KAIVOS	UTM
3000 N / 0E =	90594,935 N / 58093,224 E
0 N / 0 E =	87594.995 N / 58074,946 E
3000 S / 0 E =	84595.050 N / 58056,644 E
7000 S / 0 E =	80595.124 N / 58032,246 E

20.4.90

J. Pikkupeura

A/S BIDJOVAGGE GRUBER
BRYTING ,ALTERNATIV # 4   5.7.1989, H.Alaniska
1989

	JUNI			JULI			AUGUST			SEPTEMBER		
brudd	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	8000	0.24	6.00	5000	0.30	5.00	0			0	0.24	6.00
e1	2000	0.80	5.00	0	0.00	0.00	0			0	0.80	5.00
e2	5000	1.00	4.00	5000	1.30	4.20	15000	1.30	4.20	15000	1.30	4.20
i	10000	2.60	1.40	15000	1.60	2.30	5000	1.60	2.30	0		
i1	0	0.00	0.00	0	0.00	0.00	5000	0.80	2.80	10000	0.80	2.80
c1	0	0.00	0.00	0	0.00	0.00	5000	3.00	1.20	5000	3.00	1.20
H	3000	1.20	1.30	3000	1.20	1.30	0			0		
ZZ	0		0.00	0		0.00	0			0		
YY	0		0.00	0		0.00	0			0		
	28000	1.38	3.43	28000	1.27	3.01	30000	1.55	3.15	30000	1.42	3.23

	OKTOBER			NOVEMBER			DESEMBER					
brudd	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	0			0			0			0		0.00
e1	0			0			0			0		0.00
e2	0			0			0			0		0.00
i	0			0			0			0		0.00
i1	19000	0.80	2.80	5000	0.80	2.80	0			0		0.00
c1	5000	3.00	1.20	15000	3.00	1.20	10000	3.00	1.20	0		0.00
c2	0			5000	3.00	1.20	12000	3.00	1.20	0		0.00
GRENSEMALM	6000	0.80	1.20	5000	0.80	1.20	3000	0.80	1.20	0		0.00
YY	0			0			0			0		0.00
	30000	1.17	2.21	30000	2.27	1.47	25000	2.74	1.20	0	ERR	ERR

	jan 90			feb 90			mars 90					
brudd	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	0			0			0			0		0.00
e1	0			0			0			0		0.00
e2	0			0			0			0		0.00
i	0			0			0			0		0.00
i1	0			0			0			0		0.00
c1	0			0			0			0		0.00
c2	13000	3.00	1.20	10000	3.00	1.20	0			0		0.00
GRENSEMALM	17000	0.80	1.20	20000	0.80	1.20	30000	0.80	1.20	0		0.00
YY	0			0			0			0		0.00
	30000	1.75	1.20	30000	1.53	1.20	30000	0.80	1.20	0	ERR	ERR

A/S BIDJOVAGGE GRUBER

⑮

BRYTING 6...12.MANED,1989	CU 17 UTVIN. CU 95%
1...03.MANED,1990	Au 83 Au 80%
05.7.1989,H.Alapiska	

alternativ 4 med grensemalm og C1 og C2 strossen

maned		malm tn	cu	au	KONSENTRAT tn	cu (tn)	au(kg)	CU I KONS.	VERDE AV PROD. MKR	PROD. KOST. MKR	NETTO RESULTAT MKR
6		28000	1.36	3.43	3300	330	74	10%	8.90	7.00	1.90
7		28000	1.27	3.01	3080	310	64	10%	8.10	7.00	1.10
8		30000	1.55	3.15	3400	410	72	12%	9.70	7.00	2.70
9	grensem med	30000	1.42	3.23	3200	390	74	12%	9.50	7.00	2.50
10	6000	30000	1.17	2.21	2800	330	51	12%	6.20	5.00	1.20
11	5000	30000	2.27	1.47	4300	640	30	15%	6.6 7.60	6.00	1.60
12	3000	25000	2.74	1.20	4300	640	20	15%	5.8 6.80	6.00	0.80
		201000	1.66	2.55	24380	3050	385		56.80	45.00	11.80

alternativ 4 med grensemalm og C1 og C2 strossen

maned	gersem.	malm tn	cu	au	KONSENTRAT tn	cu (tn)	au(kg	CU%	VERDE AV PROD. MKR	PROD. KOST. MKR	NETTO RESULTAT MKR
1990											
1	17000	30000	1.75	1.2	3300	490	26	15	6.10	5.00	1.10
2	20000	30000	1.53	1.2	2900	430	26	15	5.70	5.00	0.70
3	30000	30000	0.8	1.2	2300	230	26	10	3.80	4.00	-0.20
		0	0.8	1.2	2300	230	26	10	3.80	4.00	-0.20
		0	0.8	1.2	0	0	0	0	0.00	0.00	0.00
		0	0.8	1.2	0	0	0	0	0.00	0.00	0.00
		0	0.8	1.2	0	0	0	0	0.00	0.00	0.00
		90000	1.38	1.20	10800	1380	104		19.40	18.00	1.40

```
A/S BIDJOVAGGE GRUBER                        I
                                             I
BRYTING  6...12.MANED,1989                   I CU 17     UTVIN.  CU 95%
         1...03.MANED,1990                   I Au 83             Au 80%
05.7.1989,H.Alaniska                         I
==========================================================================

                med grensemalm og C1 og C2 strossen
alternativ  4
-------------------------------------
                   malm                      I KONSENTRAT              CU I I
maned              tn          cu      au    I tn       cu (tn  ) au(kg) KONS.I
---------------------------------------------I ---------------------------------I
                                             I                                  I
      6                 28000  1.36 3.43 I      3300    330       74    10% I
                                             I                                  I
      7                 28000  1.27 3.01 I      3080    310       64    10% I
                                             I                                  I
      8                 30000  1.55 3.15 I      3400    410       72    12% I
        grensem                              I                                  I
      9 med             30000  1.42 3.23 I      3200    390       74    12% I
                                             I                                  I
     10       6000      30000  1.17 2.21 I      2800    330       51    12% I
                                             I                                  I
     11       5000      30000  2.27 1.47 I      4300    640       30    15% I
                                             I                                  I
     12       3000      25000  2.74 1.20 I      4300    640       20    15% I
                                             I                                  I
----------------------------------------------------------------------------
                       201000  1.66 2.55 I     24380   3050      385        I
----------------------------------------------------------------------------


alternativ  4     med grensemalm og C1 og C2 strossen
-------------------------------------
                   malm                      I KONSENTRAT                  I
maned              tn          cu      au    I tn       cu (tn  ) au(kg  CU% I
---------------------------------------------I ---------------------------------I
     1990   grensem.                         I                                  I
      1     17000       30000  1.75  1.2 I      3300    490       26     15 I
                                             I                                  I
      2     25000       30000  1.53  1.2 I      2900    430       26     15 I
                                             I                                  I
      3     30000       30000   0.8  1.2 I      2300    230       26     10 I
                                             I                                  I
                            0  ~~0.8  1.2 I      2300    230       26     10~~ I
                                             I                                  I
                            0   0.8  1.2 I         0      0        0      0 I
                                             I                                  I
                            0   0.8  1.2 I         0      0        0      0 I
                                             I                                  I
                            0   0.8  1.2 I         0      0        0      0 I
                                             I                                  I
----------------------------------------------------------------------------
                        90000  1.36 1.20 I     10800   1380      104        I
----------------------------------------------------------------------------
```

LEVERING

tn	cu
3080	310
3400	410
3200	390
2800	330
4300	640
16780	1260 tn

4300	640
3300	490
2900	430
2300	230
12800	1790

A/S BIDJOVAGGE GRUBER

BRYTING 6...12.MANED,1989 I CU 17 UTVIN. CU 92%
I Au 83 Au 78%

20.6.1989,H,Alaniska

alternativ 1 (uten grensemalm)

maned	malm tn	cu	au	KONSENTRAT tn	cu (tn)	au(kg)	CU I KONS.	VERDE AV PROD. MKR	PROD. KOST. MKR	NETTO RESULTAT MKR
6	28000	1.36	3.43	3300	330	74	10%	8.90	7.00	1.90
7	28000	1.27	3.01	3080	310	64	10%	8.10	7.00	1.10
8	30000	1.55	3.15	3400	410	72	12%	9.70	7.00	2.70
9	30000	1.42	3.23	3200	390	74	12%	9.50	7.00	2.50
10	24000	1.26	2.47	2300	270	46	12%	6.20	5.00	1.20
11	20000	2.45	1.60	3000	450	23	15%	6.30	5.00	1.30
12	15000	3.00	1.20	2700	410	13	15%	5.10	5.00	0.10
	175000	1.64	2.75	20980	2570	386		53.80	43.00	10.80

alternativ 2 (med grensemalm)

maned		malm tn	cu	au	KONSENTRAT tn	cu (tn)	au(kg	CU%	VERDE AV PROD. MKR	PROD. KOST. MKR	NETTO RESULTAT MKR
6		28000	1.36	3.43	3300	330	74	10%	8.90	7.00	1.90
7		28000	1.27	3.01	3080	310	64	10%	8.10	7.00	1.10
8		30000	1.55	3.15	3450	410	72	12%	9.70	7.00	2.70
9	(innmh. grensem)	30000	1.42	3.23	3200	390	74	12%	9.50	7.00	2.50
10	5000	29000	1.18	2.25	2600	310	50	12%	7.00	5.70	1.30
11	1000	30000	1.90	1.47	3400	510	34	15%	7.70	6.00	1.70
12	1000	25000	2.12	1.20	3250	480	23	15%	6.30	6.00	0.30
		200000	1.53	2.56	22280	2740	391		57.20	45.70	11.50
13	30000		0.8	1.2	1450	220	27		4	????	XXX

A) BODE ALTERNATIV 1 OG 2 ER CI -STROSS MED I DESSE TABELLER
B) DEN TRETTENDE MÅNED INNEHOLLER BARE GRENSEMALM

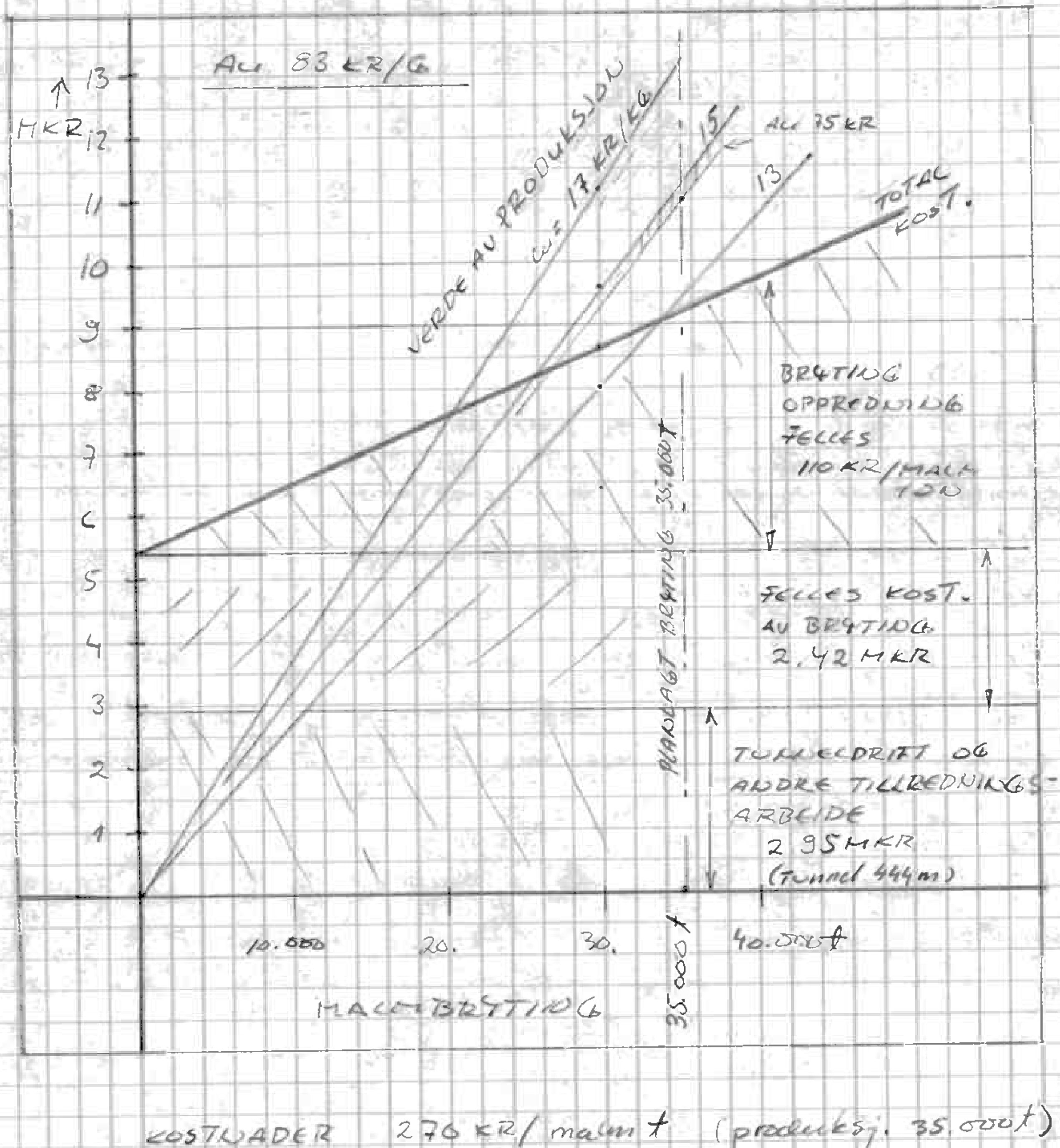
A/S BIDJOVAGG GRUBER
C-FOREKOMST, C1-STROSS

20.6.1989
H. Alaniska

BRYTING MELLOM NIVÅER 612-636

MALM Cu = 3,6 % (inneholde: 10% gråb. innbl.
Au = 1,2 g/t 10% malmtap.)

~35.000 t



KOSTNADER 276 KR/ malm t (produksj. 35.000 t)

A/B BIDJOVAGGE GRUBER
BRYTING ,ALTRENATIV 1 20.6.1989, H.Alaniska
1989

brudd	JUNI			JULI			AUGUST			SEPTEMBER		
	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	8000	0.24	6.00	5000	0.30	5.00	0			0	0.24	6.00
e1	2000	0.80	5.00	0	0.00	0.00	0			0	0.80	5.00
e2	5000	1.00	4.00	5000	1.30	4.20	15000	1.30	4.20	15000	1.30	4.20
i	10000	2.60	1.40	15000	1.60	2.30	5000	1.60	2.30	0		
i1	0	0.00	0.00	0	0.00	0.00	5000	0.80	2.80	10000	0.80	2.80
c1	0	0.00	0.00	0	0.00	0.00	5000	3.00	1.20	5000	3.00	1.20
H	3000	1.20	1.30	3000	1.20	1.30	0			0		
ZI	0		0.00	0		0.00	0			0		
YY	0		0.00	0		0.00	0			0		
	28000	1.36	3.43	28000	1.27	3.01	30000	1.55	3.15	30000	1.42	3.23

brudd	OKTOBER			NOVEMBER			DESEMBER					
	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	0			0			0			0		6.00
e1	0			0			0			0		5.00
e2	0			0			0			0		4.00
I	0			0			0			0		1.40
i1	19000	0.80	2.80	5000	0.80	2.80	0			0		0.00
c1	5000	3.00	1.20	15000	3.00	1.20	15000	3.00	1.20	0		0.00
H	0			0			0			0		1.30
GRENSEMALM	0			0			0			0		0.00
YY	0			0			0			0		0.00
	24000	1.26	2.47	20000	2.45	1.60	15000	3.00	1.20	0	ERR	ERR

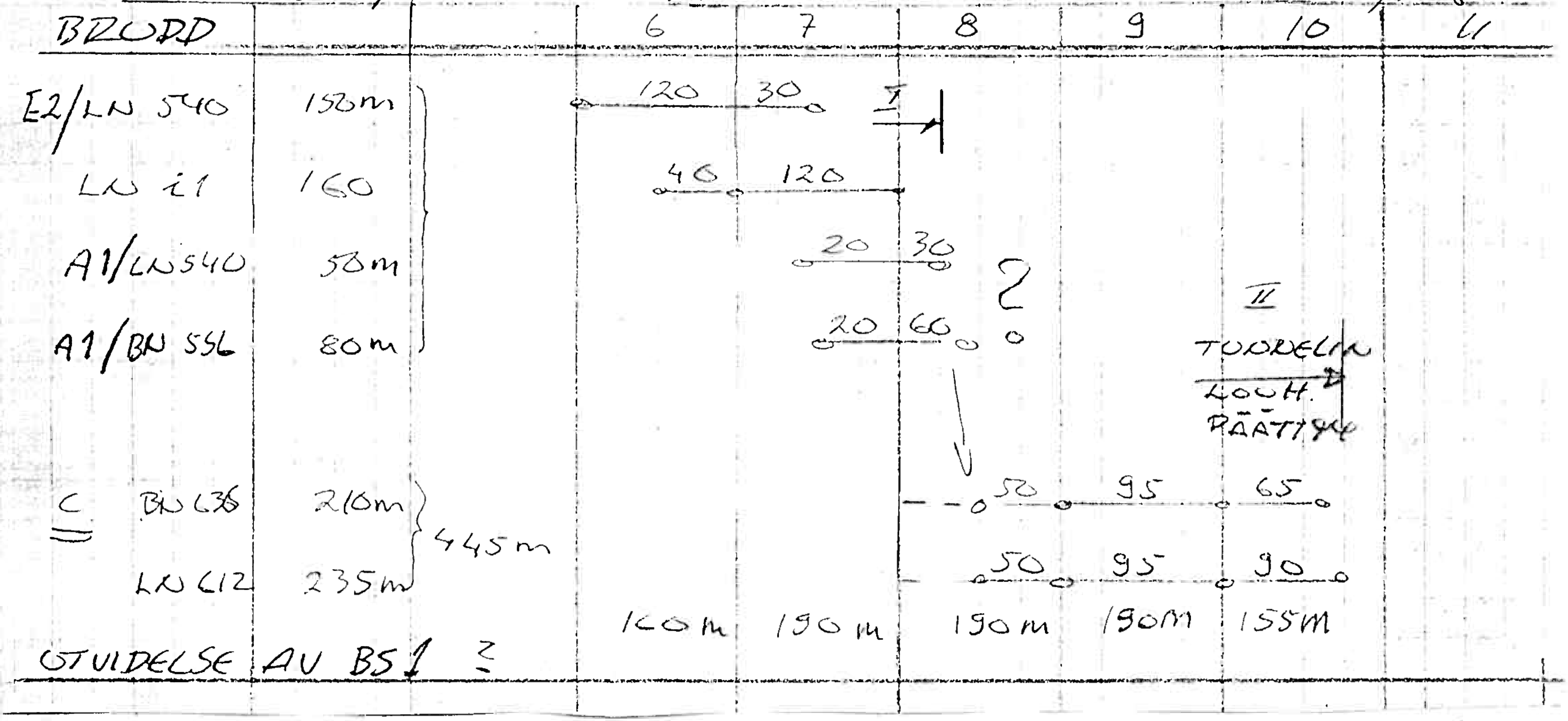
A/S BIDJOVAGGE GRUBER
BRYTING ALTERNATIV 2 20.6.1989, H.Alaniska
1989 (grensemalm)

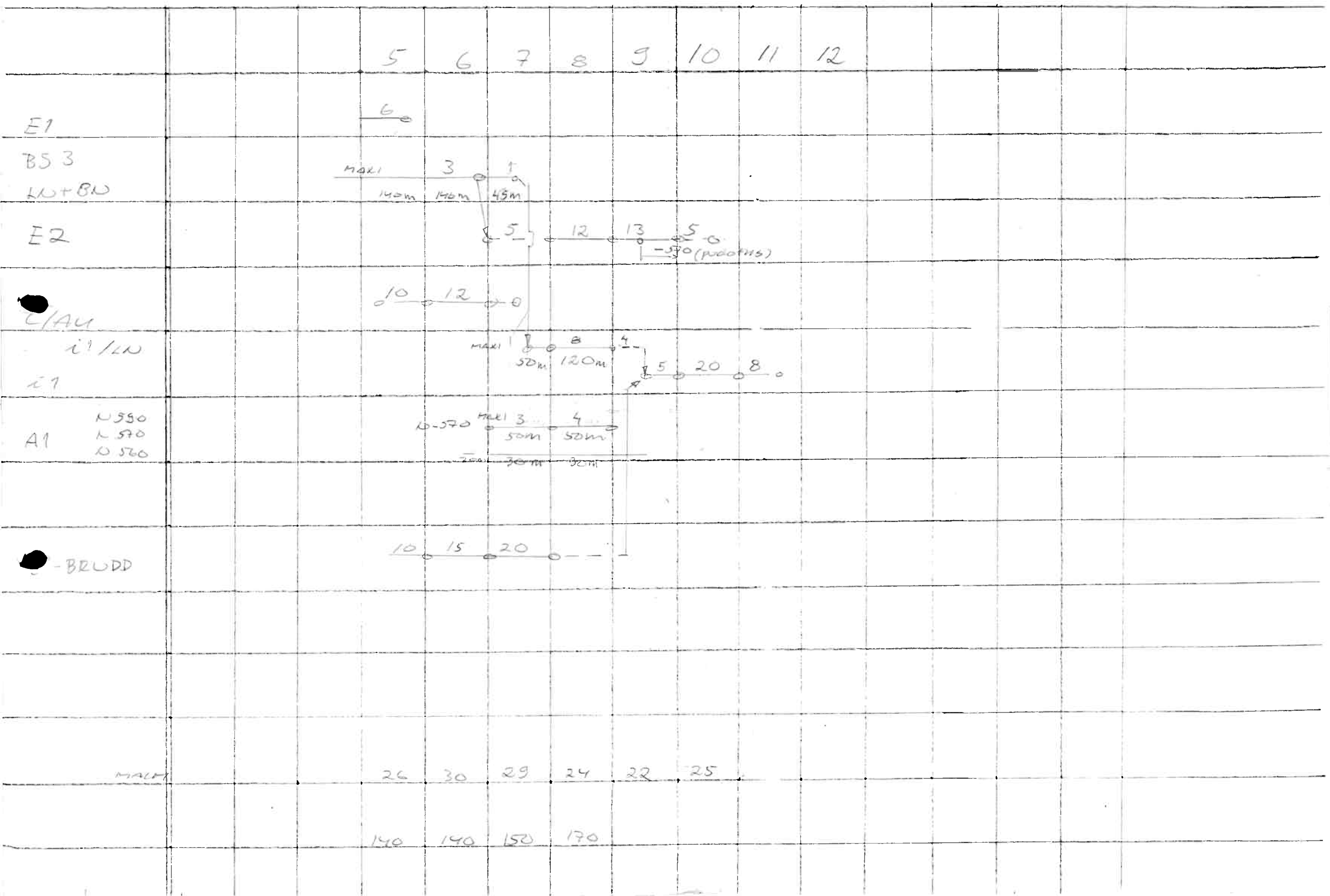
	JUNI			JULI			AUGUST			SEPTEMBER		
brudd	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	8000	0.24	6.00	5000	0.30	5.00	0			0	0.24	6.00
e1	2000	0.80	5.00	0	0.00	0.00	0			0	0.80	5.00
e2	5000	1.00	4.00	5000	1.30	4.20	15000	1.30	4.20	15000	1.30	4.20
i	10000	2.60	1.40	15000	1.60	2.30	5000	1,60	2.30	0		
i1	0	0.00	0.00	0	0.00	0.00	5000	0.80	2.80	10000	0.80	2.80
cl	0	0.00	0.00	0	0.00	0.00	5000	3.00	1.20	5000	3.00	1.20
H	3000	1.20	1.30	3000	1.20	1.30	0			0		
ZZ	0		0.00	0		0.00	0			0		
YY	0		0.00	0		0.00	0			0		
	28000	1.36	3.43	28000	1.27	3.01	30000	1.55	3.15	30000	1.42	3.23

	OKTOBER			NOVEMBER			DESEMBER			jan +xx		
brudd	TN	cu	au	TN	cu	au	TN	cu	au	TN	cu	au
cau	0			0			0					
e1	0			0			0					
e2	0			0			0					
i	0			0			0					
i1	19000	0.80	2.80	5000	0.80	2.80	0					
cl	5000	3.00	1.20	15000	3.00	1.20	15000	3.00	1.20			
H	0			0			0					
GRENSEMALM	5000	0.80	1.20	10000	0.80	1.20	10000	0.80	1.20	30000	0.80	1.20
YY	0			0			0			0		0.00
	29000	1.18	2.25	30000	1.90	1.47	25000	2.12	1.20	30000	0.80	1.20

A/S BG

TIDTABELL/TUNNELDRIFT 1989 6.89/HA




5 6 7 8 9 10 11 12
E1
6
BS 3
LN+BN
MAXI 3 1
140m 140m 45m
E2
5 12 13 5
-570 (pådoffus)
10 12
[redacted] C/AU
i¹/LN
i1
MAXI 8 4
50m 120m
5 20 8
A1
N 590
N 570
N 560
N-570
MAXI 3 4
50m 50m
20m 30m 30m
10 15 20
[redacted] -BRUDD
MALM
26 30 29 24 22 25
140 140 150 170

A/S BIDJOVAGGE

5.4.89
/HA

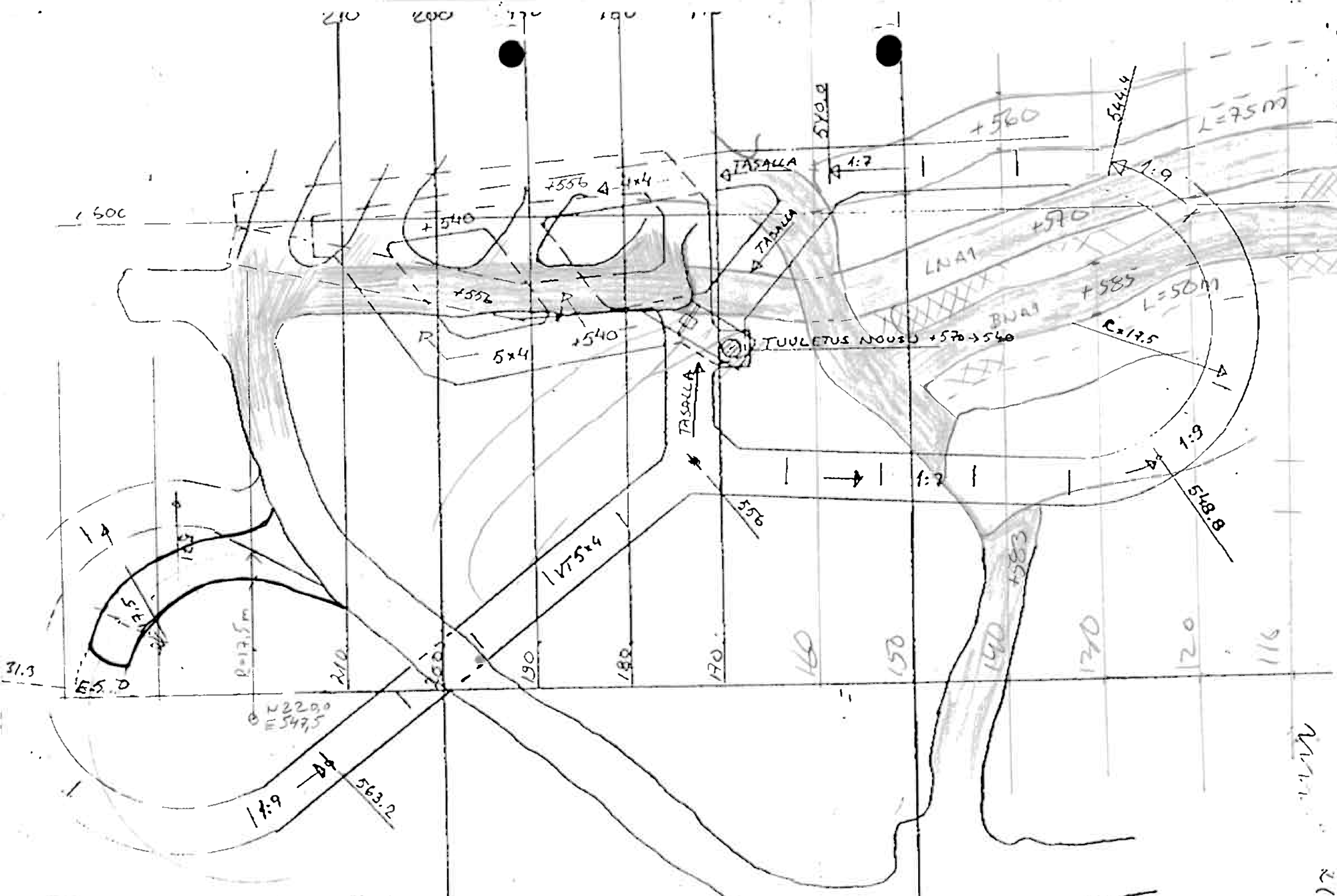
1989

(1000 t)	31.3	4	5	6	7	8	9	10	11	12	
MALM PÅ LAGER I SLUTET AV M	20	10	5	0							
MALM TIL VERKETT		30 30	30 60	30 90	30 120	30 150					
BRYTING											
MALM/GRÅB											
E1		18/0									
C/Au		2/	10	5							
i		/15	15/30	20/20	15/5						[illegible]?
E2					5	20	10				
BS2 3		/4 (100)	/5 (100)	2/3 (130)	4/1 (130)						
MALM/GRÅBERG		20/15	25/30	25/20	24						
MALM FRA LAGER TIL VERKETT		10	5	5	-						
GRENSEMALM					6						
		30	30	30	30						

F-LOUHOS POIKKILEIKKAUKSISTA LASKETUT KIINTOKUUTIOT

PROFIILI	GRÅBERG	MALM
560	166 x 10 = 1660	88 x 10 = 880
570	150 x 10 = 1500	242 x 10 = 2420
580	200 x 10 = 2000	402 x 10 = 4020
590	340 x 10 = 3400	239 x 10 = 2390
600	370 x 10 = 3700	167 x 10 = 1670
610	320 x 10 = 3200	
	YHT. 15460 m^3	YHT. 11380 m^3 SISÄLTÄÄ RAJAMALMIN

10.4.-89



YHTEENSÄ PERÄÄ 49[illegible]m
NOUSUA Ø[illegible]m 10+12m

2(8)

Malmiarvio A-arvl. pohja

N 110 – N 150, A-pohja – -570, in situ

N 110 272.5 m² = 2700 m³ × 2.85 = 7700 t
Cu 2.44 Au 1.4

N 120 210 m² = 2100 m³ × 2.85 = 5985 t
Cu 1.87 Au 1.78

N 130 310 m² = 3100 m³ × 2.85 = 8835 t
Cu 4.52 Au 1.32

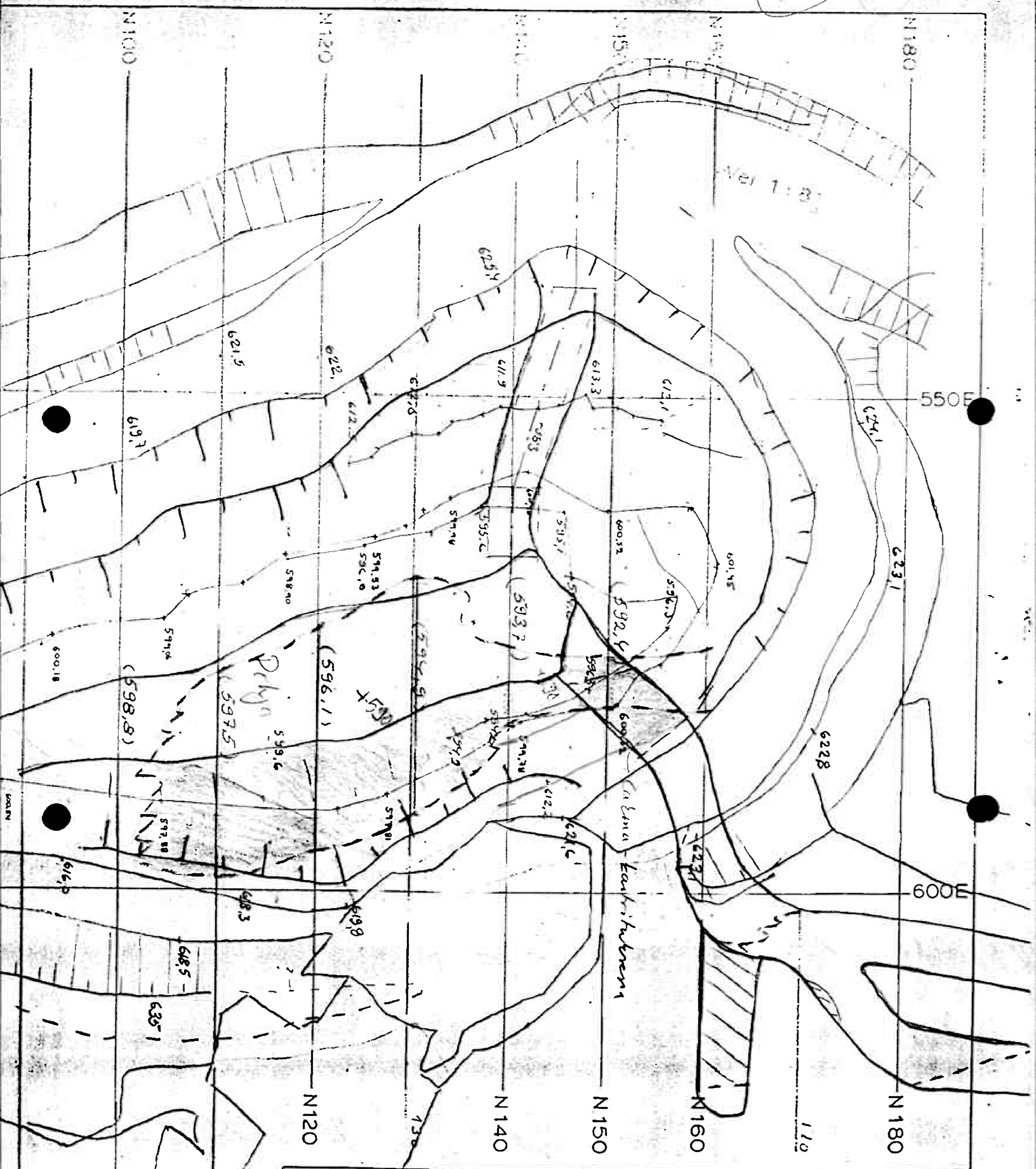
N 140 102.5 m² = 1020 m³ × 2.85 = 2907 t
Cu 2.02 Au 1.19

Cu 2.99 Au 1.44 25427 t

TUNNEL PÅ NIVÅ 570 70 m 585 60 m	130 m × 12.000 NOK =	1.560.000
LÅNGHULLBORING		200.000
15.000 t × 30		450.000
OPPREDNING 100 × 15.000		1.500.000
FELLES		500.000
		4.210.000

	m²
110	120
120	120
130	140
140	140
150	100
	620

620 × 10 × 2,8
= 17360 tn malm



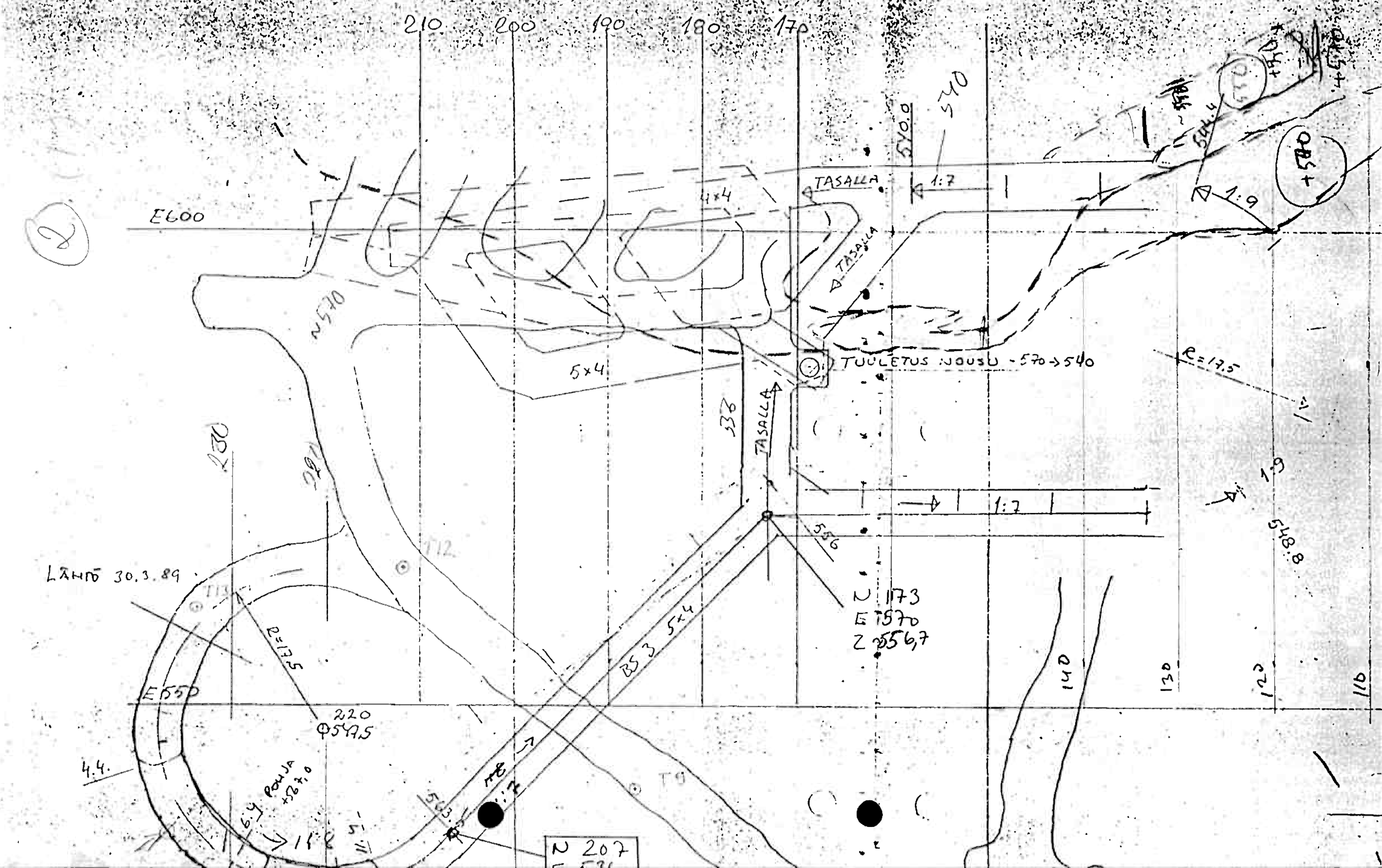
A/S BIDJOVAGGE GRUBER

DESIGNED	8. 1986 YH
APPROVED	

DRAWING TITLE

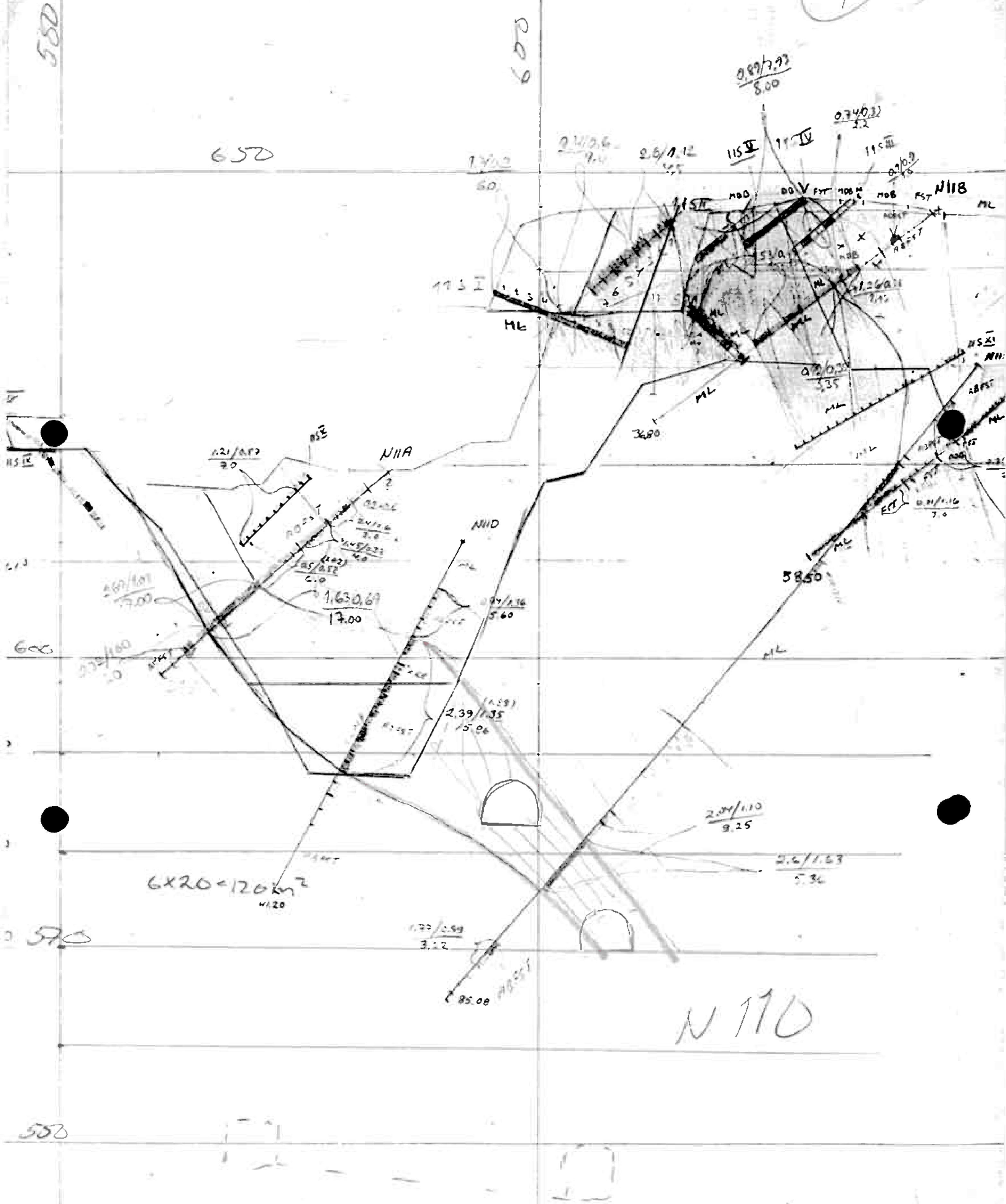
A-MALMILOUHOKSEN LAAJENNUSSUUNNITELMA II

