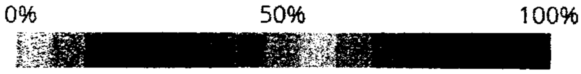
Maximum Signal Height: 93.3%

Plate Width: 1780.03mm

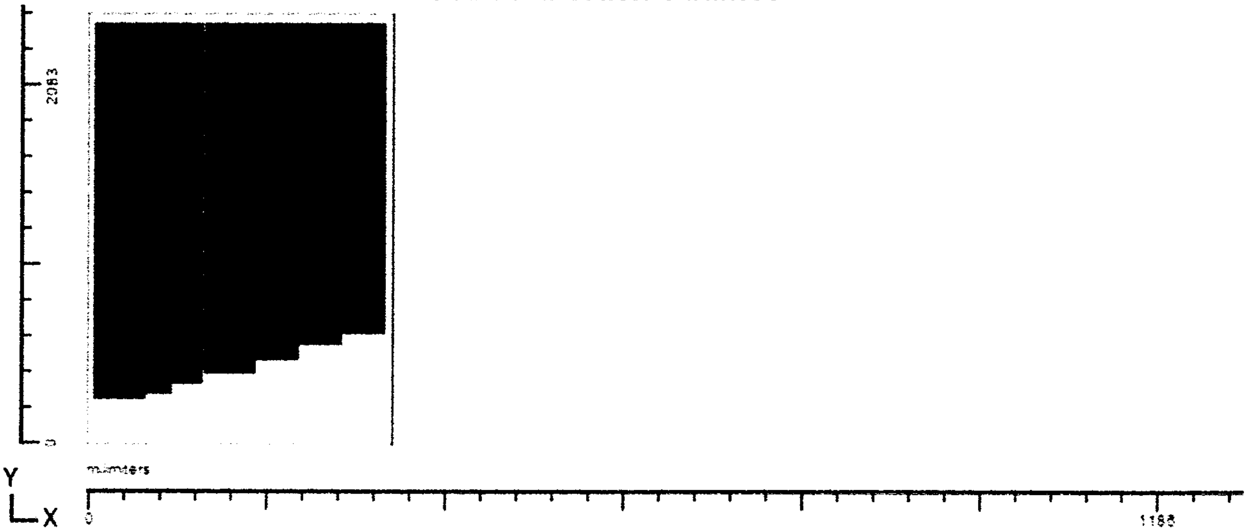
Plate Height: 2499.36mm

Recorded Measurements





Scanned Track Outlines



MFE ENTERPRISES INCORPORATED

VANDT Non Destructive Testings

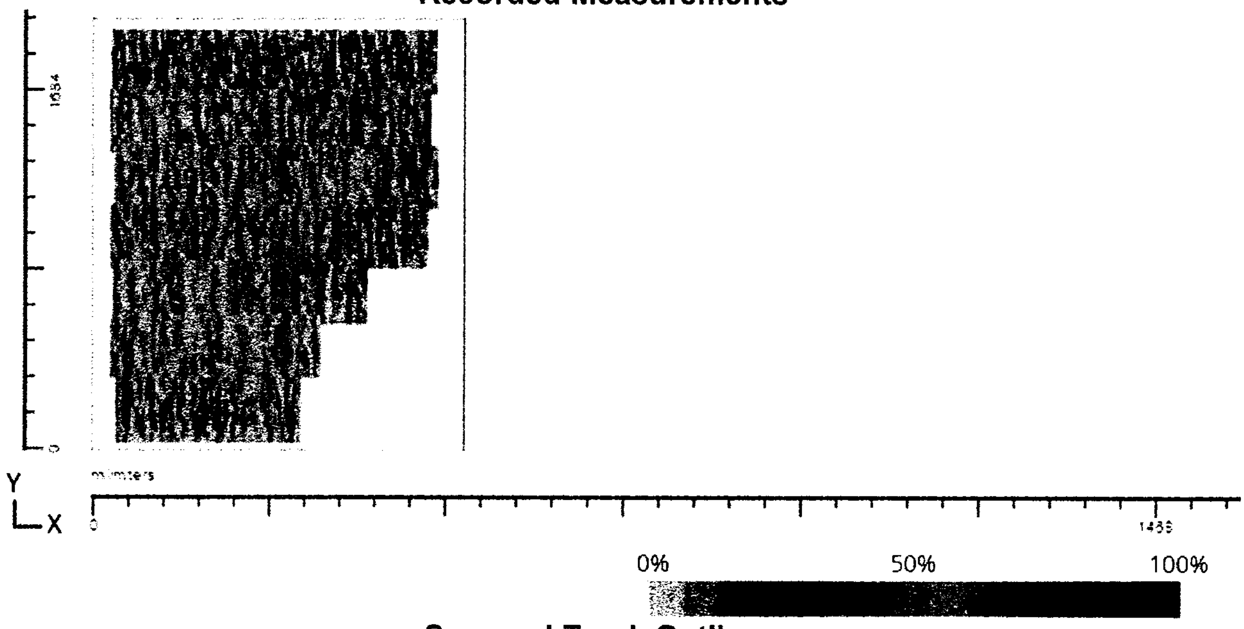
Plate Number 53

Maximum Signal Height: 100%

Plate Width: 1780.03mm

Plate Height: 2020.82mm

Recorded Measurements



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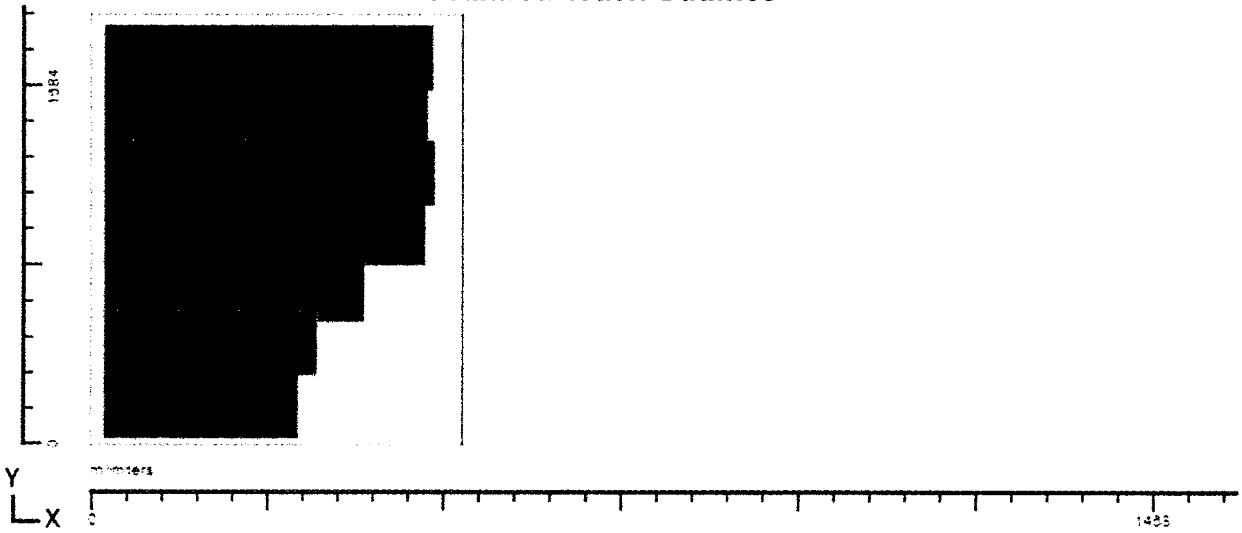

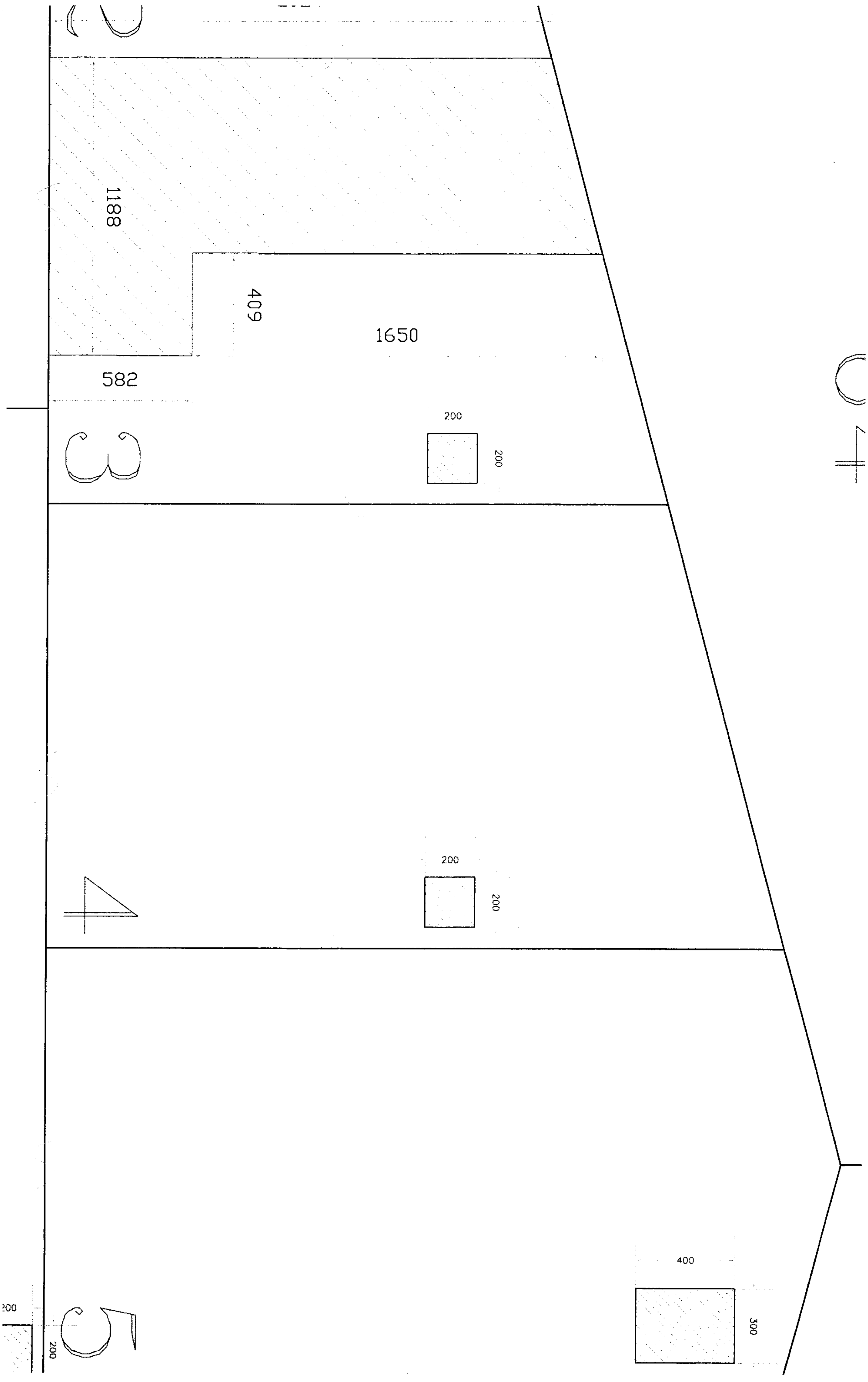
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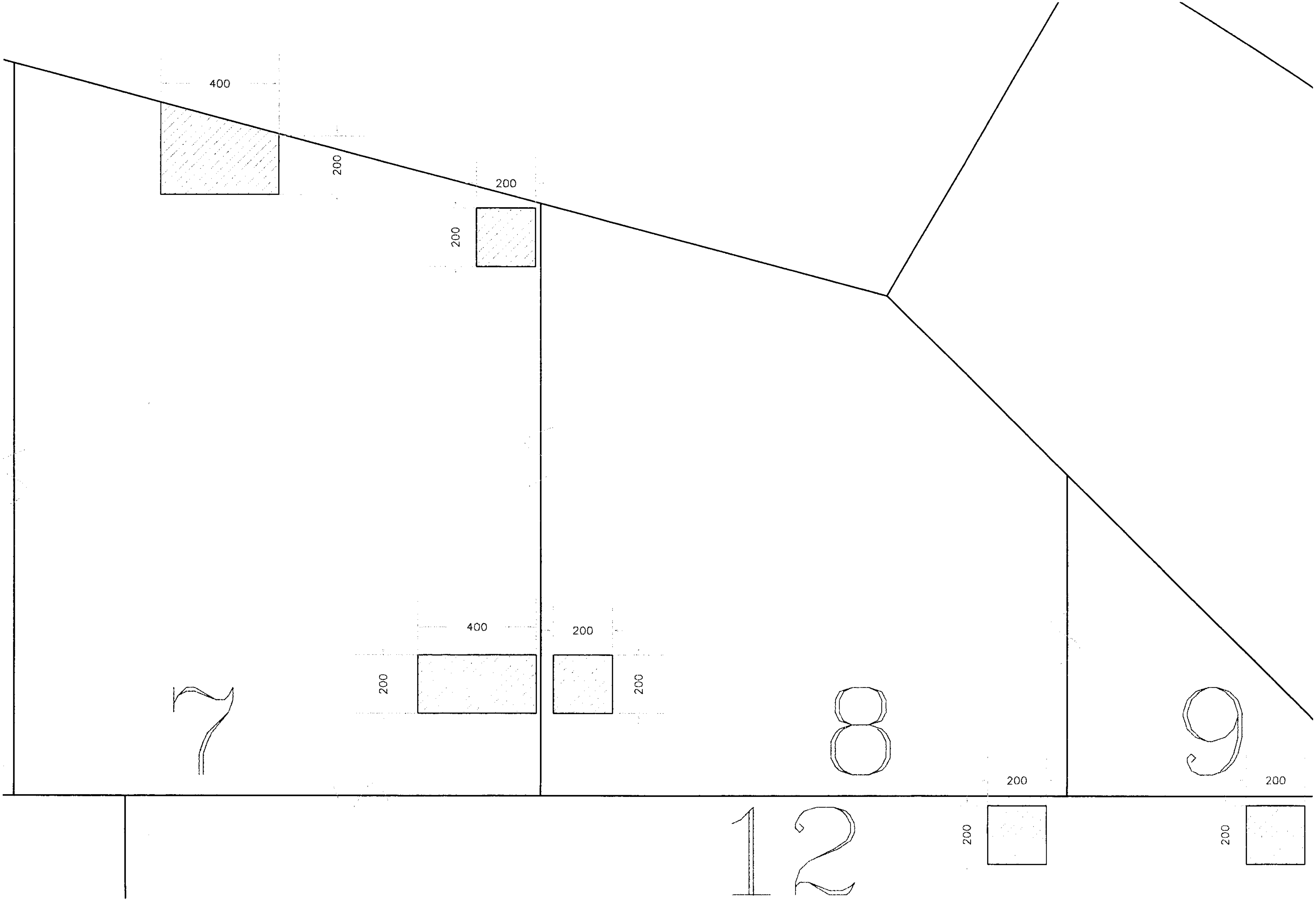
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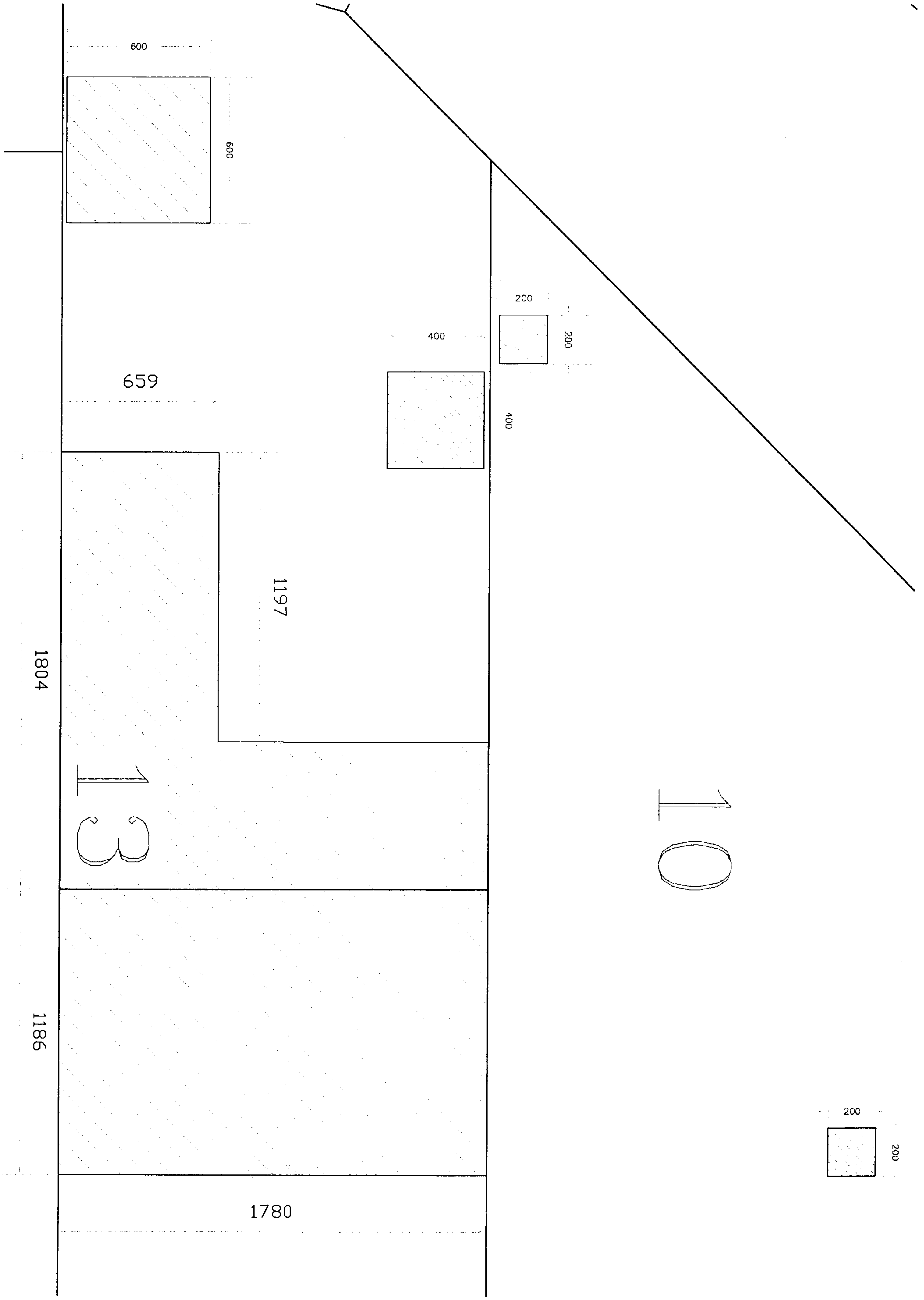

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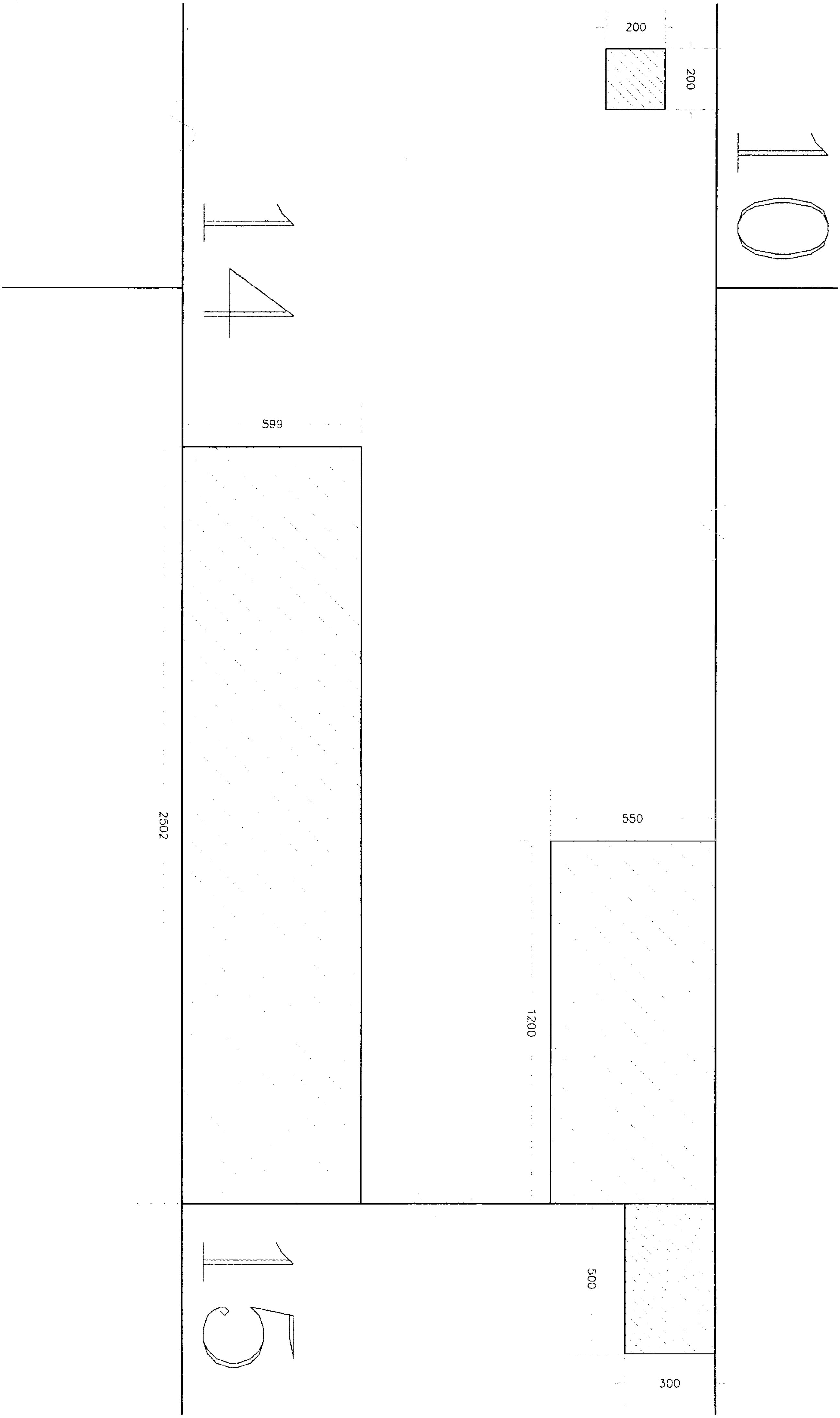