ORIGINAL SCALE	REF DWG
1:500	DWG NO 900932-3
	ALTERED



2
210
200
190
180
170
540.0
540
TASALLA
1:7
4x4
E600
N570
TASALLA
5x4
TUULETUS NOUSU -570->540
R=17.5
336
TASALLA
1:9
+540.0
544.4
1:9
230
221
T12
1:7
556
N 173
E 1570
Z 556,7
548.8
LÄHTÖ 30.3.89
T13
R=17.5
E550
220
Φ547.5
4.4.
6.9
POHJA +567.0
563
5x4
353
1:7
T9
N 207
140
130
120
110

4 3



Kopia
22.4.89/HA

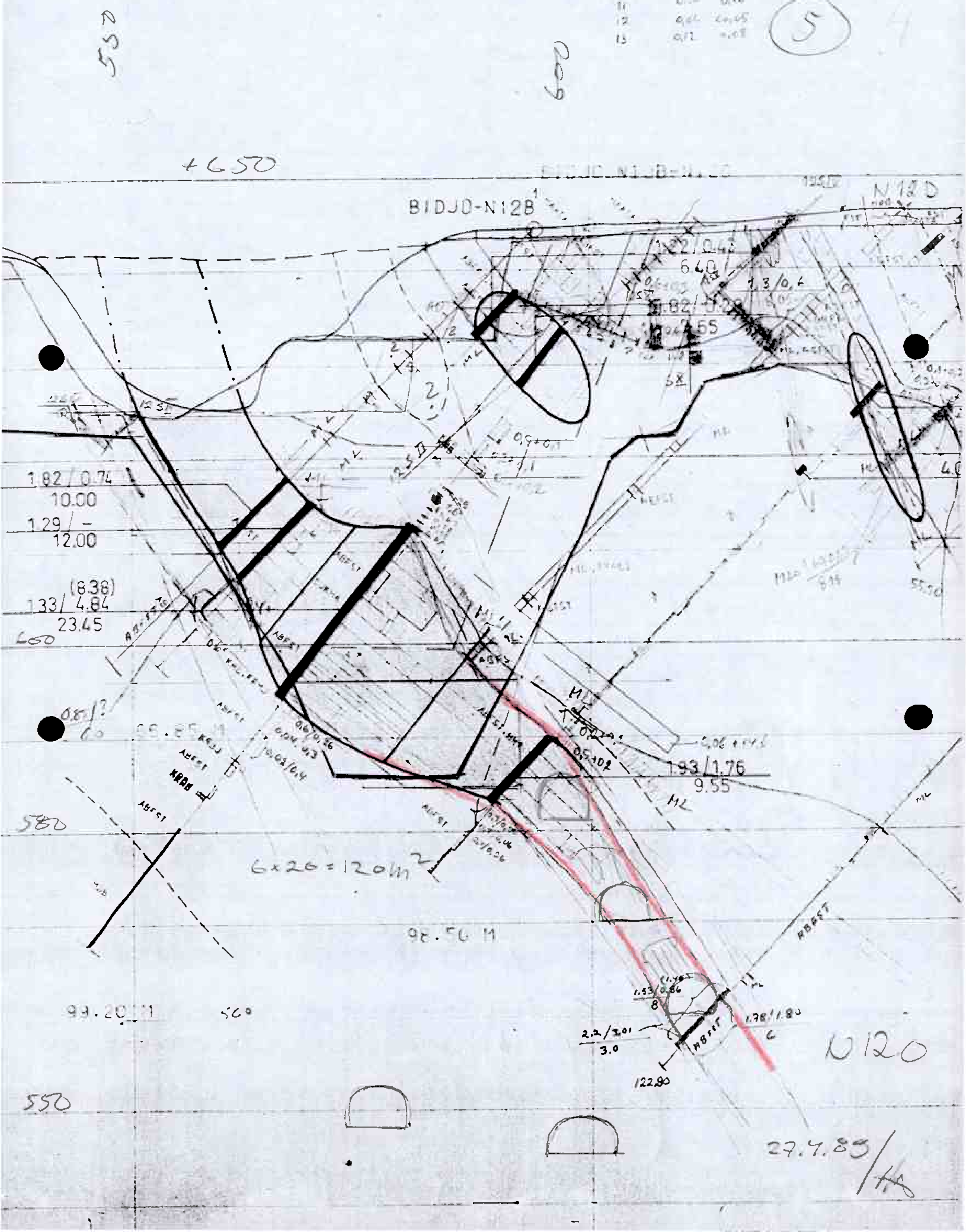
12.500

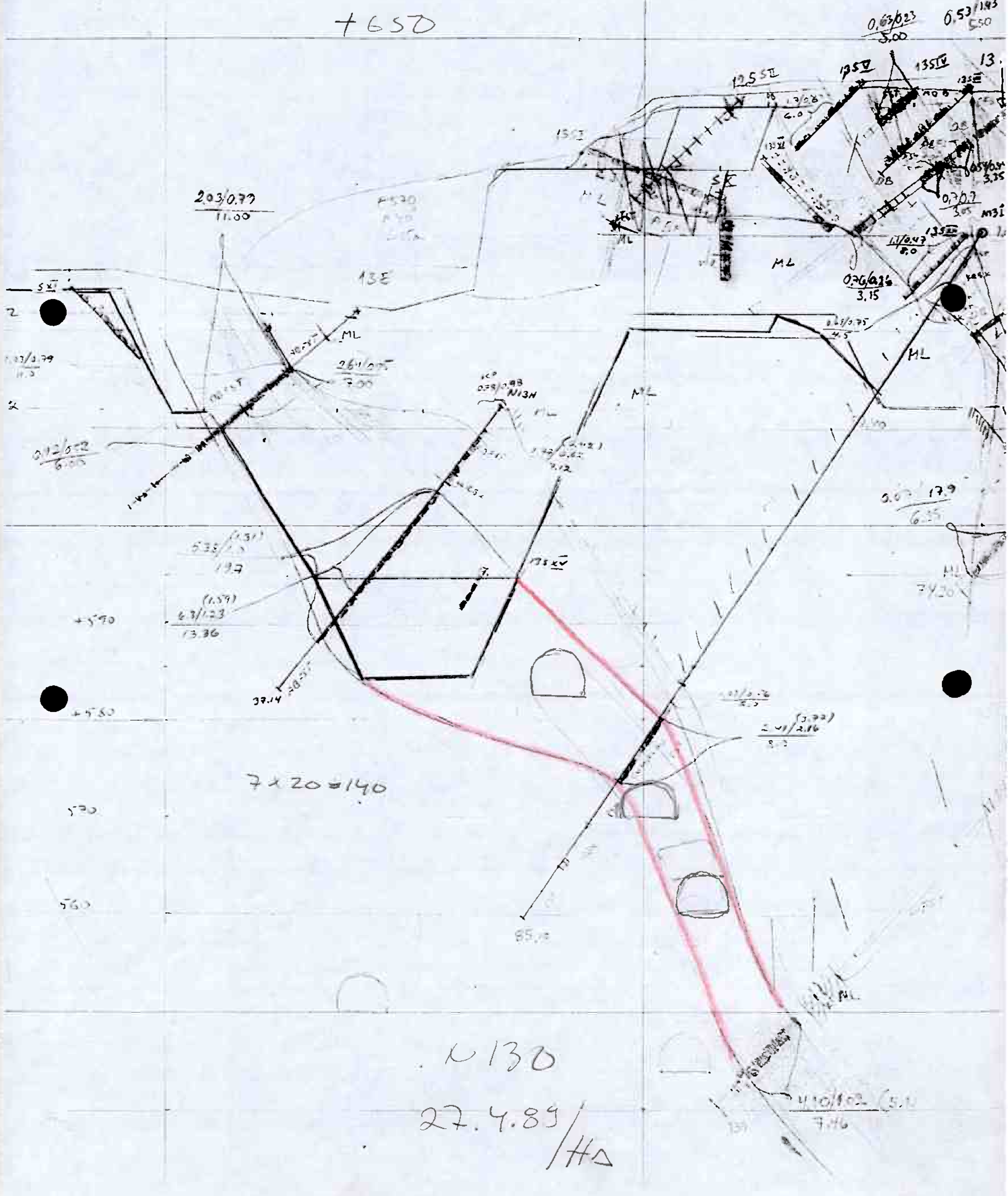
13	2.00	2.27
14	1.45	5.20
15	1.21	5.30

5	1.87	[illegible]
6	1.44	1.18
7	0.24	0.08
8	0.17	0.37
9	0.24	0.16
10	0.11	<0.05
11	0.50	0.22
12	0.06	<0.05
13	0.12	<0.08

5	2.03	1.25
6	7.38	1.24
7	1.41	0.61
8	1.85	1.03

⑤





N130

27.4.89/HΔ

550

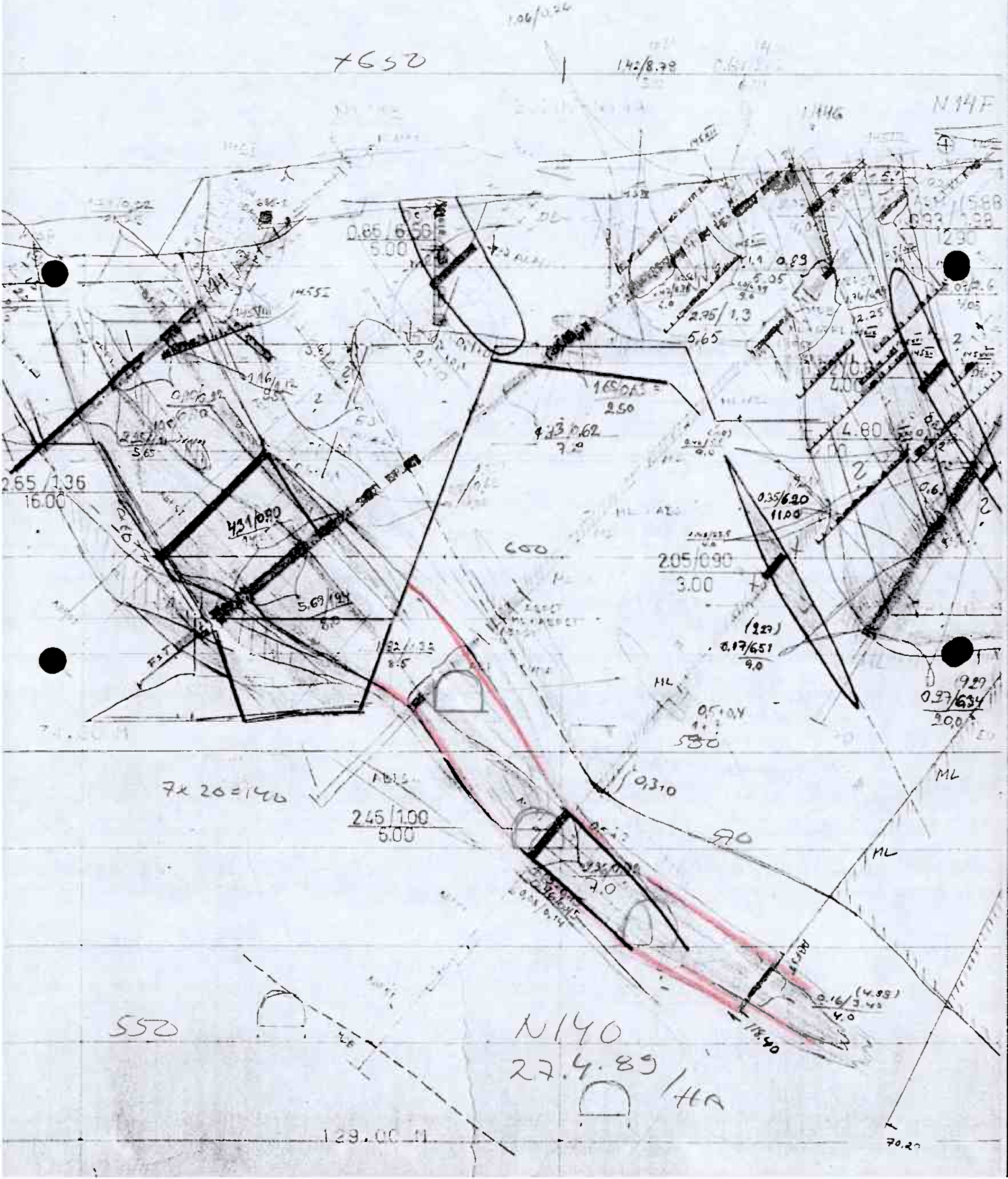
600

⑥

10 0.
11 0.
12 0.
13 0.

0.91 0.31
0.01 0.24
1.44 0.20

145 XXII	Cu	Au
1	0,23	0,07
2	0,41	0,06
3	0,01	0,01
4	0,23	0,22

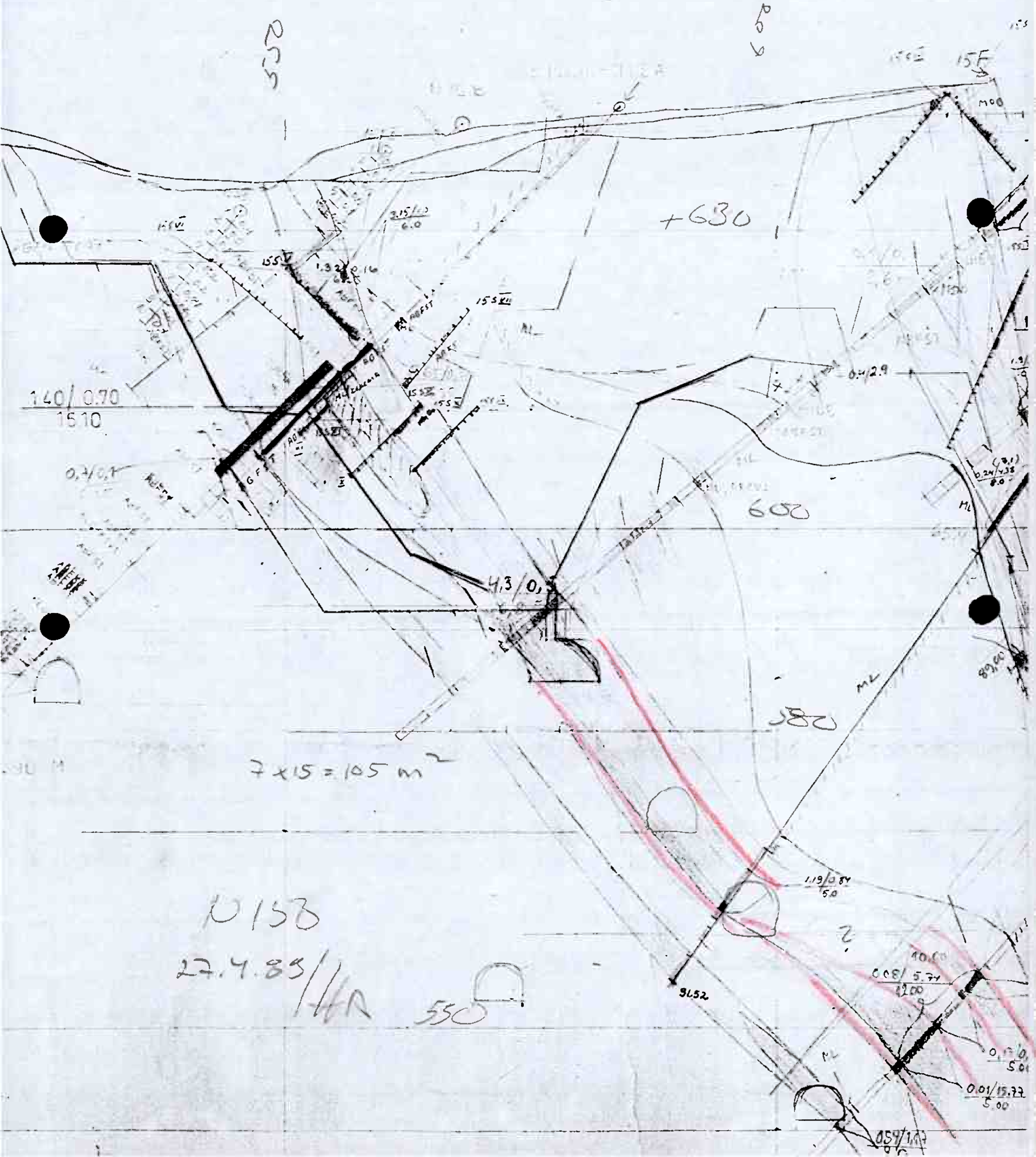


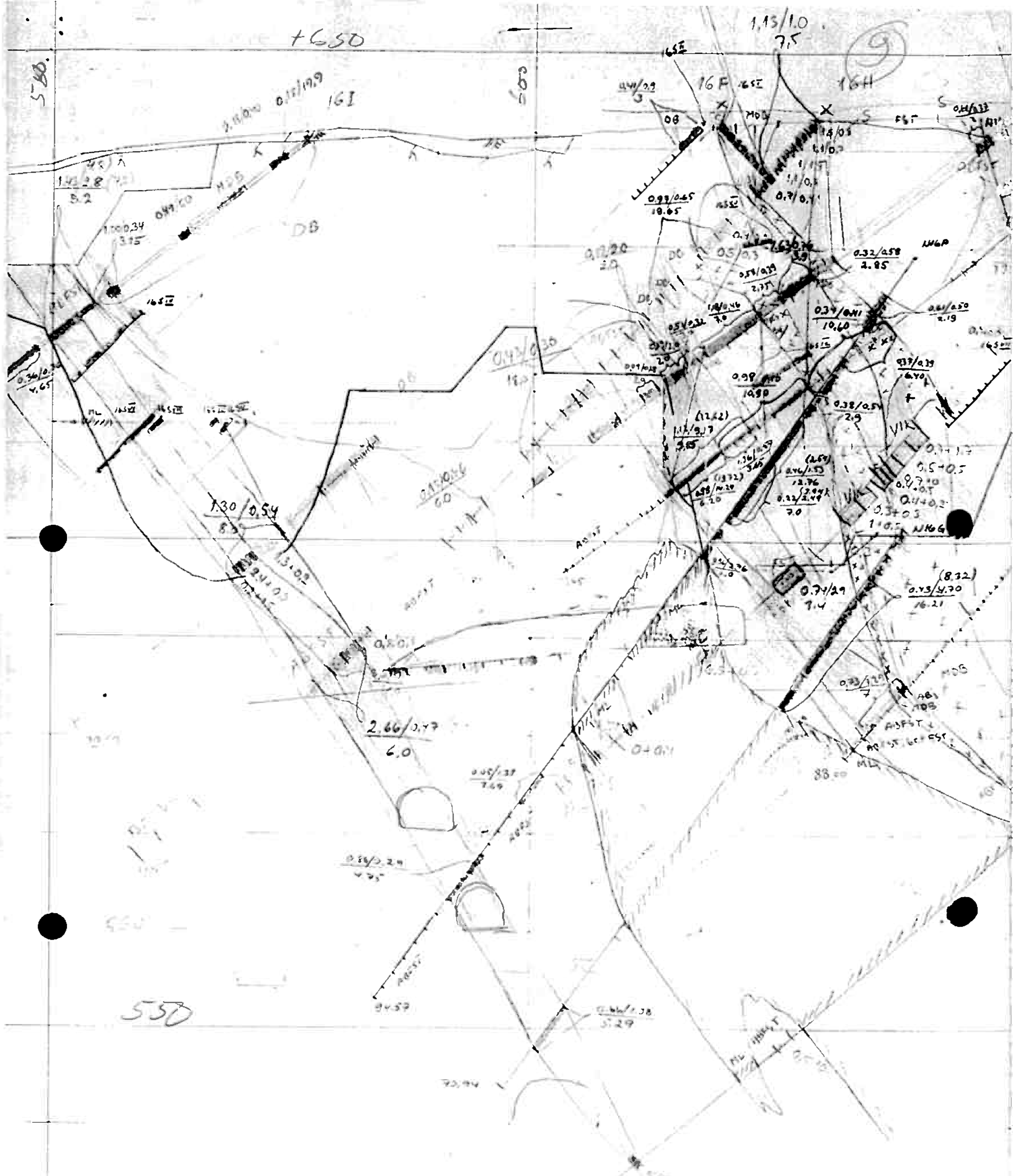
N140
27.4.89
/HA

10 [illegible] [illegible]
11 0.03 0.34
12 0.03 0.74
13 0.04 0.54
14 0.02 0.44

10 2.03 0.30

10 0.16 0.12
11 0.11 0.08
12 0.084 0.10





N 160
27.4.89/
ttn

А - руда

N110 - N160

Потъя - +570

N110	272 m²		7700 t
Cu	2.44	Au 1.44	
N120	210 m²		5985 t
Cu	1.87	Au 1.78	
N130	310 m²		8835 t
Cu	4.52	Au 1.92	
N140	102 m²		2907 t
Cu	2.08	Au 1.19	
N150	117 m²		3276 t
Cu	2.98	Au 0.64	
N160	150 m²		4200 t
Cu	1.62	Au 0.45	
	2.81	1.23	32903 t

29.4.

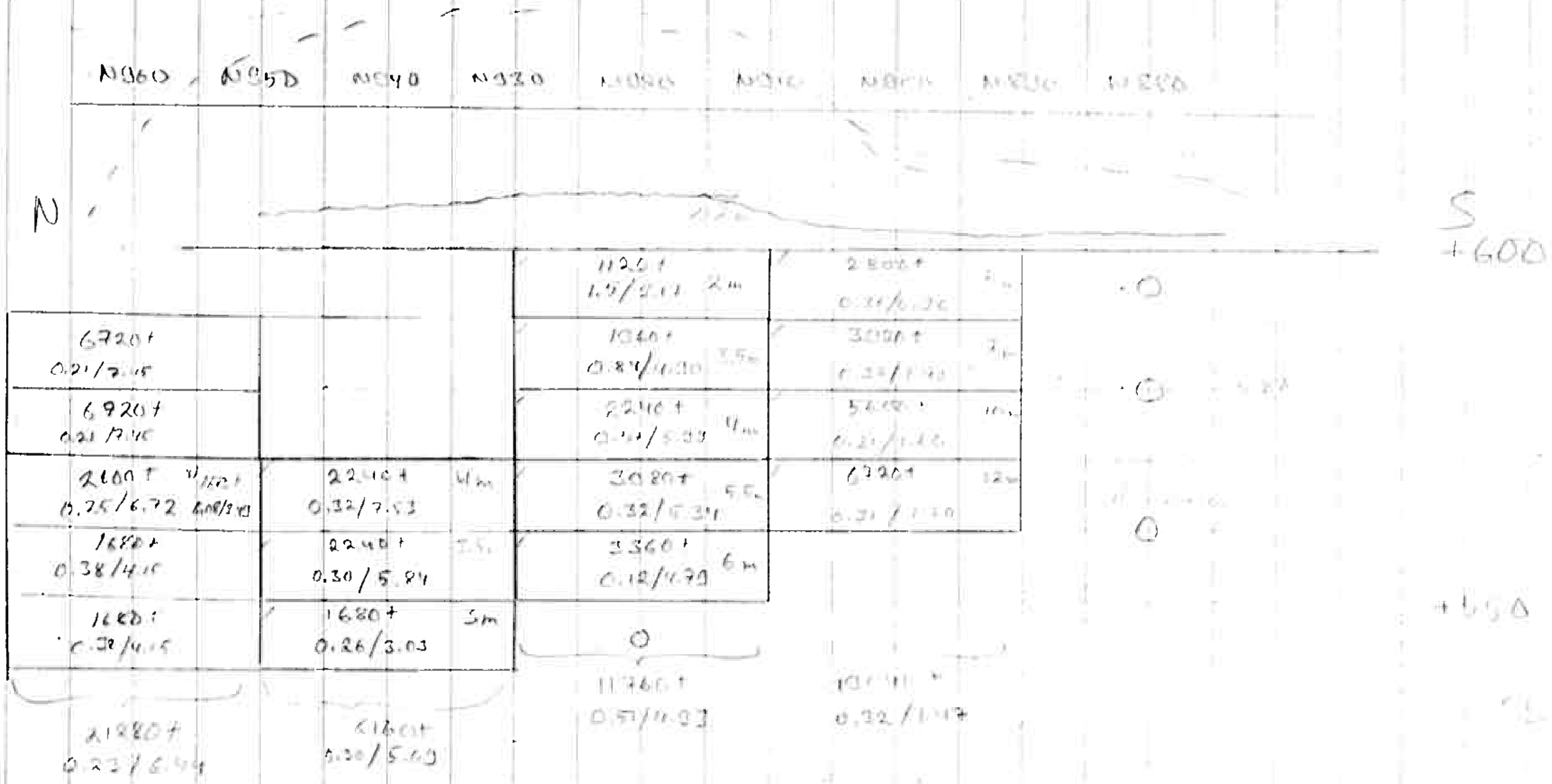
A +570 – +560

N 110 – N 160

N 110	65 m²		1820 t
	2.60	1.53	
N 120	70 m²		1960 t
	1.78	1.60	
N 130	70 m²		1960 t
	3.23	1.61	
N 140	95 m²		2660 t
	1.50	1.85	
N 150	57 m²		1596 t
	1.19	0.84	
N 160	40 m²		1120 t
	0.86	0.29	
	1.93	1.44	11116 t

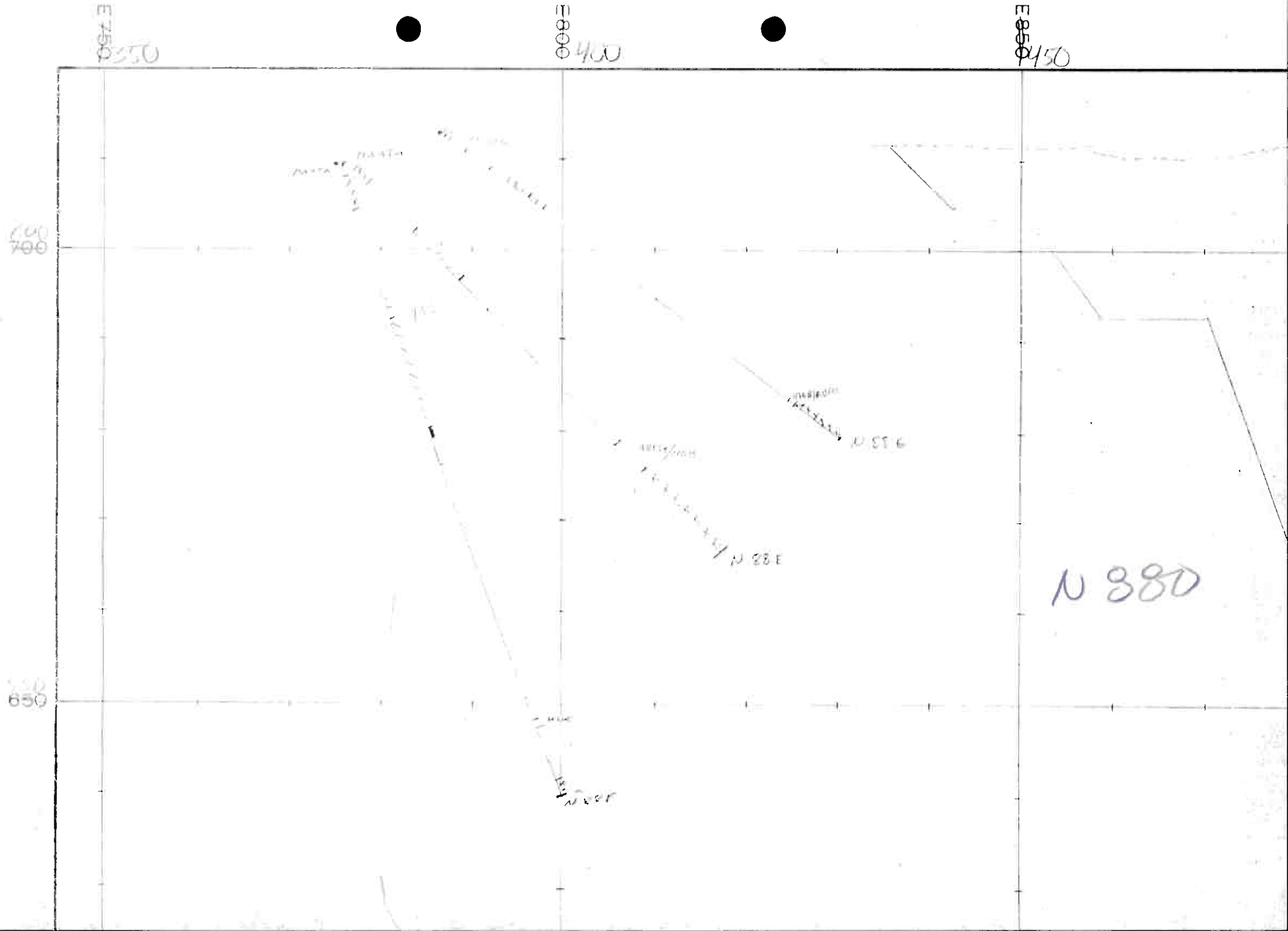
29.4. M. Ohberg

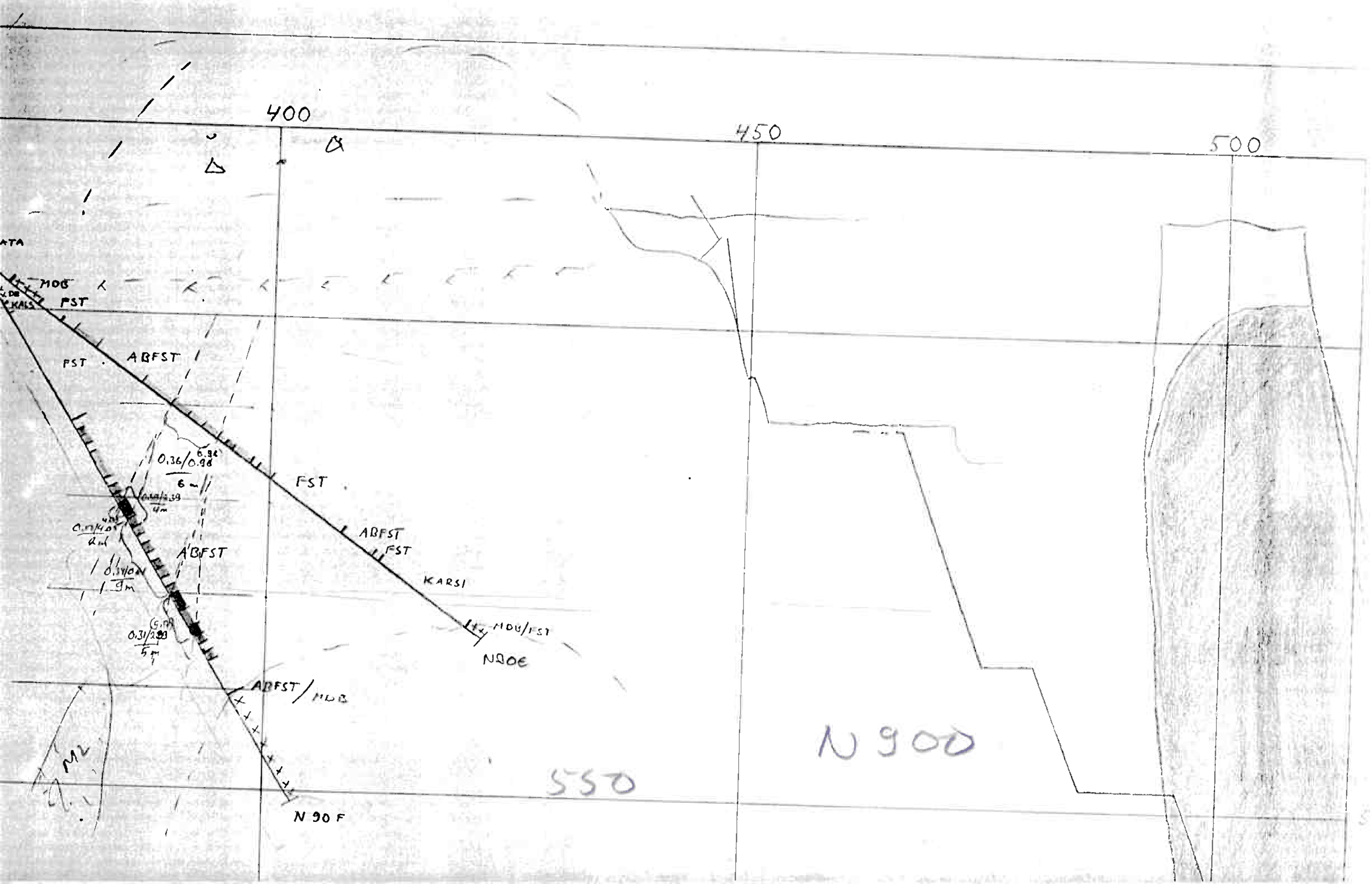
Malmberäkning B-väst

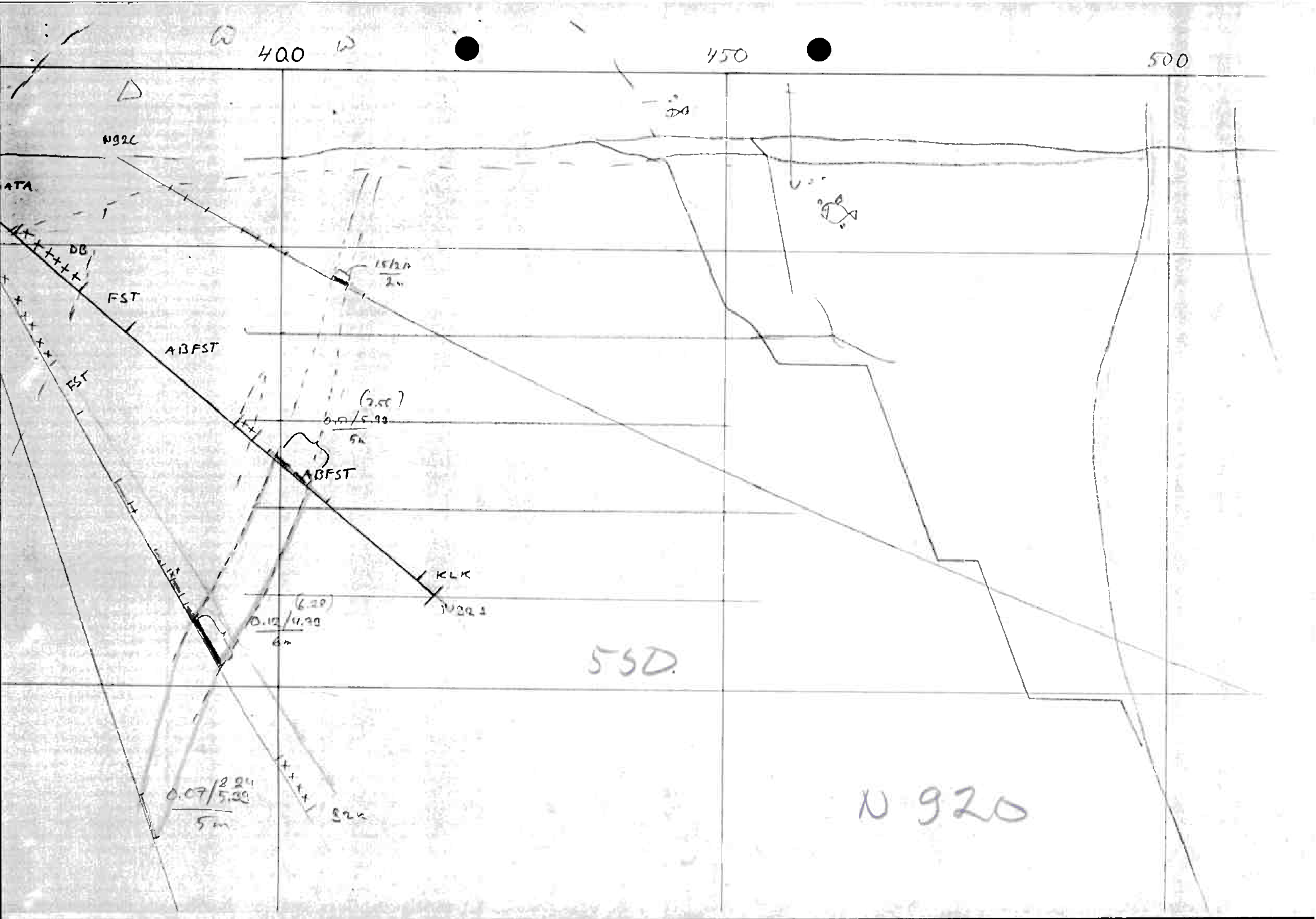


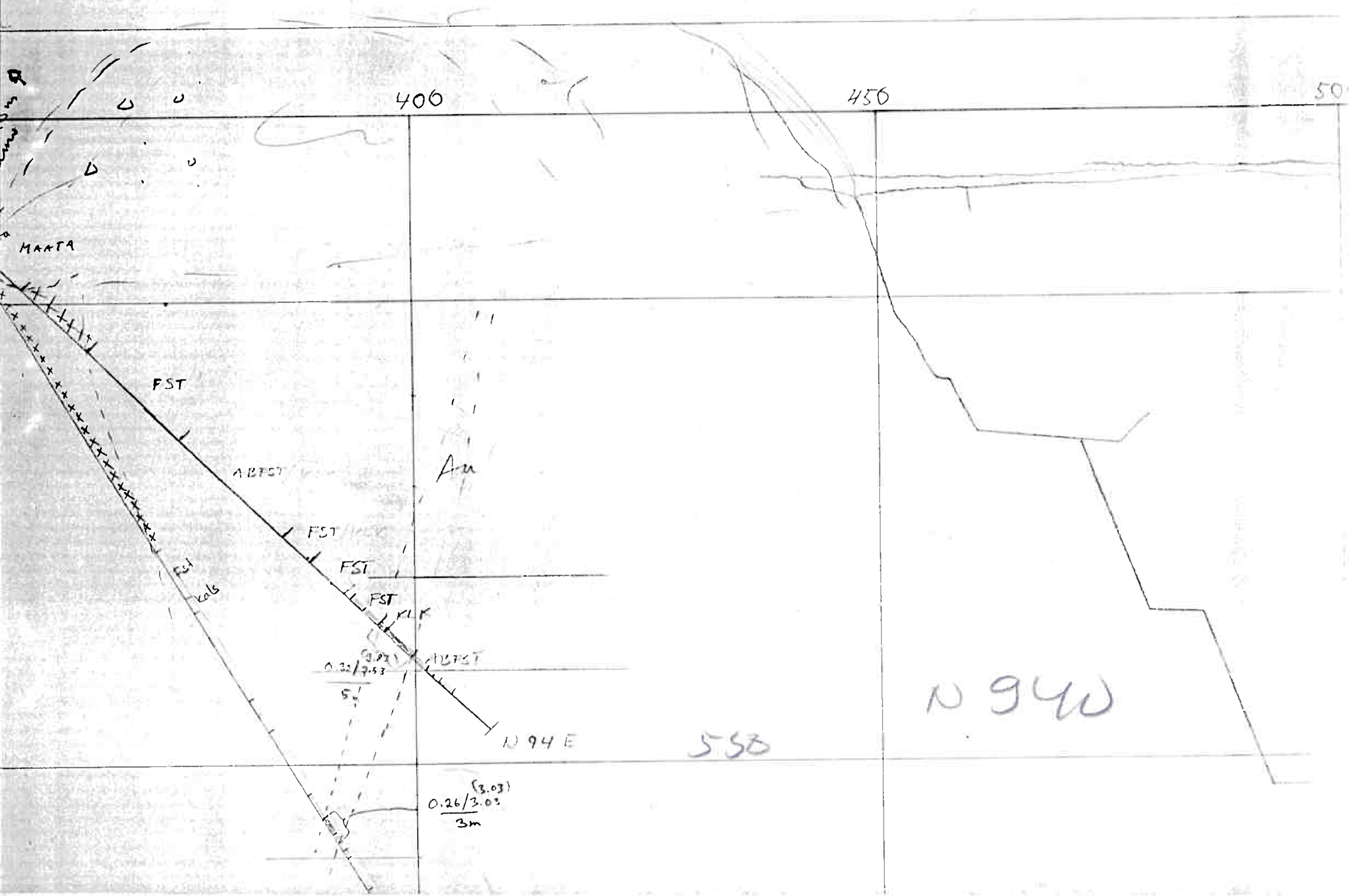
Σ ~~36060~~ 58240
~~0.58/3.27~~ 0.33/4.43

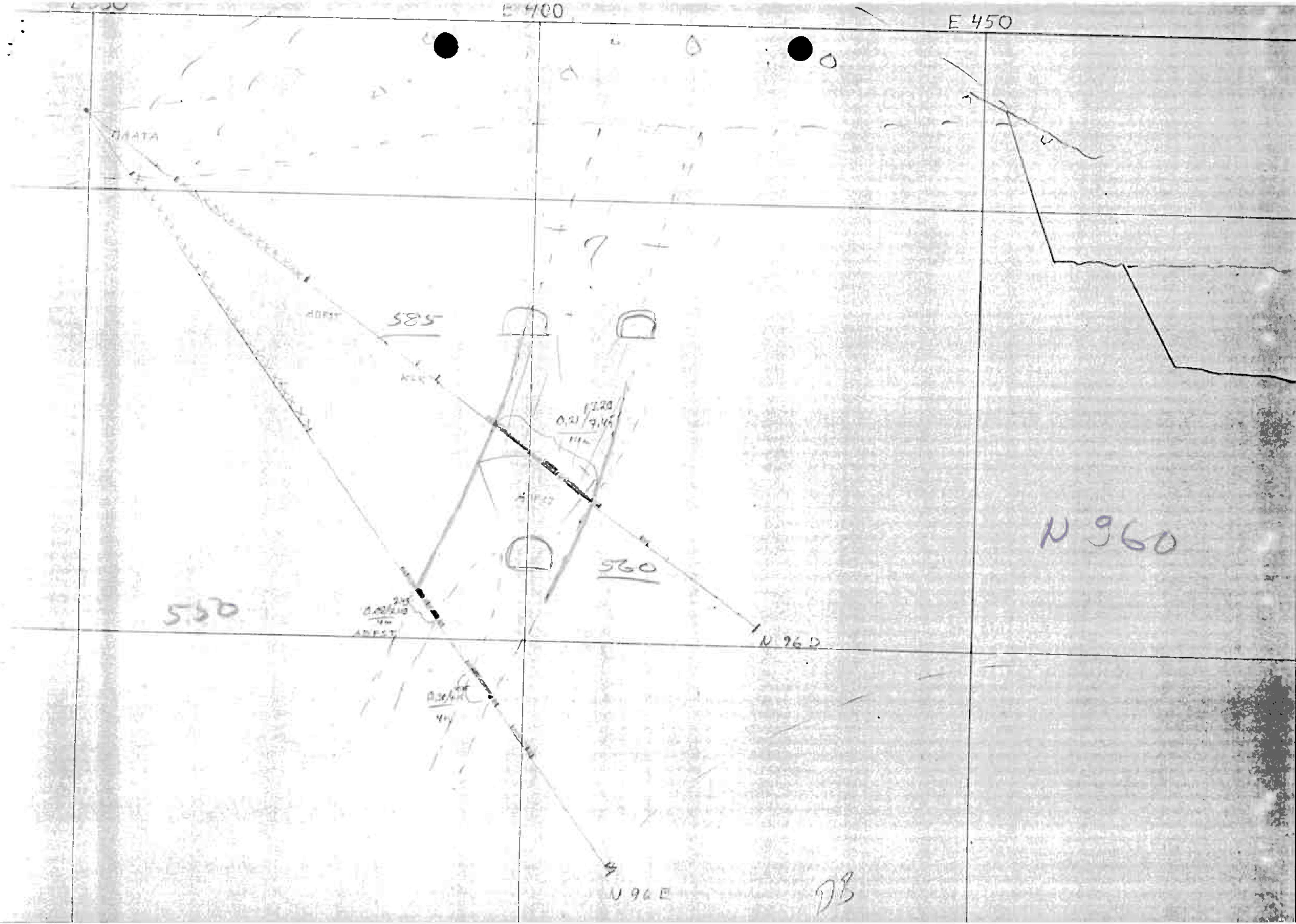
5144!

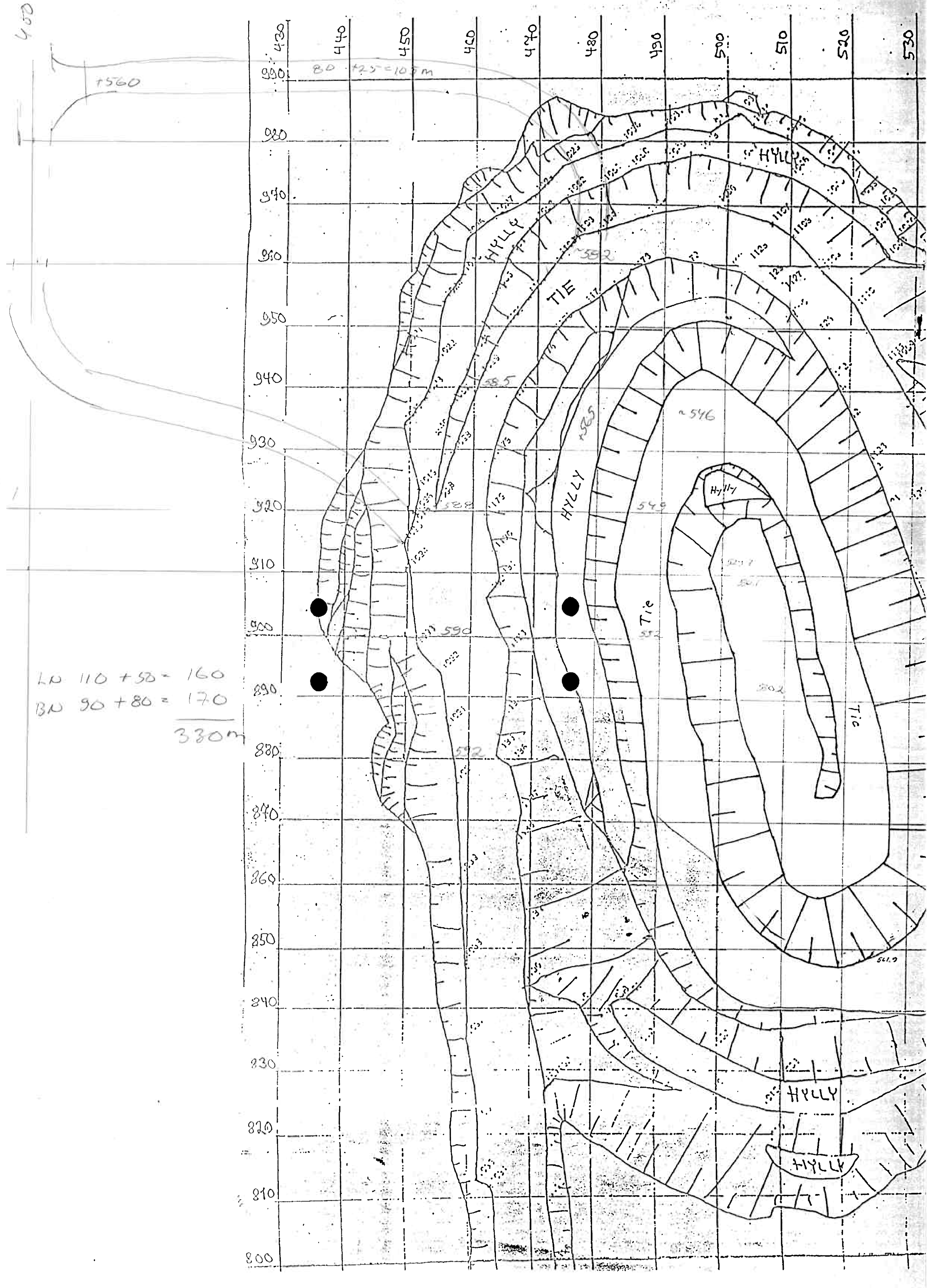

E750
350
E800
400
E850
450
700
650
N 880


400
450
500
ATA
MOB
FST
KALS
FST
ABFST
0,36/0.98
6.98
6 m
0.58/2.39
4m
0.17/4.05
4.05
4 m
ABFST
0.34/0.84
9m
6.88
0.31/2.88
5 m
FST
ABFST
FST
KARSI
MOB/FST
N90E
ABFST/MOB
N 90 F
550
N 900


400
450
500
N92C
ATA
DB
FST
ABFST
FST
15/2A
2m
(7.55)
0.51/5.93
5m
ABFST
KLK
N92J
(6.28)
0.12/4.79
6m
0.07/8.24
5.39
5m
82m
550
N 920


400
450
50
MAANTA
FST
ABFST
FST
FST
FST
KLK
Au
(9.83)
0.32/7.53
5m
ABFST
Fst
kals
N94E
558
N94W
(3.03)
0.26/3.03
3m


E 400
E 450
585
?
0,21/7,45
560
550
N 960
N 96 D
N 96 E
ADFST
DB

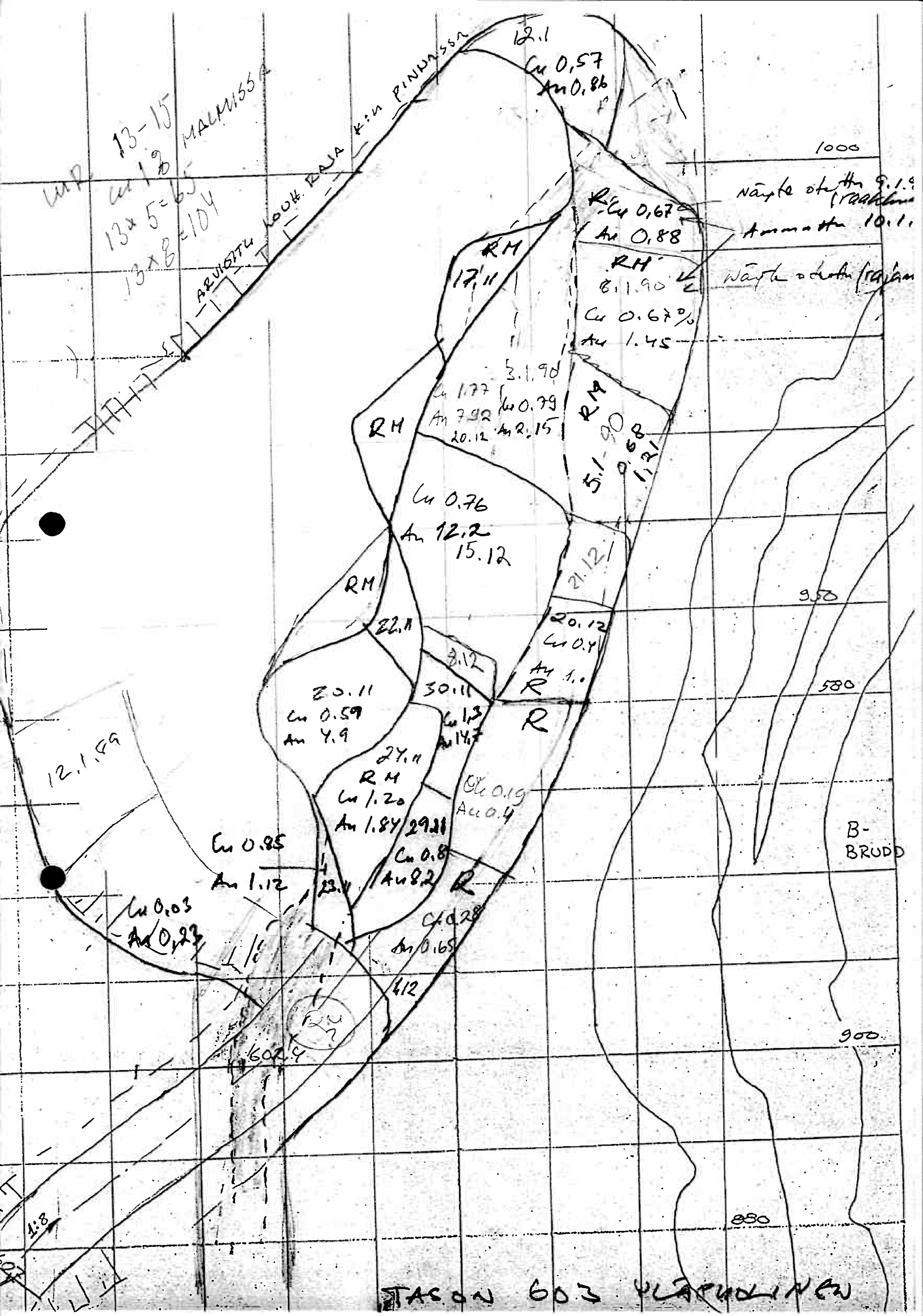


LN 110 + 50 = 160
BN 90 + 80 = 170
330m

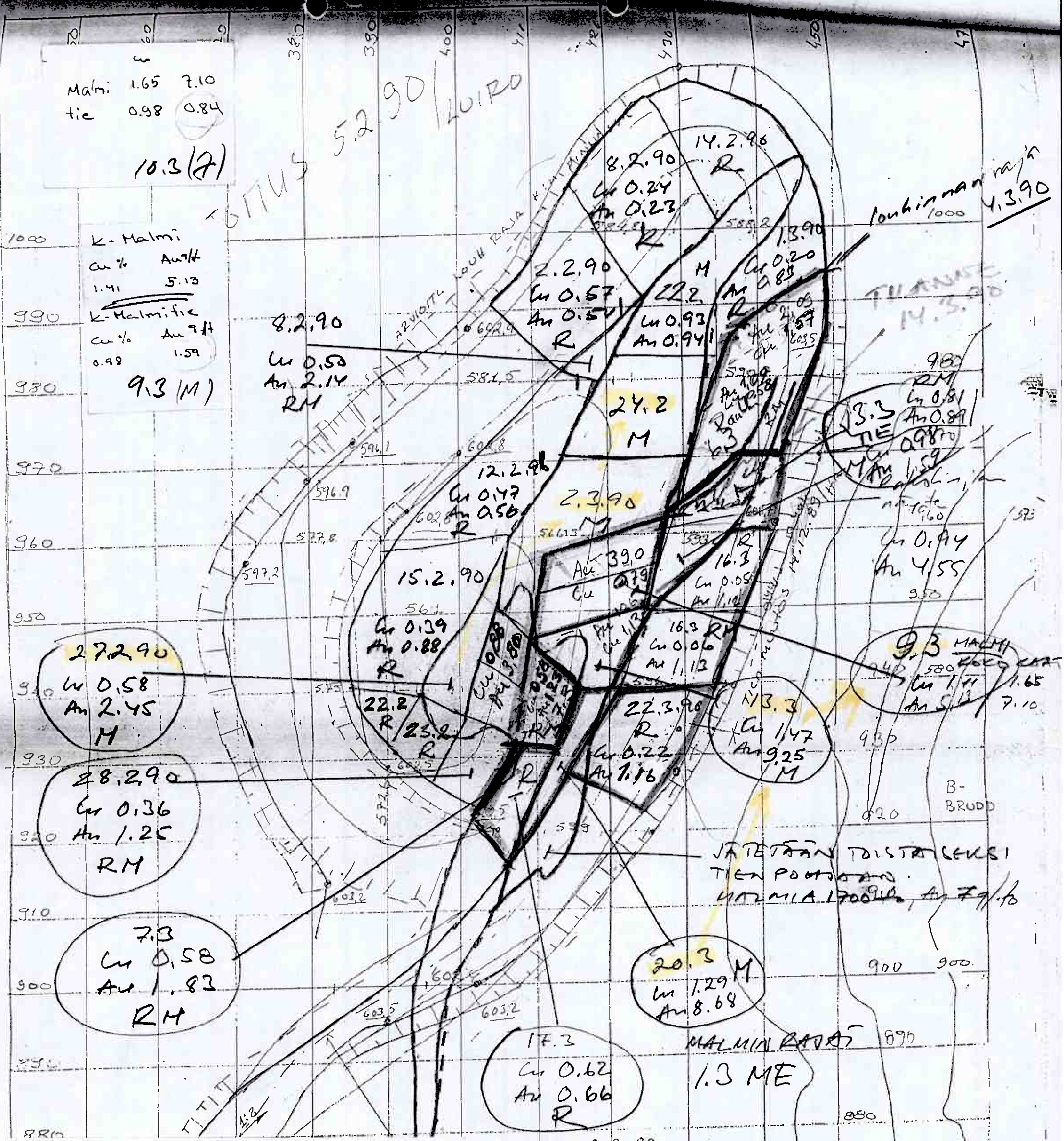
K

N

X
Y
Z
Æ
Ø
Å



TASON 603 YLÄPUOLINEN



SIIRRETTY KL. 13.9.89

Cu % Au g/t

0.62 0.66

TASOJEN 603 – 592 VÄLINEN LOUHINTA

K-näyte
1.29 Cu %
8.68 Au g/t

VUOVAGGE 6

1:500 HA/MaS 30.9.89 14.12.89/HA

~~12.9~~ MaS

KARTOITUS 15.2.90

25.8.09

B/vest = K

Cu = 17
Au = 83

ISO AVOLOUHOS

MALM 91.000 tn
Cu 0,36   CuR 10%   UTB Cu 95
Au 6.75   Au 80
VERDI AV PROD 40.4 MKR

GRÅBERG 290.000 tn

ISO AVOLOUHOS / MaS

BRYTING
8 x 395.000 = 3.160
20 x 381.000 = 7.620
80 x 91.000 = 7.280
TUNNEL 70 x 4100 = 287
1 x 300.000 = 300
FELLES / GRUVE 3 x 670.000 = 2.010
JORDAVDEKKING 25 x 80.000 = 2.000
FELLES
22.657

TULOS +18 MKR

248,9 KR/MTN

AVOLOUHOS / PIENI + MAANALAINEN OSA

MALMIA 4HT 105.000

PIENI AVOLOUHOS + MAANALAINEN OSA MaS

MALM 60.000
Cu = 0,54   CuR 10%   Cu 95
Au = 9,00   Au 80

6 x 395.000 = 2.370
20 x 175.000 = 3.500
80 x 60.000 = 4.800
2 x 670.000 = 1.340
25 x 60.000 = 1.500
13.510 ⟺ VERDI 35.7 MKR

225 KR/TN

KATE ① +22.2

UNDER JORD 45.000 tn

TUNNEL 260m x 4100 = 1.066
JUMBO 3 x 395.000 = 1.185
Simba 2 x 250.000 = 500
Zoom 2 x 215.000 = 430
4HT 2 x 670.000 = 1.340
80 x 45.000 = 3.600
sähkö 100.000 = 100
8.221

182.7

14.8 MKR

KATE ② +6.6

4HT 207 KR/TN

KATE 4HT +28.8

A/S BG
K-BRUDD

KESKIKOKOINEN
AUDLOVTHOS 84600/245.000

8.9.89
H. Alamiska

TVERRSNITT	MASCH b×h×l	GRÅB	Cu	Au
900				
920	2×20×20×2,8 = 2240	26460	1.0	3
940	10×50×20×2,8 = 28000	64240	0,7	8
960	10×52×20×2,8 = 29120	83950	0,3	9
980	8×35×20×2,8 = 15680	34800	0,4	9
1000	7×33×15×2,8 = 9700	35200	0,8	2
	84740	245050 tn 1.2.88	0,53 84600	7,7

Cu 17 14
Au 83 87

CuR 102
Cu UTV 95
Au 80

OMSETNING

84600 → 43,3 → 44,1 MKR

MASCH 84600 tn
GRÅB 245000 tn } 330.000 tn

7 × 395.000 = 2.765
20 kr/tn × 330.000 = 6,600
80 × 84600 = 6,768
2,8 × 670.000 = 1,876
jord.av. dekking 1,000

KOSTN. = 19.009 MKR

RESULTAT 43.3 44,1
− 19.0 19.0
24,3 +25,1

om
Cu 0,53
Au 7,7

42,8
19
+23,8

Cu 0,4
Au 7,5

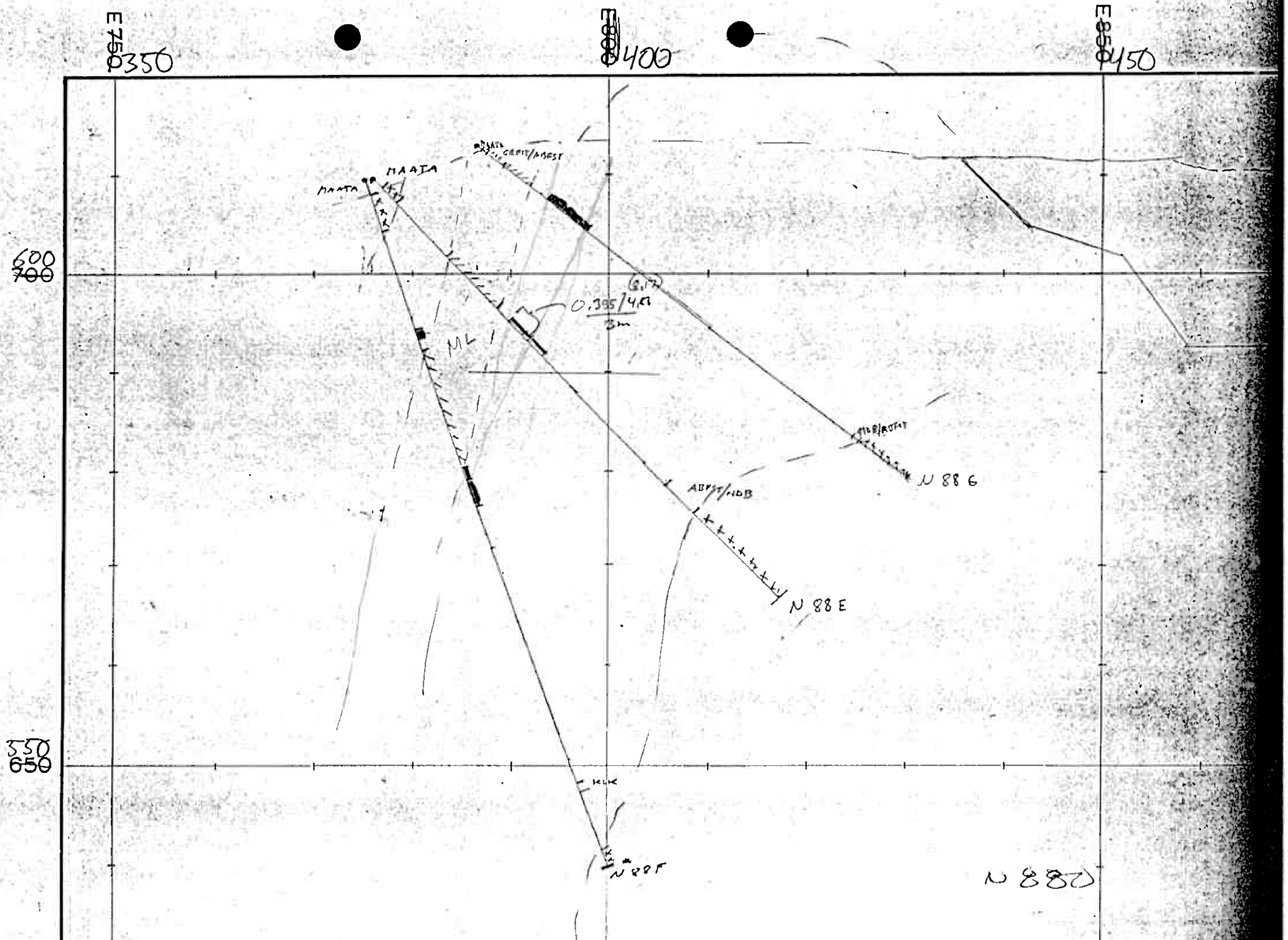
37,3
19
+15,3

0,3
6

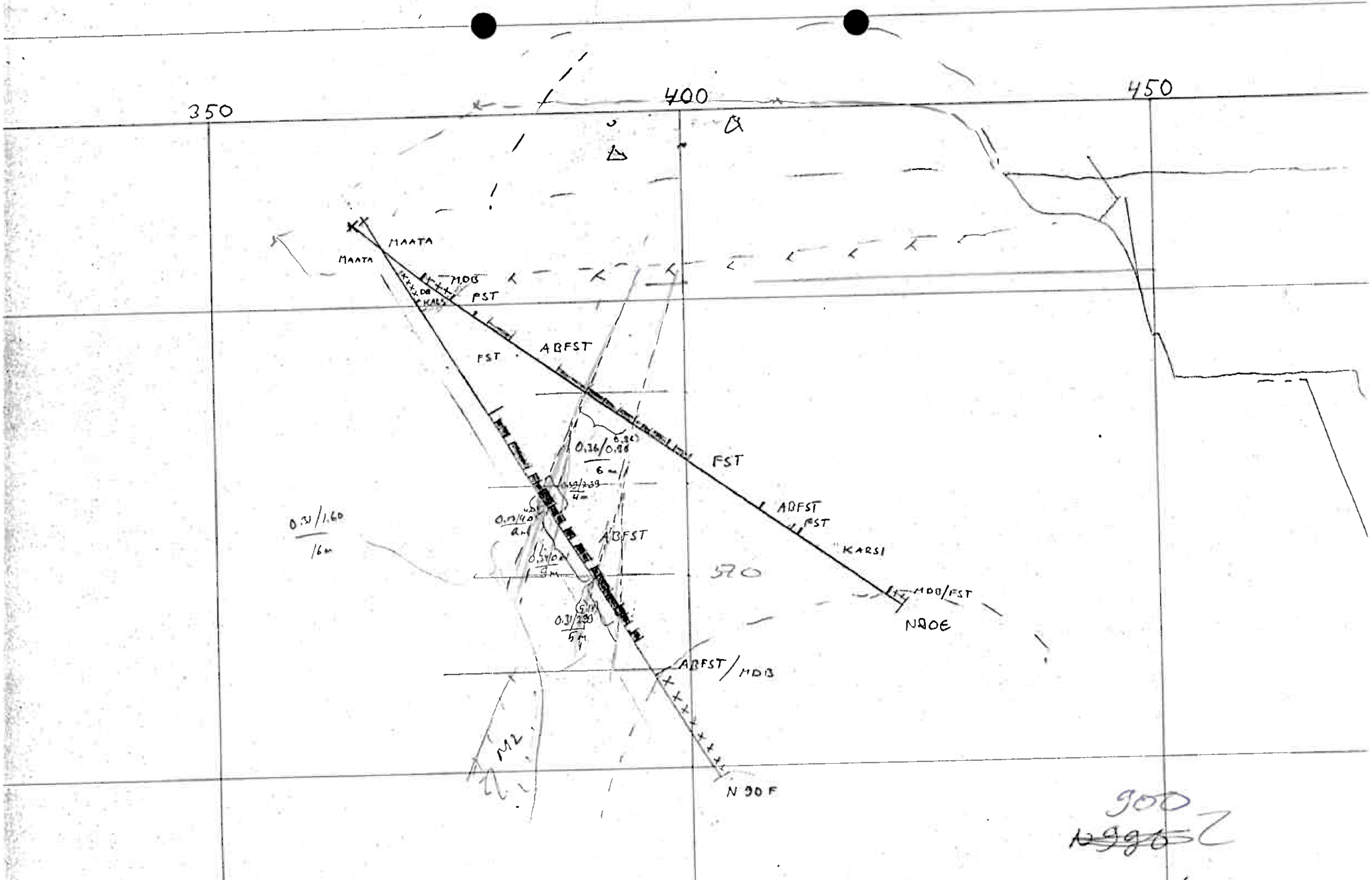
89 * 90

10 11 12 1 2 3 4

1. 2. 3. 4. 5. 6. 7.

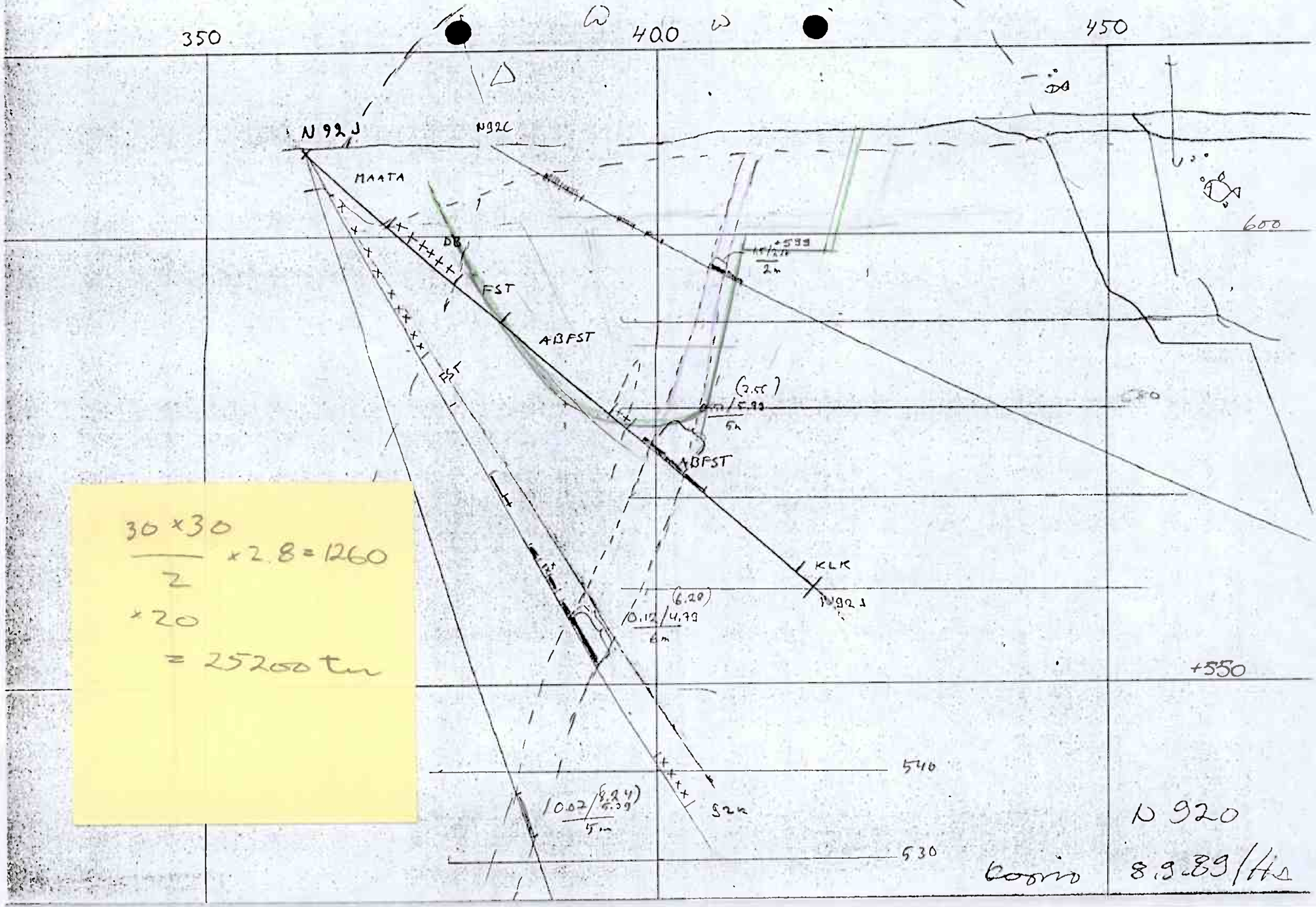


kooing 8.9.89/AA



900
~~N996~~

kopio 8.9.89/Ha



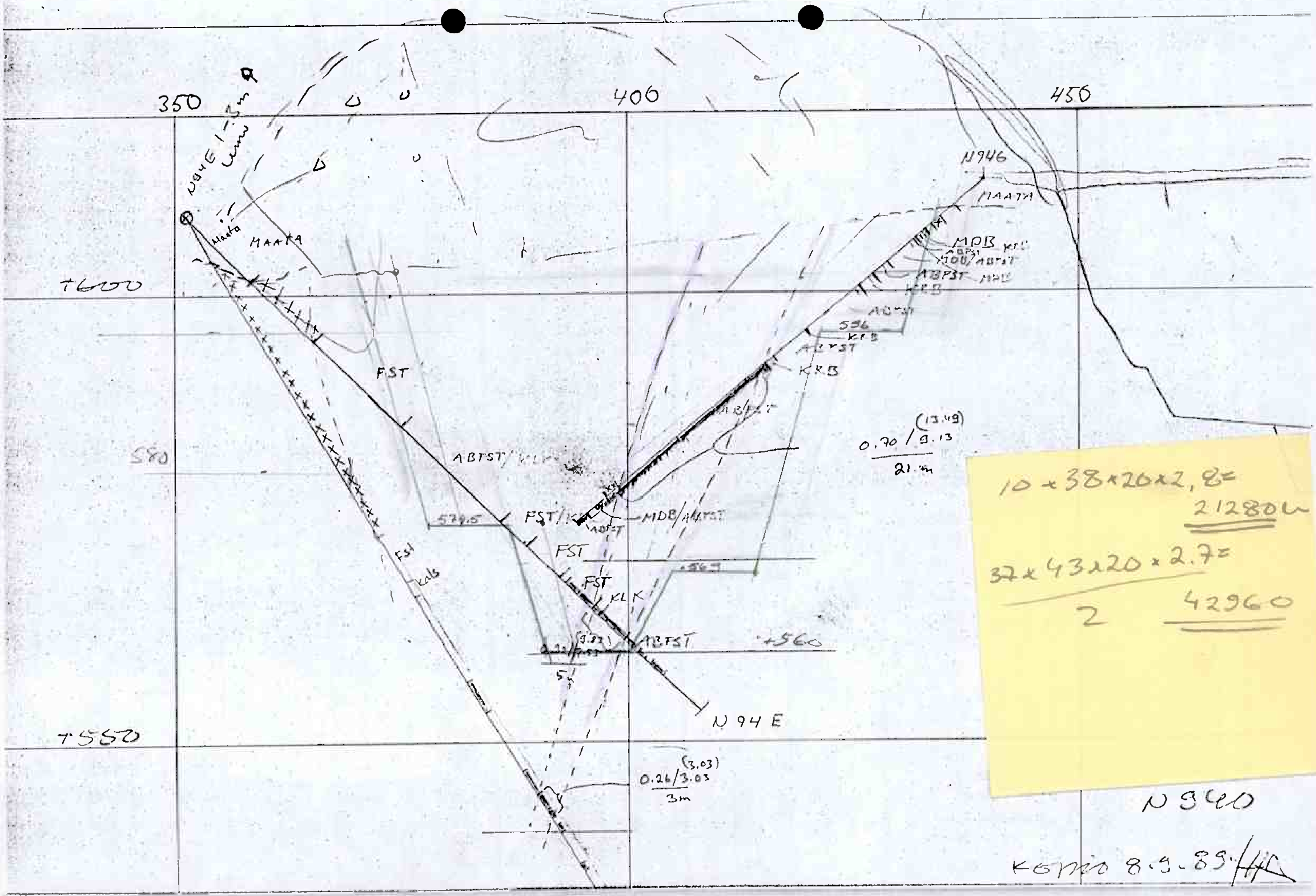
$$\frac{30 \times 30}{2} \times 2.8 = 1260$$