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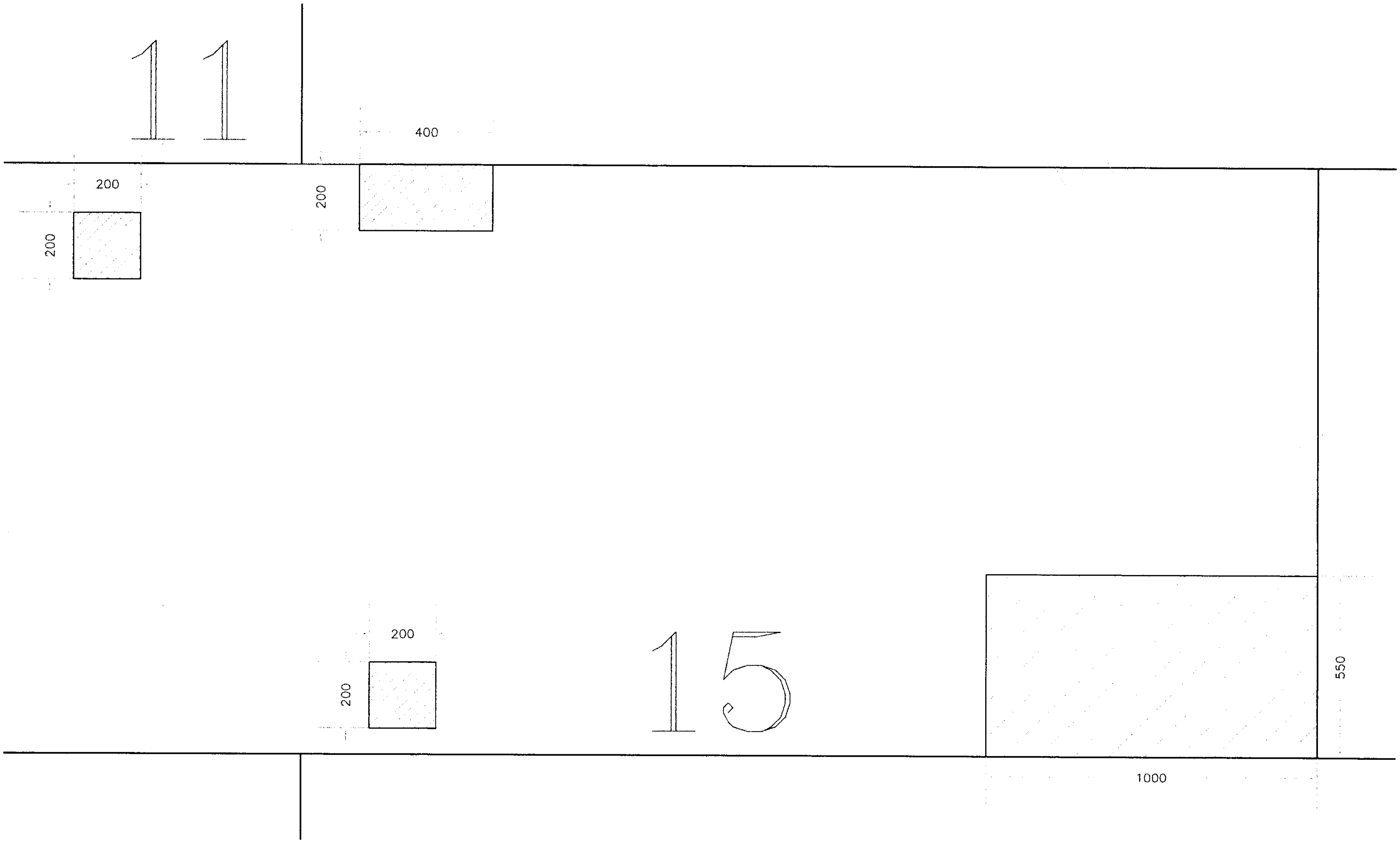
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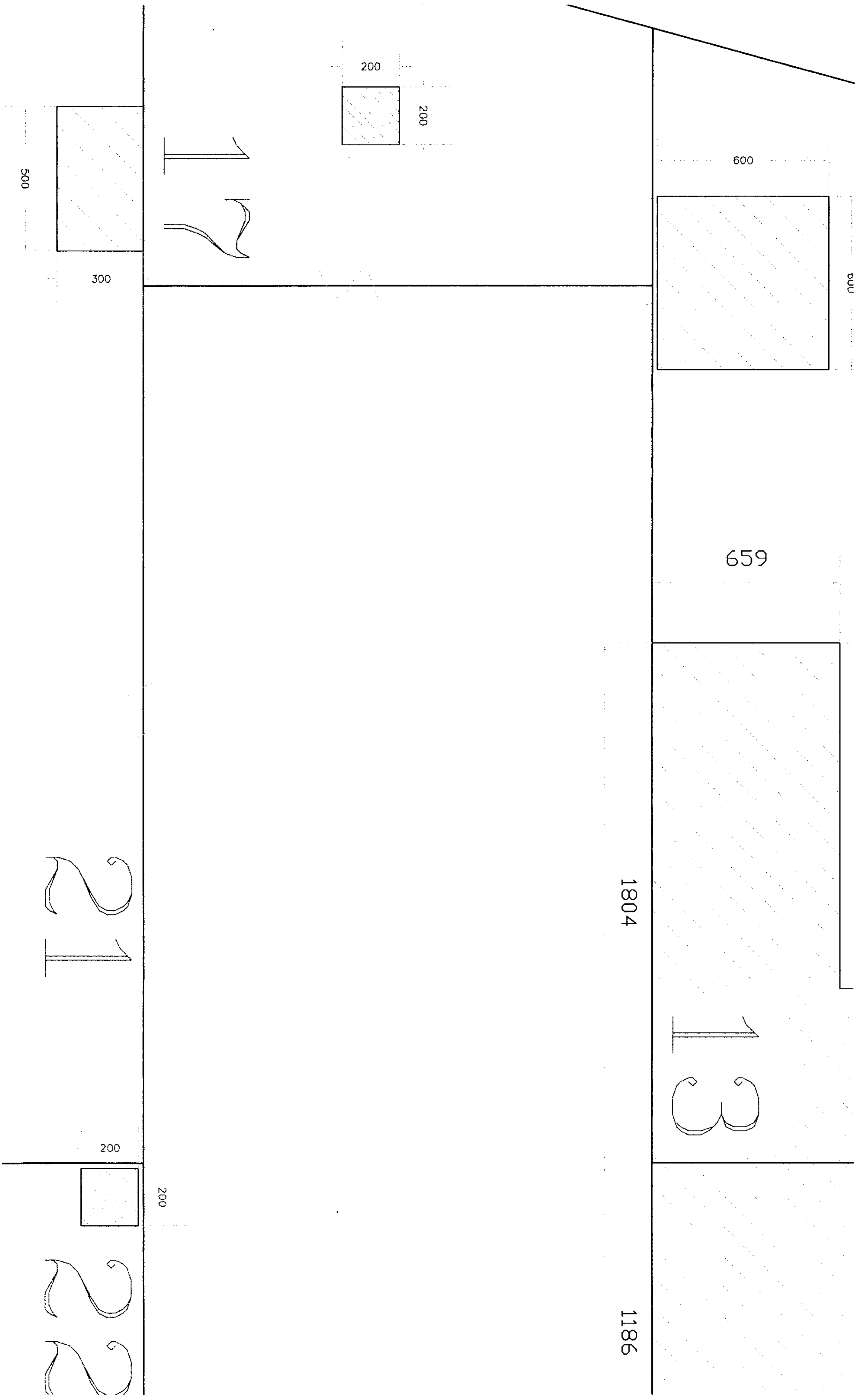
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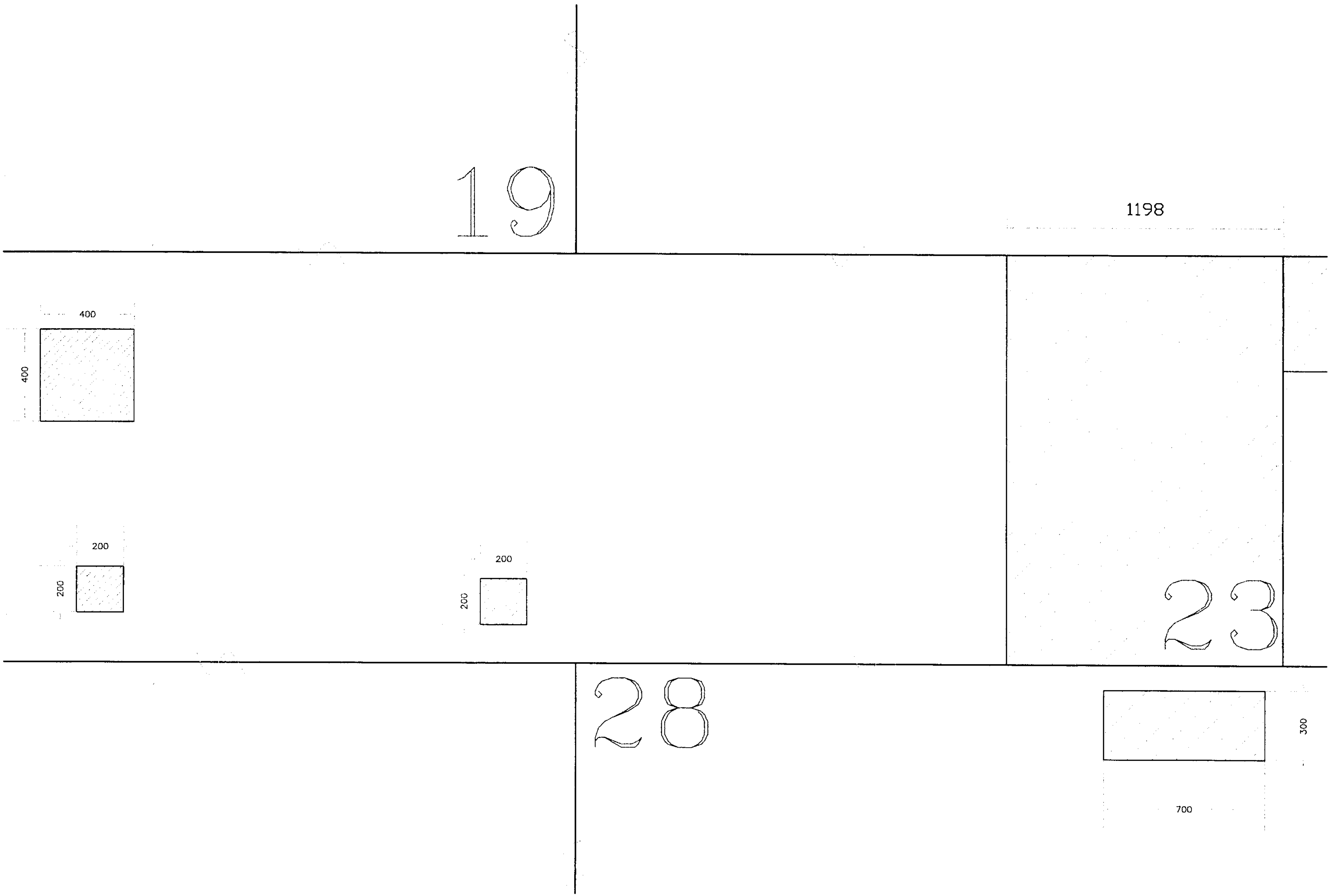
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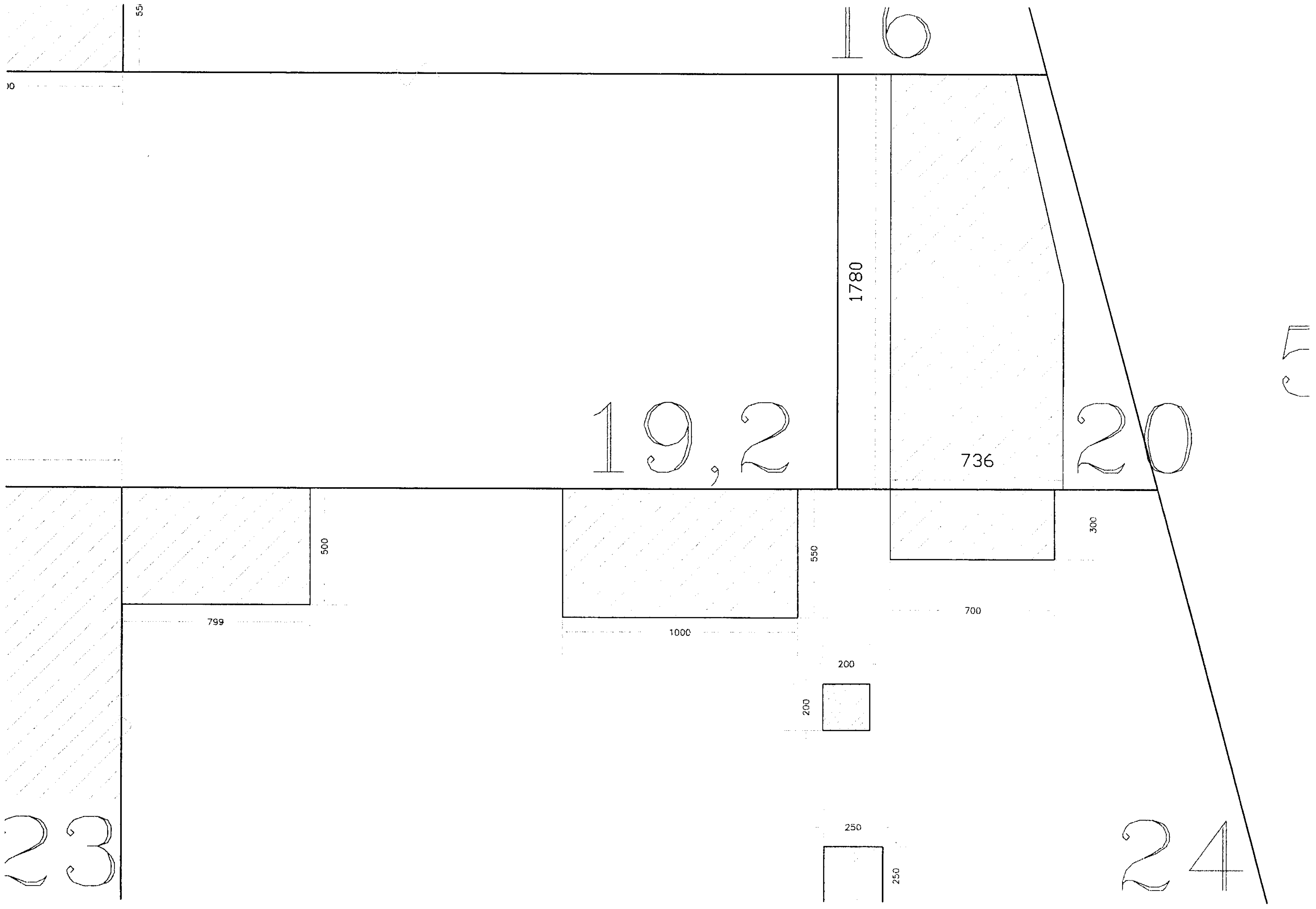
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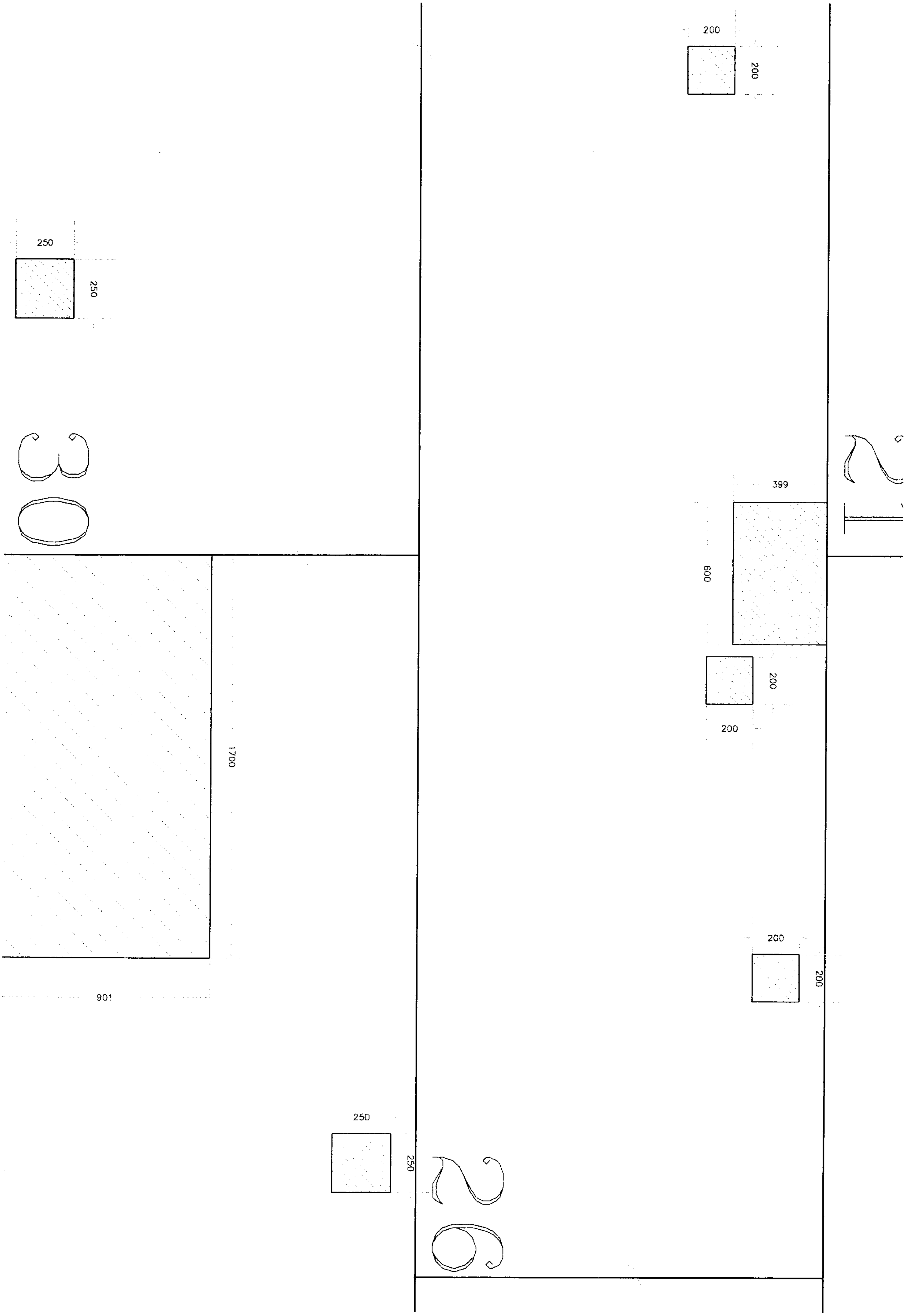
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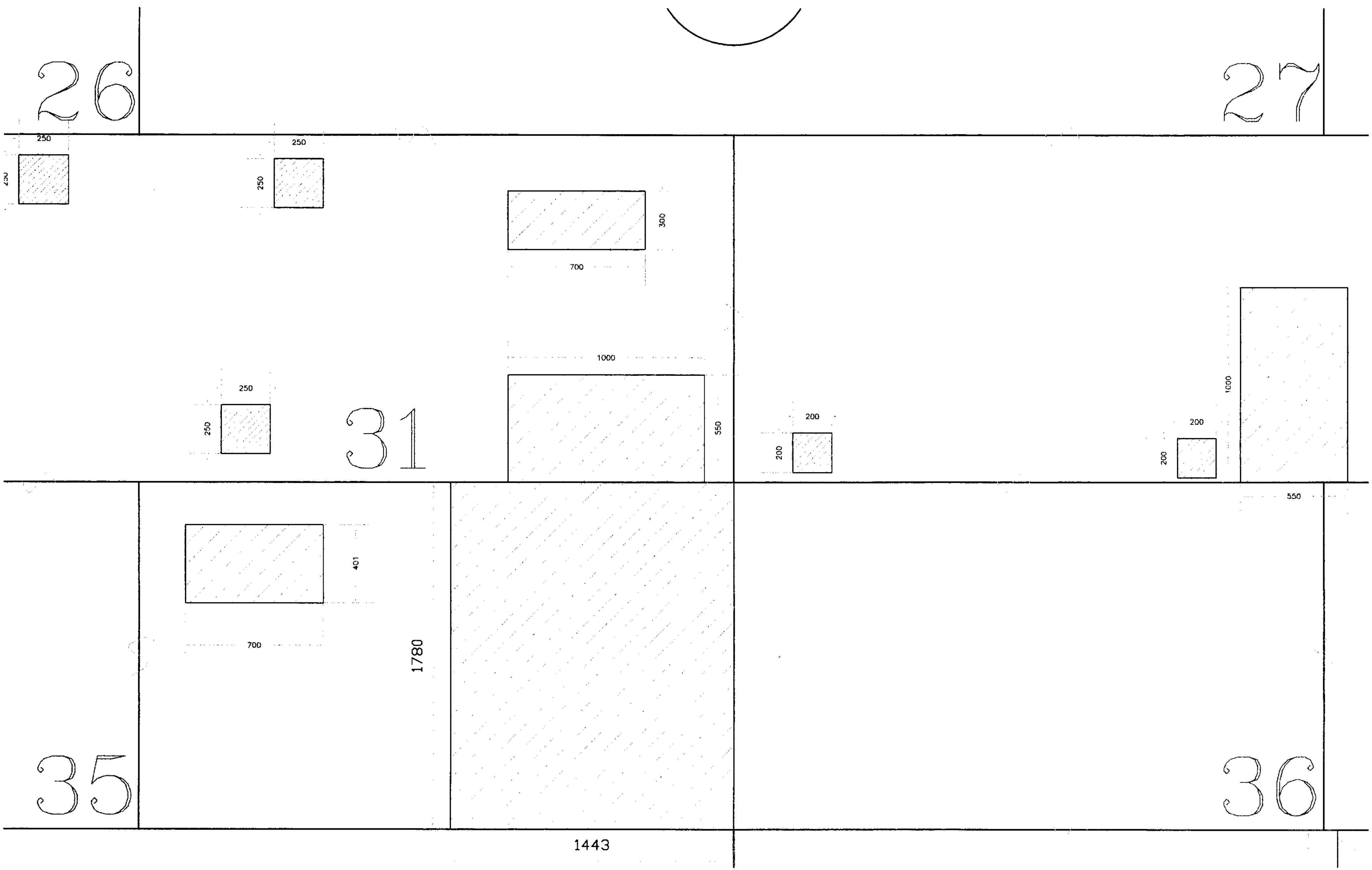
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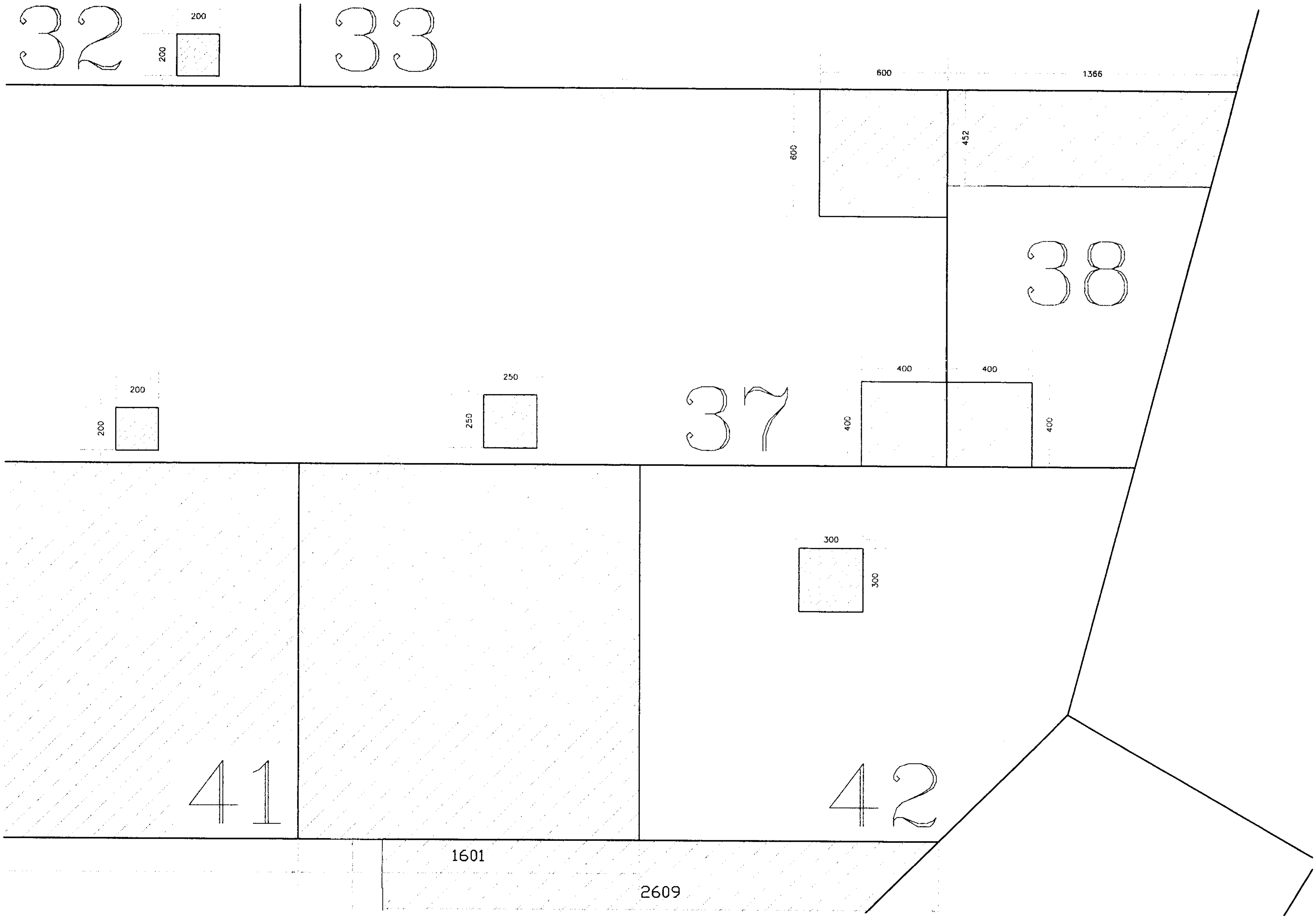