$\times 20$

$= 25200$ tn

N 920

Kopio 8.9.89/Hs

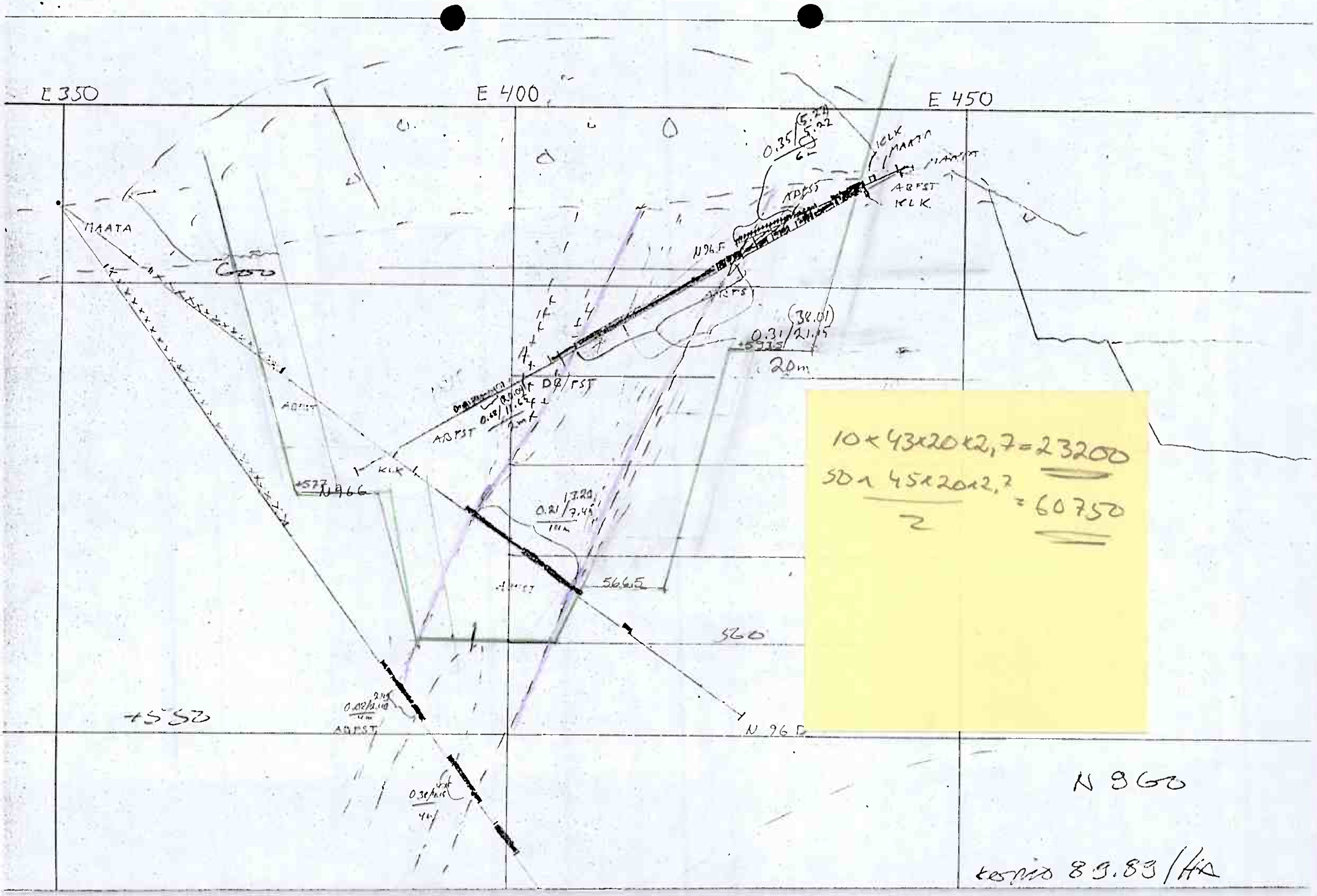


10 × 38 × 20 × 2,8 =
21280 t

$$\frac{32 \times 43 \times 20 \times 2.7}{2} = 42960$$

N 960

Komio 8.9.89

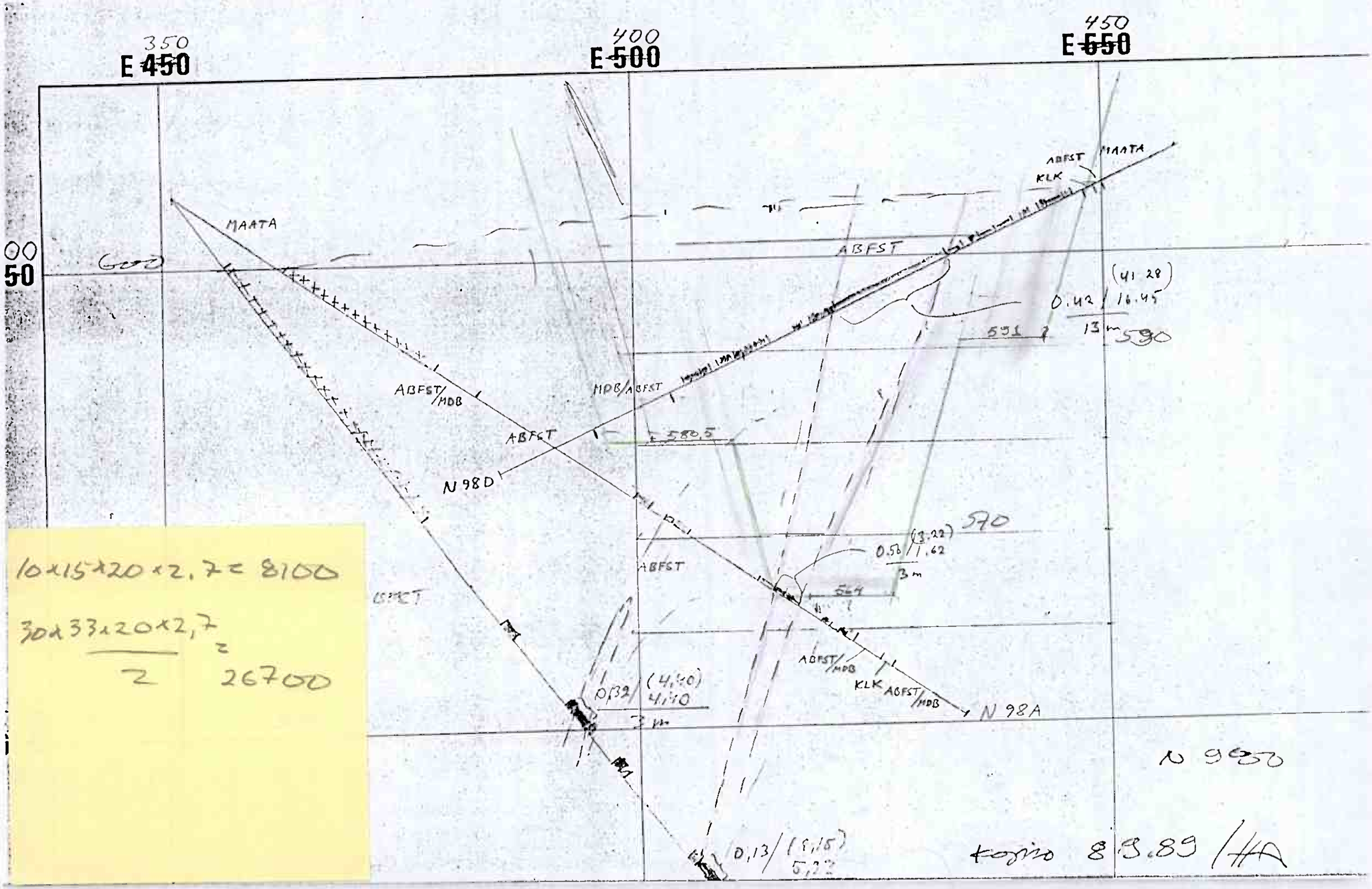


10 × 43 × 20 × 2,7 = 23200

$$\frac{50 \times 45 \times 20 \times 2,7}{2} = 60750$$

N 960

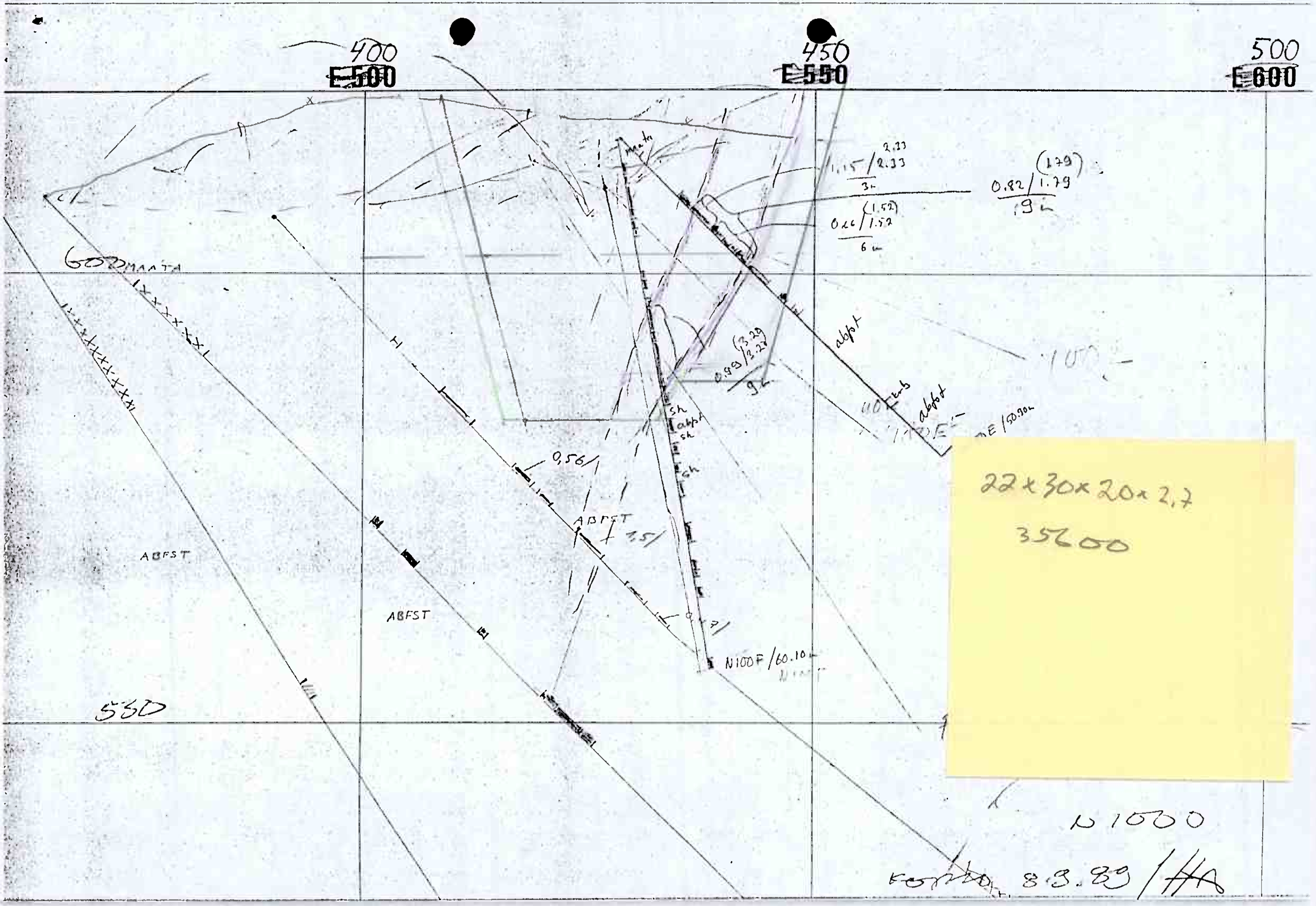
kesriio 8.9.83 / HA



10×15×20×2,7 = 8100

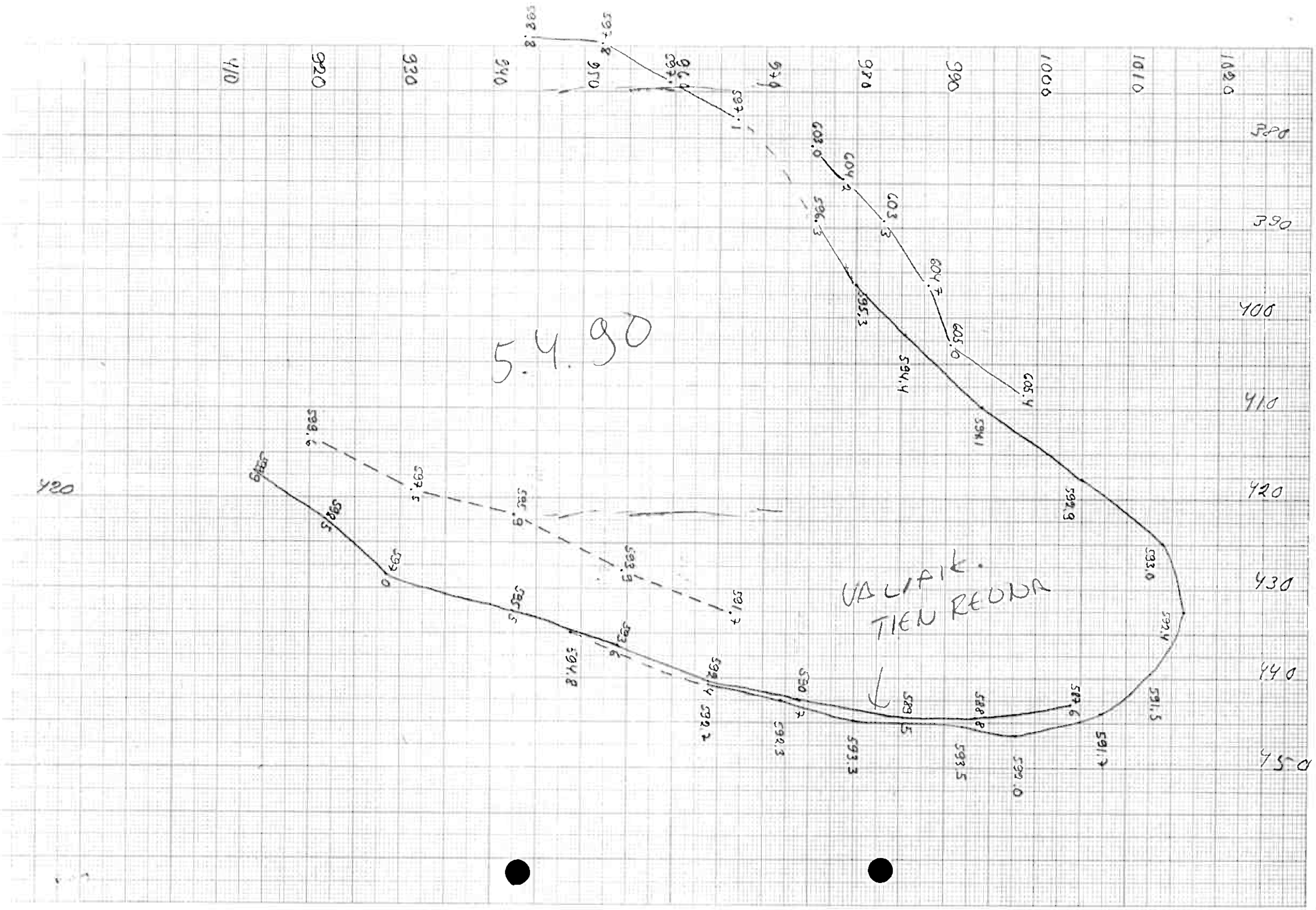
$\frac{30 \times 33 \times 20 \times 2,7}{2} = 26700$

Kopio 8.9.89 /HA



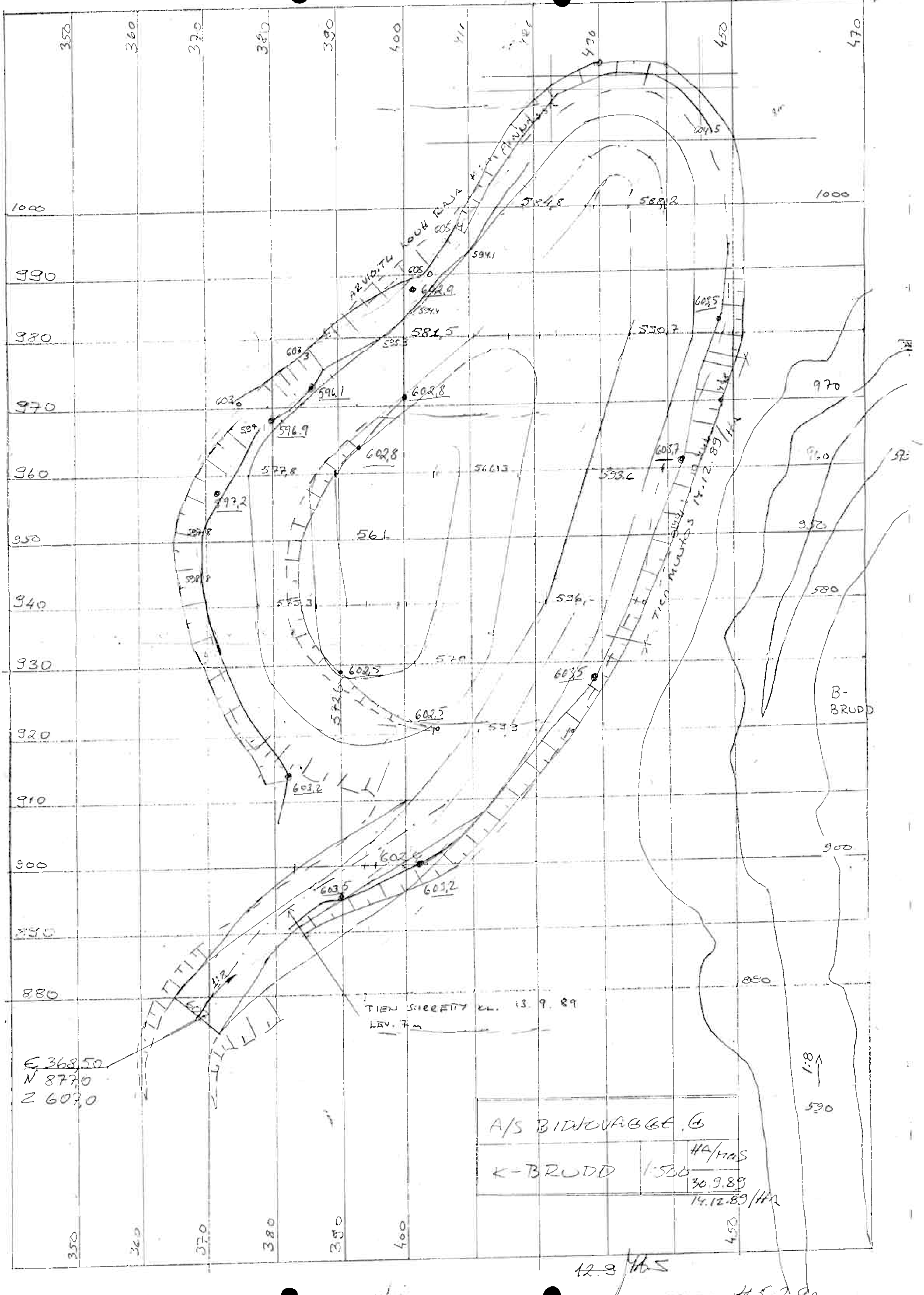
22x30x20x2,7
35600

Korjattu 8.3.89 / HA



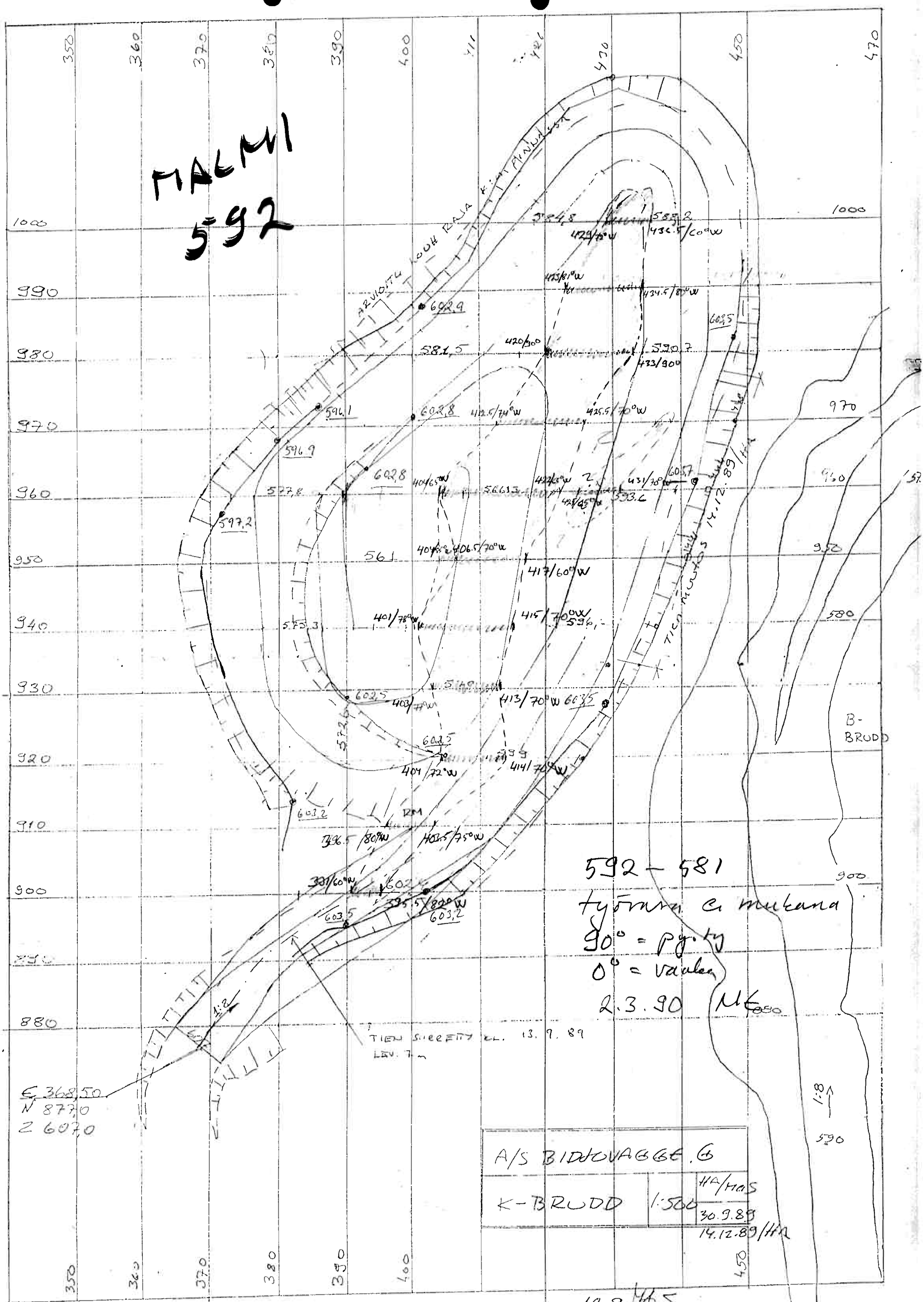
5.4.90

VALIAIK.
TIEN REUNA



~~12.9~~ /HAS

KARTOITUS ~~4~~ 5.2.90



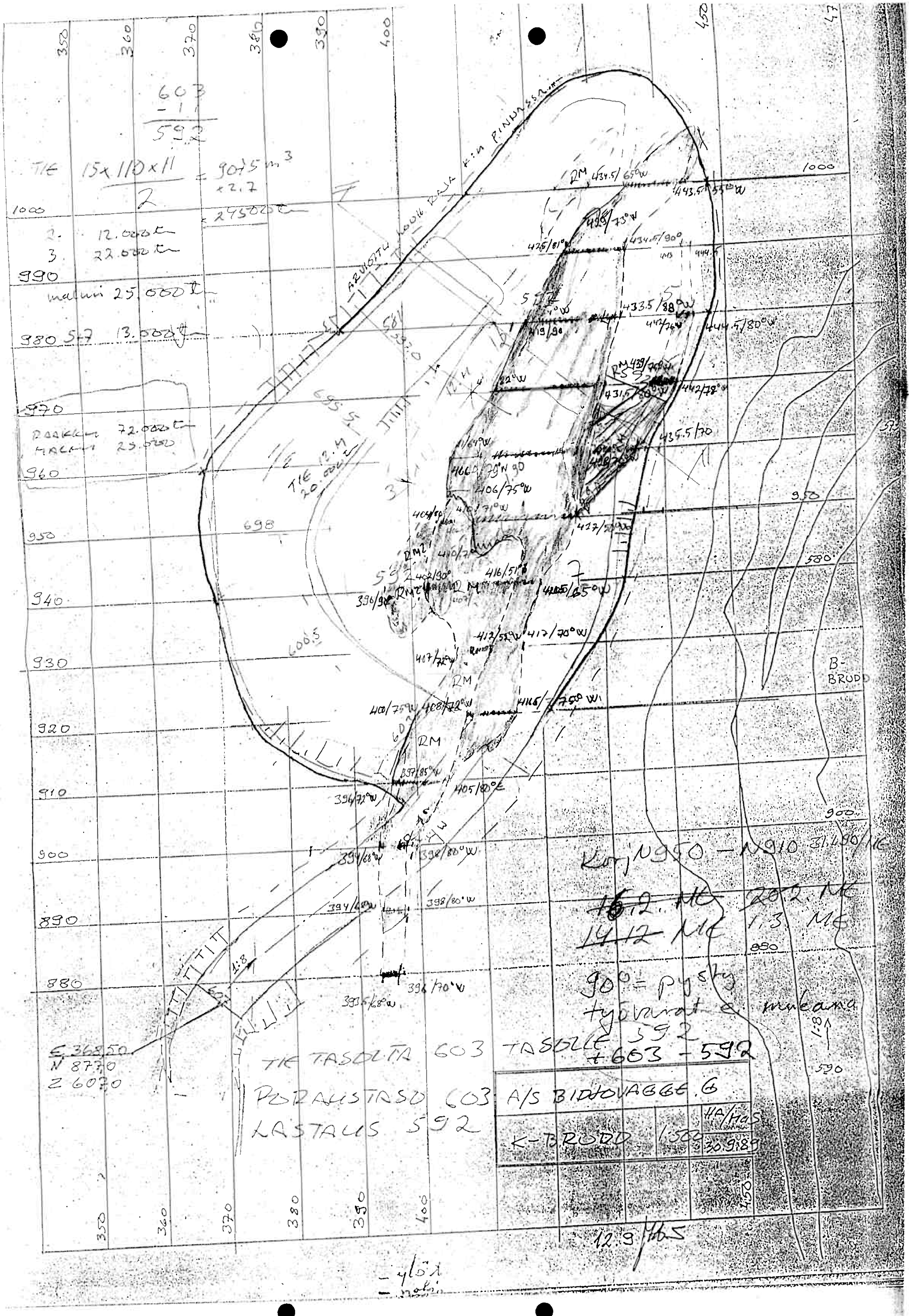
MALMI
592

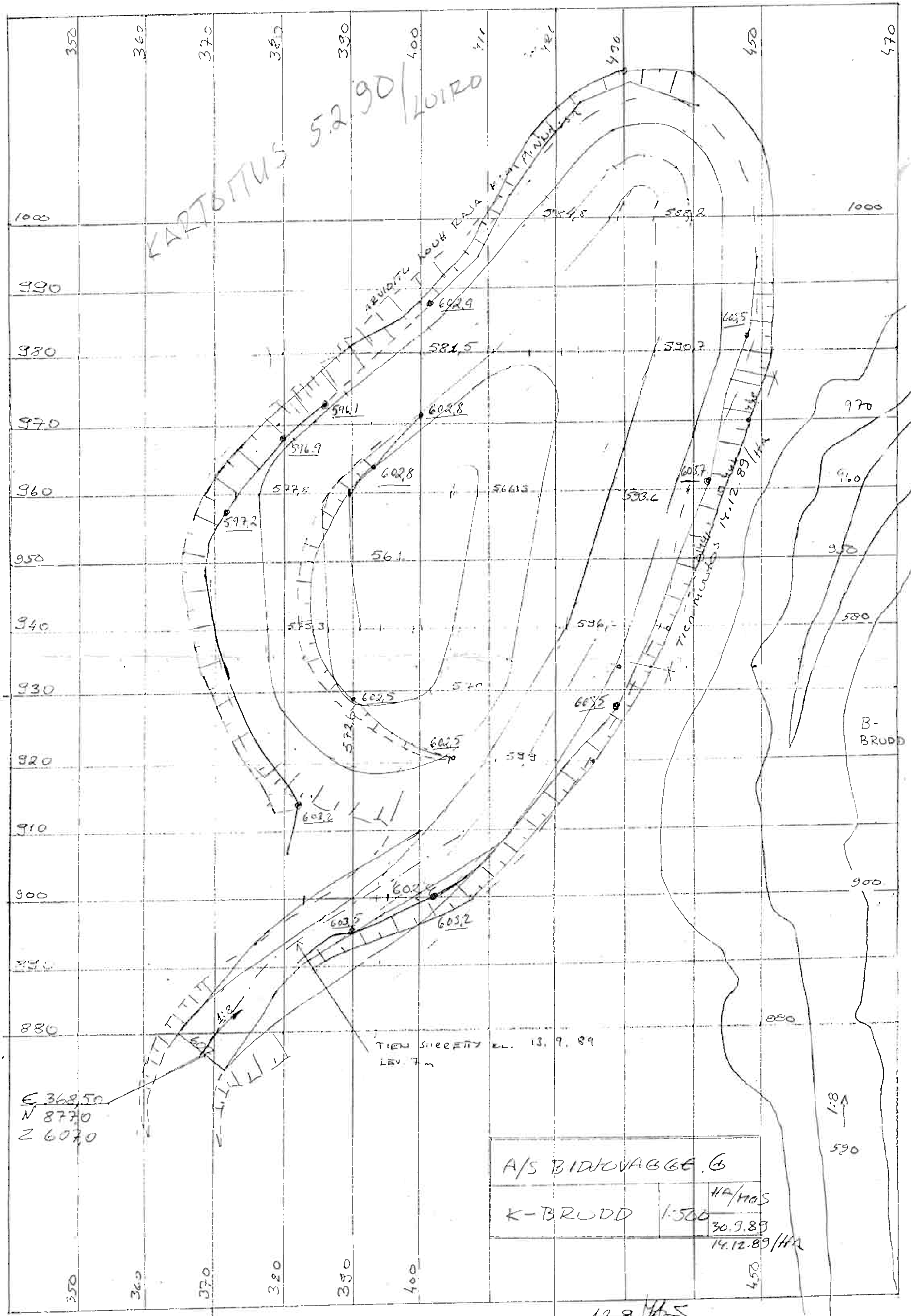
592 – 581
työraja ei mukana
90° = pysty
0° = vaaka
2.3.90 ME

A/S BIDJOVAGGE G		
K-BRUDD	1:500	HA/MaS 30.9.89 14.12.89/HA

~~12.9~~ /MaS

KARTOITUS 15.2.90





KARTOITUS 5.2.90 / LUIRO

TIEN SIIRRETTY KL. 13. 9. 89
LEV. 7 m

TIEN MUUTOS 14.12.89 / HR

A/S BIDJOVAGGE G

K-BRUDD 1:500 HA/MaS 30.9.89

14.12.89 / HR

~~12.8~~ MaS

KARTOITUS ~~4~~5.2.90

Cu 18
Au 82

K

N S

		990	980	970	960	950	940	930	920	
	37035 + 0,79 / 9,10 657 kr/t 24,6 MNOK	980+ 0,28/4,38	4910+ 1,15/4,23	6880+ 0,67/15,69	6048+ 0,31/21,15	5790+ 1,18/3,80	8070+ 0,35/4,14	1755+ 1,29/4,89	2630+ 1,97/2,80	600
	24160 + 1,05 / 10,79 813 kr/t 19,63 MNOK	2970+ 0,39/4,37	3100+ 0,42/16,45	4320+ 0,65/13,41	3240+ 0,31/21,75	2970+ 3,09/11,56	4050+ 0,52/6,63	1620+ 2,27/2,21	1890+ 2,17/2,50	590
110 545 0,67 / 8,38 590 kr/t 65 MNOK	19845 + 0,6 / 8,36 579 kr/t 11,50 MNOK	2430+ 0,39/4,37	1880+ 0,30/7,00	2970+ 0,26/9,10	3510+ 0,25/14,3	1755+ 1,21/10,83	3510+ 0,70/9,13	2160+ 1,23/3,05	1620+ 0,90/4,50	580
	16.135 t 0,26 / 5,53 372 kr/t 5,35 MNOK	1080+ 0,22/3,35	1080+ 0,21/4,00	2500+ 0,21/5,00	4050+ 0,21/7,45	1890+ 0,15/4,15	2025+ 0,32/7,53	2160+ 0,31/3,45	1350+ 0,57/5,39	570
	13370 + 0,27 / 5,43 331 kr/t 4,43 MNOK		810+ 0,56/1,62	2300+ 0,27/6,42	3780+ 0,21/7,45	1890+ 0,15/4,15	1350+ 0,32/7,53	1890+ 0,31/3,45	1350+ 0,2/3,45	560
	7280 + 0,21 / 4,20 231 kr/t 1,6 MNOK				2160+ 0,23/3,30	1520	1080+ 0,28/5,28	1200	1350+ 0,12/4,79	550

10.11.89 MC

R.A. nr 920

Cu 18
Au 82

K

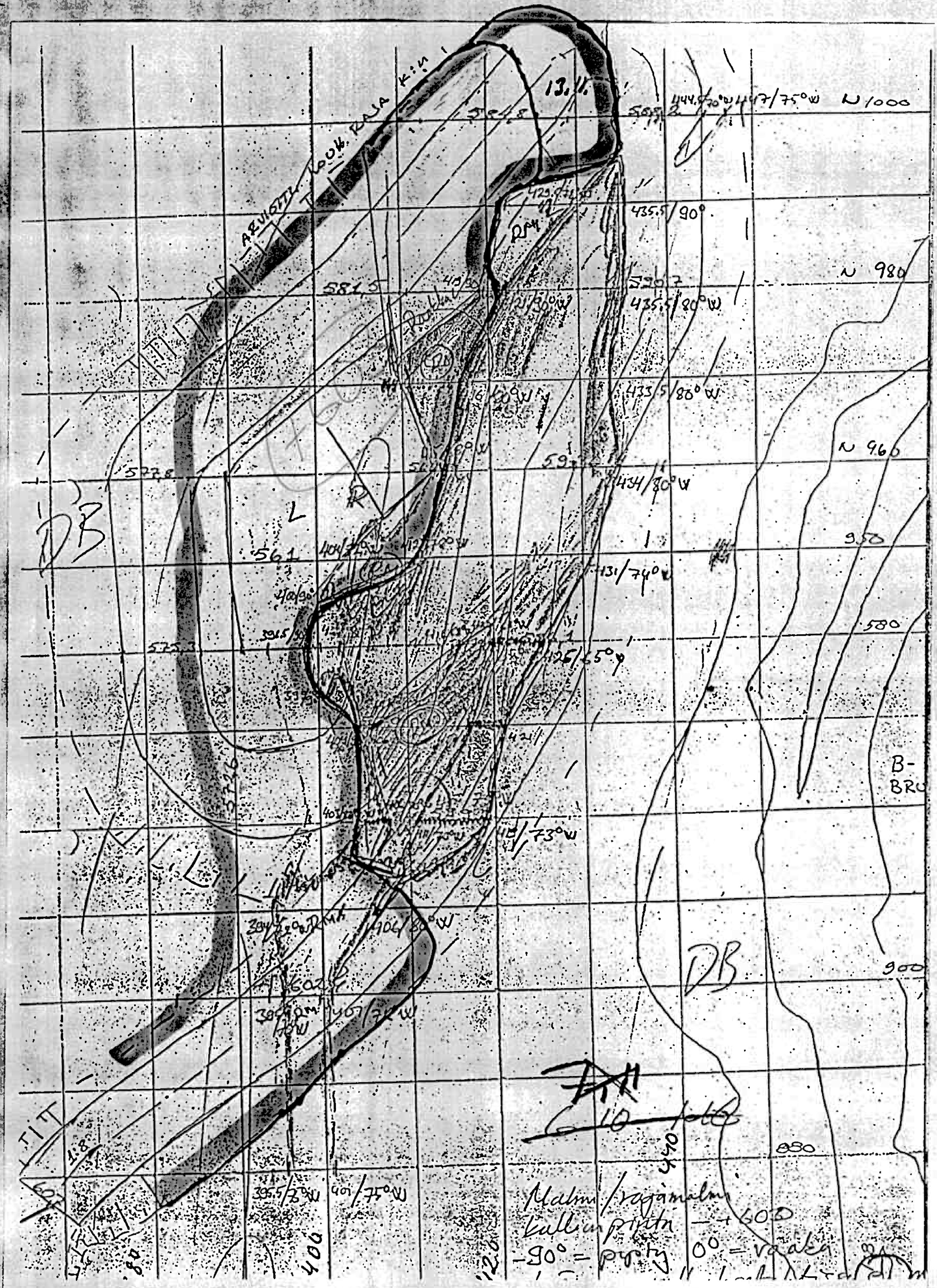
N

S

110 545
0.67/ 8.38
590 kr/t 65 MNOK

	990	980	970	960	950	940	930	920	
37035 + 0.79/9.10 657 kr/t 24.6 MNOK	980+ 0.28/4.38	4910+ 1.15/4.23	6880+ 0.67/15.69	6048+ 0.31/21.15	5790+ 1.18/3.66	8070+ 0.35/4.14	1755+ 1.29/4.89	2630+ 1.97/2.50	600
24160 + 1.05/10.79 813 kr/t 19.63 MNOK	2970+ 0.39/4.37	3100 + 0.42/16.45	4320+ 0.65/13.11	3240+ 0.31/21.15	2970+ 3.09/11.56	4050+ 0.52/6.63	1620+ 2.27/2.21	1890+ 2.17/2.50	590
19845 + 0.6 / 8.36 579 kr/t 11.50 MNOK	2430+ 0.30/4.37	1880+ 0.30/7.00	2970+ 0.26/9.10	3510 + 0.25/14.3	1755+ 1.21/10.43	3510+ 0.30/9.13	2160+ 1.23/3.05	1620+ 0.90/4.50	580
16135 t 0.26 / 5.53 332 kr/t 5.35 MOK	1080+ 0.22/3.35	1080+ 0.21/4.00	2500+ 0.24/5.00	4050+ 0.21/7.45	1890+ 0.15/4.15	2025+ 0.32/7.53	2160+ 0.31/3.45	1350+ 0.57/5.39	570
13370 0.27/5.49 331 kr/t 4.43 MNOK		810+ 0.56/1.62	2300+ 0.27/6.42	3780+ 0.21/7.45	1890+ 0.15/4.15	1350+ 0.32/7.13	1890+ 0.31/3.45	1350+ 0.31/3.45	560
7290 + 0.21/4.20 231 kr/t 1.6 MNOK				2160+ 0.23/3.30	1500	1080+ 0.28/5.28	1200	1352+ 0.12/4.79	550

10.11. 89 ME


13.11.
ARVIOITU 100% RAJA K:n
N 1000
444.5/70°W
447/75°W
595.8
435.5/90°
581.5
N 980
590.7
435.5/80°W
433.5/80°W
N 960
434/80°W
577.8
DB
L
R
561
431/74°
950
575.3
425/65°
580
421
B-
BRU
73°W
394/80°W
404/80°W
900
390/80°W
407/75°W
DB
10
440
880
18
395.5/85°W
401/75°W
400
Malmi/rajamalmi
kallionpinta — +600
-90° = pysty 0° = vaaka

14.11

Cu 18
Au 82

K

N

S

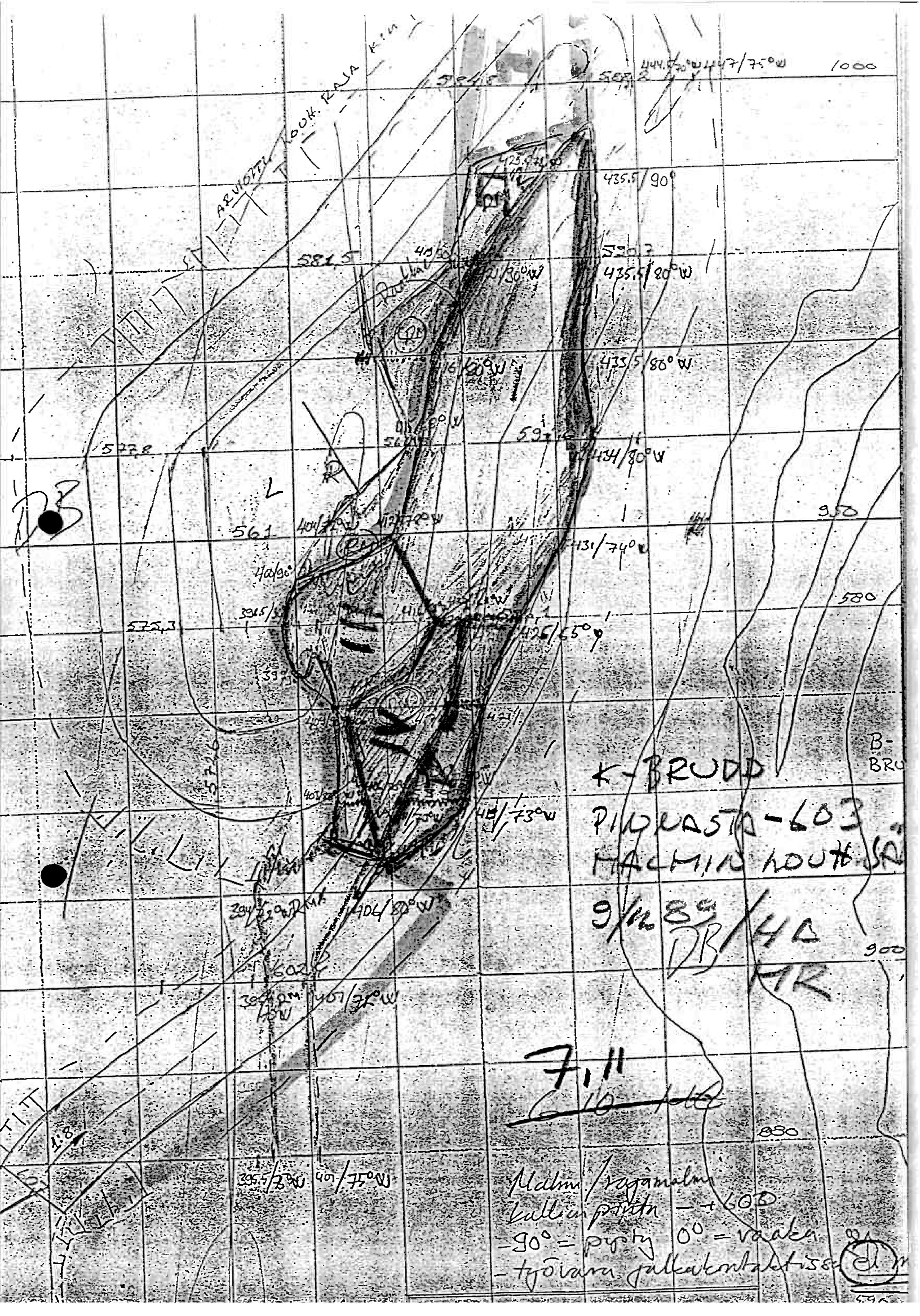
	990	980	970	960	950	940	930	920
37035 t 0,79/9.10 657 kr/t 24,6 MNOK	960t 0.28/4.38	4910t 1.15/4.23	6880t 0.67/15.63	6048t 0.31/21.15	5790t 1,18/3,66	8070t 0.35/4.14	1755t 1.29/4.89	2630t 1.97/2.80
22180 t 1.10 / 11.36 853 kr/t - 19.06 MNOK	1000 t ∈ 0.28/4.38	3100 t 0.42/16.45	4320t 0.65/13.61	3240t 0.31/21.15	2970t 3.09/11.56	4050t 0.52/6.63	1620t 2.27/2.21	1890t 2.17/2.50
18400 t 0,60/8.62 598 kr/t 11.0 MNOK	1000t ∈ 0.22/3.35	1880t 0.30/7.00	2970t 0.26/9.10	3570 t 0.25/14.3	1755t 1.21/10.83	3510t 0.70/9.13	2160t 1.23/3.05	1620t 0.90/4.50
17275t 0.27/6.03 369 kr/t 6,39 MNOK	1080t 0.22/3.35	1080t 0.21/4.00	2500t 0.21/5.00	4050t 0.21/7.45	3030t 0.25/7.50	2025t 0.32/7.53	2160t 0.31/3.45	1350t 0.57/5.99
14040t 0.28/6.02 370 kr/t 5.2 MNOK		810t 0,56/1.62	2300t 0.27/6.42	3760t 0.21/7.45	2560t 0.26/7.40	1350t 0.32/7.53	1880t 0.31/3.45	1350t 0.31/3.45
~~7280t~~ 0,21/4,20 231 kr/t 1,6 MNOK				2160t 0.23/3.30	1500	1080t 0.28/5.28	1200	1350t 0.12/4.79

108940 t
0,67 / 8.60
606 kr/t 66.02 MNOK

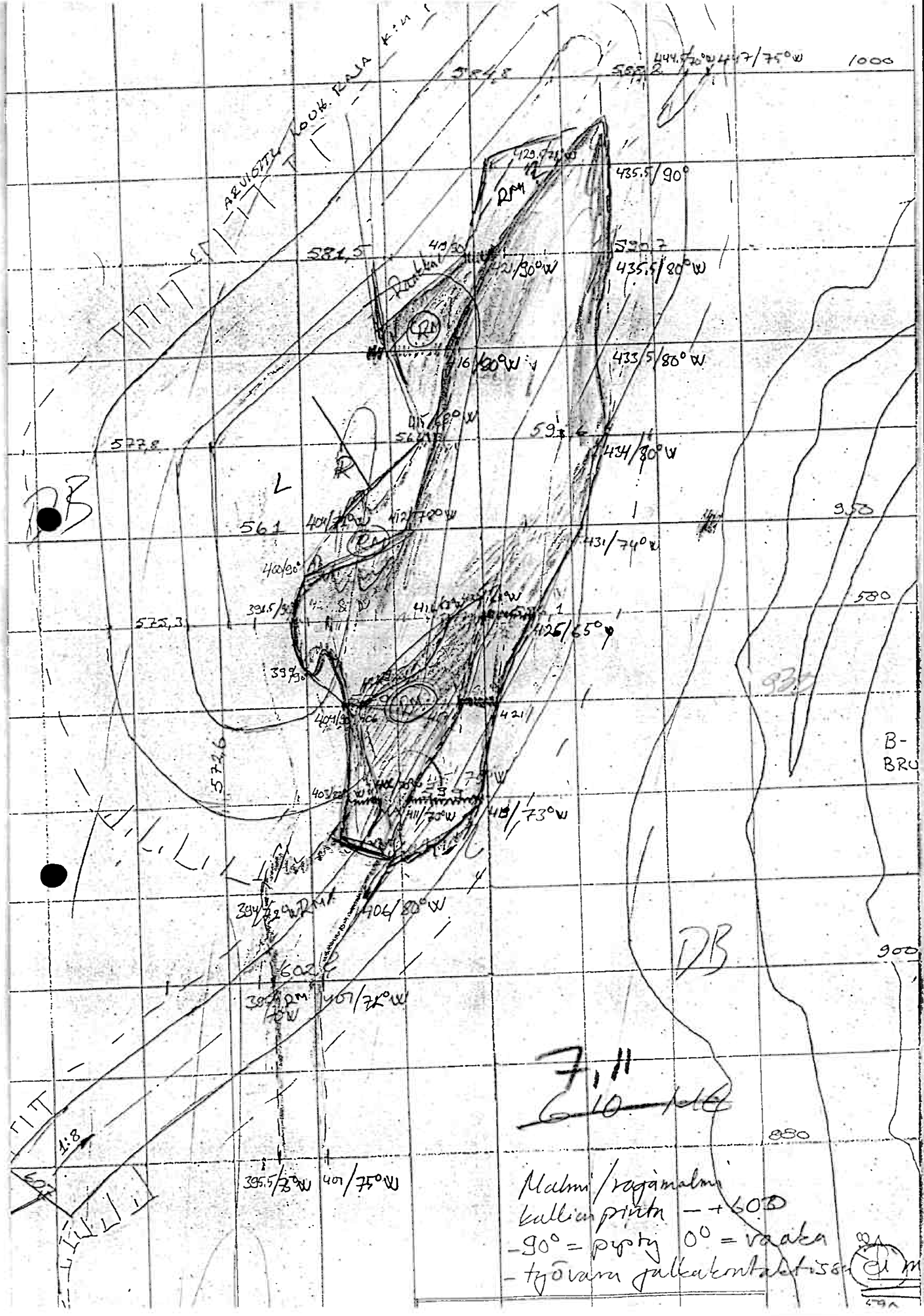
600
590
580
570
560
550

10.11.89 ME

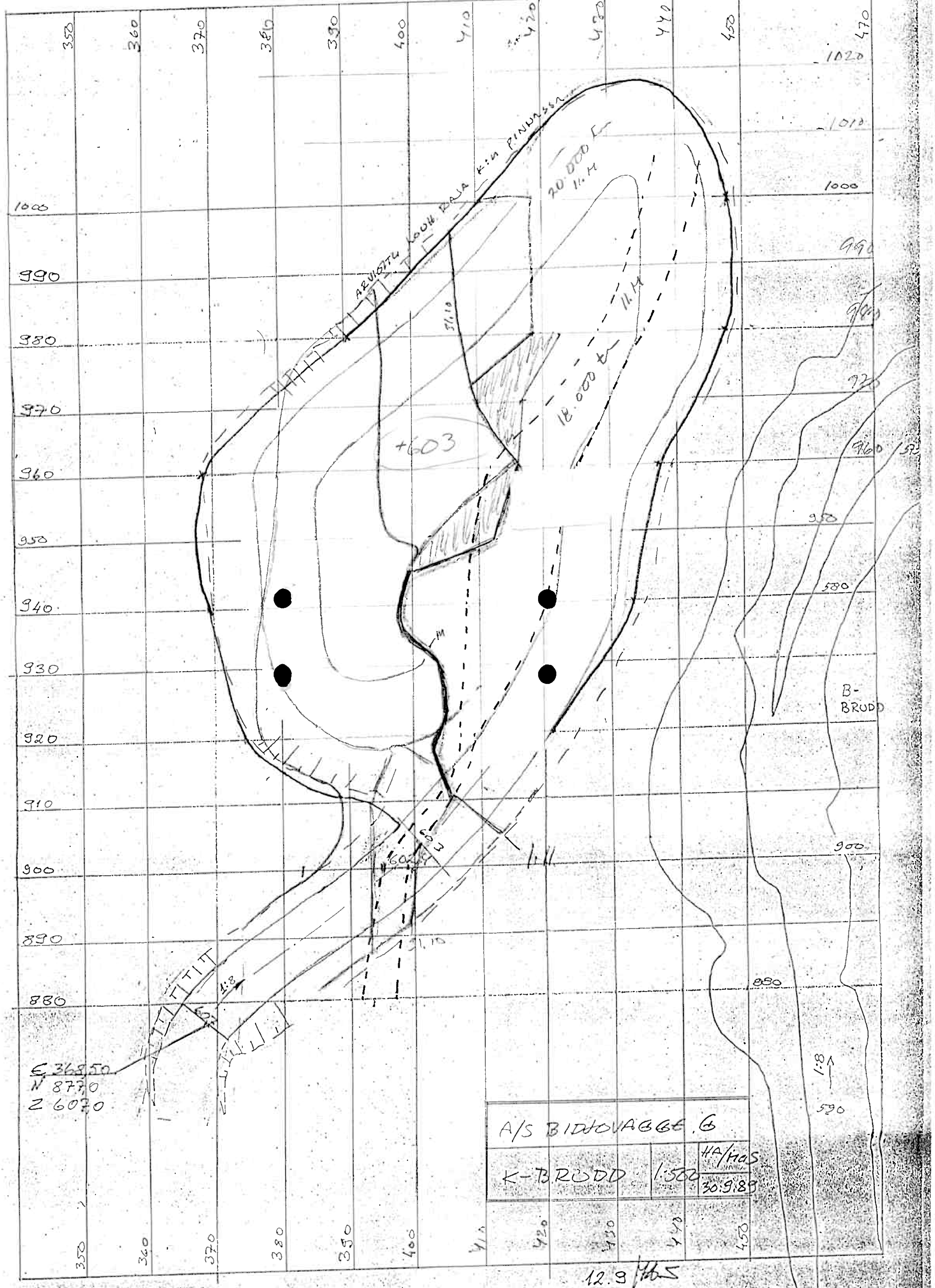
R.A.nr 920.



Malmi/vaganmalmi
kallionpinta — +600
-90° = pysty 0° = vaaka
- työiarin jalkakontaktissa

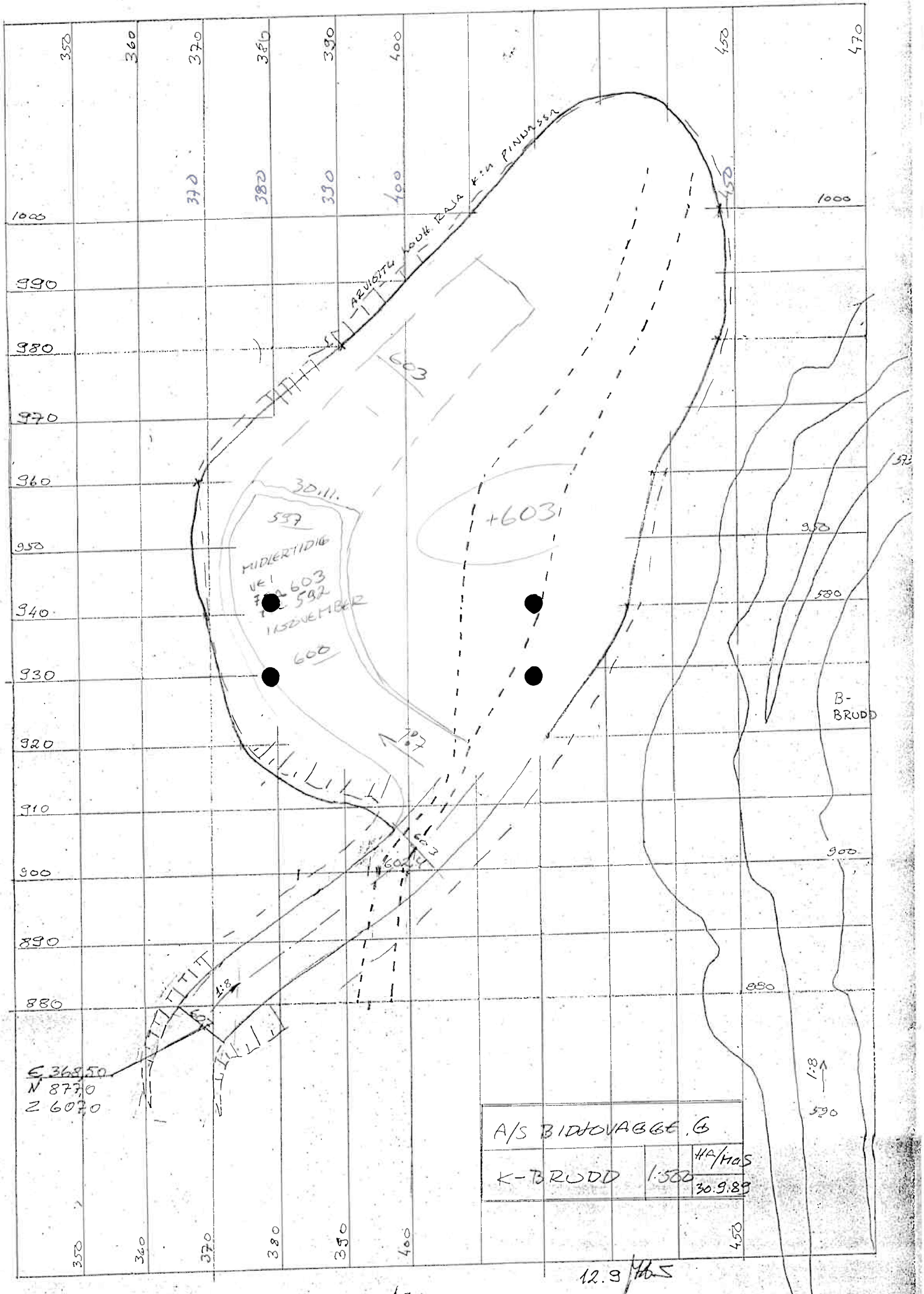
ARVIOITU KOOK. RAJA KIVI
584.8
585.2
444.5/70°W 447/75°W
1000
429.5/71°W
RM
435.5/90°
581.5
419/80
421/80°W
590.7
435.5/80°W
RM
416/80°W
433.5/80°W
415/80°W
562.1
591.6
434/80°W
577.8
DB
L
R
561
404/70°W
412/78°W
RM
431/74°W
400/90°
950
580
391.5/90
416/80°W
575.3
426/65°W
399/90
935
404/90
RM
421
572.6
B-
BRU
401/80°W
75°W
411/70°W
418/73°W
394/72°W RM
406/80°W
602.2
DB
300/ RM 70°W
407/72°W
900
7/11
6.10 ME
880
1:8
395.5/78°W
407/75°W
Malmi/rajamalmi
kallion pinta — +600
-90° = pysty 0° = vaaka
-työvara jalkakontakti 58
Cu M
570

603


A/S BIDJOVAGGE .G
K-BRUDD
1:500
HA/HaS
30.9.89
E 36850
N 8770
Z 6070
+603
ARVIOITU KOUH RAJA K:N PINNASSA
20.000 t
11.M
18.000 t
11.M
31,10
60.3
1:8
B-BRUDD
350
360
370
380
390
400
410
420
430
440
450
470
880
890
900
910
920
930
940
950
960
970
980
990
1000
1010
1020
590
580

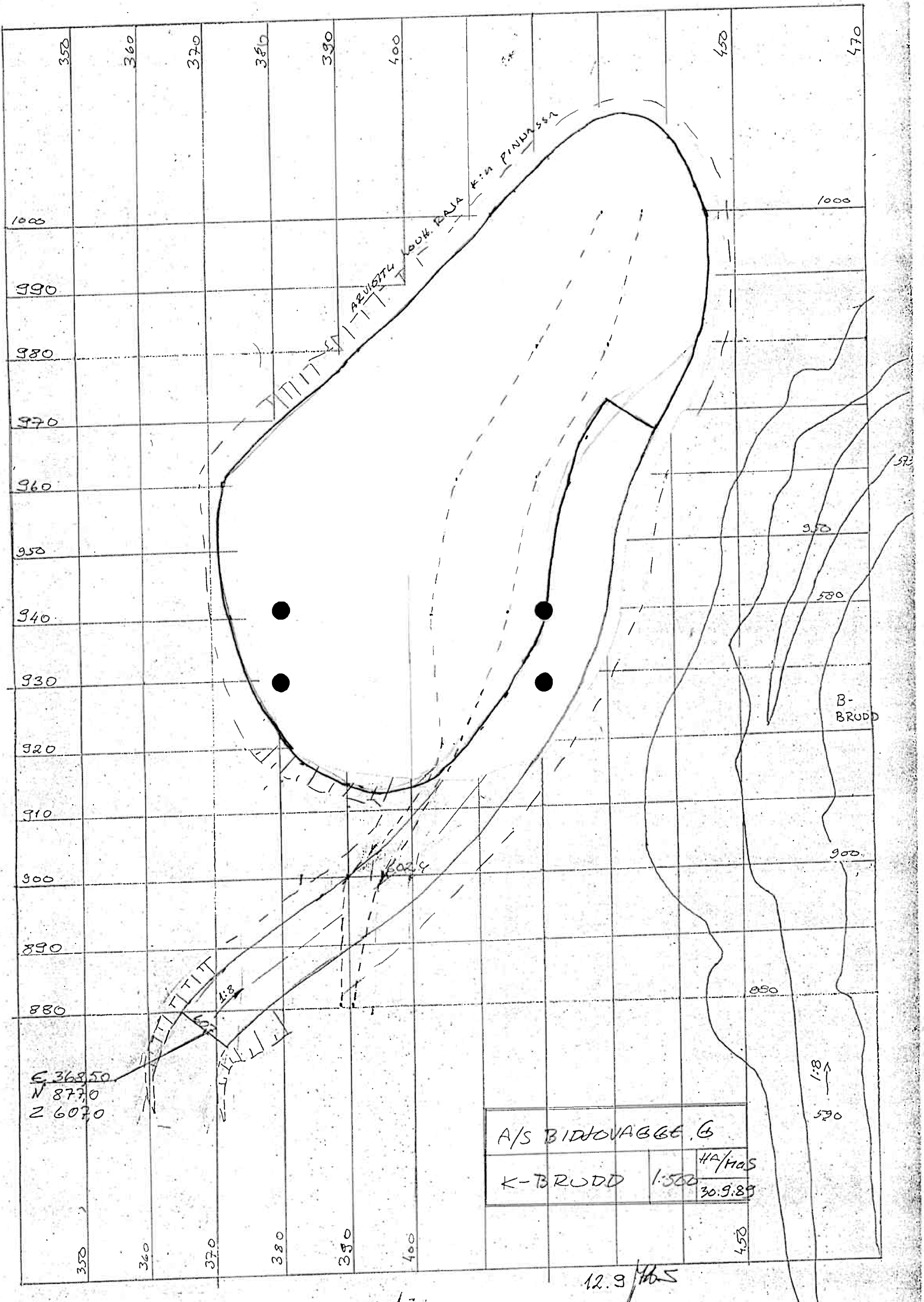
12.9

603



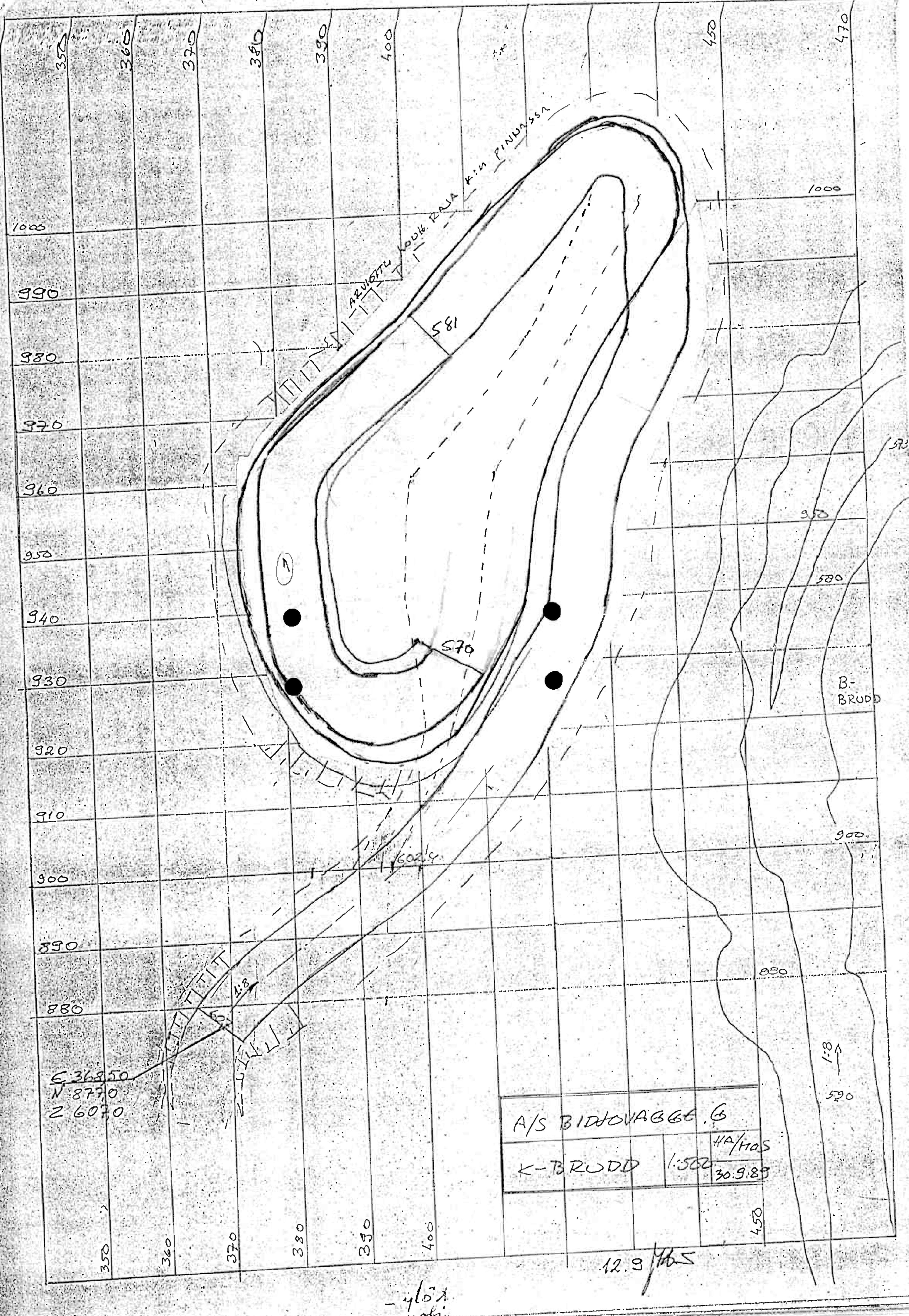
12.9 HaS

- ylöä


350
360
370
380
390
400
450
470
1000
990
980
970
960
950
940
930
920
910
900
890
880
ARVIOITU LOUH. RAJA K:n PINNASSA
602,4
1:8
602
E 368,50
N 877,0
Z 607,0
B-
BRUDD
950
580
575
900
880
1:8
590
A/S BIDJOVAGGE .G
K-BRUDD
1:500
HA/MoS
30.9.89

12.9 /MoS

- ylök


350
360
370
380
390
400
450
470
1000
990
980
970
960
950
940
930
920
910
900
890
880
ARVIOITU LOUH. RAJA K:n PINNASSA
581
570
①
6024
1:8
60:
E 36850
N 8770
Z 6070
B-
BRUDD
1000
575
950
580
900
850
1:8
520
A/S BIDJOVAGGE G
K-BRUDD
1:500
HA/MaS
30.9.89
12.9 MaS
– ylök
– noho

Malmberegning ~~B-vest~~ K

N

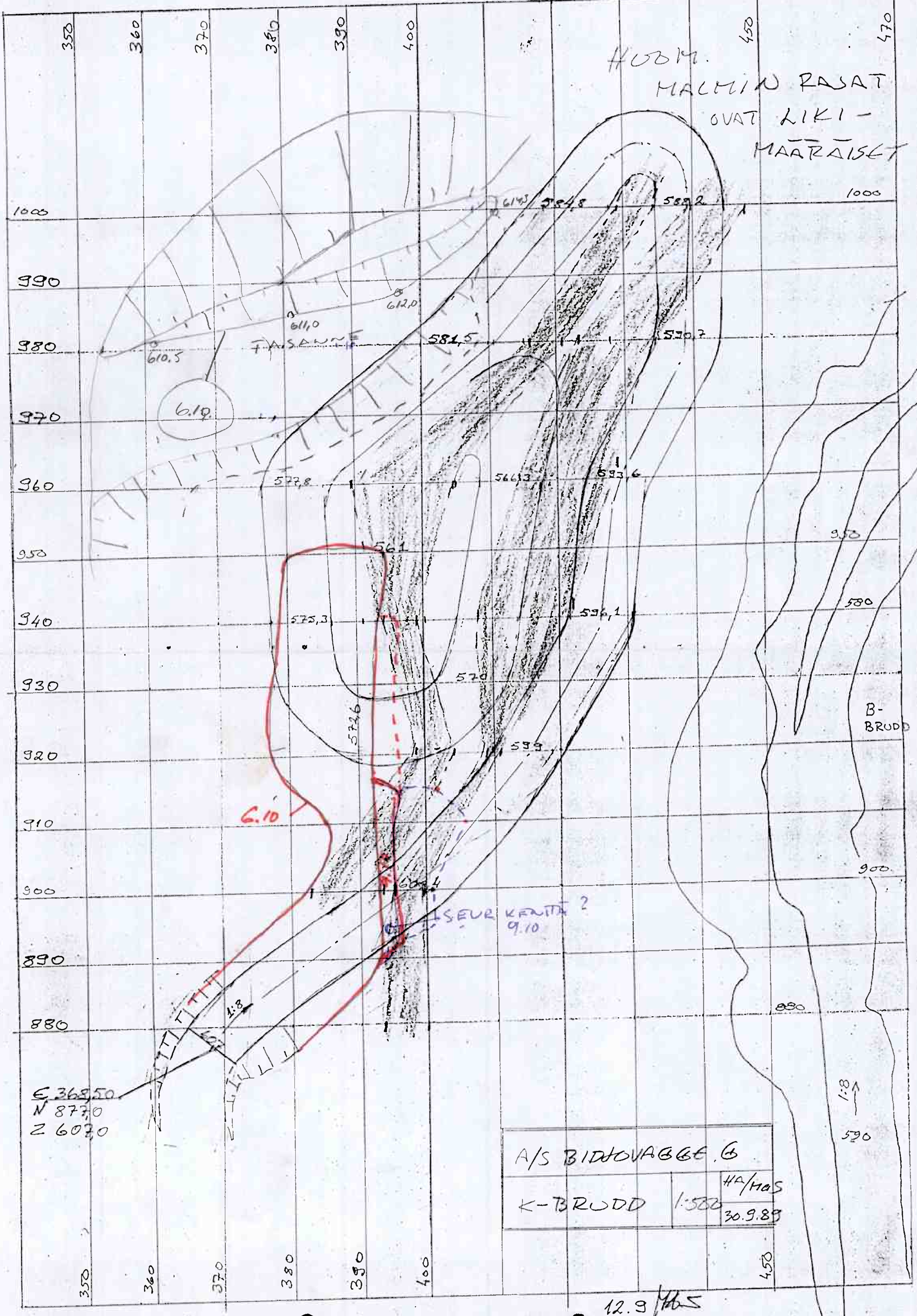
N1000	N980	N970	N960	N950	N940	N930	N920	N910	N900	N890	N880	
7776 t 0.82/1.79	3600 t 0.42/16.45		5600 t 0,31/21.15		9828 t 1.89/2.11		<2m				0	S +600
3788 t 0,93/3,20	5400 t 0.42/16.45	11m	6500 t 0,31/21,15		6480 t 1,30/5,16		1120 t 1,5/2,17	2m	2800 t 0.36/0.96	5m	1680 t 3m 0,39/4,86	
	5400 t 0,42/16,45	11m	6500 t 0,27/15,57		5940 t 0,70/9,13		1960 t 0,84/4,90	3,5m	3920 t 0,32/1,43	7m		580
	2700 t 0,45/13,67		6920 t 0,21/7,45		4820 t 0,70/9,13		2240 t 0,57/5,99	4m	5600 t 0,31/1,60	10m		570
	1620 t 0,58/1,62		2600 t 0,25/6,72	4160 t 0,08/2,49	2240 t 0,32/7,53	4m	3080 t 0,32/5,34	5,5m	6720 t 0,31/1,60	12m	ikke malm	560
	1620 t 0,56/1,62		1680 t 0,38/4,15		2240 t 0,30/5,84	3,5m	3360 t 0,12/4,79	6m				550
	1620 t 0,32/4,40	3m	1680 t 0,38/4,15		1680 t 0,26/3,03	3m	2430 t 0,10/5,06	4,5m				+550
	1620 t 0,32/4,40						2160 t 0,07/5,39	4m	19040 t 0,32/1,47			+540 SS
	23640 0,38/12,27		~~31480 t~~ ~~0,28/13,96~~		~~6160 t~~ ~~0,30/5,69~~		15230 0,31/5,22					+530

~~76570~~
~~0,32/11,03~~

N1000	11556	0,88	2.25
N 980	14400	0,42	16.45
N 960	28120	0.27	15.13
N 940	27108	1.27	5,64
N 920	5320	0,87	4.78
	86500	0,73	10.02

~~2.8.~~ M

10.10
ME

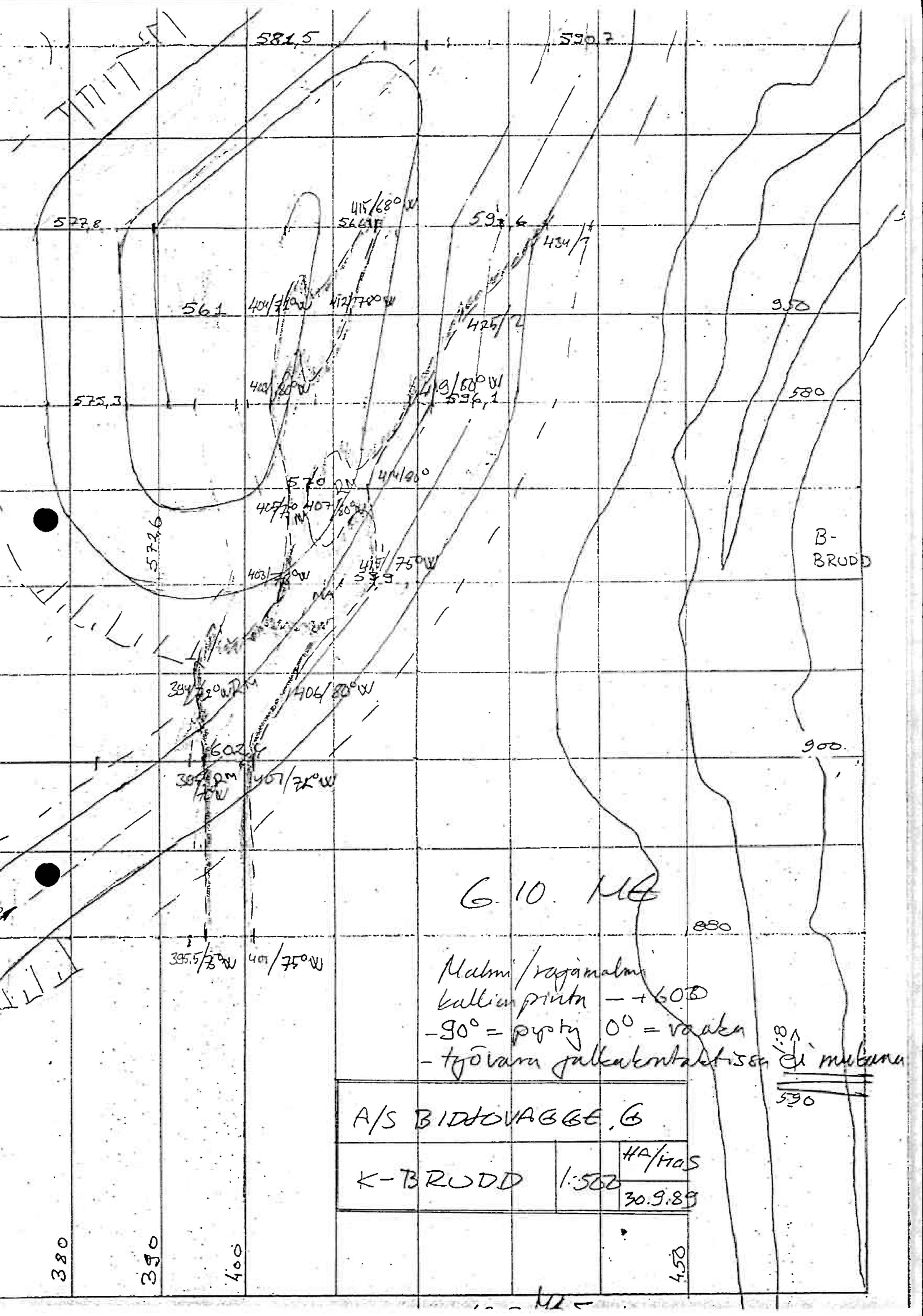


HUOM.
MALMIN RAJAT
OVAT LIKI-
MÄÄRÄISET

A/S BIDJOVAGGE .G
K-BRUDD 1:500 HA/MaS 30.9.89

12.9

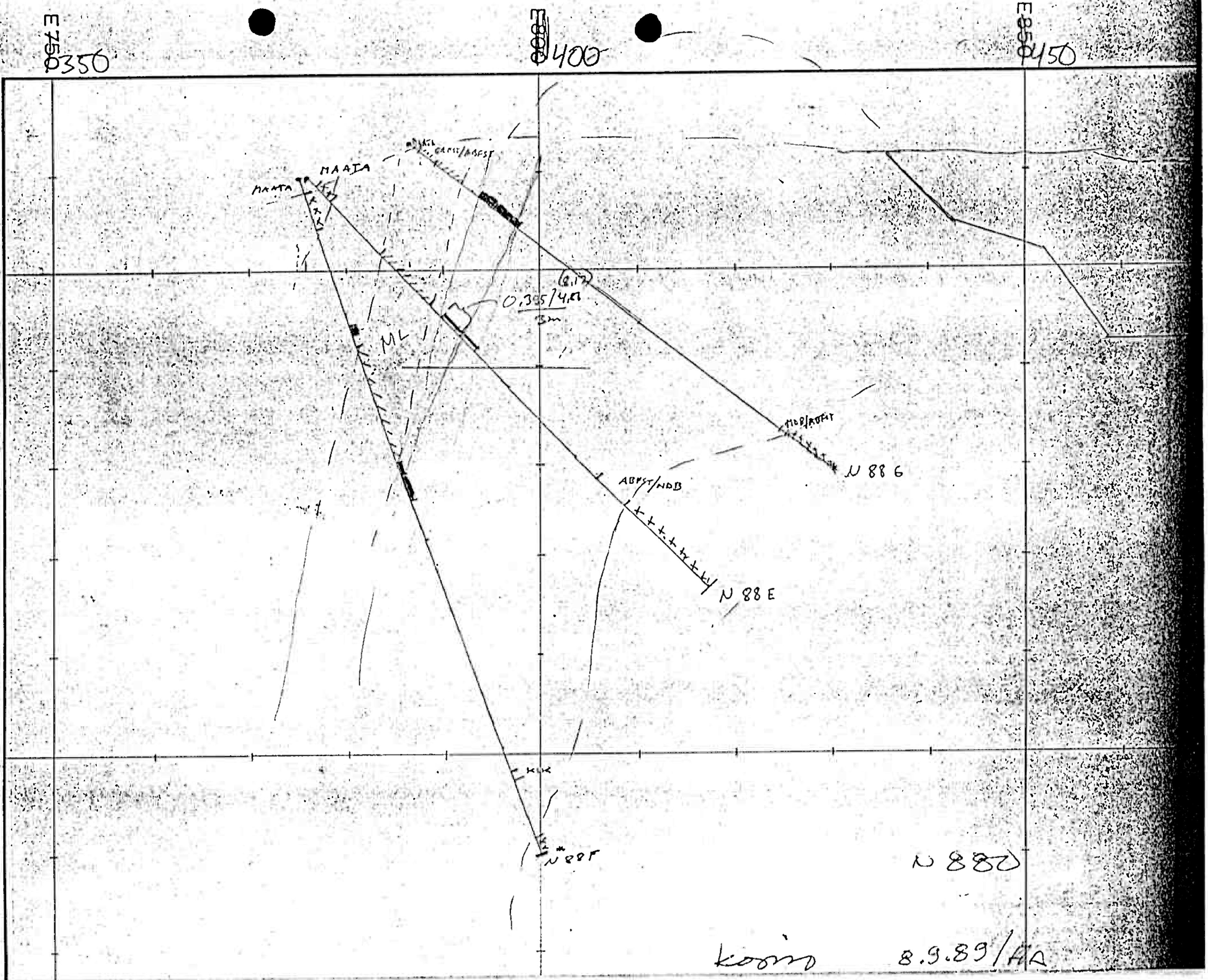
-ylöi

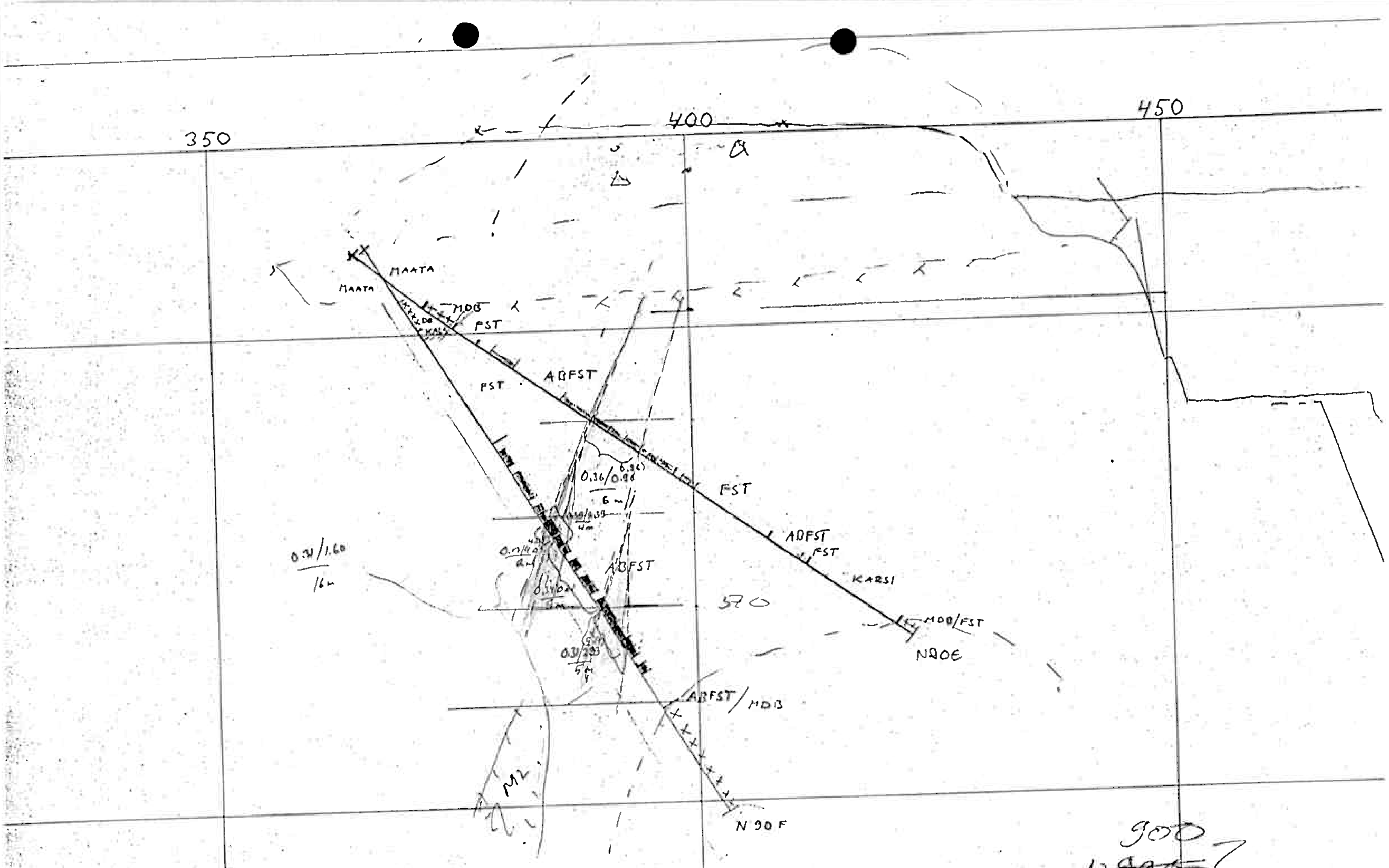


G.10 MG

Malmi/rajamalmi
kallionpinta — +600
-90° = pysty 0° = vaaka
- työvara jalkakontaktissa ei mukana

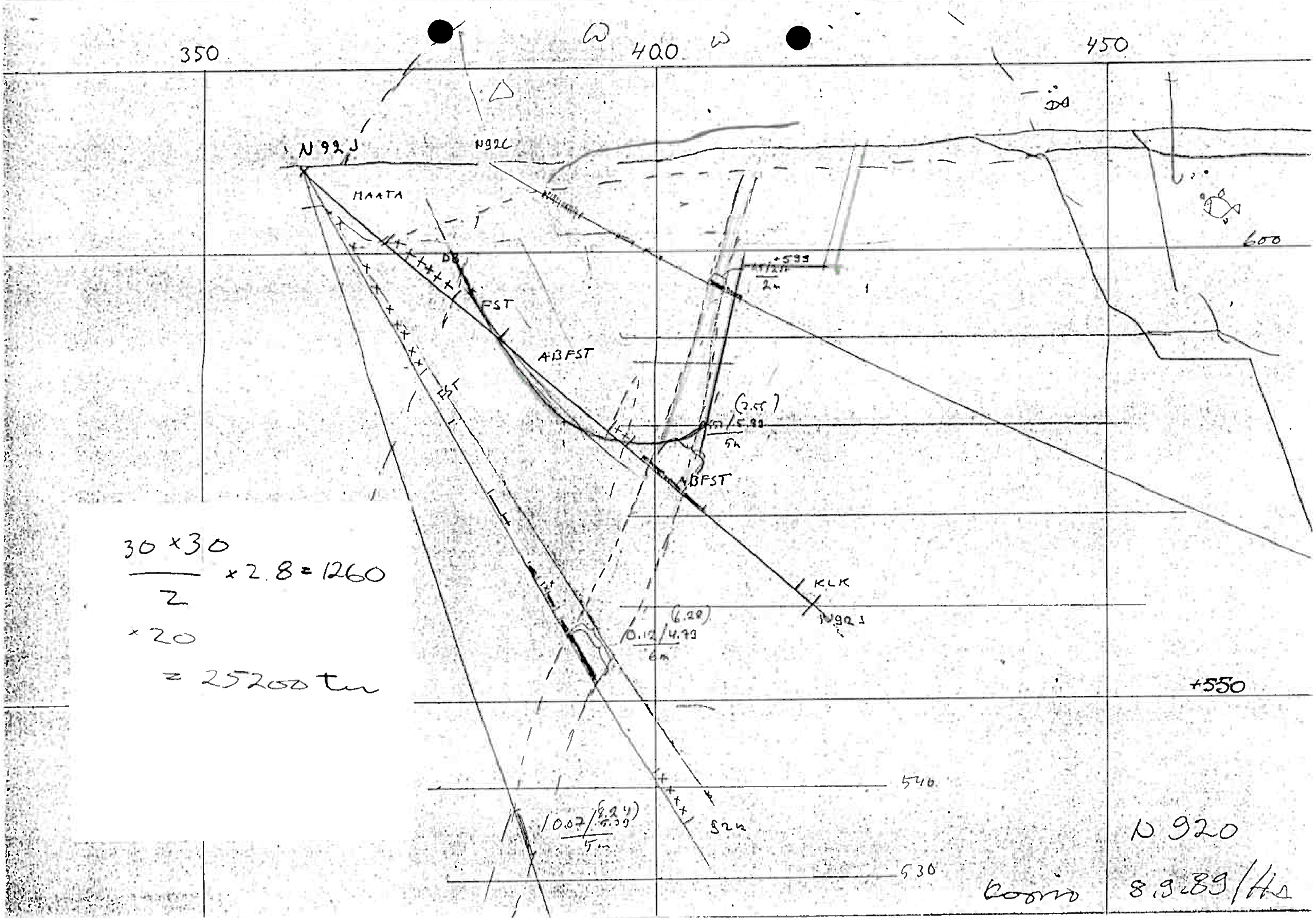
A/S BIDJOVAGGE, G
K-BRUDD 1:500 HA/HaS 30.9.89


E750
350
E800
400
E850
450
600
700
550
650
MAATA
MAAIA
CAPST/ABEST
(8,17)
0,395/4,0
3m
ML
MDB/ABST
N 88 G
ABFST/NDB
N 88 E
KLK
N88F
N 88D
kooing
8.9.89/AA