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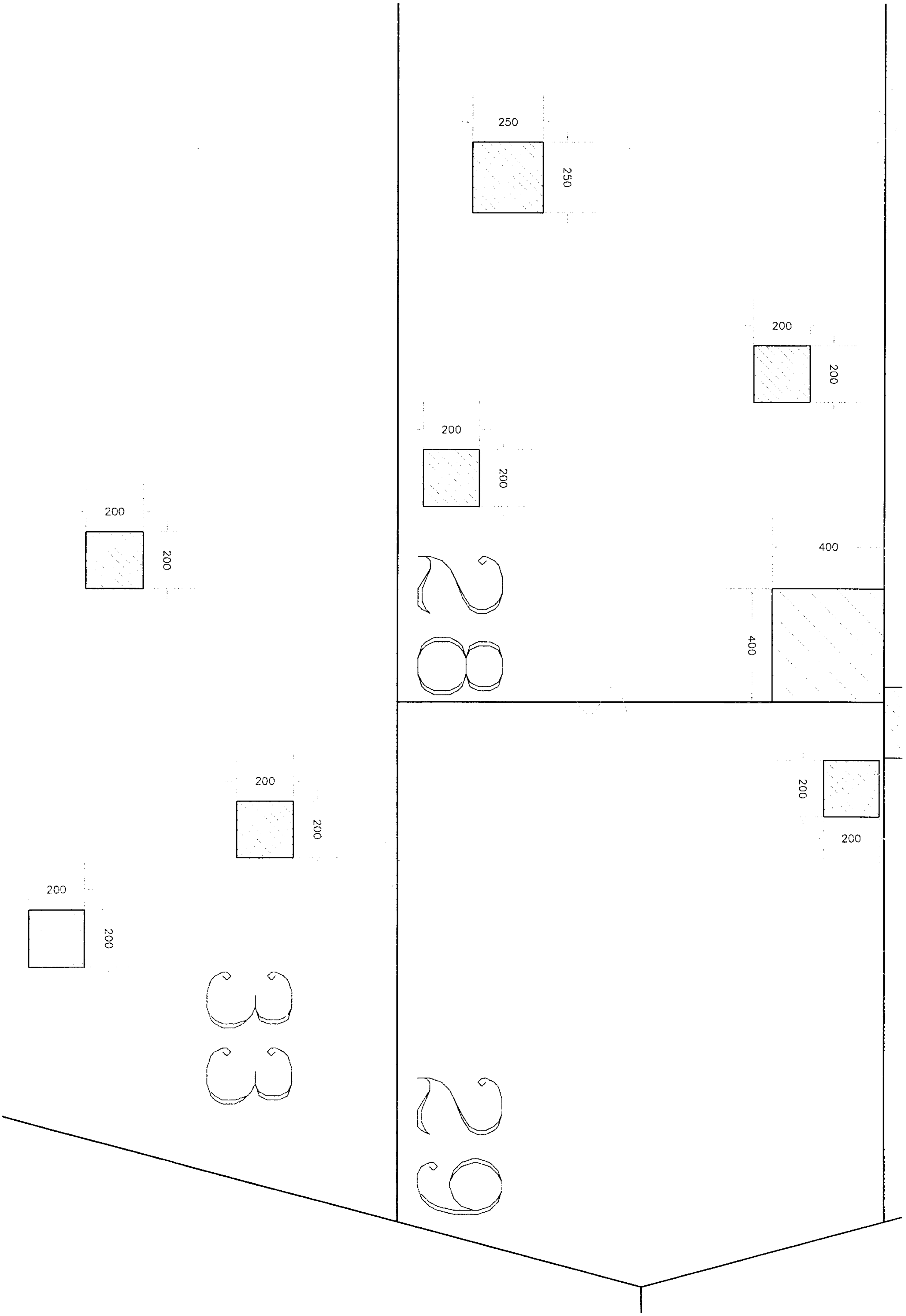
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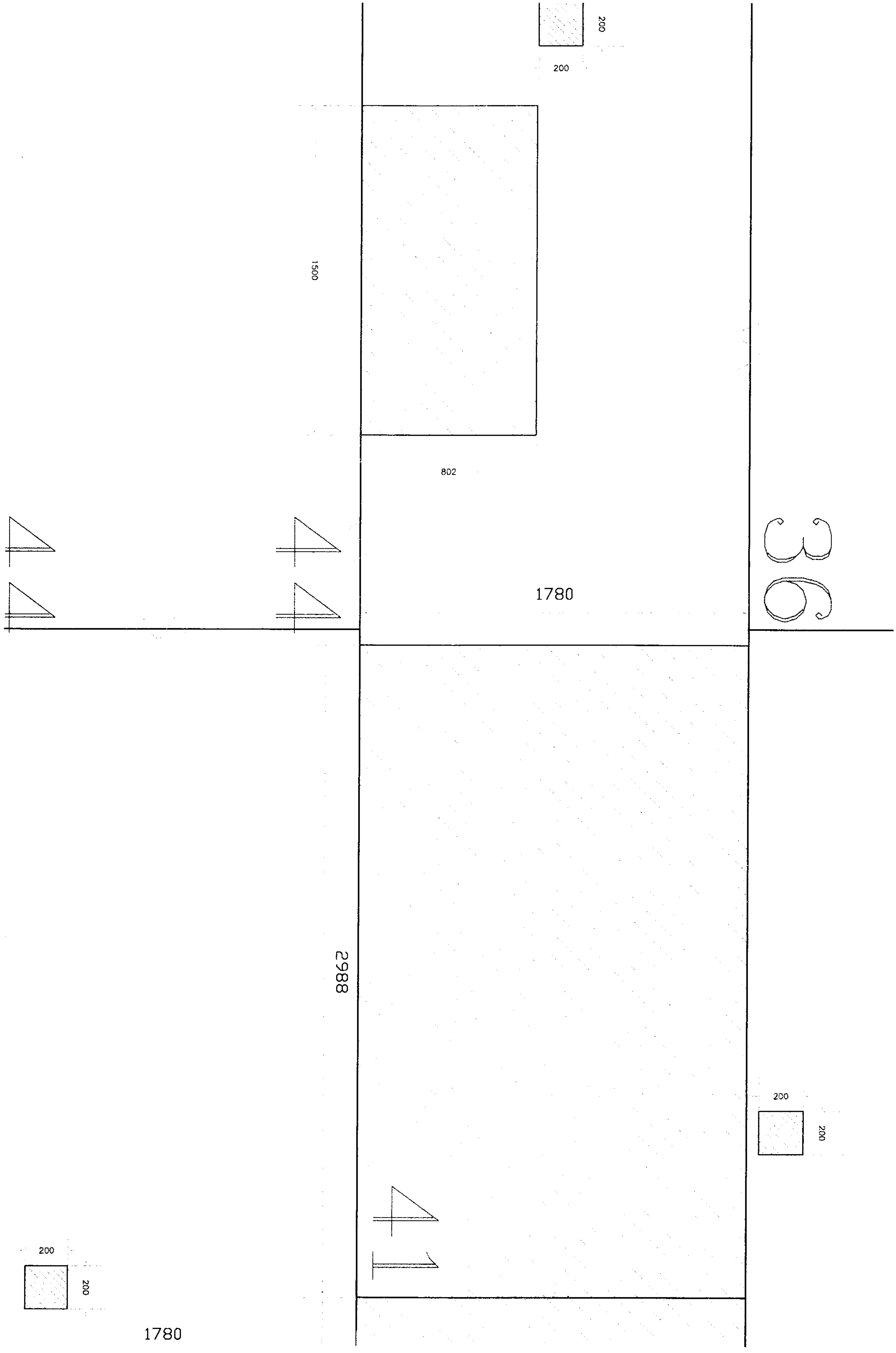
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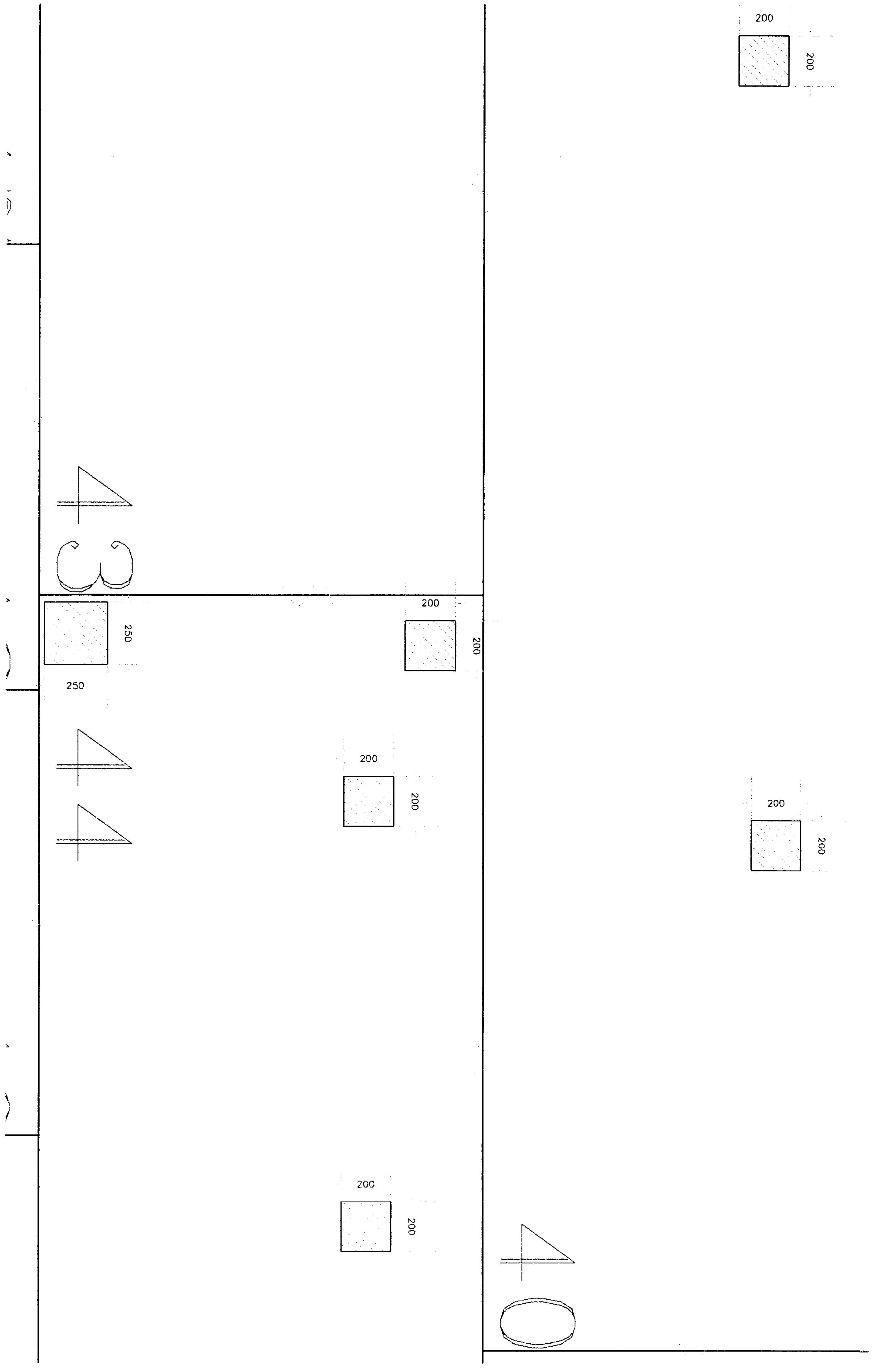
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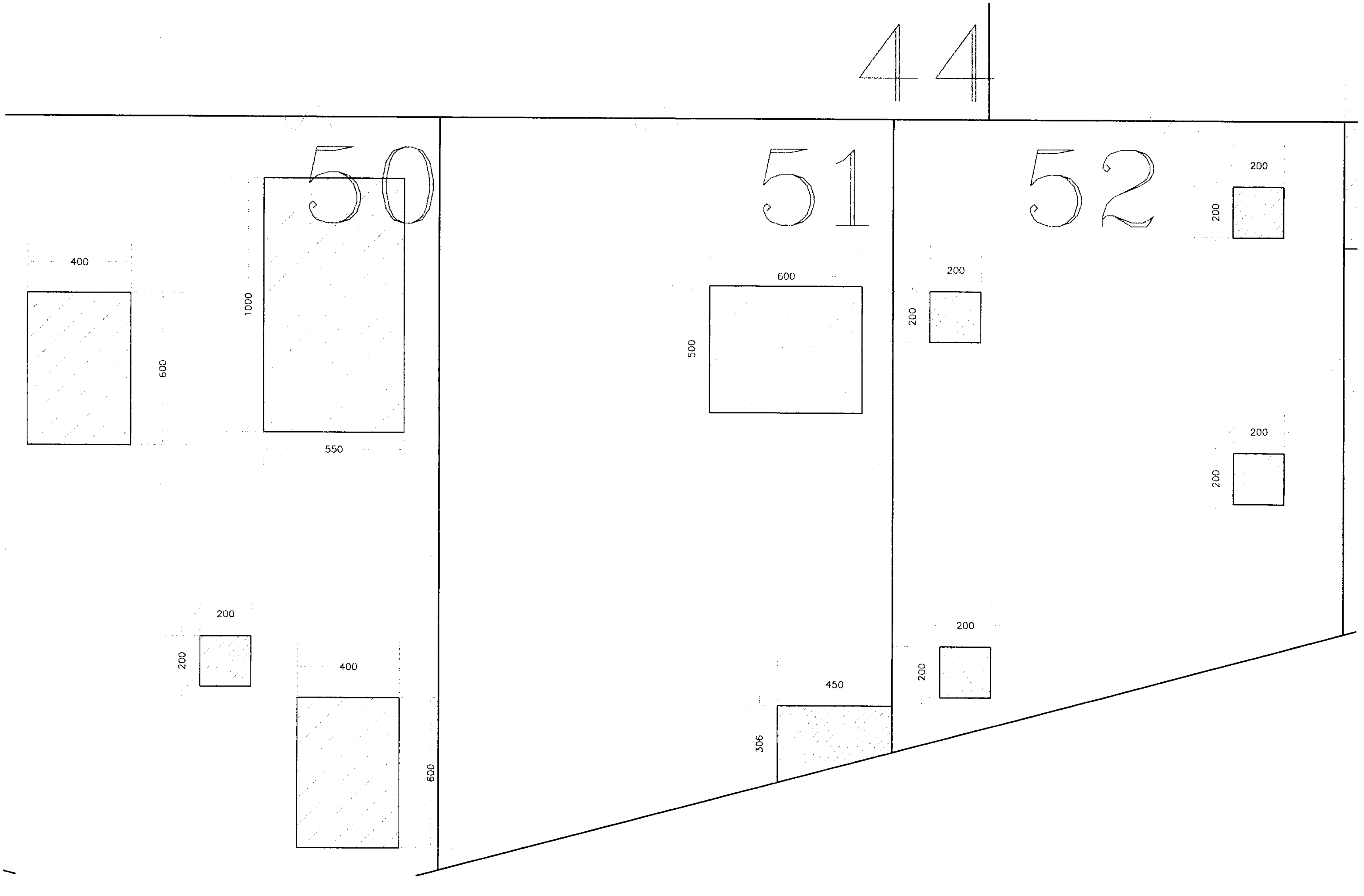
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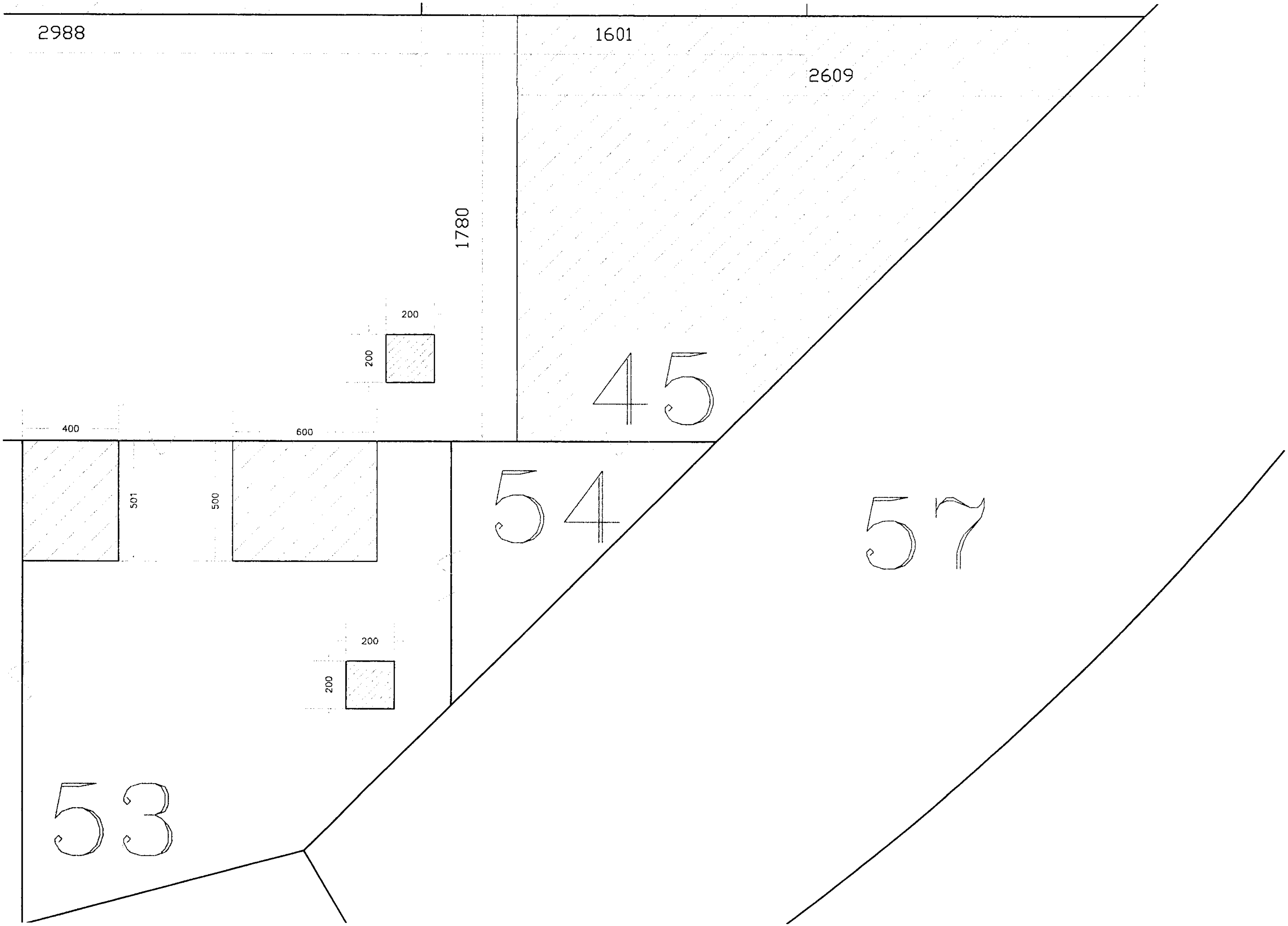
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1780
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57
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200
53