900
~~N996~~ 2

kopio 8.9.89/Ha



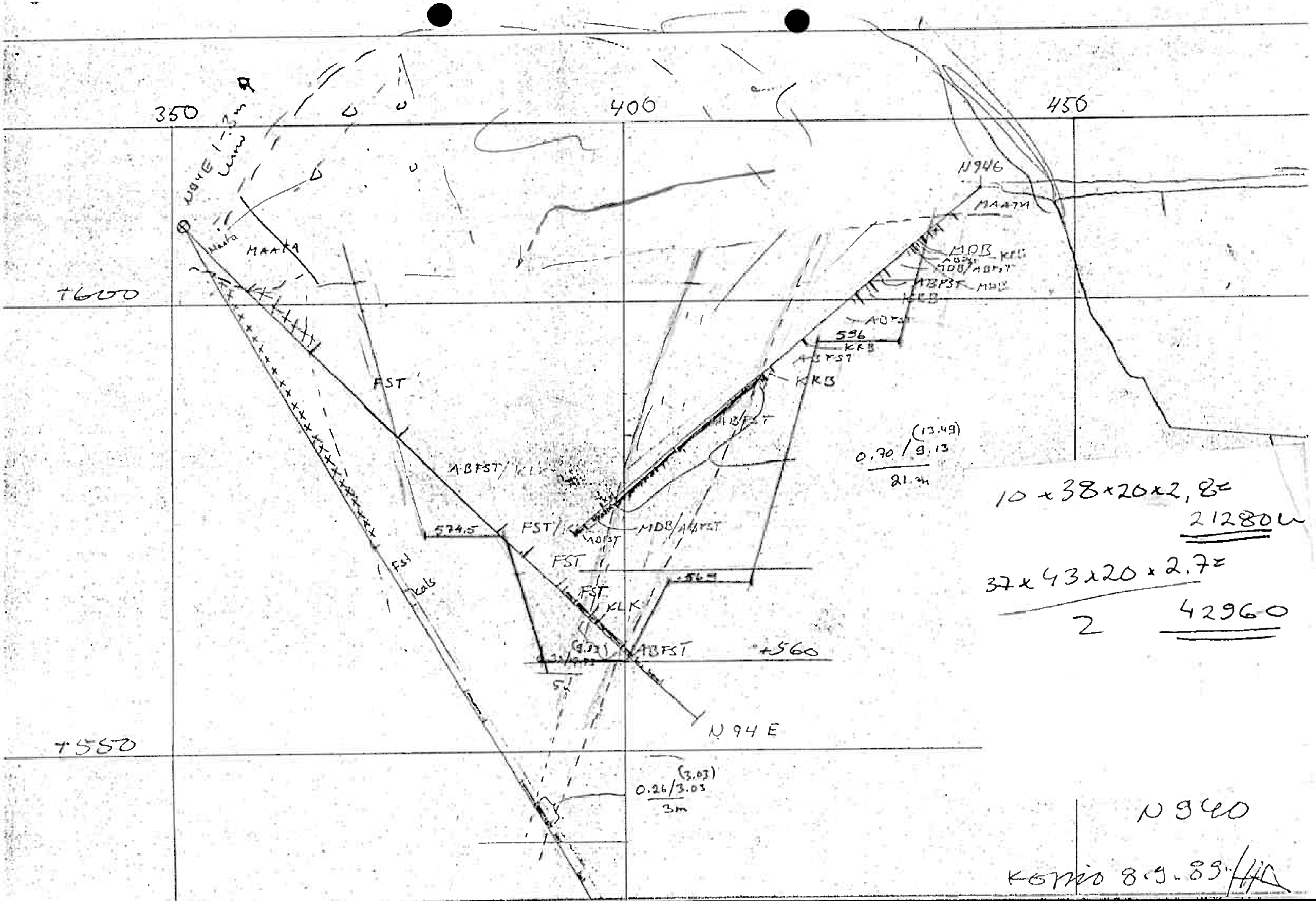
$$\frac{30\times30}{2}\times2.8=1260$$

×20

= 25200 tn

N 920

8.9.89/Hs

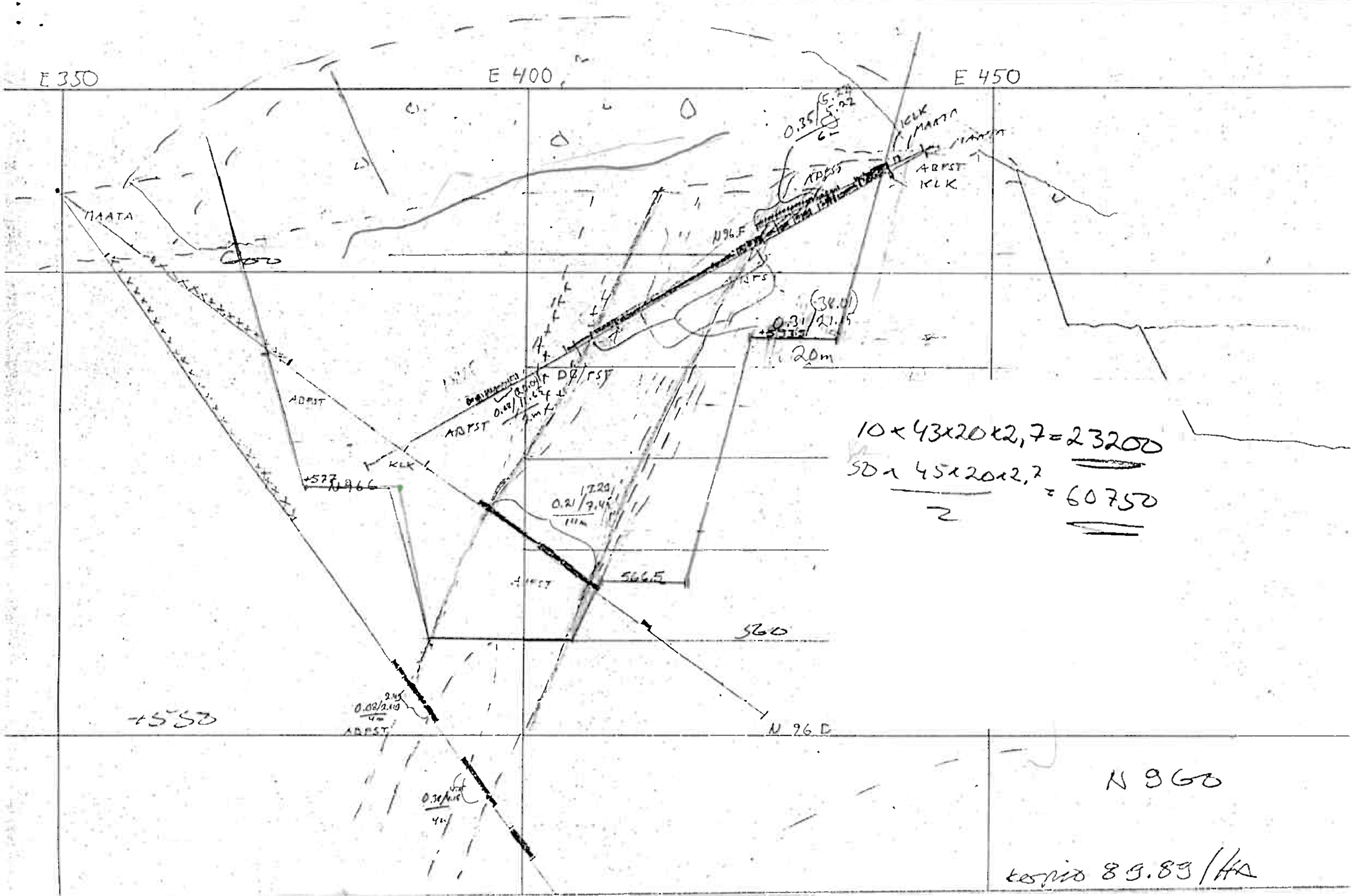


10 × 38 × 20 × 2,8 = 21280 t

$$\frac{37 \times 43 \times 20 \times 2.7}{2} = 42960$$

N 940

Kotiio 8.9.89.

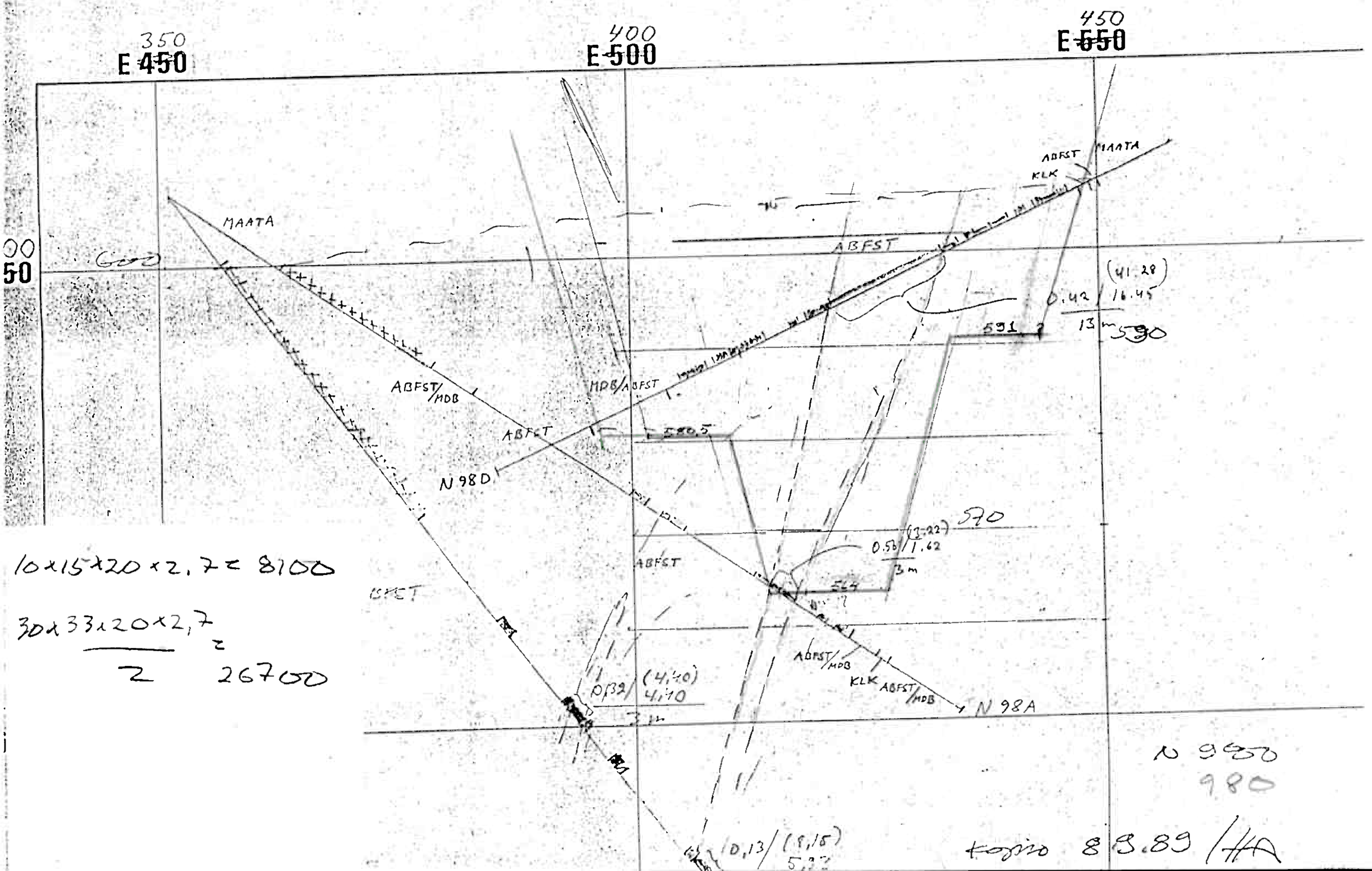


$10 \times 43 \times 20 \times 2{,}7 = \underline{\underline{23200}}$

$\frac{50 \times 45 \times 20 \times 2{,}7}{2} = \underline{\underline{60750}}$

N 960

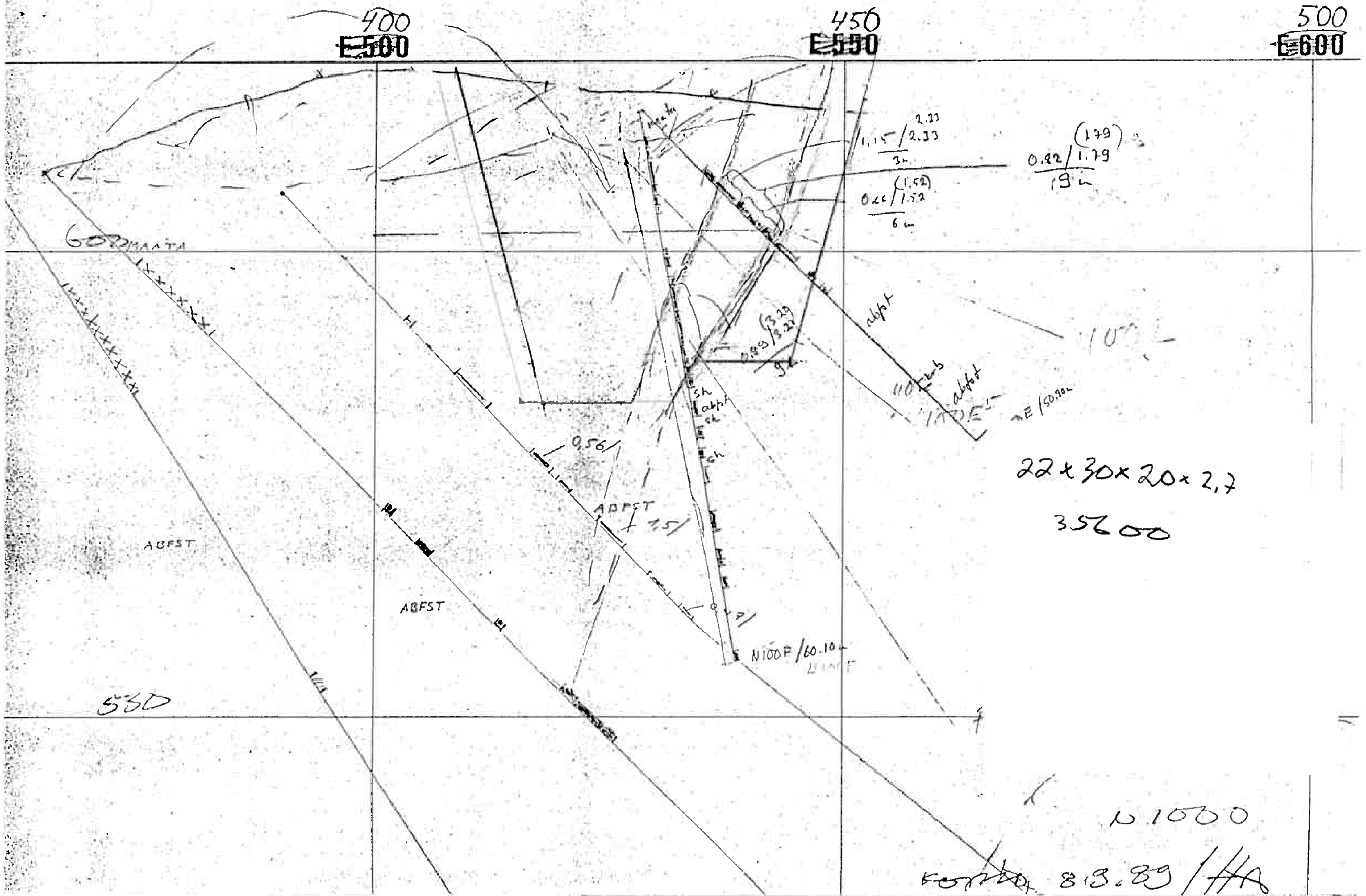
kopio 89.89 / Ha



10×15×20×2,7 = 8100

$$\frac{30\times33\times20\times2{,}7}{2} = 26700$$

kopio 8.8.89 /HA

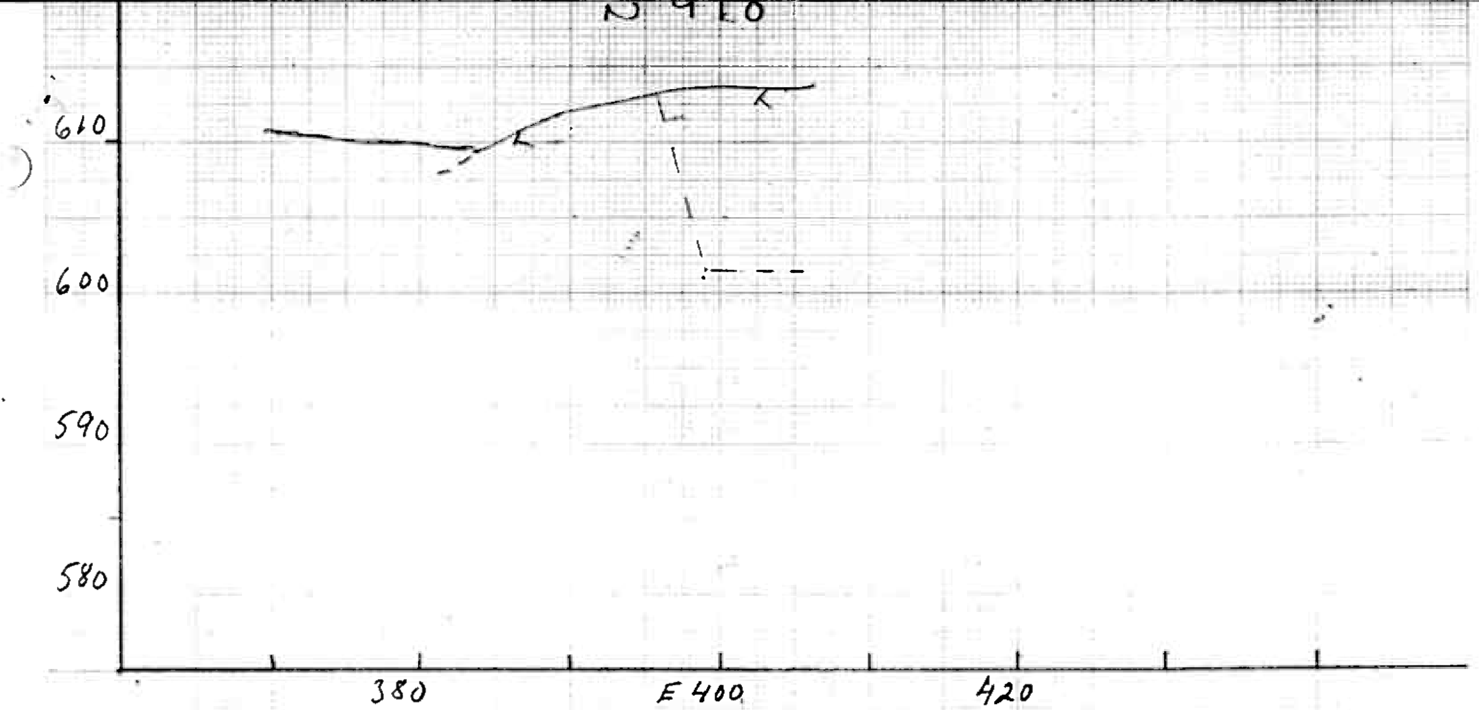


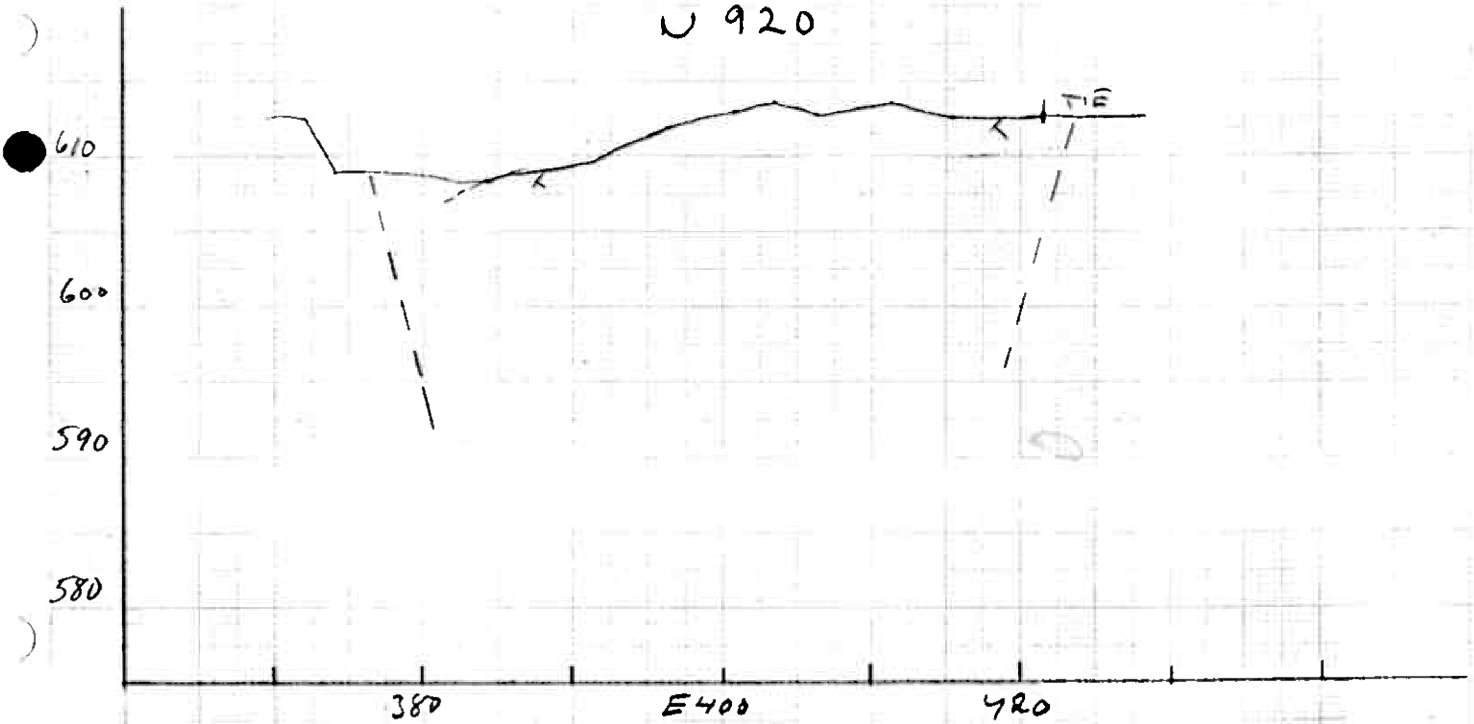
22 x 30 x 20 x 2,7

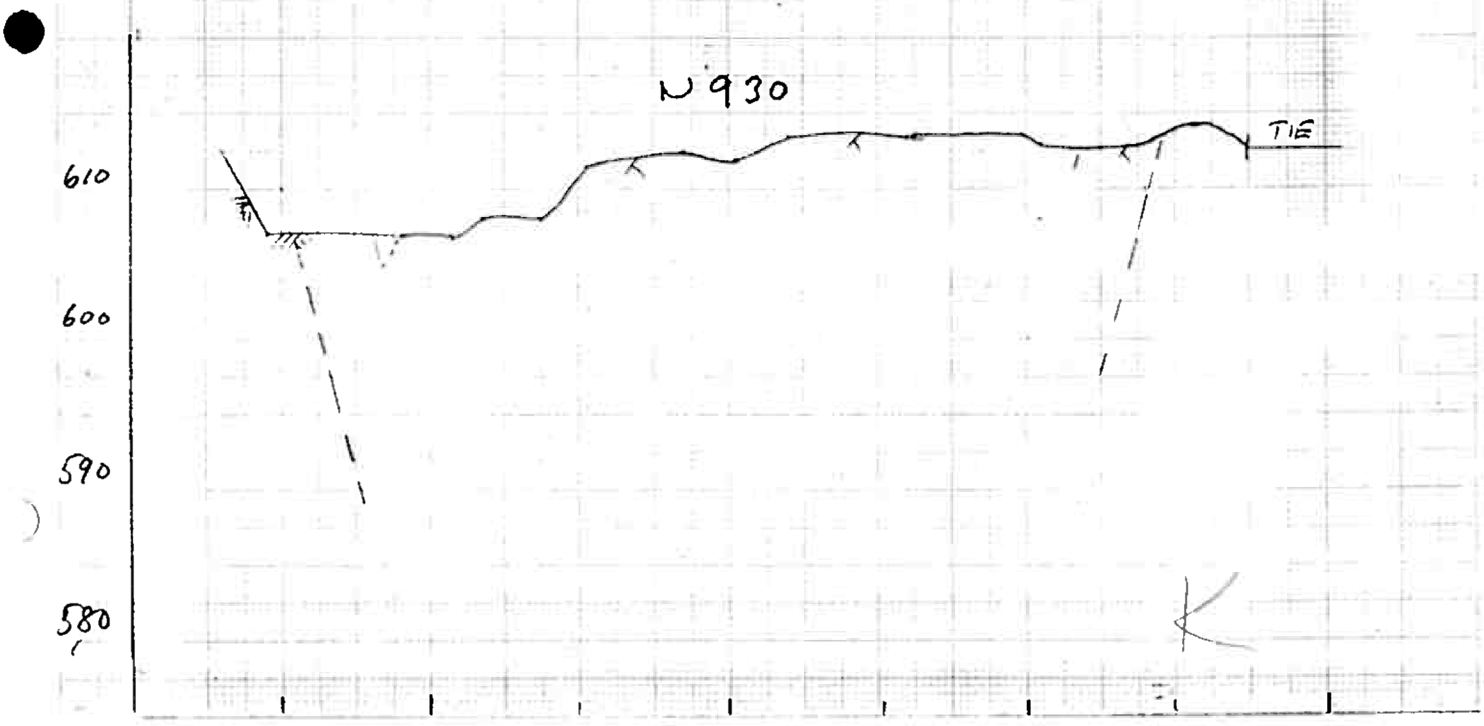
35600

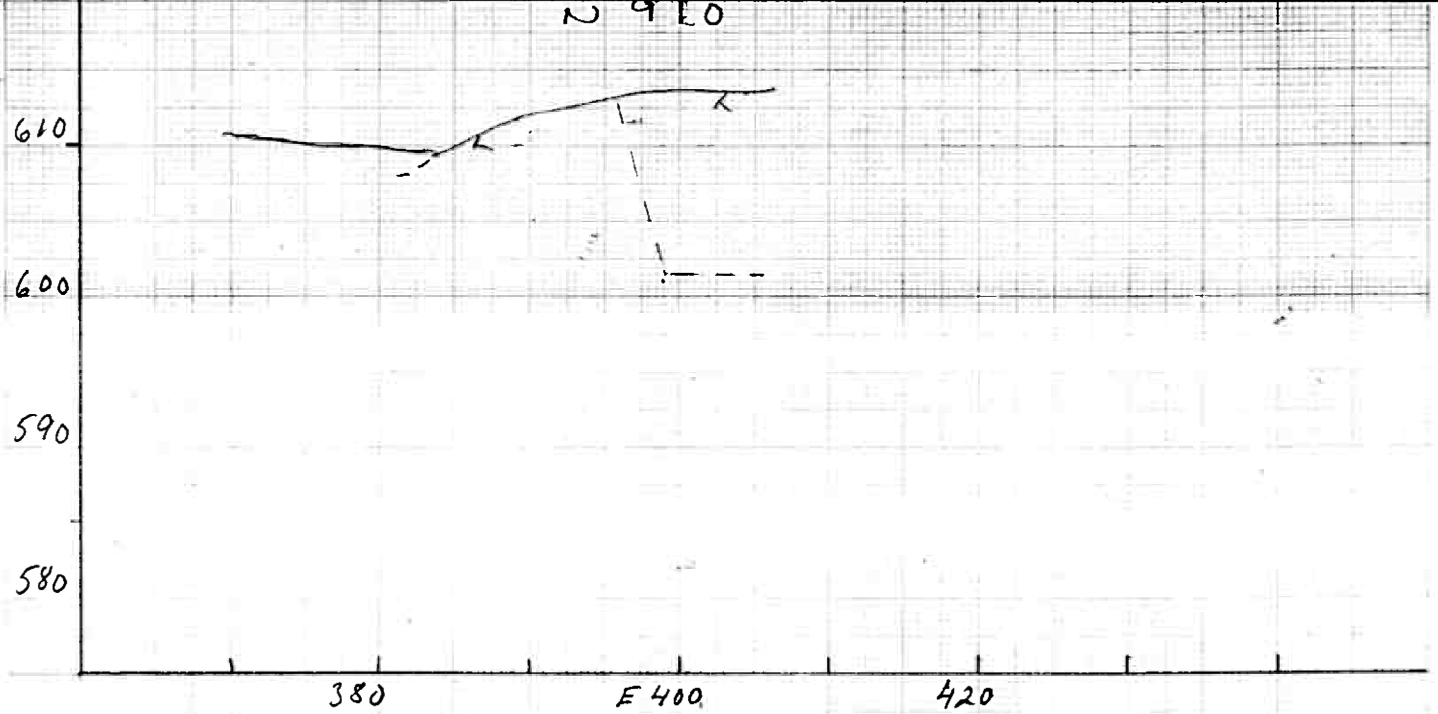
N 1000

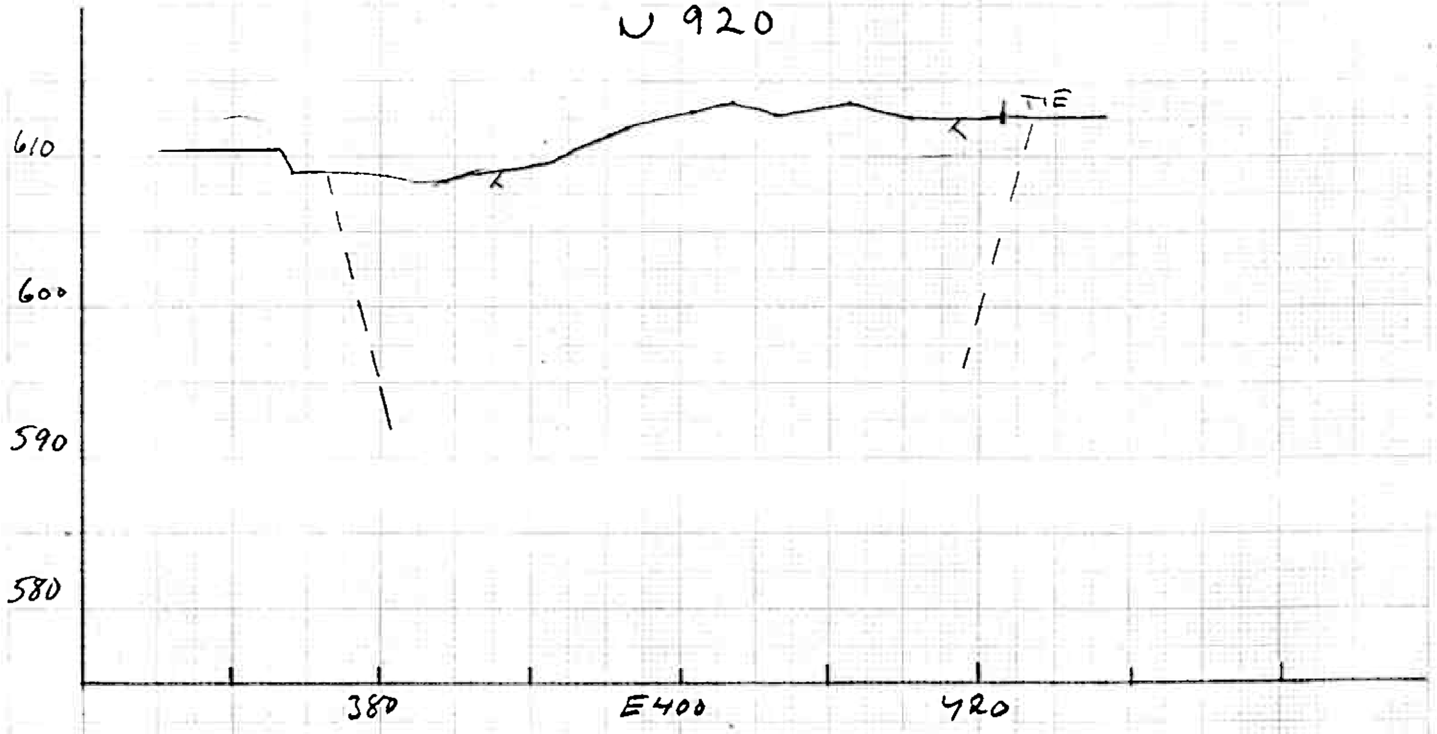
~~FORMER~~ 8.3.89 / HA


N 910
610
600
590
580
380
E 400
420

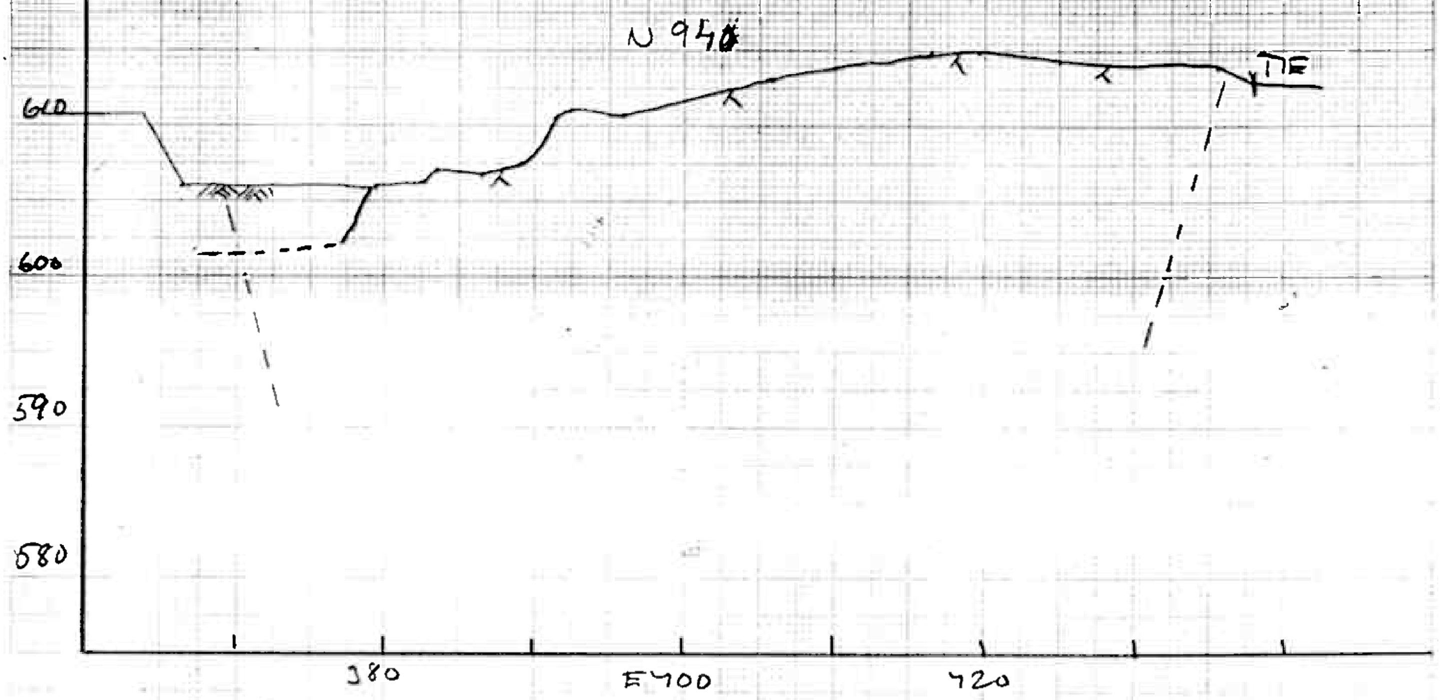

N 920
TIE
610
600
590
580
380
E 400
420

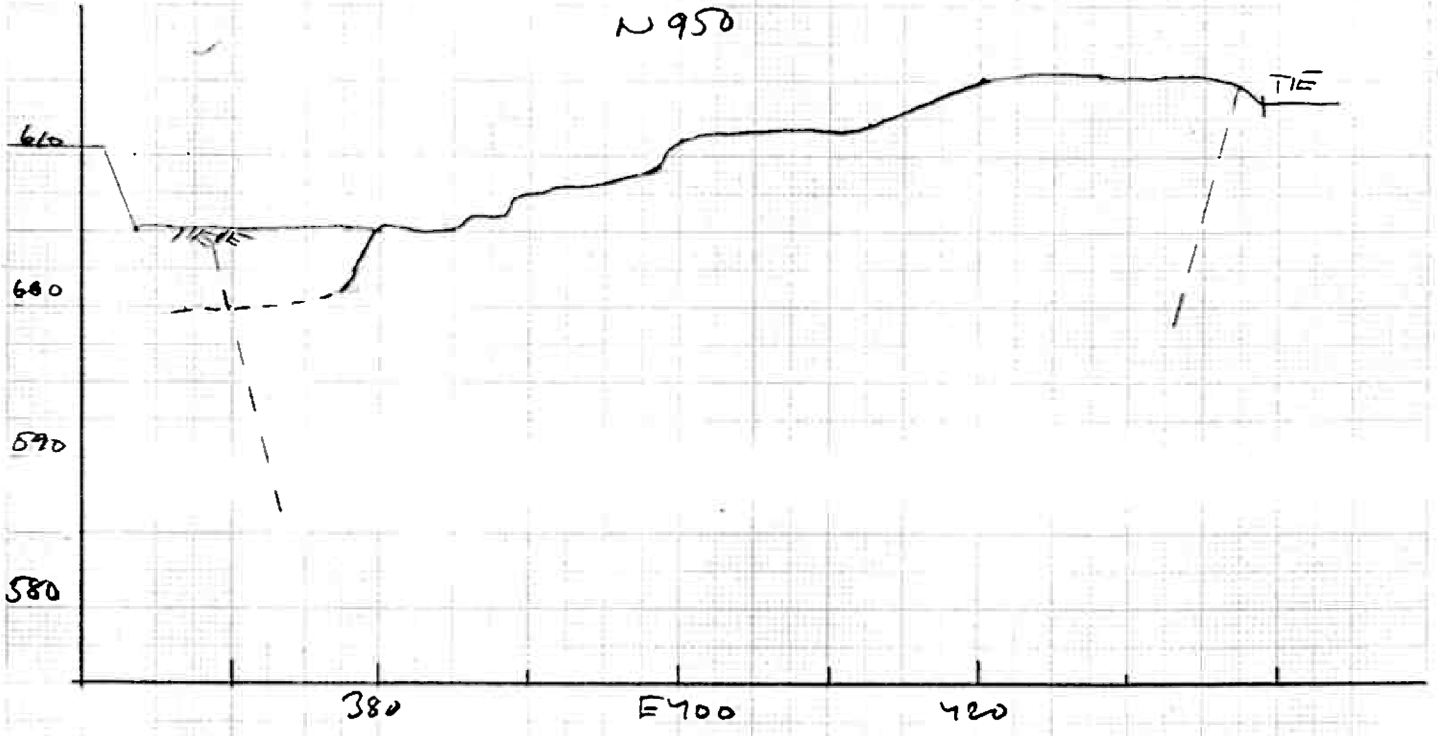

N 930
TIE
610
600
590
580

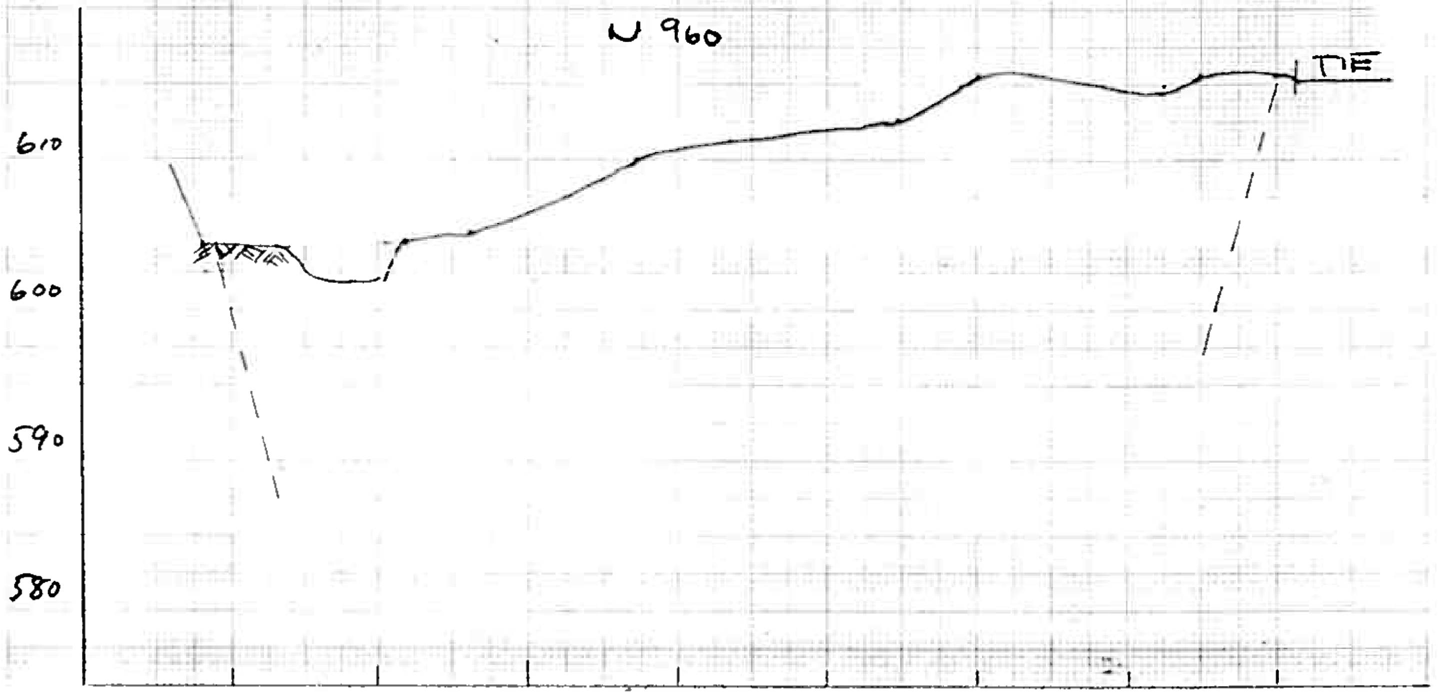

N 9[illegible]0
610
600
590
580
380
E 400
420

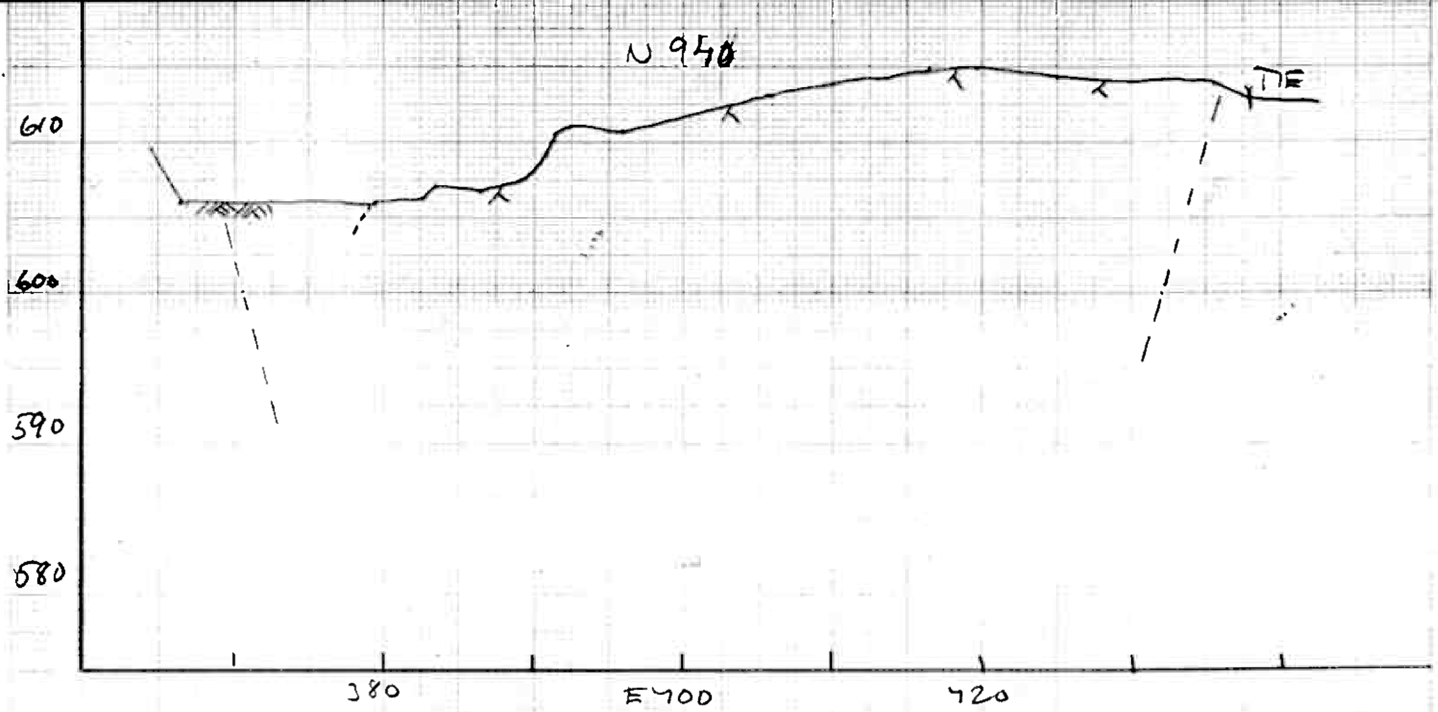

N 920
TIE
610
600
590
580
380
E 400
420

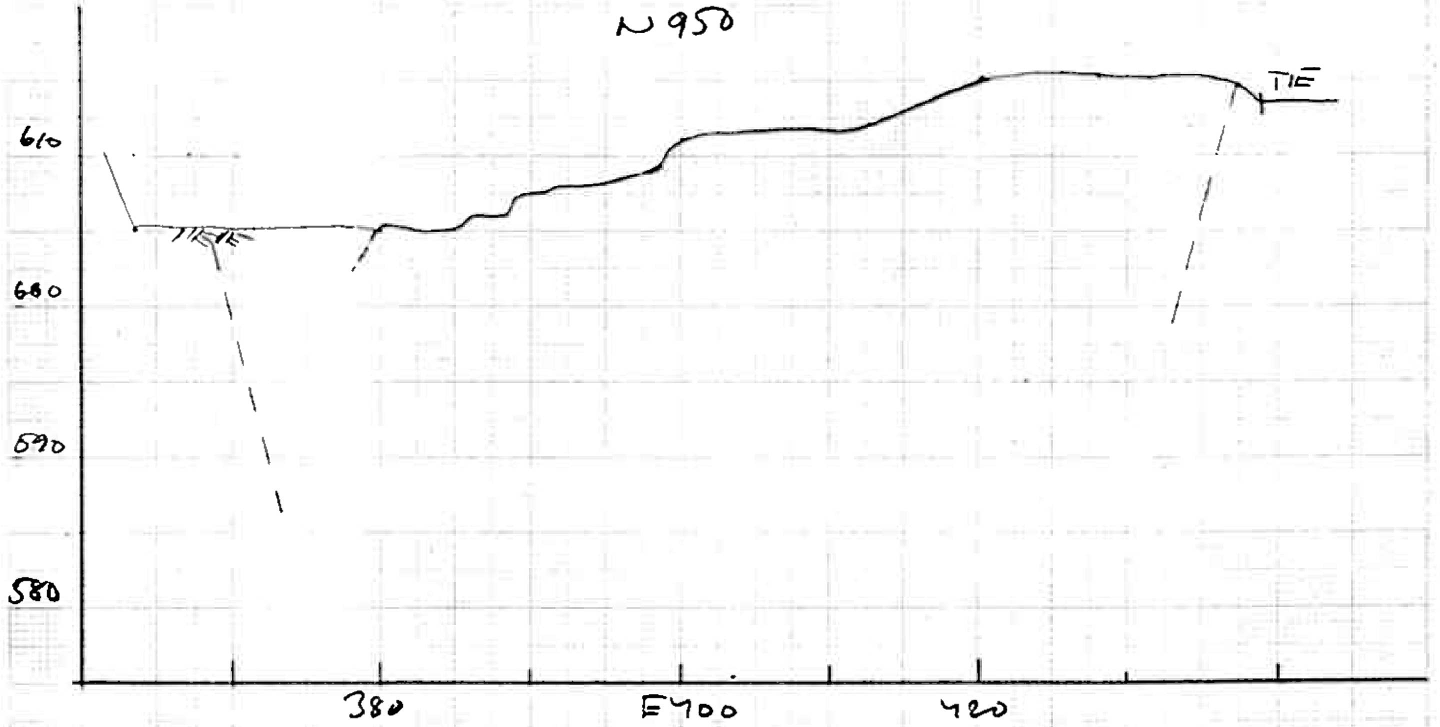

N 930
TIE
610
600
590
580

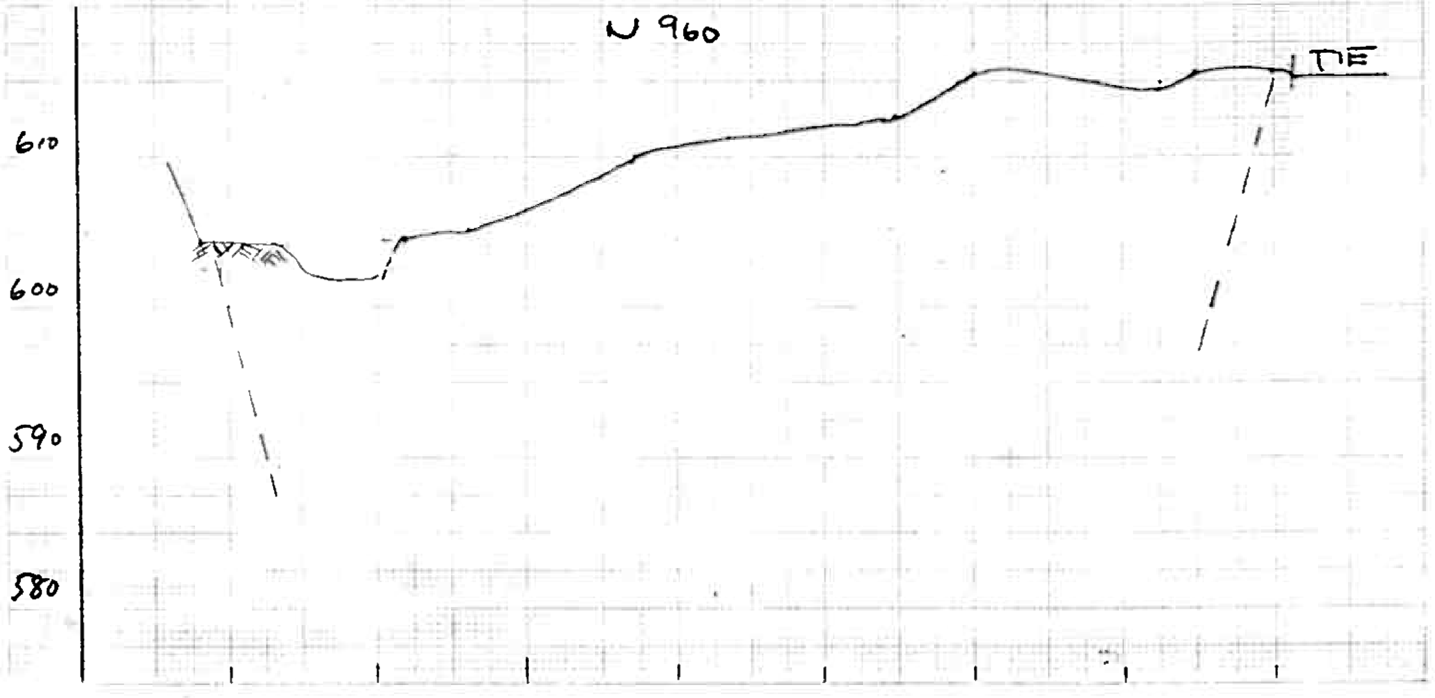

N 940
610
600
590
580
380
E400
420
TIE

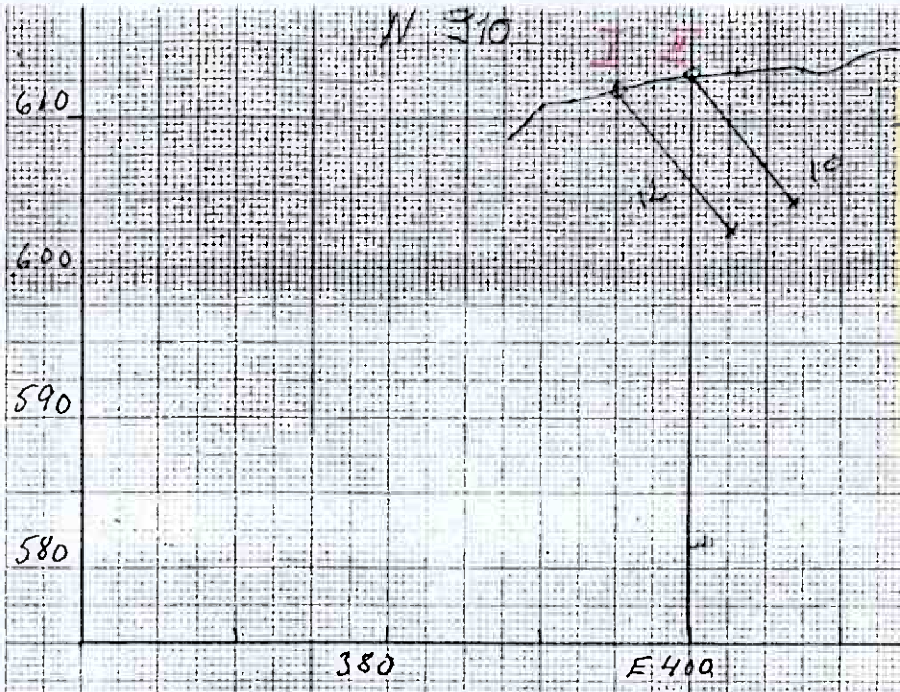

N 950
610
600
590
580
380
E400
420
TIE


N 960
610
600
590
580
TIE

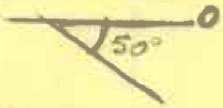

N 950
TIE
610
600
590
580
380
E400
420

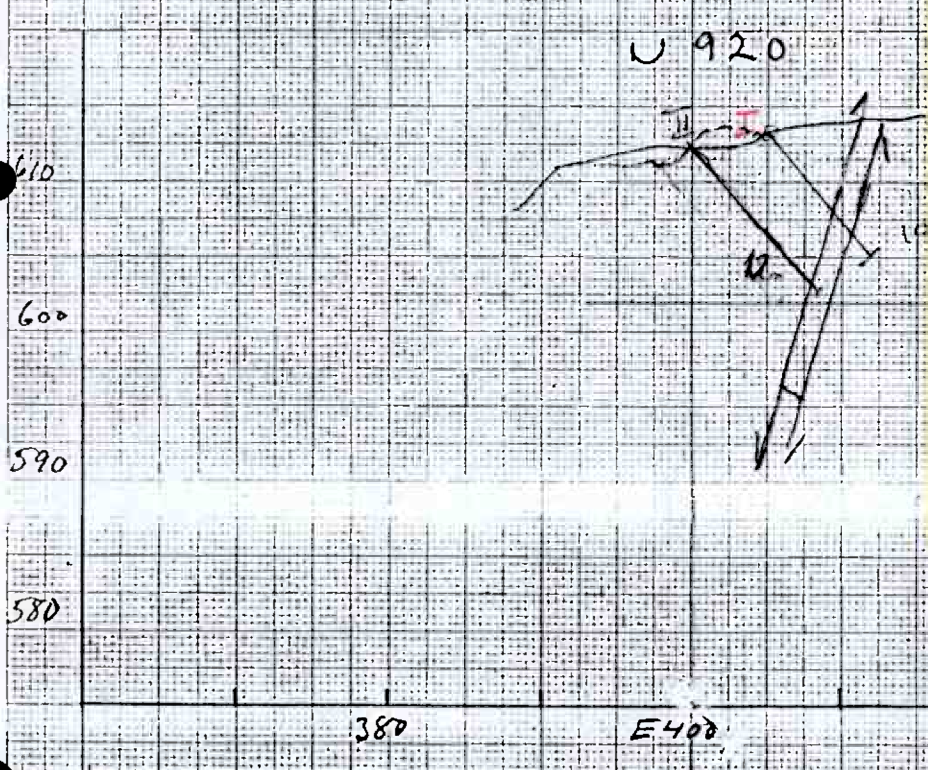

N 950
TIE
610
600
590
580
380
E400
420


N 960
TIE
610
600
590
580

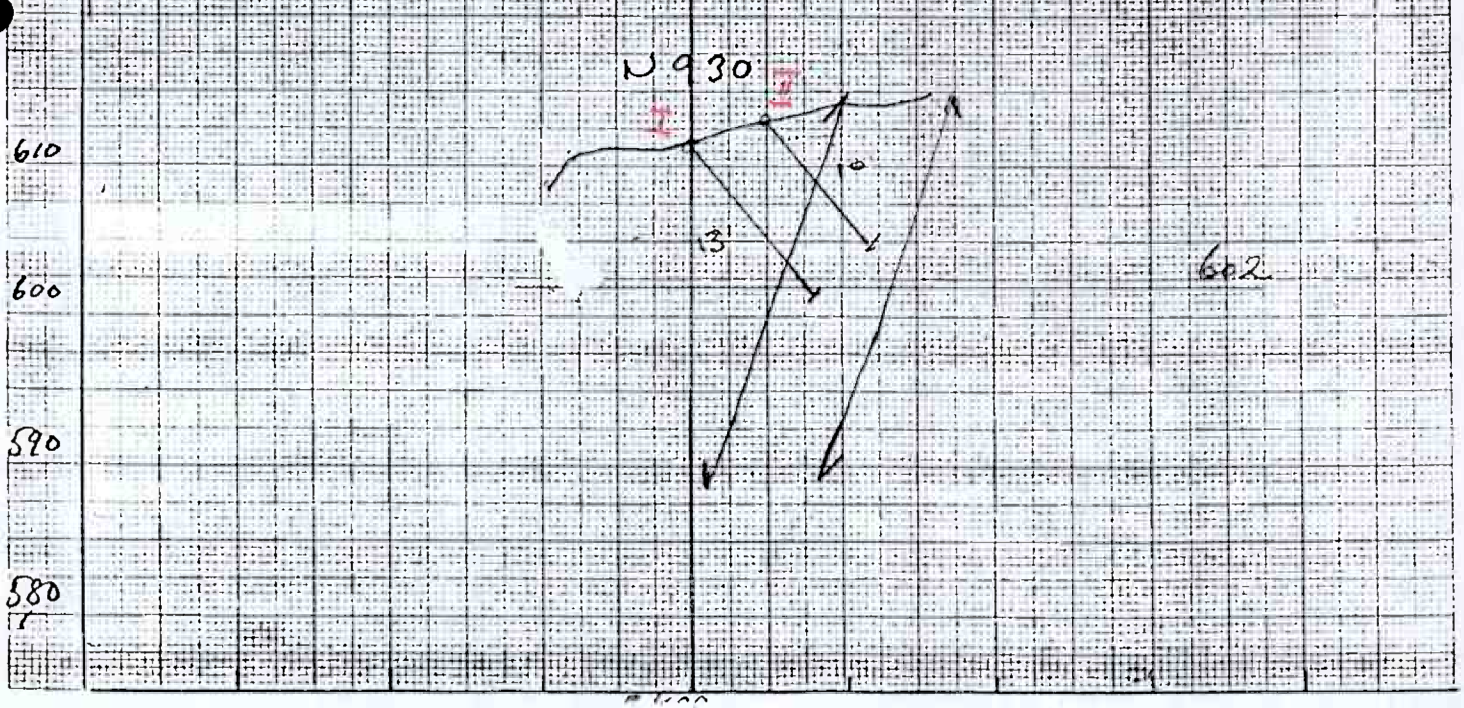


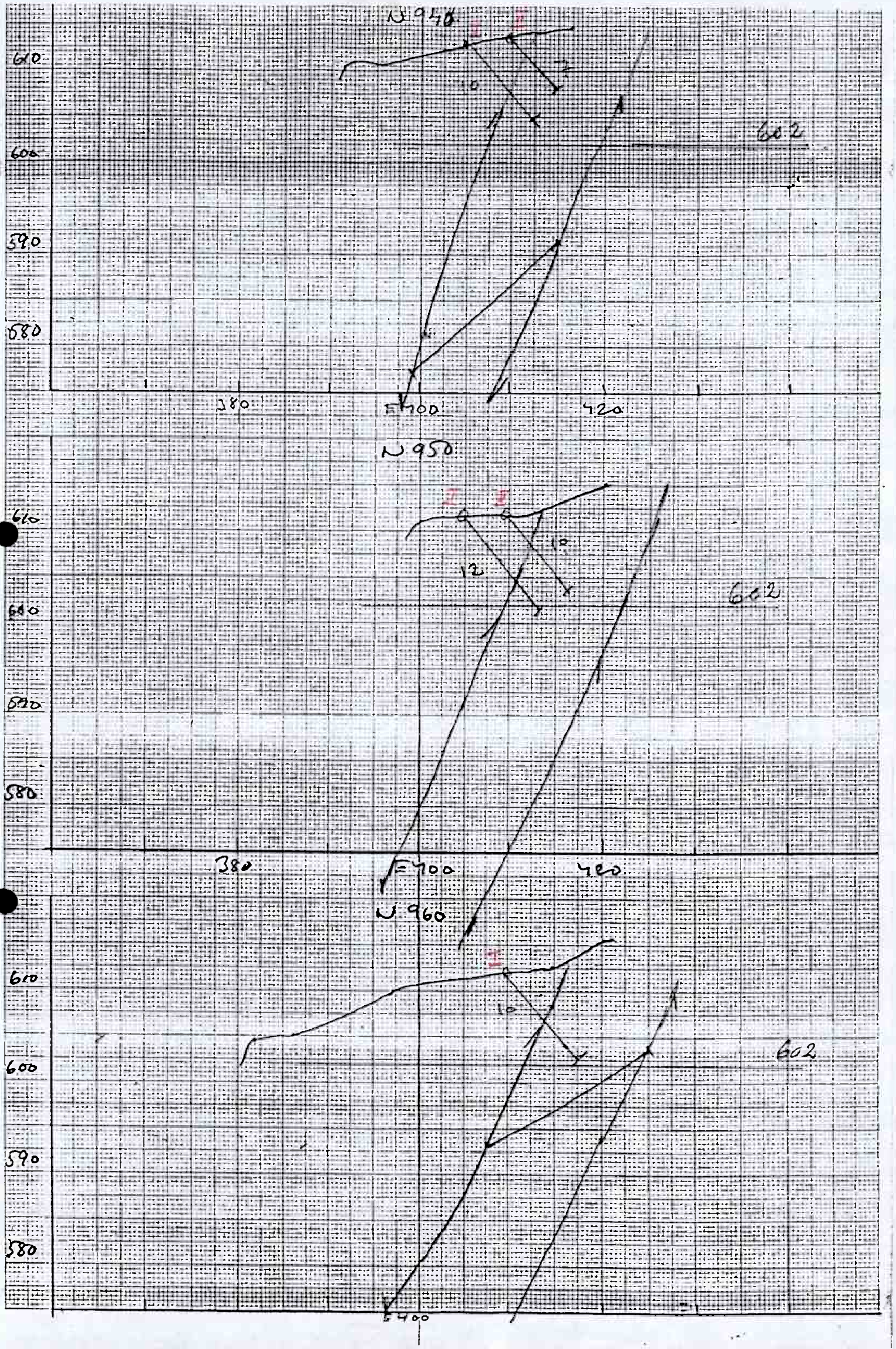
- Näytteen tunnus:
Esim. 91 I 1
↑ ↑ ↑
Prof Reikä Näyte
- Näytepituus 1m
- Reiänpit. merkitty.
- Kaikkien reikien kaltevuus 50°E





Joka näytteeseen koko tunnus!
Jks



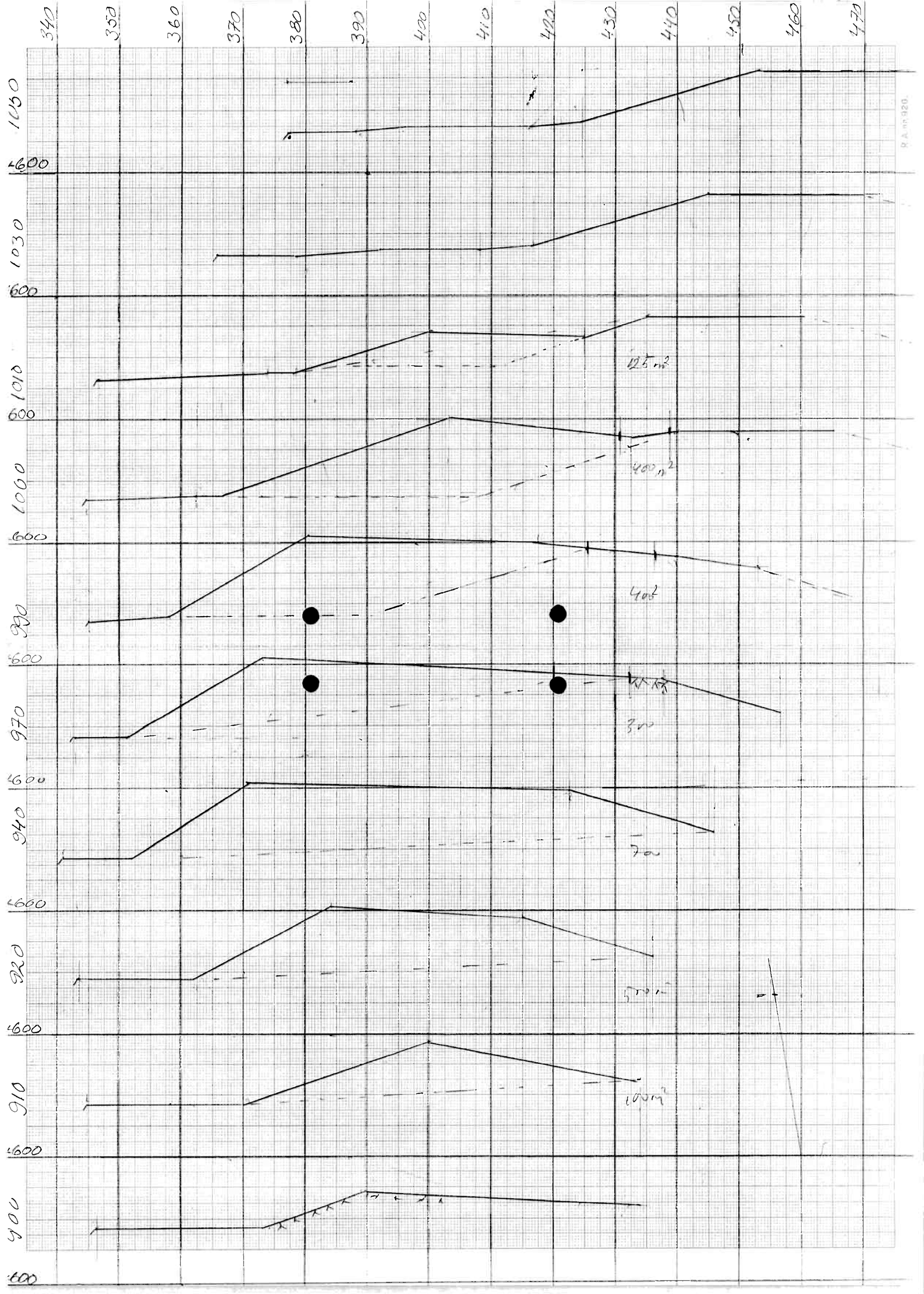

N 940
I
II
610
10
2
602
600
590
580
380
E400
420
N 950
I
II
610
10
12
602
600
590
580
380
E400
420
N 960
I
610
10
602
600
590
580
E400

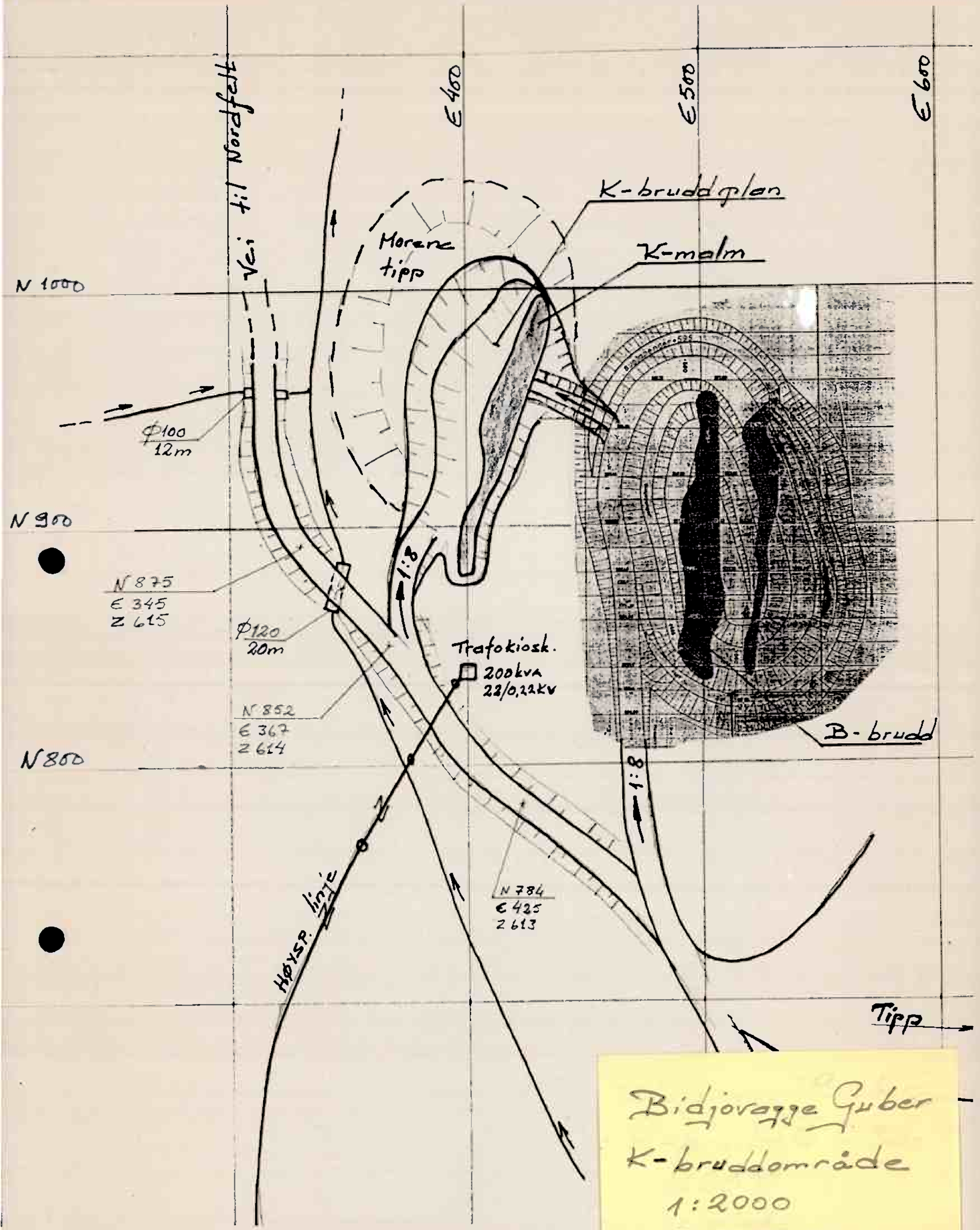
Boring vest om B

Profil	Øst	Navn	Retning	Fallv.	Lengde
N990	410	N99 A	90	30° ned	40 m
	410	N99 B	90°	50°	50 m
	410	N99 C	90°	70°	70 m
N970	400	N97 A	90°	30°	40 m
	400	N97 B	90°	50°	50 m
	400	N97 C	90°	70°	70 m
N950	390	N95 D	90°	30°	40 m
	390	N95 E	90°	50°	50 m
	390	N95 F	90°	70°	70 m
N930	385	N93 D	90°	30°	40 m
	385	N93 E	90°	50°	50 m
	385	N93 F	90°	70°	70 m
N 910	385	N91 F	90°	40°	40 m
	365	N91 G	90°	60°	50 m
					Σ 730 m

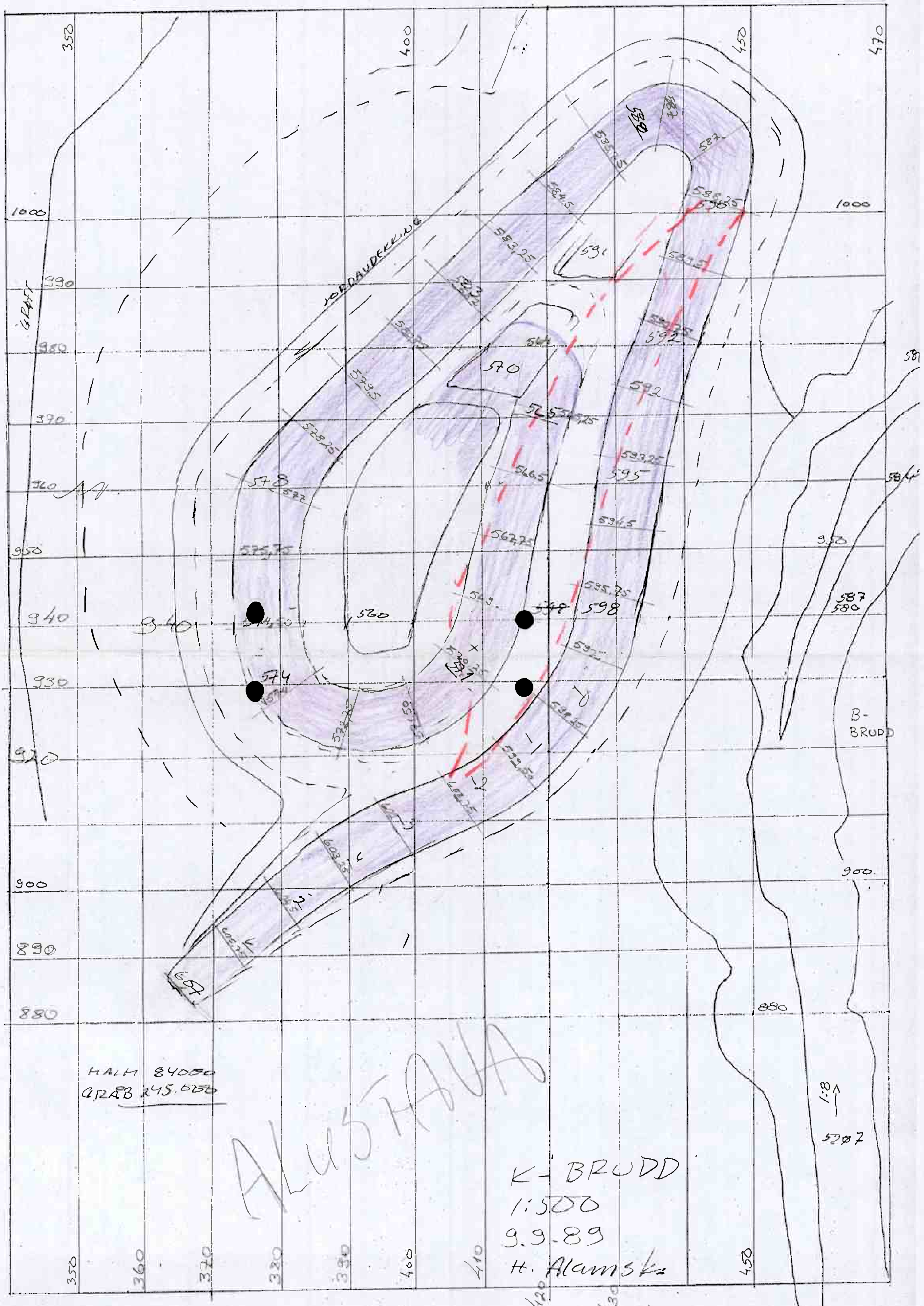
31.8. ME

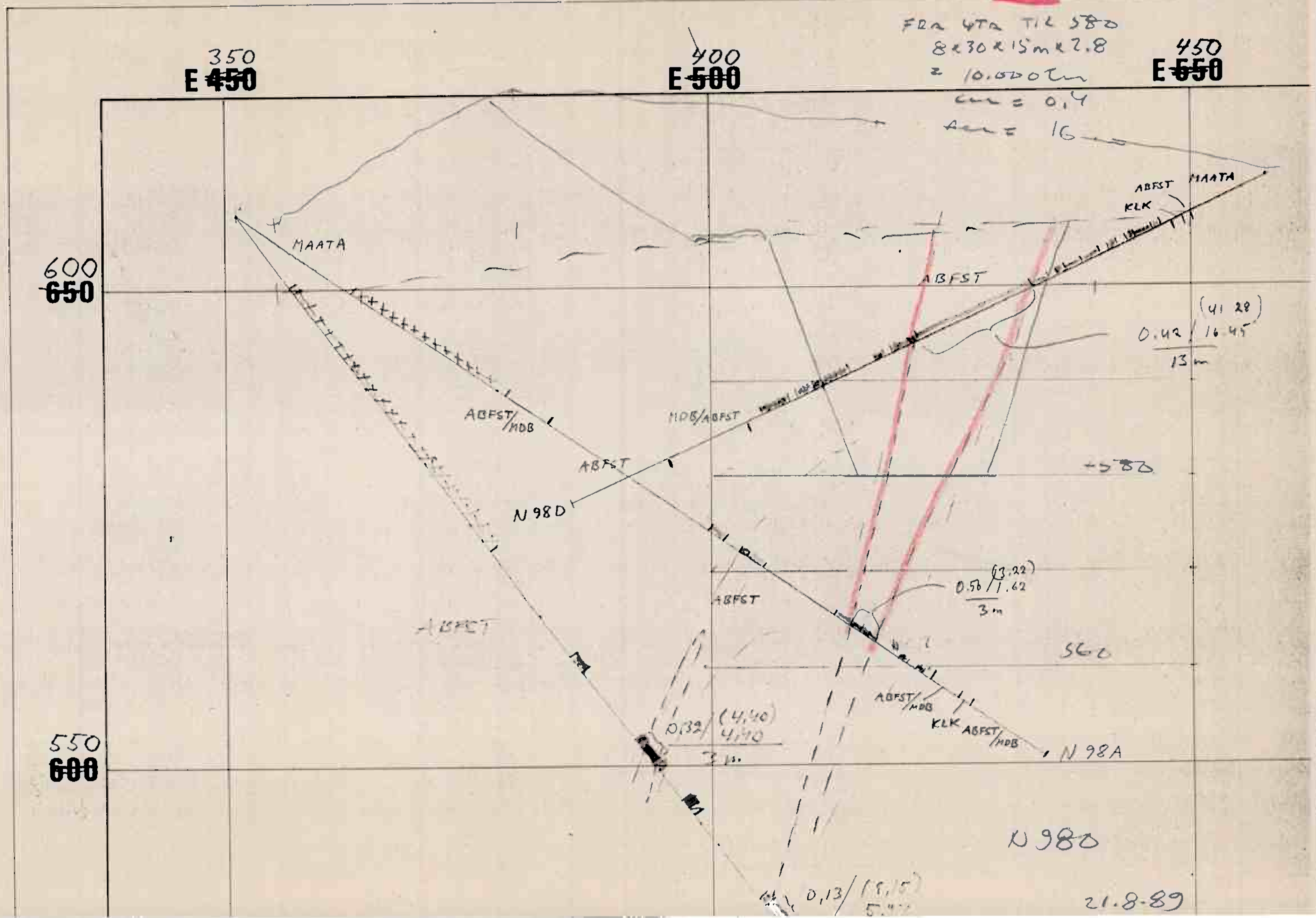
[illegible]


340
350
360
370
380
390
400
410
420
430
440
450
460
470
1050
600
1030
600
1010
125 m²
600
1000
400 m²
600
990
40m²
600
970
30m
600
940
70m
600
920
50m²
600
910
100m²
600
900
600