LAVENDER

INTERNATIONAL NDT TRAINING SCHOOL

UNIT 7, PENISTONE STATION, SHEFFIELD, S36 6HP, UK

INVESTORS IN PEOPLE | Gold

Tel: (44) (0) 1226 765769 Fax: (44) (0) 1226 760707 E-mail: nicola@lavender-ndt.com

FOR VERIFICATION, PLEASE CONTACT THE ABOVE

QUAERERE · INVENIRE · SCIRE

Certificate of Training

This is to certify that GISLI ARNAR GUDMUNDSSON

of NDT EHF

has succesfully completed a course of training in: ULTRASONIC INSPECTION – WELDS – LEVEL 2

To the syllabus outlined in the document: PCN GEN ISS 14 2017

Date: 9-10.02.2017 Hours: 8

TUTOR: J P TREWEEK

B Scott

B SCOTT
ADMINISTRATION ASSISTANT
For Lavender International NDT Consultancy Services Ltd.

No. 67057 dated 10 MARCH 2017

This course is accredited by the British Institute of NDT

QD 258 ISSUE 2 19.05.2016 TRAINING WAS CONDUCTED AT LAVENDER UK WHICH IS A BINDT APPROVED TRAINING ORGANISATION

Lloyd's Register

CERTIFICATE OF CALIBRATION

LR REYKJAVIK

It is hereby certified that thickness measurement gauge, SONATEST, T-GAUGE V, serial no. 05057849, has been calibrated, by Mr. Guðni Guðnason, using LR's Step wedge no. LR RJK 01, certified on 26. November 2001, by T. Kalland Surveyor to Lloyd's Register Aalborg.

Nominal Value (mm)	**Measured Value (mm)**	**Tolerance (mm)**
4,99	5,0	+/- 0,01
10,00	10,0	+/- 0,00
15,00	15,0	+/- 0,00
19,99	20,0	+/- 0,01

Reykjavik, 30th August 2016

Calibration made by: Guðni Guðnason

Lloyd's Register EMEA
Reykjavik Office
Lloyd's Register

Witnessed by:

SIGLINGASTOFNUN

Starfsleyfi
til þykktarmælinga á skipum

Starfsleyfið er veitt samkvæmt heimild í lögum um Siglingastofnun Íslands, nr. 6/1996, lögum nr. 47/2003 um eftirlit með skipum og rg. nr. 94/2004 um starfshætti faggiltra skoðunarstofa skipa og búnaðar.

Nafn:	Heimili:	Sveitarfélag:	Kt.:
NDT ehf.	**Aðalstræti 67**	**600 Akureyri**	**450111-0310**
- Gísli Arnar Guðmundsson	Aðalstræti 6.	600 Akureyri	251172-4639

Með starfsleyfi þessu er ofanrituðum veitt heimild til að annast þykktarmælingar á skipum og bátum, skýrslugerð og innfærslu í skipaskrá vegna þeirra.

Um framkvæmd þykktarmælingar, skýrslugerðar og innfærslu í skipaskrá skal hafa samráð við starfsmenn Siglingastofnunar Íslands. Fylgja skal ákvæðum í lögum, reglugerðum og verklagsreglum um þykktarmælingar, sjá nr. 25.04.02.07.02 Þykktarmæling á skipum sem smíðuð eru úr málmi.

Gildi starfsleyfis er m.a. bundið því skilyrði að ákvæði 8. gr. rg. nr. 94/2004 um starfshætti faggiltra skoðunarstofa skipa og búnaðar séu ætíð uppfyllt.

Starfsleyfið gildir til: **28. febrúar 2018**

Fella má starfsleyfið úr gildi ef ekki er farið í einu og öllu eftir settum reglum.

F.h. Siglingastofnunar Íslands

Kópavogi	14. maí 2013	[signature]
Staður	**Dagsetning**	**Undirskrift og stimpill**

OLÍUDREIFING EHF
B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

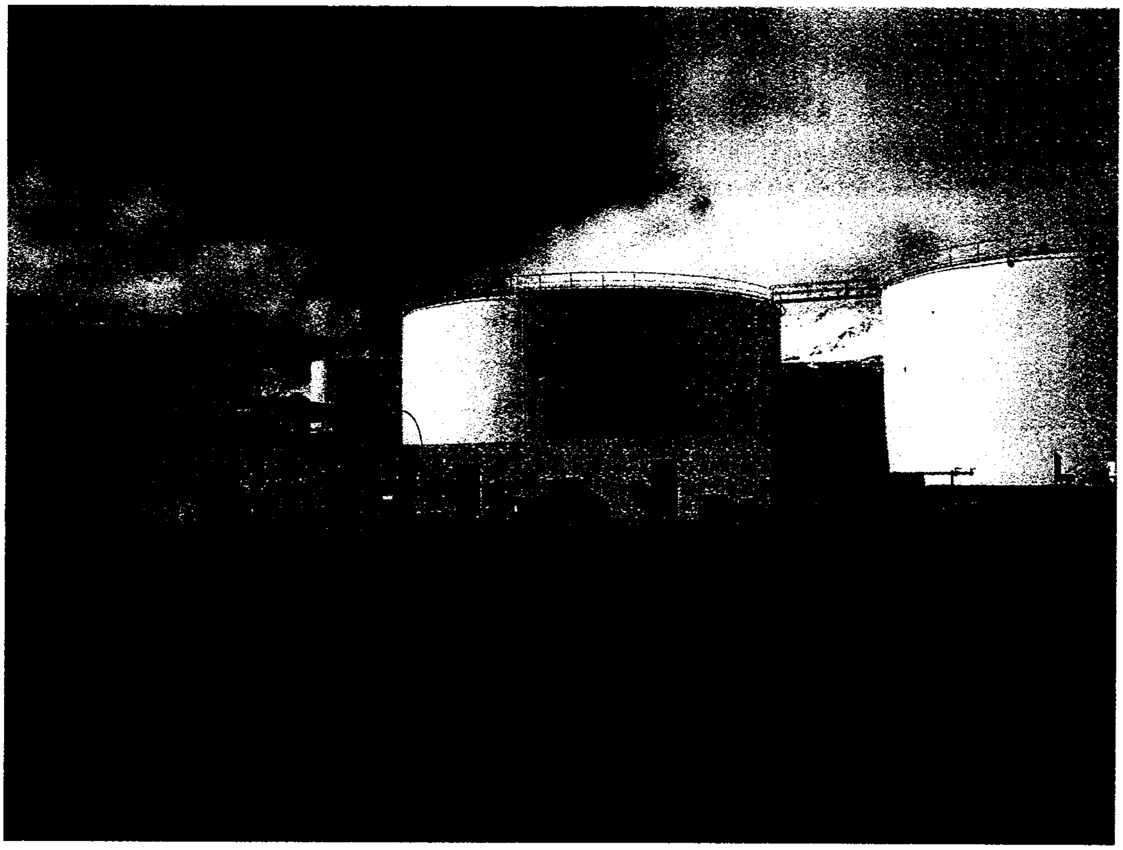
NON DESTRUCTIVE TESTINGS - ICELAND

SKÝRSLA

ÞYKKTARMÆLINGAR Á OLÍUGEYMI 5 Í KROSSANESI

ULTRASONIC THICKNESS MEASUREMENT

UTM SKÝRSLA NR. 1744



DESEMBER 2017

FASTANÚMER: T1052

MÆLINGAR FRAMKVÆMDAR , STAÐUR: AKUREYRI, KROSSANES

EIGANDANÚMER: 600.05.00

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+354 8440313

Samgöngustofa

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B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

VANDT
NON DESTRUCTIVE TESTINGS - ICELAND

Framkvæmd mælinga
Þykktarmælingu og segulsviðsskönnun framkvæmdi Robin Geyser hjá NDT ehf á Akureyri. Upplýsingar varðandi aðstæður, notkun geyma o.fl. veitti Gunnar Jónsson og Guðjón Páll Jóhannsson hjá Olíudreifingu ehf.
Framkvæmd þykktarmælinga og segulsviðskönnunar á geyminum fór fram þann 5 - 6 des 2017 Geymirinn er standandi stálgeymir og var botn hans mældur ásamt neðsta umfari.

Þykktarmælingar
Varðandi staðsetningu mælistaða og niðurstöður þykktarmælinga á geyminum er hér vísað á meðfylgjandi teikningar (1 stk.). Allar gólfplötur eru mældar á svipaðan hátt þ.e.a.s. miðast er við að hafa mælinguna i miðri plötu, aðeins var tekin einn punktur í plötu.

Segulsviðsmælingar
Gólfskanninn er kvarðaður á 6mm plötu. 8mm, 10mm, 14mm og 18mm göt eru boruð í plötuna þar til 3mm efnisþykkt er eftir. Hugbúnaðurinn er stilltur þar til götin gefa rautt/appelsínugult merki á skjá. Gólfskannanum er rennt yfir alla fleti sem hann kemst yfir. Svelgir, rör eða ójafn botn gera gólfskannanum ókleift til mælingar.

Niðurstöður
Geymir er málaður að hluta að innan. Umfar er í góðu ásigkomulagi, geymir virðist nýmálaður að utanverðu. Geymir er í slæmu ásigkomulagi að innanverðu, gólf er tært að innan og á einstaka stöðum má finna pytti sem geta náð tæplega 3mm dýpt. Gólfið hefur líklega verið sandblásið og málað fyrir þónokkru síðan, málningin er afar illa farinn víða og gólfið óslétt. Líklega hefur náðst að stöðva tæringuna að mestu að ofanverðu nema þar sem binding málningar hefur náð að rofna.
Sjá teikningar og ljósmyndir. Eigandi geymis var látin vita. Sjá meðf. niðurstöður mælingar. Öll uppgefin mál á teikningum eru í mm.

Akureyri, 13 desember 2017

Virðingarfyllst.

PCN
G. A. GUDMUNDSSON
PCN No. 307004
www.bindt.org/PCN
UT. PT & WI

Gísli Arnar Guðmundsson

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Samgöngustofa

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VANDT
NON DESTRUCTIVE TESTINGS - ICELAND

STAÐFESTING ÞYKKTARMÆLINGA OG SEGULSVIÐSSKÖNNUNAR

SKÝRSLA NR.:	**1744**
DAGS. SKÝRSLU:	**13 desember 2017**
EIGANDI GEYMIS:	**Olíudreifing ehf**
REKSTRARAÐILI:	**Olíudreifing ehf**
DAGS. FRAMKV.:	**5-6 desember 2017**
STAÐUR	**Krossanes Akureyri**
HVAÐ MÆLT:	**Geymir 5**
FASTANÚMER:	**T1052**
EIGENDANÚMER:	**600.05.00**
SMÍÐAÁR:	**1952**
MÆLIBÚNAÐUR:	**Olympus 45MG. 5 Mhz Serial nr: 130177407, skoðað og vottað þann 30.08.2016 Stilliklossar (Calibration blocks): 3mm, 6mm 9mm 12mm og 18mm. MFE MK IV Tank Floor Scanner. Serial No.MK4 0016-A-TFS**
FRAMKV. MÆLINGA:	**Robin Geyser**
SKÍRTEINI (CERTIFICATE):	**Ultrasonic Inspection – Level II PCN Cert no: E013S3329037 (UT, PA,TOFD) 10/07/2013-09/07/2018**

Hér staðfestist að framkvæmdar hafa verið þykktarmælingar og segulsviðsskönnun á ofangreindum geymi, í eigu og rekstri Olíudreifingar ehf, að ósk rekstraraðila.
Niðurstöður mælinga eru skráðar á meðfylgjandi blaðsíður (teikningar) og eru öll mál í mm. Alls eru þar skráðar 97 niðurstöður.
Þykktarmælir, gólfskanni og nemar tengdir búnaðinum voru sannreyndir og prófaðir með mælingum á stilliklossum fyrir, á meðan og að loknum mælingum.

Skoðað/dags./af: 13/12/2017

PCN
G. A. GUDMUNDSSON
PCN No. 307004
www.bindt.org/PCN
UT. PT & WI
G.A. Gudm

Samþykkt/dags./af:

16. janúar 2018

UMHVERFISSTOFNUN
Mengunarvarnaeftirlit

Samgöngustofa

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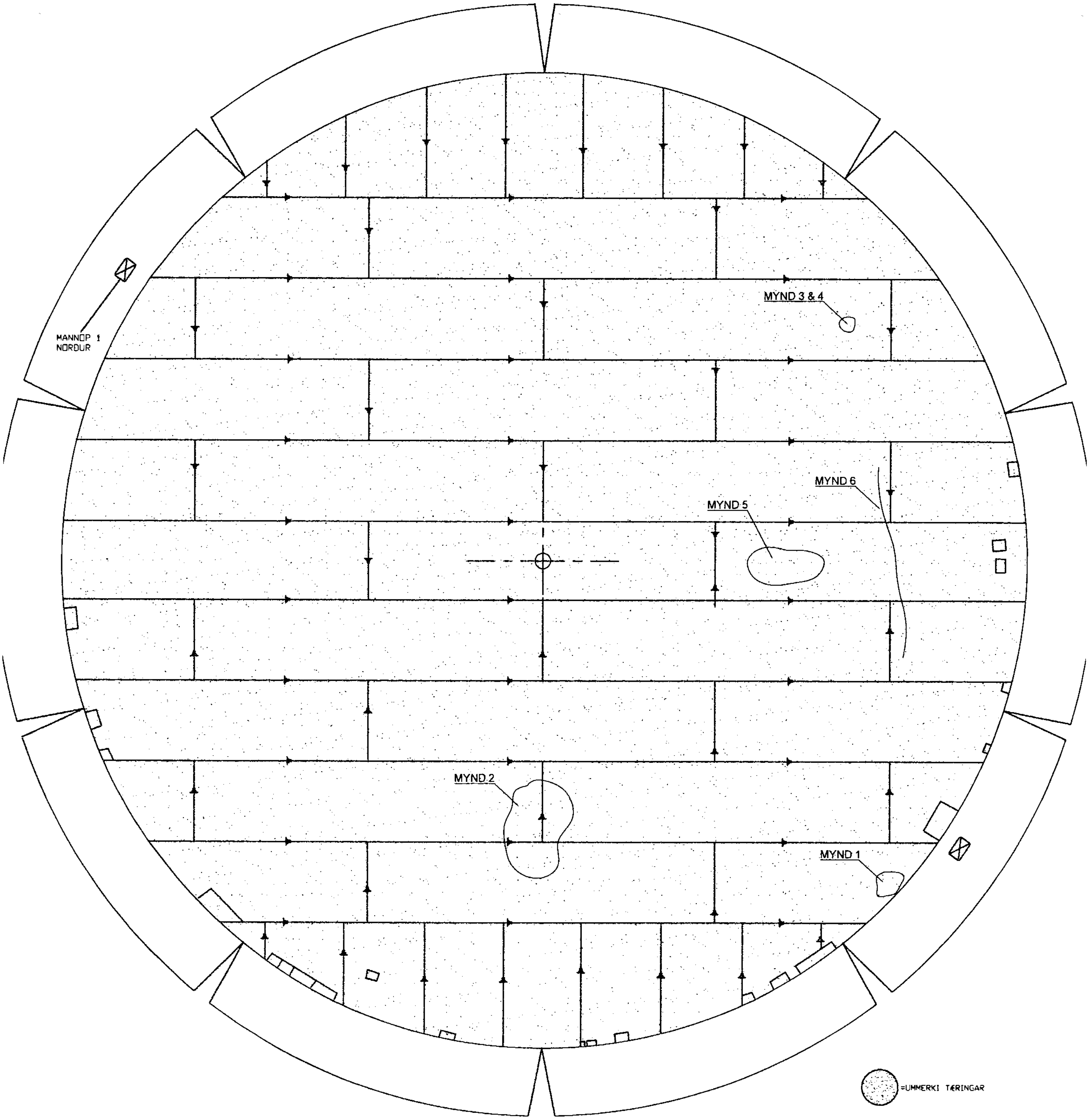
ndt@internet.is
+354 8440313

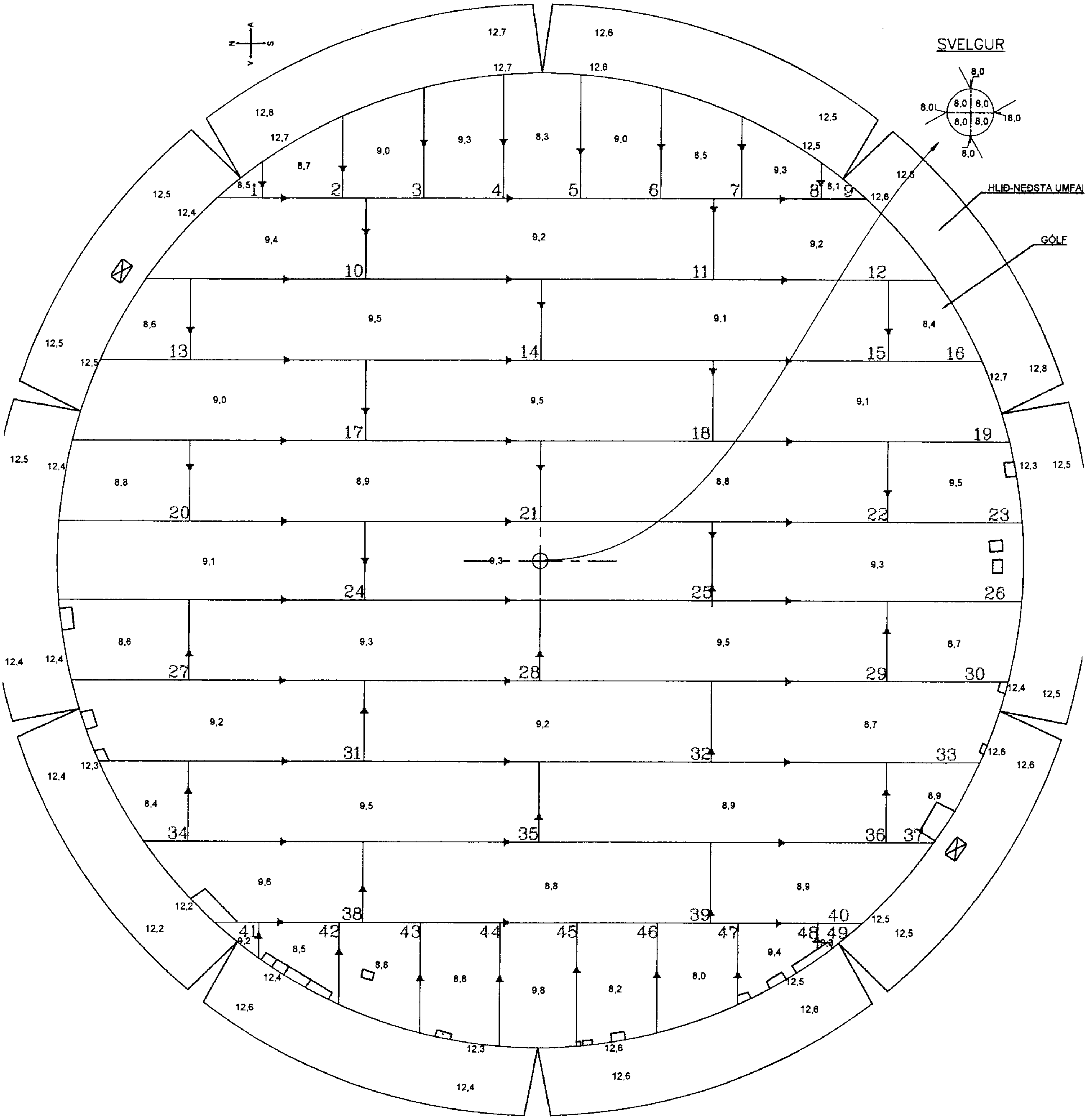
STAÐSETNING MYNDA Í SKÝRSLU.



VANDT NON DESTRUCTIVE TESTINGS - ICELAND ÞYKKTARMÆLING SKIPA SPRUNGULEIT Á STÁLI HLJÓÐBYLGJUPRÓFUN SEGULAGNAPRÓFUN LITAPRÓFUN	ÞYKKTARMÆLINGAR (UTM) REKSTRARAÐILI: OLÍUDREIFING EHF TILVÍSUN OKKAR: 1744/RB MÆLINGAR FRAMKV. 5-12-2017 STAÐUR: AKUREYRI KROSSANES HLUTUR MÆLDUR: GEYMIR NR. 5 FASTANÚMER: T1052

TEIKNING ER EKKI Í MÆLIKVARÐA

ÞYKKTARMÆLING



VANDT NON DESTRUCTIVE TESTINGS - ICELAND ÞYKKTARMÆLING SKIPA SPRUNGULEIT Á STÁLI HLJÓÐBYLGJUPRÓFUN SEGULAGNAPRÓFUN LITAPRÓFUN	ÞYKKTARMÆLINGAR (UTM) REKSTRARAÐILI: OLÍUDREIFING EHF TILVÍSUN OKKAR: 1744/RB MÆLINGAR FRAMKV. 5-12-2017 STAÐUR: AKUREYRI KROSSANES HLUTUR MÆLDUR: GEYMIR NR. 5 FASTANÚMER: T1052

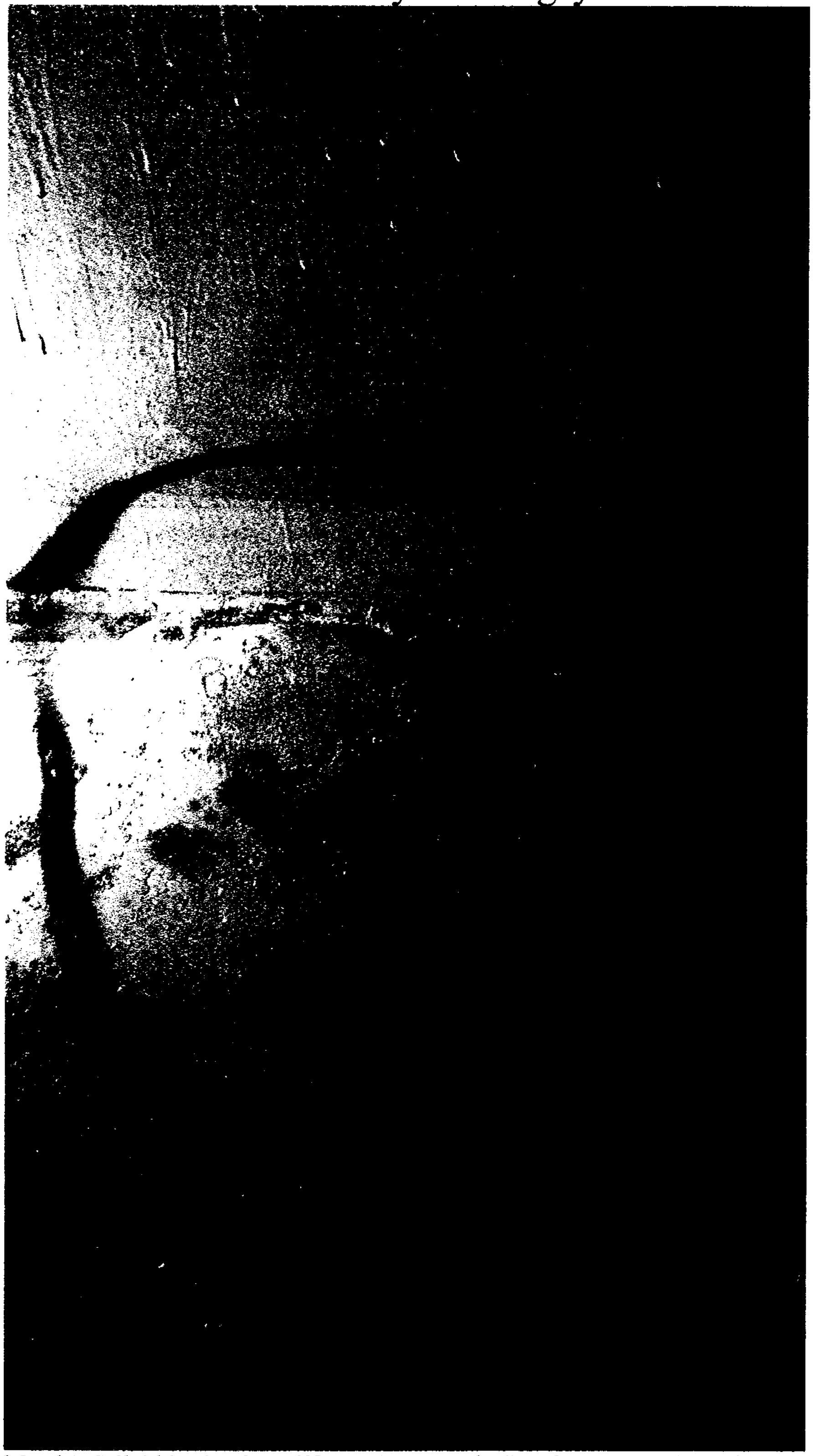
UPPRUNALEG ÞYKKT Á GÓLFI: 10,0 MM
MINNSTA ÞYKKT Á GÓLFI: 8,0 MM
MINNSTA ÞYKKT Í FYRSTU PLÖTURÖÐ: 12,2 MM

TEIKNING ER EKKI Í MÆLIKVARÐA

OLÍUDREIFING EHF
B/T.: GUNNAR JÓNSSON
HÓLMASLÓÐ 8-10 101
REYKJAVÍK

NON DESTRUCTIVE TESTINGS - ICELAND

Myndir frá geymi 5



Mynd 1. Stálvirki mótar hér gólf geymis. 34mm hæðarmismunur er við umfarið og þar sem bitinn endar.

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ndt@internet.is
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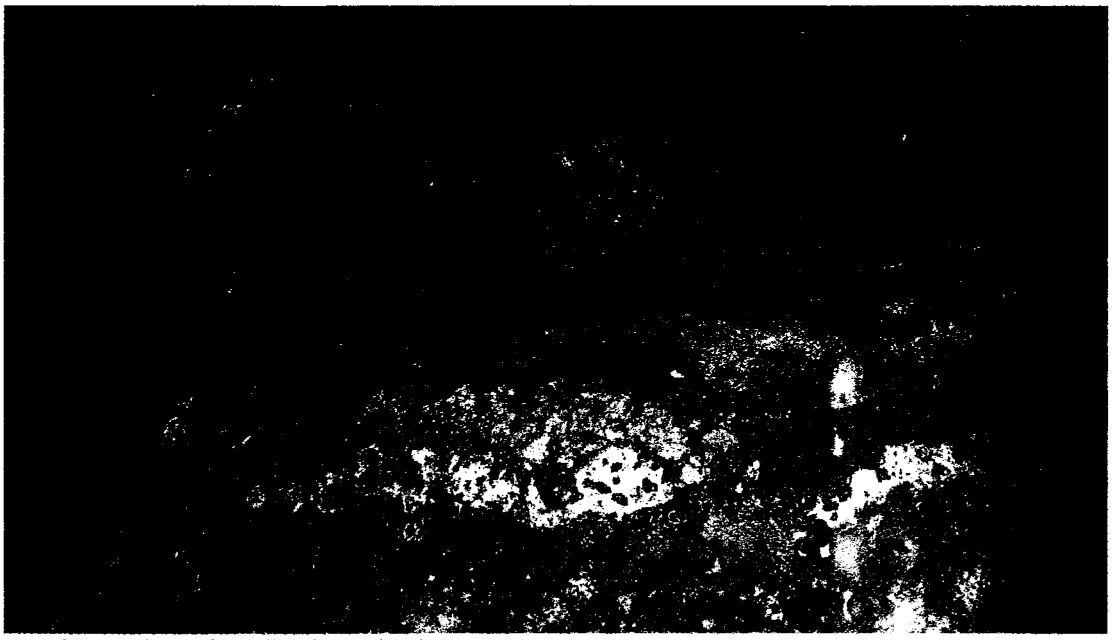
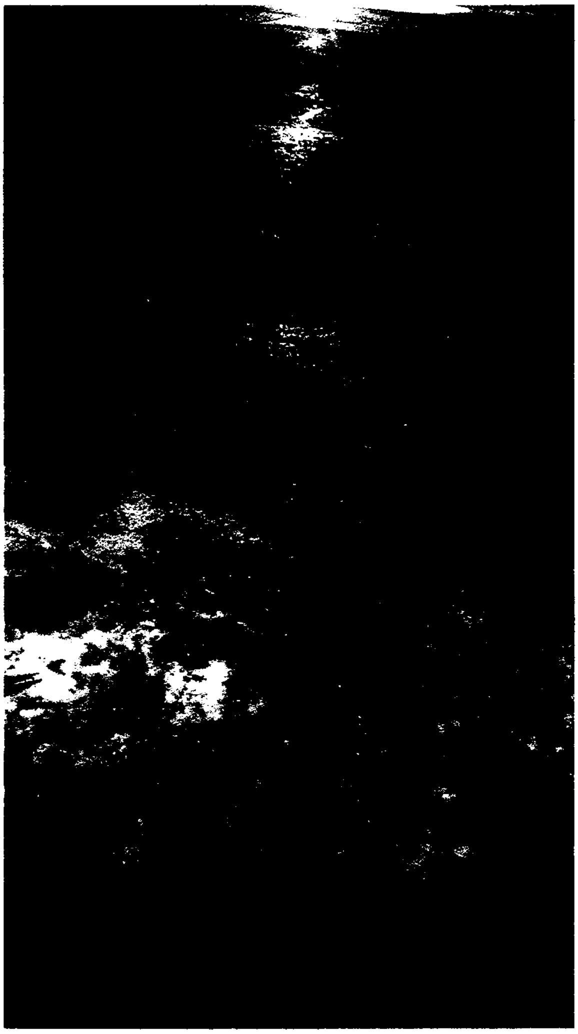
Samgöngustofa

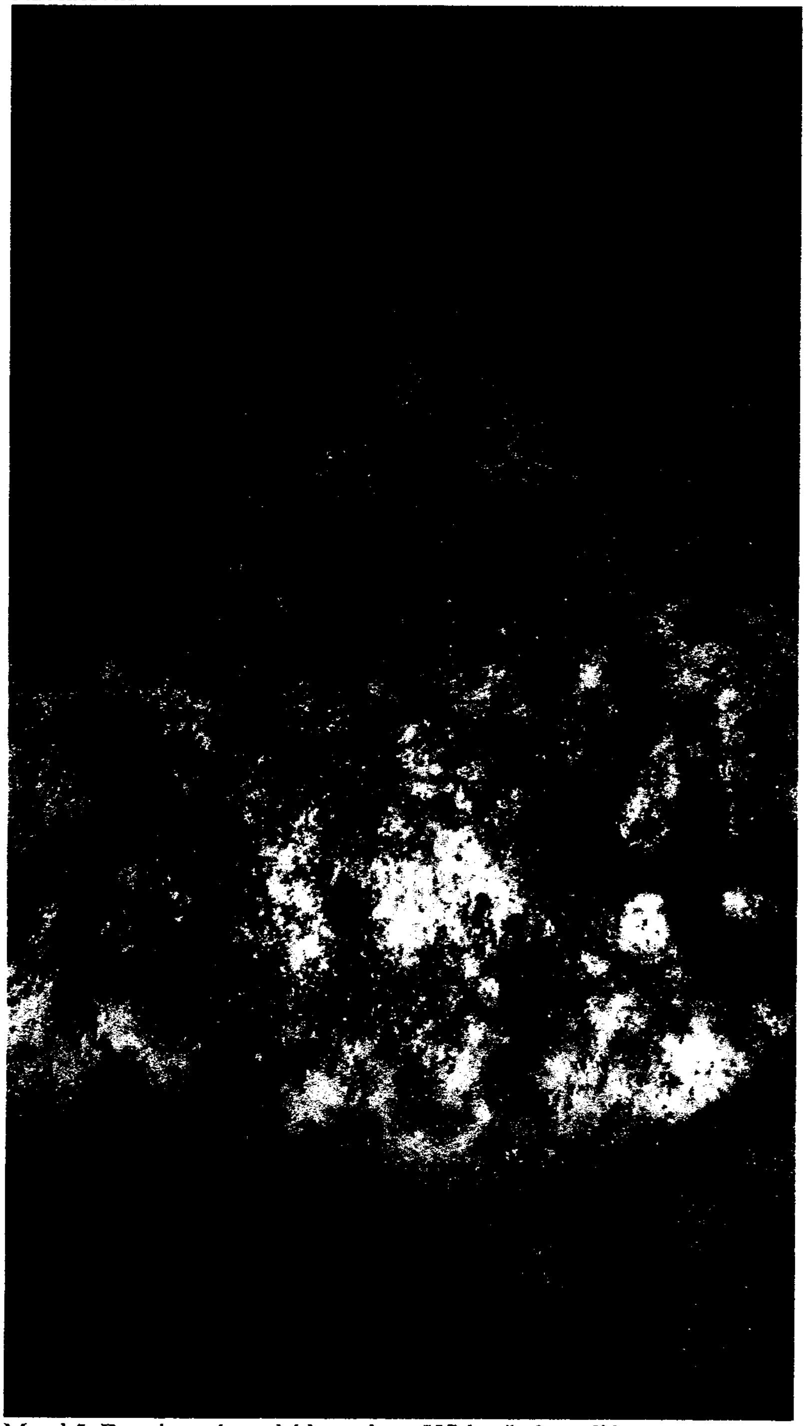
Mynd 2. Stálvirki undir botnplötum mótar víða botn geymis.



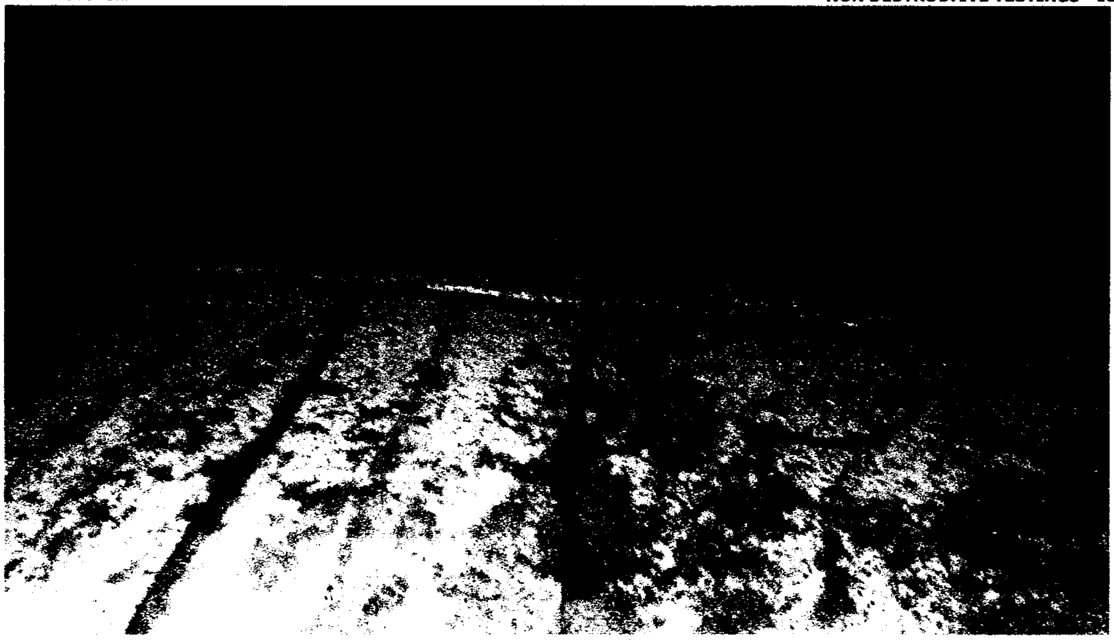
Mynd 3. Tæring útfrá suðu platta (baula)



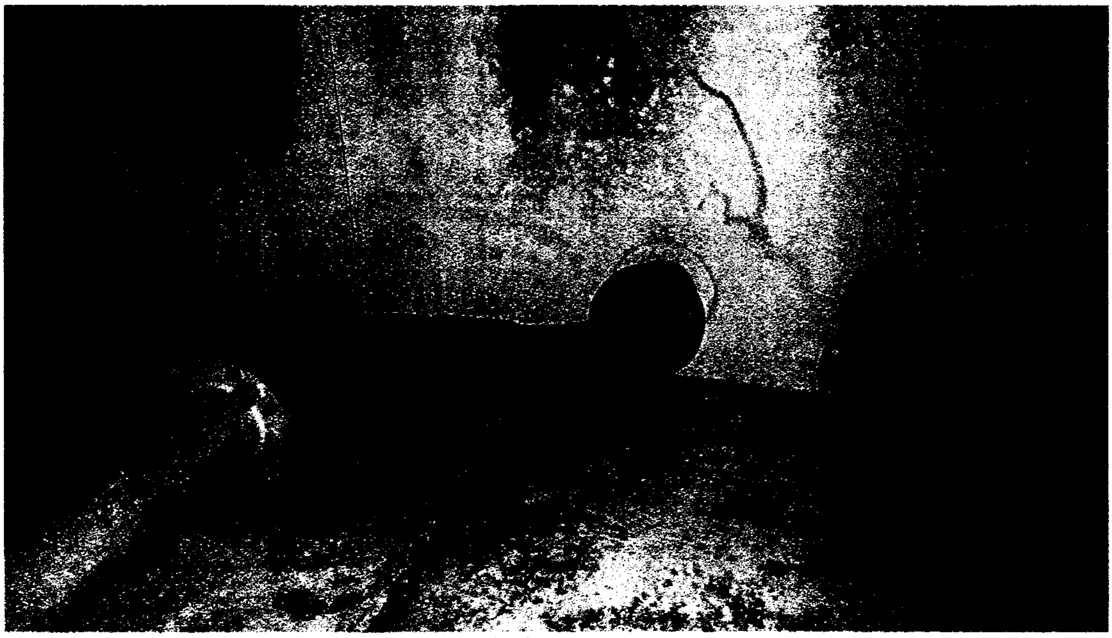
Mynd 4. Tæring við platta (Baulu)



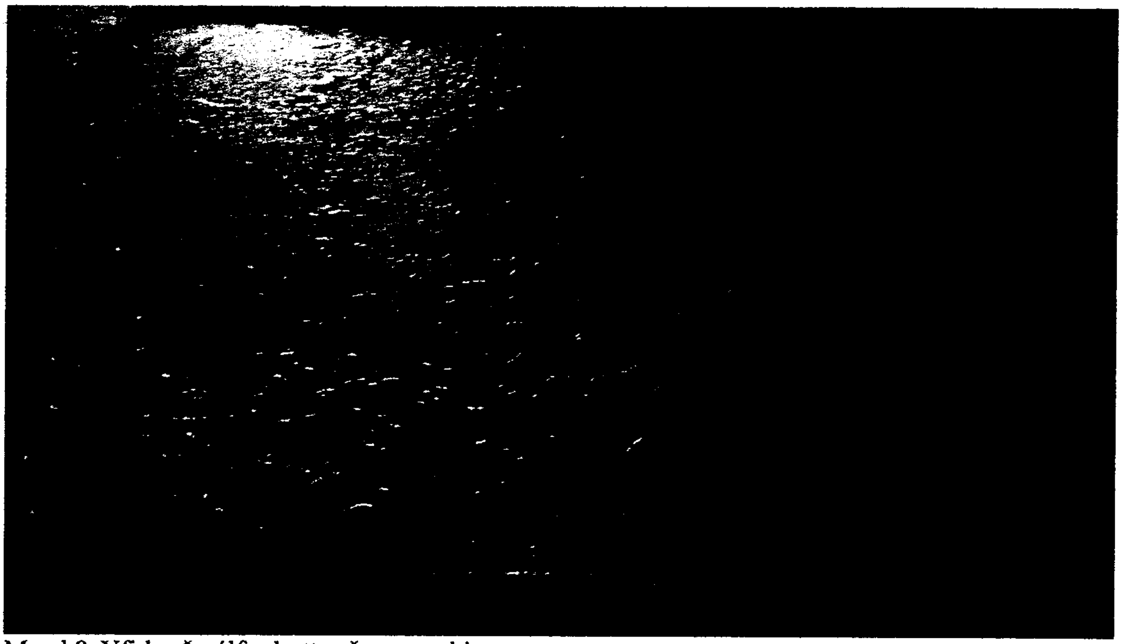
Mynd 5. Dæmigert ástand á botnplötu. Yfirborð alsett djúpum pyttum. Málning í slæmu ástandi en þó ver hann ennþá að stórum hluta fyrir frekari tæringu að ofanverðu.



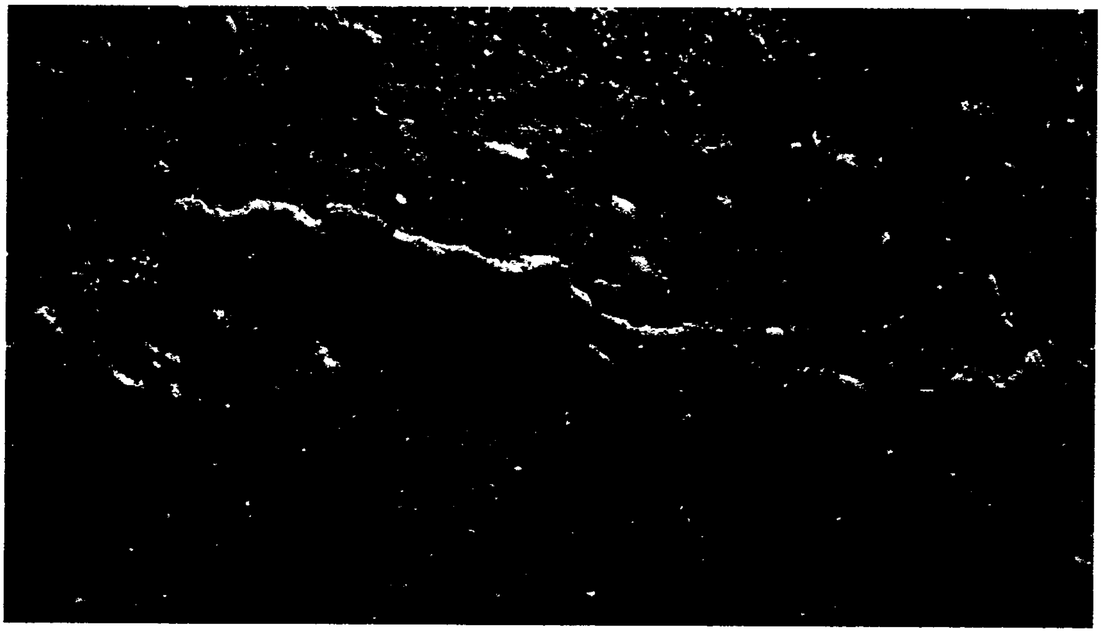
Mynd 6. Stálvirki undir botnplötum mótar víða botn geymis.



Mynd 7. Neðsta umfarið var í góðu ásigkomulagi.



Mynd 8. Yfirborð gólfs alsett suðuummerkjum.

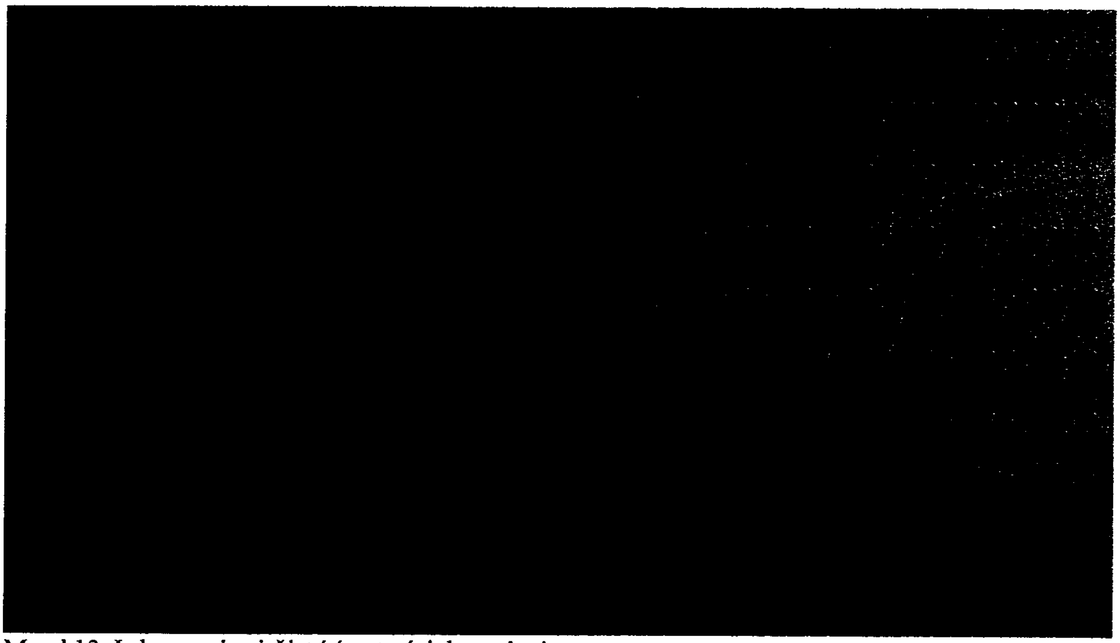


Mynd 9. Yfirborð gólfs alsett suðuummerkjum.

Mynd 10. Dæmigert ástand gólfs.

Mynd 11. Gólf geymis er afar óslétt.

Mynd 12. Gólf geymis er afar óslétt.



Mynd 13. Þak geymis virðist í ágætu ásigkomulagi.

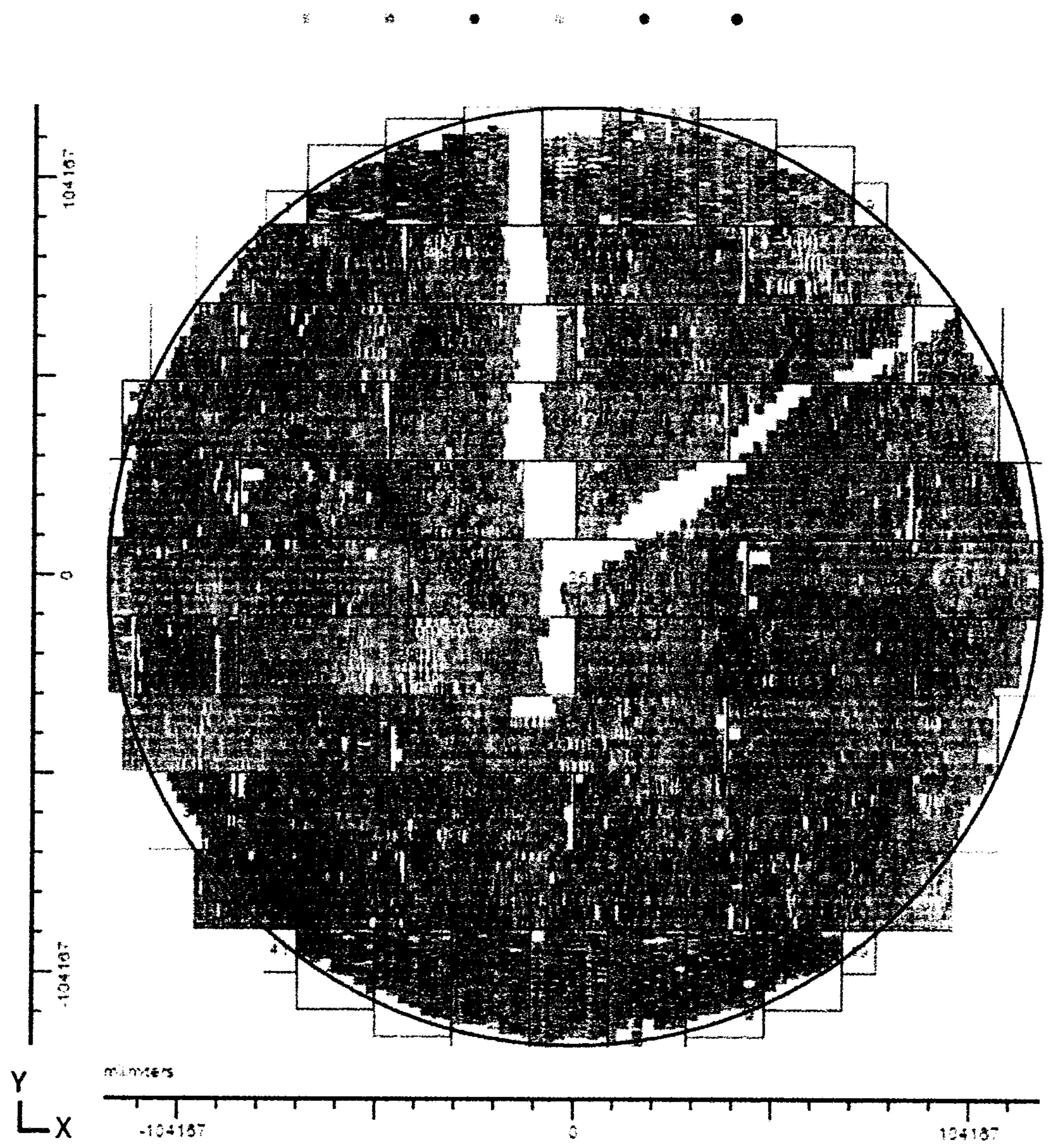
MFE Scan Survey Report

Skýrsla nr: TM – 1744 – T1052 – 5 - 2017

Umsjónaraðili:	Olíudreifing ehf	**Dags.skoðanna**:	6 Dec 2017
Unnið af:	Gísli Arnar Guðmundsson/Robin Geyser	**Dags.skýrslu**:	6 Dec 2017
Fyrirtæki:	NDT ehf	**Umbeðið af**:	Gunnar Jónsson

ENTERPRISES INCORPORATED

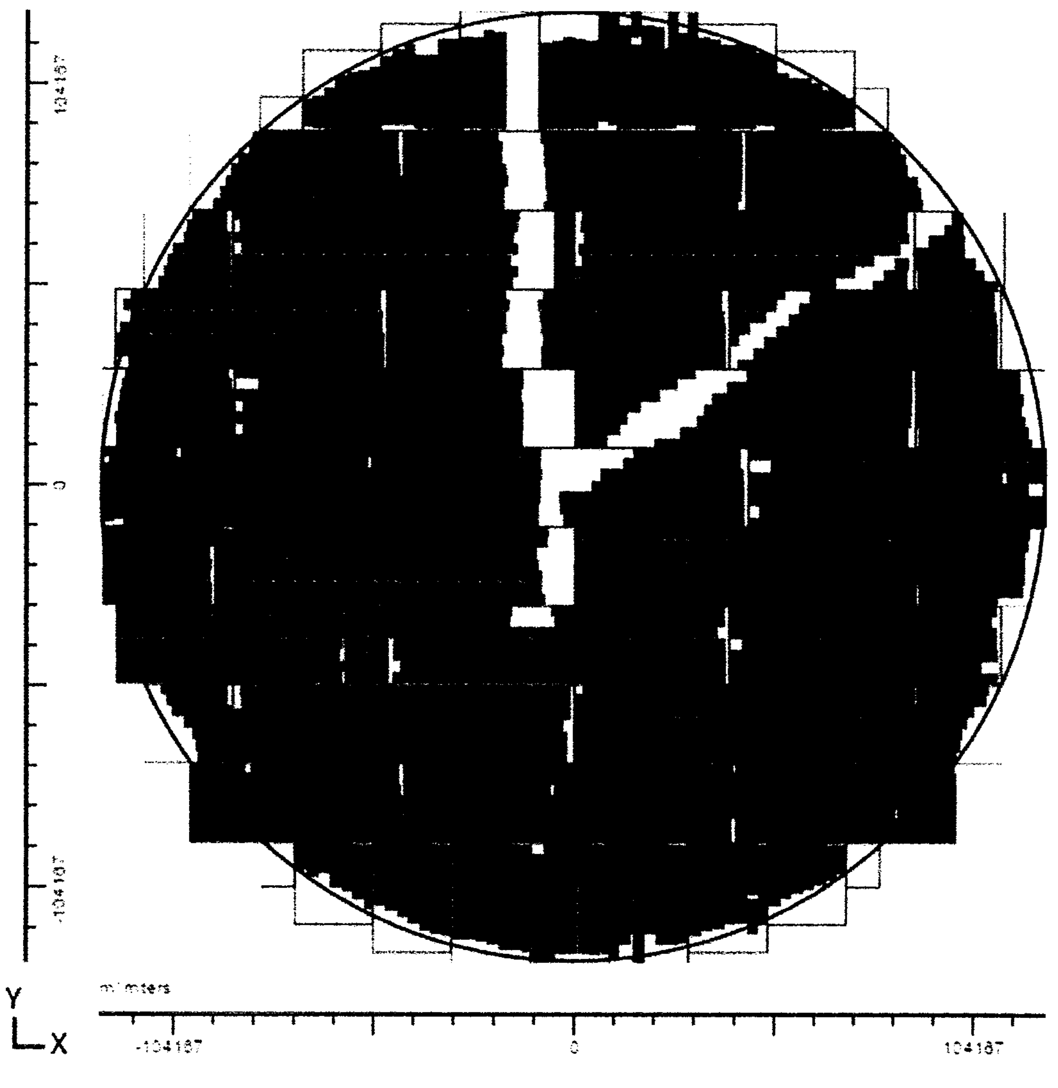
Tank Overview



ENTERPRISES INCORPORATED

VANDT

Track Coverage Overview



12/08/17

MFE Enterprises, Inc.

THIS CERTIFIES THAT

Gisli Gudmundsson

HAS SUCCESSFULLY COMPLETED 40 HOURS OF TRAINING AND PASSED THE STANDARDS
PER API 653 ANNEX G AND SNT TC-1A

Scanner Equipment	MFL Mat[illegible]	Mapping
Plate Thickness (t)		[illegible] Inch
Coating Thickness (tc)		[illegible] Inch
[illegible] Found		
[illegible]		[illegible] Passed
[illegible]		[illegible] Passed
[illegible]		[illegible] Passed
General [illegible]		[illegible] Passed

Critical Equipment [illegible] Function Test Ch[illegible]	Per Ma[illegible] Per Manufacturer
Hours of MFL [illegible]	40
Final Written Test [illegible]	92%
Final Result	Passed

DYLAN DUKE, DIRECTOR OF TRAINING

BILL DUKE, PRESIDENT

LAVENDER

INTERNATIONAL NDT TRAINING SCHOOL

Tel: (44) (0) 1226 765769 Fax: (44) (0) 1226 760707 E-mail: nicola@lavender-ndt.com

FOR VERIFICATION, PLEASE CONTACT THE ABOVE

INVESTOR IN PEOPLE

Certificate of Training

This is to certify that GISLI GUOMUNDSSON

of SELF SPONSORED

has completed a course of training in: ULTRASONIC INSPECTION - WELDS – LEVEL 2

To the syllabus outlined in the document: PCN GEN ISS 6 2010

Date: 12.03 – 03.4.2012 Hours: 120

B SCOTT

For Lavender International NDT Consultancy Services Ltd. No. 52140

This course is accredited by the British Institute of NDT

SIGLINGASTOFNUN

Starfsleyfi
til þykktarmælinga á skipum

Starfsleyfið er veitt samkvæmt heimild í lögum um Siglingastofnun Íslands, nr. 6/1996, lögum nr. 47/2003 um eftirlit með skipum og rg. nr. 94/2004 um starfshætti faggiltra skoðunarstofa skipa og búnaðar.

Nafn:	Heimili:	Sveitarfélag:	Kt.:
NDT ehf.	**Aðalstræti 67**	**600 Akureyri**	**450111-0310**
- Gísli Arnar Guðmundsson	Aðalstræti 6.	600 Akureyri	251172-4639

Með starfsleyfi þessu er ofanrituðum veitt heimild til að annast þykktarmælingar á skipum og bátum, skýrslugerð og innfærslu í skipaskrá vegna þeirra.

Um framkvæmd þykktarmælingar, skýrslugerðar og innfærslu í skipaskrá skal hafa samráð við starfsmenn Siglingastofnunar Íslands. Fylgja skal ákvæðum í lögum, reglugerðum og verklagsreglum um þykktarmælingar, sjá nr. 25.04.02.07.02 Þykktarmæling á skipum sem smíðuð eru úr málmi.

Gildi starfsleyfis er m.a. bundið því skilyrði að ákvæði 8. gr. rg. nr. 94/2004 um starfshætti faggiltra skoðunarstofa skipa og búnaðar séu ætíð uppfyllt.

Starfsleyfið gildir til: **28. febrúar 2018**

Fella má starfsleyfið úr gildi ef ekki er farið í einu og öllu eftir settum reglum.

F.h. Siglingastofnunar Íslands

Kópavogi	14. maí 2013	
Staður	**Dagsetning**	**Undirskrift og stimpill**

Lloyd's Register

CERTIFICATE OF CALIBRATION

LR REYKJAVIK

It is hereby certified that thickness measurement gauge, OLYMPUS 45 MG, serial no. 130177407, has been calibrated, by Mr. Guðni Guðnason, using LR's Step wedge no. LR RJK 01, certified on 26. November 2001, by T. Kalland Surveyor to Lloyd's Register Aalborg.

Nominal Value (mm)	Measured Value (mm)	Tolerance (mm)
4,99	5,0	+/- 0,01
10,00	10,0	+/- 0,00
15,00	15,0	+/- 0,00
19,99	20,1	+/- 0,11

Reykjavik, 30th August 2016

Calibration made by: [signature]

Lloyd's Register EMEA
Reykjavik Office
Lloyd's Register

Witnessed by: [signature]