Bidjovagge Guber
K-bruddområde
1:2000
26.8.89 MAS

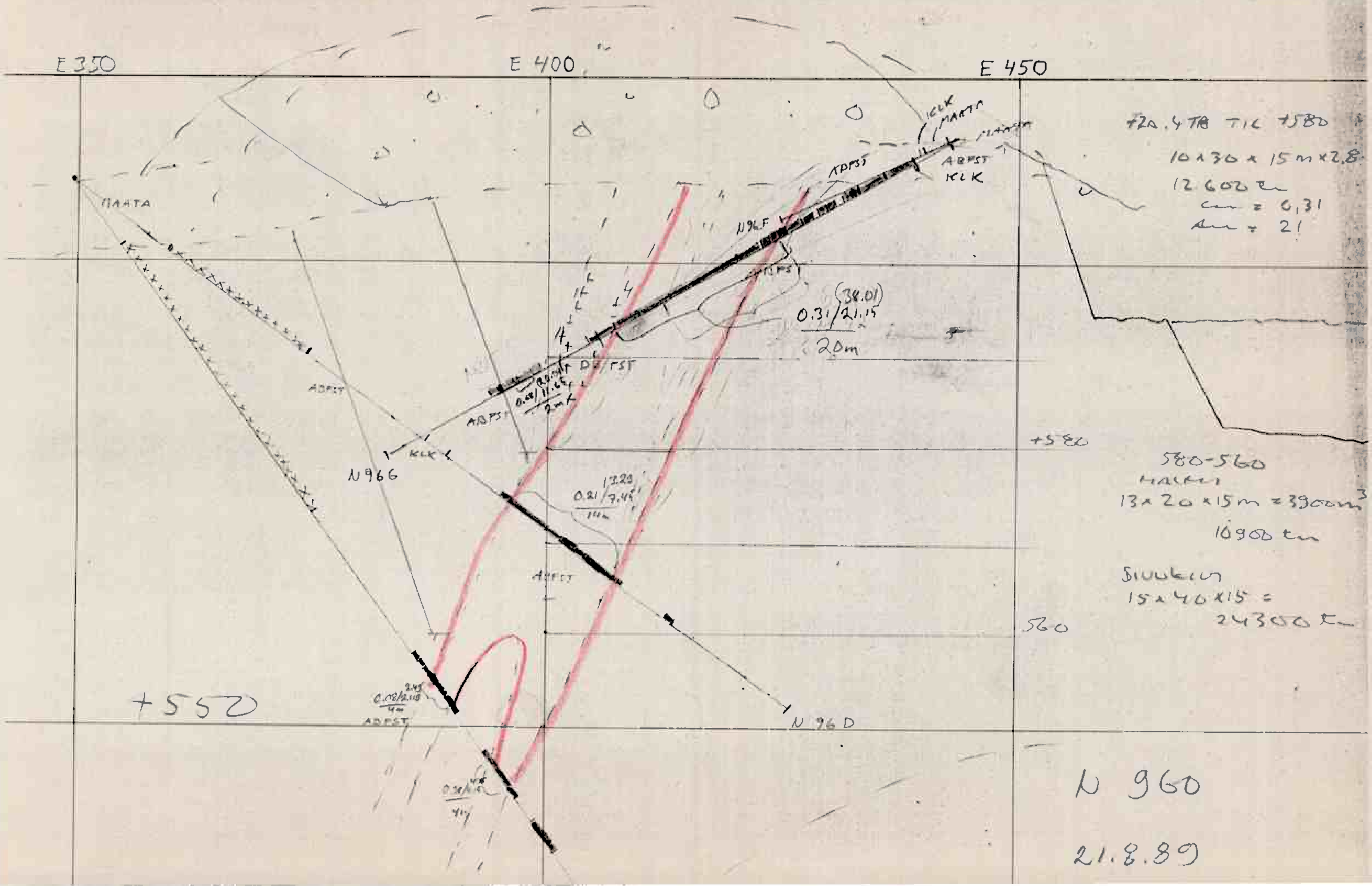


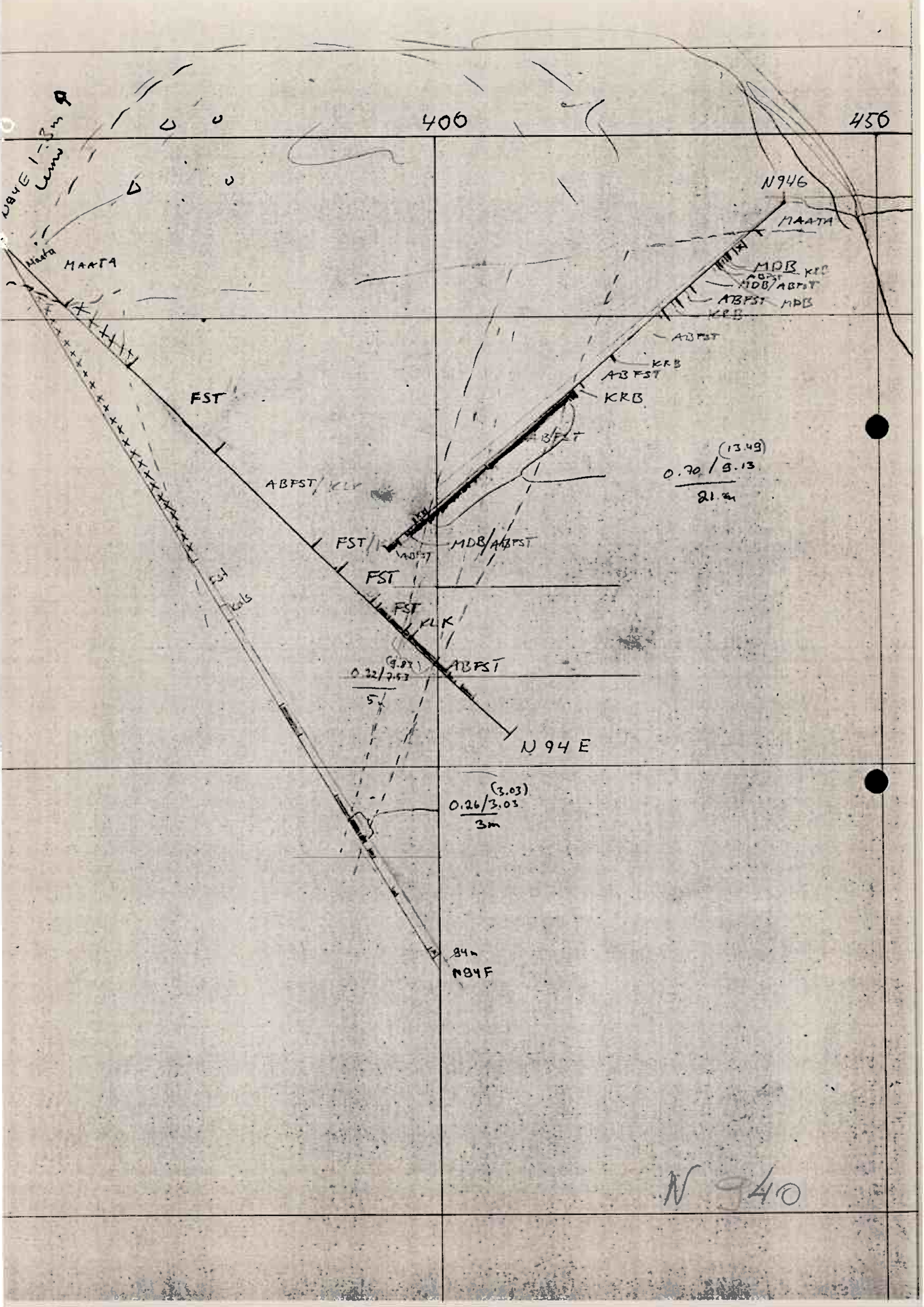


FRA 470 TIL 580
8 x 30 x 15 m x 2.8
= 10.000 t
Cu = 0,4
Au = 16

N 980

21.8.89


E 350
E 400
E 450
ПAATA
KLK
MAATA
ABFST
KLK
N96F
ABFST
DE/FST
(38.01)
0.31/21.15
20m
R0.98
0.08/11.65
2m
ABFST
ABFST
N966
KLK
13.29
0.21/7.45
14m
ABFST
2.45
0.08/2.48
4m
ABFST
0.36/4.8
4m
N 96 D
+580
560
+550
+20.4 TA TIL +580
10x30x15mx2.8
12 602 tn
Cu = 0,31
Au = 21
580-560
HALKEI
13x20x15m = 3900m³
10900 tn
Siivukin
15x40x15 =
24300 tn
N 960
21.8.89


400
450
N94E 1-3m
MAATA
Maata
FST
ABFST/KLK
FST/
MDB/ABFST
FST
FST
KLK
ABFST
(9.87)
0.32/7.53
5
N 94 E
(3.03)
0.26/3.03
3m
84m
N94F
fst
kals
N946
MAATA
MDB
KRB
ABFST
MDB/ABFST
ABFST
MDB
KRB
ABFST
KRB
AB FST
KRB
ABFST
(13.49)
0.70/8.13
21.m
N 940

0,965

0,2588

0,23185

0,26723

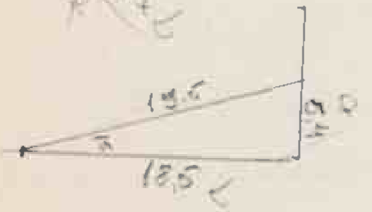
2

0,267

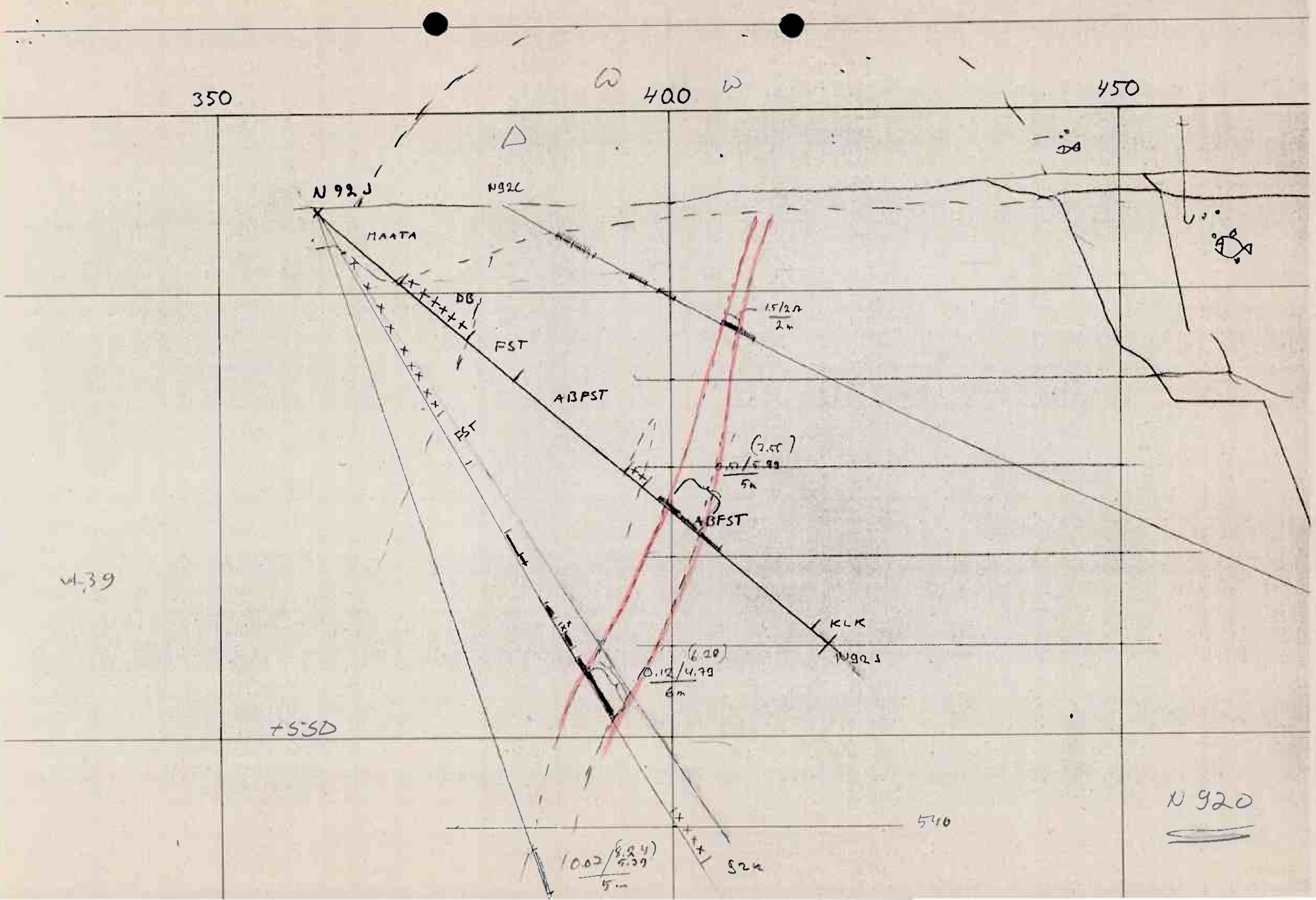
$\frac{a}{b} = \tan$

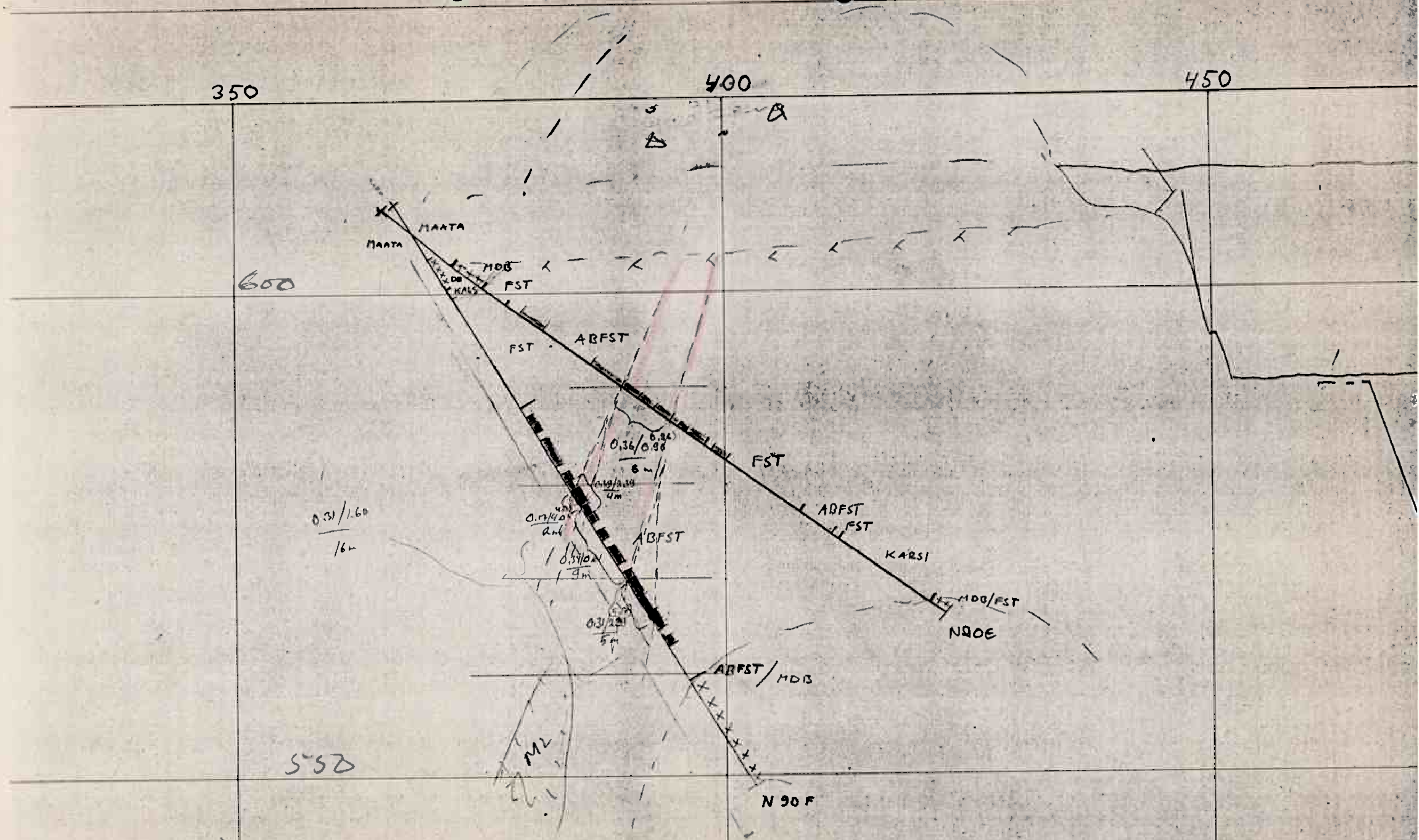
3,73

[illegible] $= 0,267 \cdot b$



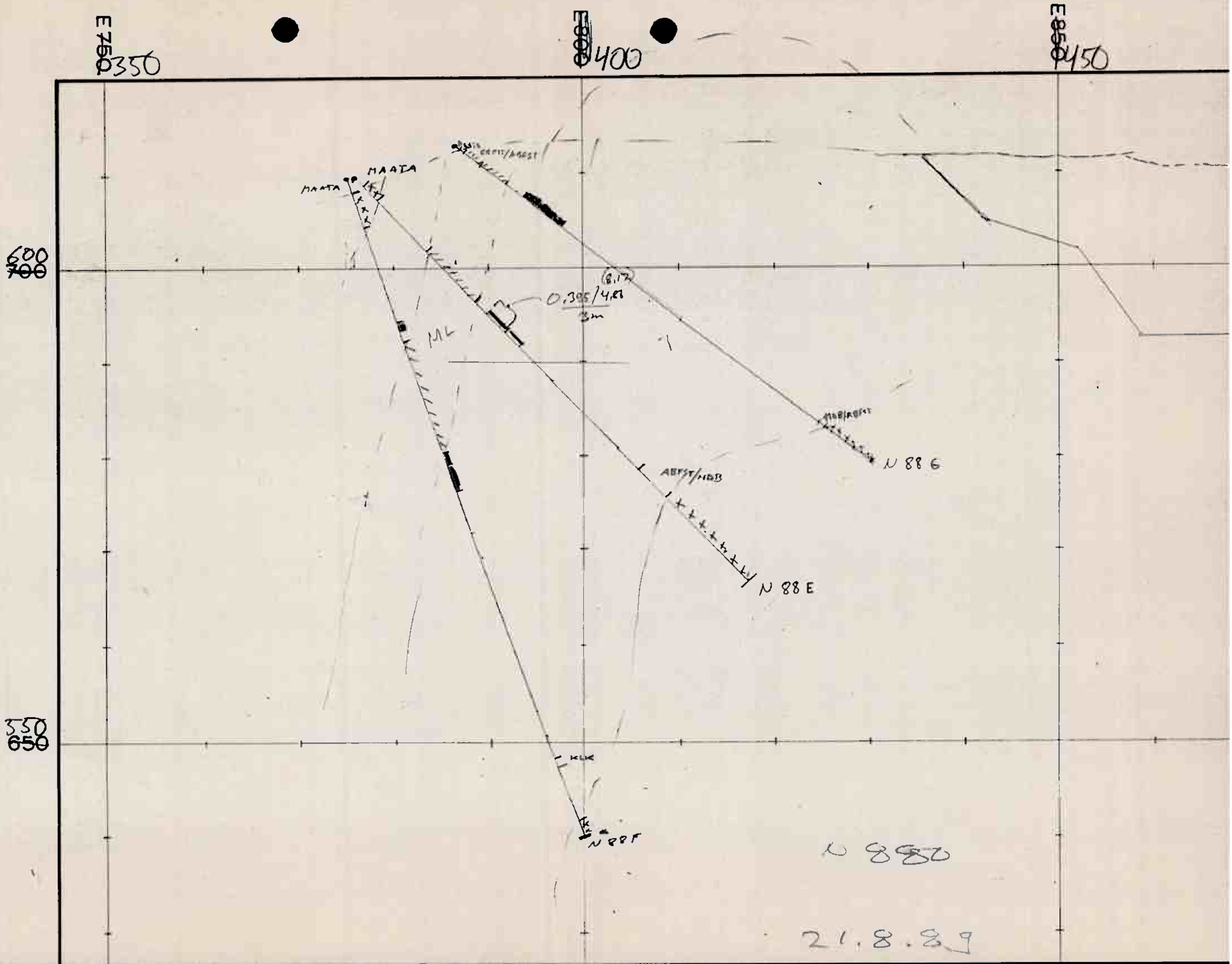
18

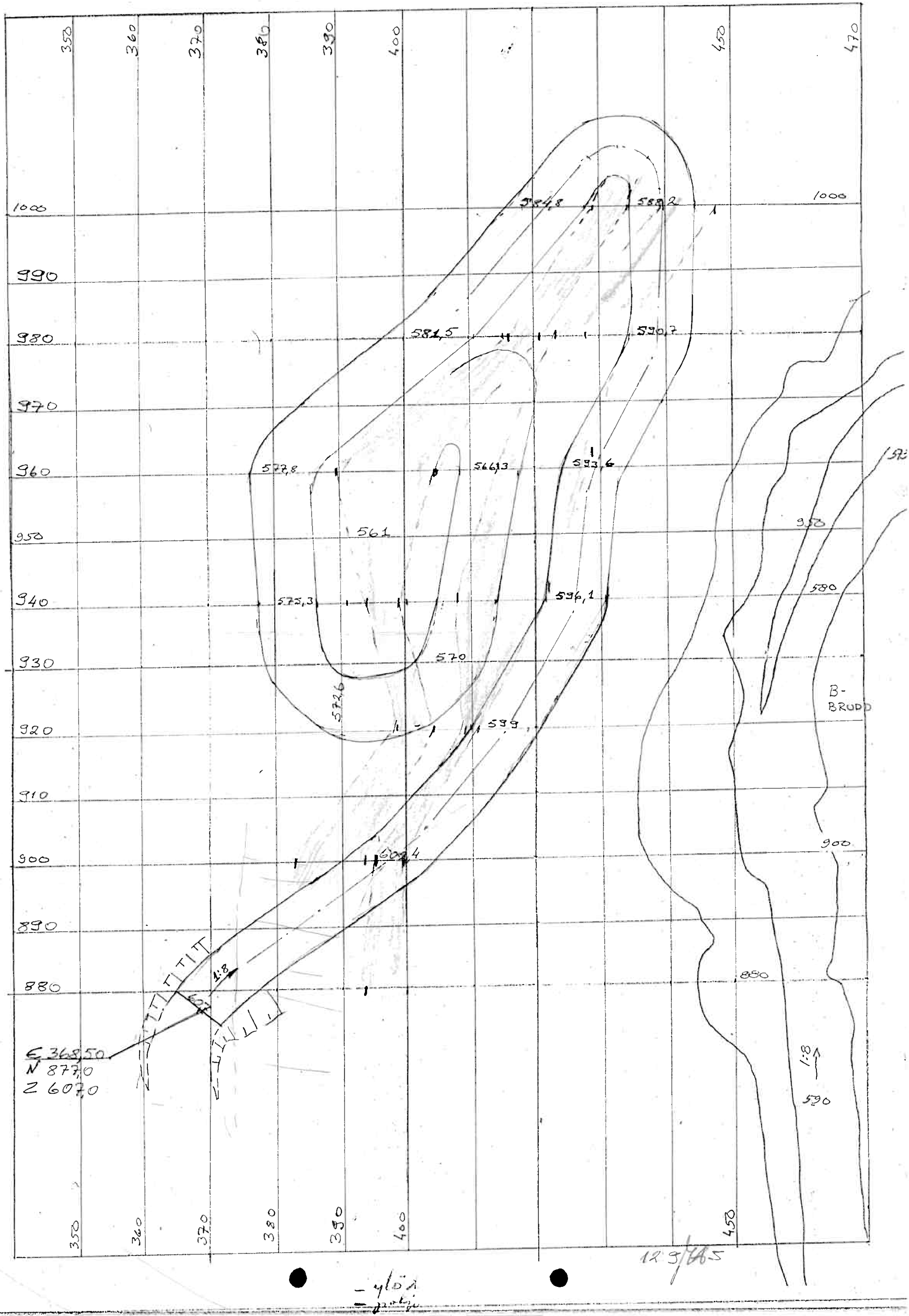

350
400
450
N 92 J
N92C
MAATA
DB
FST
ABFST
FST
1.5/2.7
2m
(7.55)
0.51/5.89
5m
ABFST
KLK
N92J
(6.28)
0.12/4.79
6m
+550
540
(8.24)
0.07/5.39
5m
92K
N 920


350
400
450
600
550
MAATA
MAATA
MDB
FST
DB
KALS
FST
ABFST
0,36/0,96
6m
0,84
0.19/2.19
4m
0.17/4.0
2m
4.0
0.31/1.60
16m
A'BFST
0,54/0.
9m
0.31/2.31
5m
FST
ABFST
FST
KARSI
MDB/FST
N90E
ABFST/MDB
N 90 F
M2

N900

21.8.89


~~E 750~~
350
~~E 800~~
400
~~E 850~~
450
600
~~700~~
550
~~650~~
MAATA
MAATA
GRFST/ABFST
(8,17)
0,395/4,81
3m
ML
MDB/ABFST
N 88 G
ABFST/HDB
N 88 E
KLK
N 88 F
N 88EG
21.8.89

350
360
370
380
390
400
450
470
1000
990
980
970
960
950
940
930
920
910
900
890
880
584,8
589,2
581,5
590,7
577,8
566,3
593,6
561
575,3
596,1
570
572,6
599
603,4
607
1:8
E 368,50
N 877,0
Z 607,0
950
580
B-
BRUDD
900
880
1:8
590
12 9/65
– ylöä
– pohja

A/S BIDJOVAGGE GRUBER
Postboks 160
N-9520 KAUTOKEINO
NORWAY

Telephone + 47 84 56202 or 56245
Telefax + 47 84 56202 or 56245

TELEFAX COVER SHEET

Date: 11.3.1989

To: SEPPO JANHUNEN

Company: LEMMINKÄINEN OY

Telefax number: 095-358-0-148 2680

Number of pages (including this cover sheet): 2

Re:

From: BG

TERV
Heimo A

BG/ LMK

K-BRUDD

11.9.89
H. Alanisk

MALMIA 75.000 - 85.000 tn
SIVUK. 225.000 - 260.000 tn
300.000 345.000 tn

LOUHINTA-AIKA MAX 7 KK, 42.000 – 50.000 tn/KK

LOUHINTA ALKAA VIIMEISTÄÄN 1.10.89 JA PÄÄTTYY VIIMEISTÄÄN 30.4.90, JOS LMK/BG SOPIVAT URAKOINNIN JATKOSTA (31.12.89 JÄLKEEN)

KOSKA JOISSAKIN YHTEYKSISSÄ ON OLLUT EPÄSELVYYTTÄ ERÄISSÄ URAKOINTIIN LIITTYVISSÄ ASIOISSA, PAINOTETAAN ERITYISESTI ETTÄ BG/LMK VÄLILLÄ TEHDYT EDELLISET URAKKASOPIMUKSET OVAT TEKNISTEN MÄÄRÄYSTEN OSALTA EDELLEEN VOIMASSA, JA ETTÄ MM.

- LOUHOSALUEEN LUMITYÖT, TYÖAIKAISET OJITUKSET PUMPPAUKSET YMS SISÄLTYVÄT URAKAN YKSIKKÖHINTOIHIN.

ERITYISESTI TÄMÄN OSAURAKAN SUHTEEN SOVITAAN SEURAAVAA.

1. PORAUSKALUSTON KIINTEÄ KORVAUS ON KR/KK. JOS URAKOITSIJA JOUTUU LISÄÄMÄÄN PORAUSKAPASITEETTIA (KONEYKSIKÖITÄ TAI TYÖVUOROJA) EI SE OIKEUTA KIINTEÄN OSAN KOROTUKSEEN.

2. MAANPOISTON URAKKAHINTA ON 22.00 KR/ktr-m^3
MALMIN LOUHINTA ____ KR/TN
SIVUKIVEN " ____
RAJAMALMIN " ____

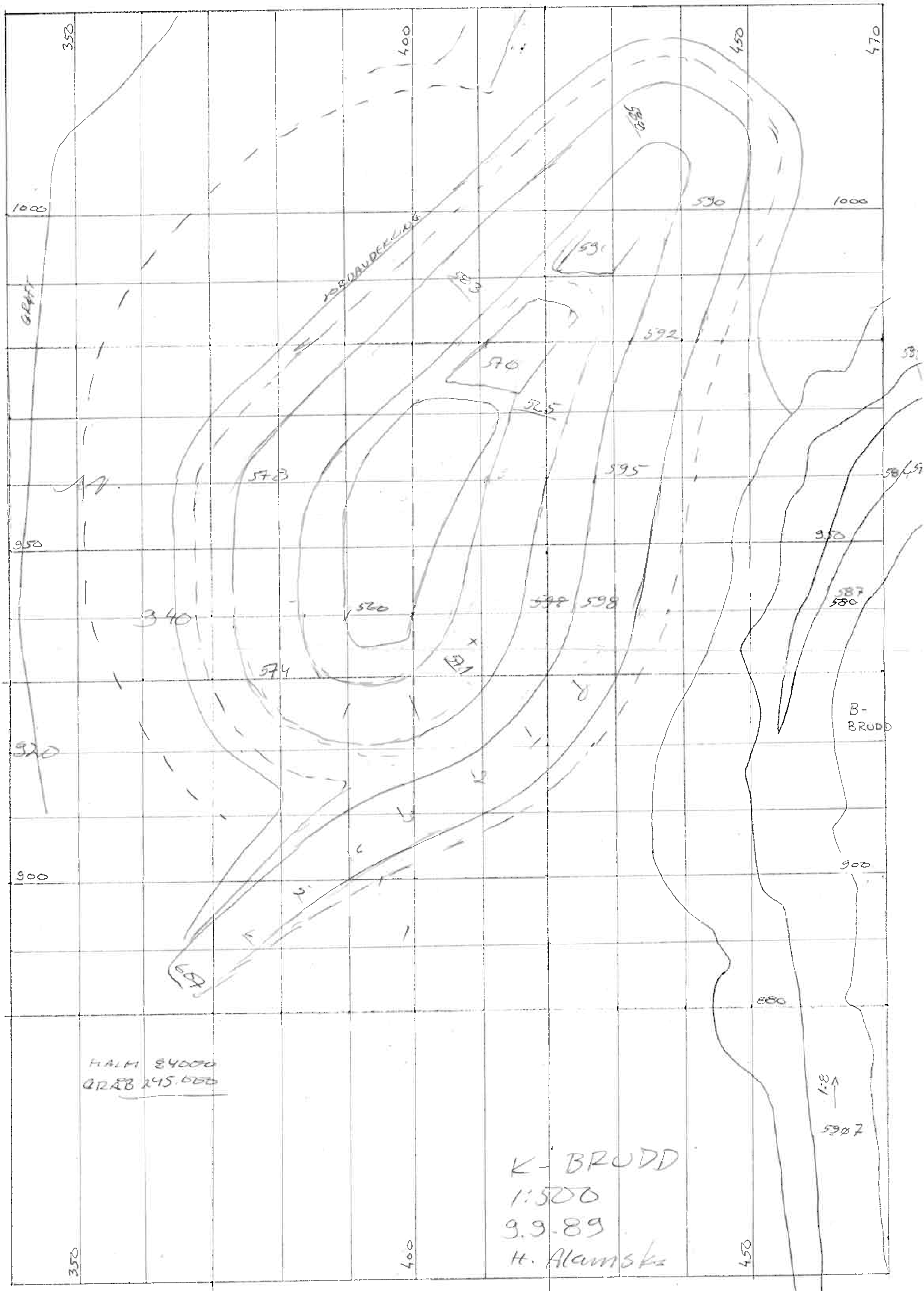
TÄSSÄ JA KOHDASSA 1. MAINITUT HINNAT OVAT VOIMASSA KOKO K-LOUHOKSEN LOUHINNAN AJAN.

3. EDELLISTEN SOPIMUSTEN MUKAAN PIDÄTTÄÄ BG 10% SIVUKIVENLOUHINTASUMMASTA KUNNES KUNKIN TASON LOUHINTA ON SUORITETTU LOPPUUN JA SEINÄT ASIANMUKAISESTI RUSNATTU.

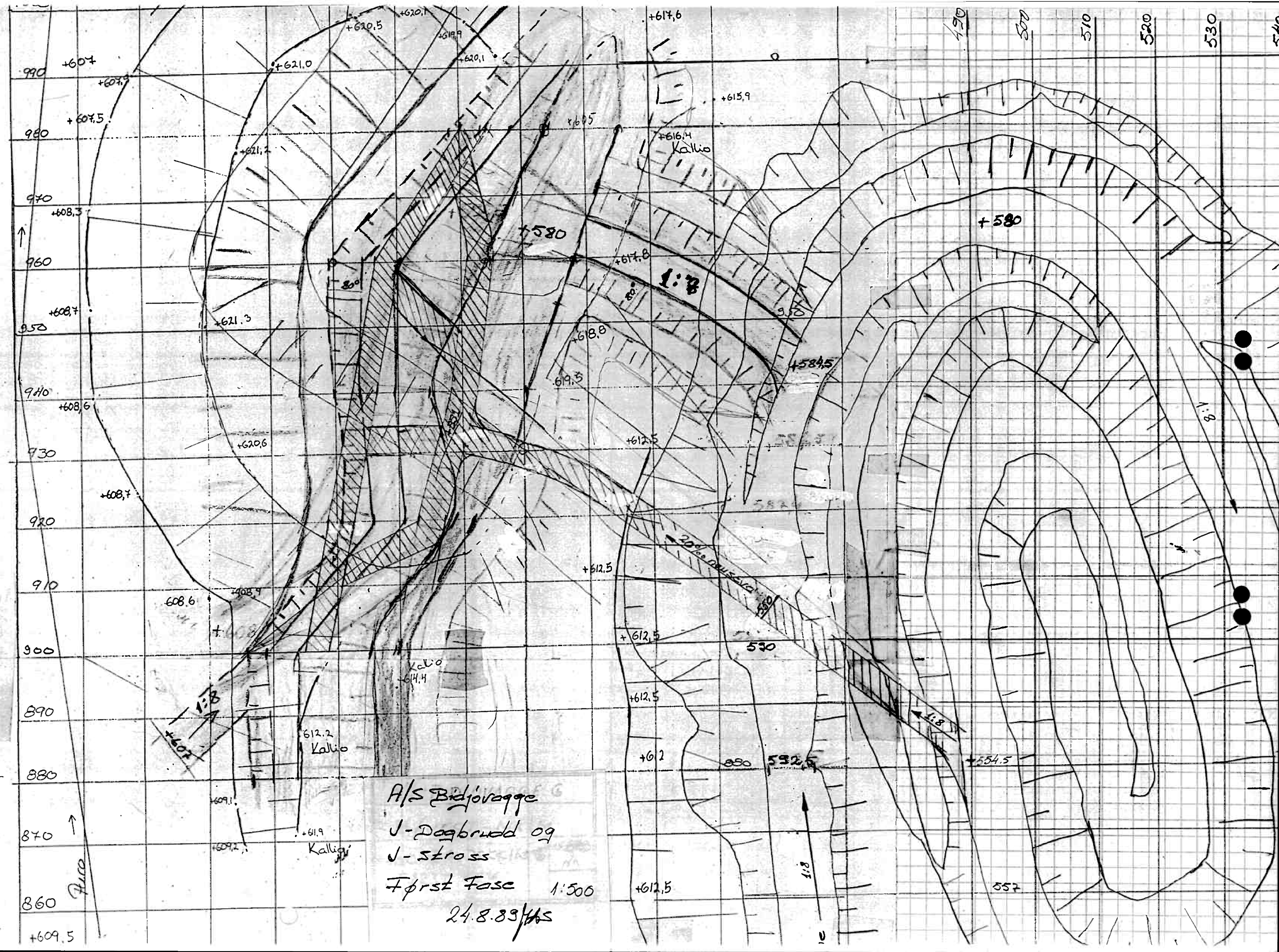
?
?

4 SJ/LMK

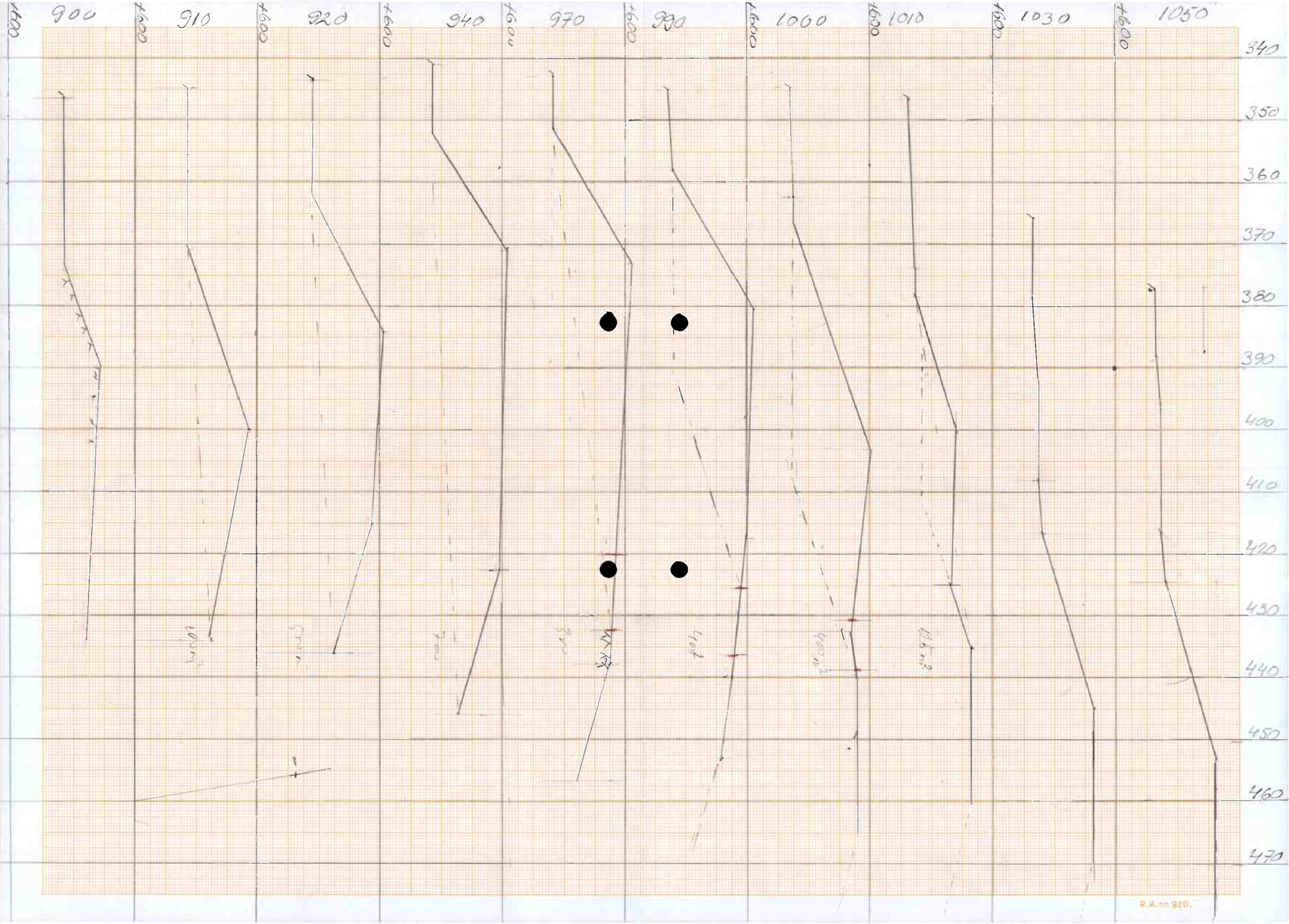
KESKUSTELUN POHJAKSI



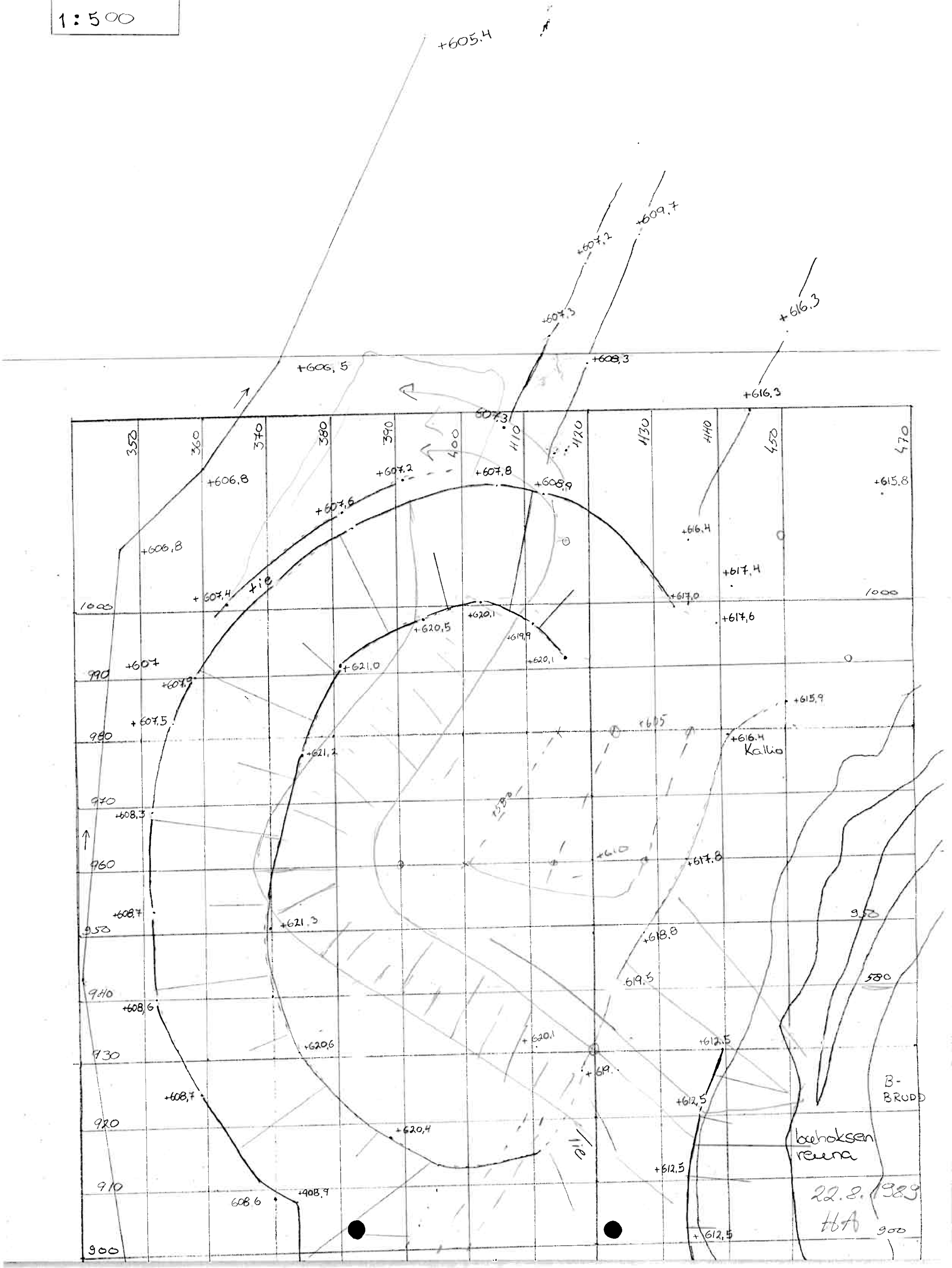
K-BRUDD
1:500
9.9.89
H. Alamska



A/S Bidjovagge
J-Dagbrudd og
J-stross
Først Fase 1:500
24.8.89/ths


900
+600
910
+600
920
+600
940
+600
970
+600
990
+600
1000
+600
1010
+600
1030
+600
1050
340
350
360
370
380
390
400
410
420
430
440
450
460
470
40t
R.A. nr 920.

B -malmi
1:500



22.8.1989
HA

K-Dagbrudd II-alternativ botn +560

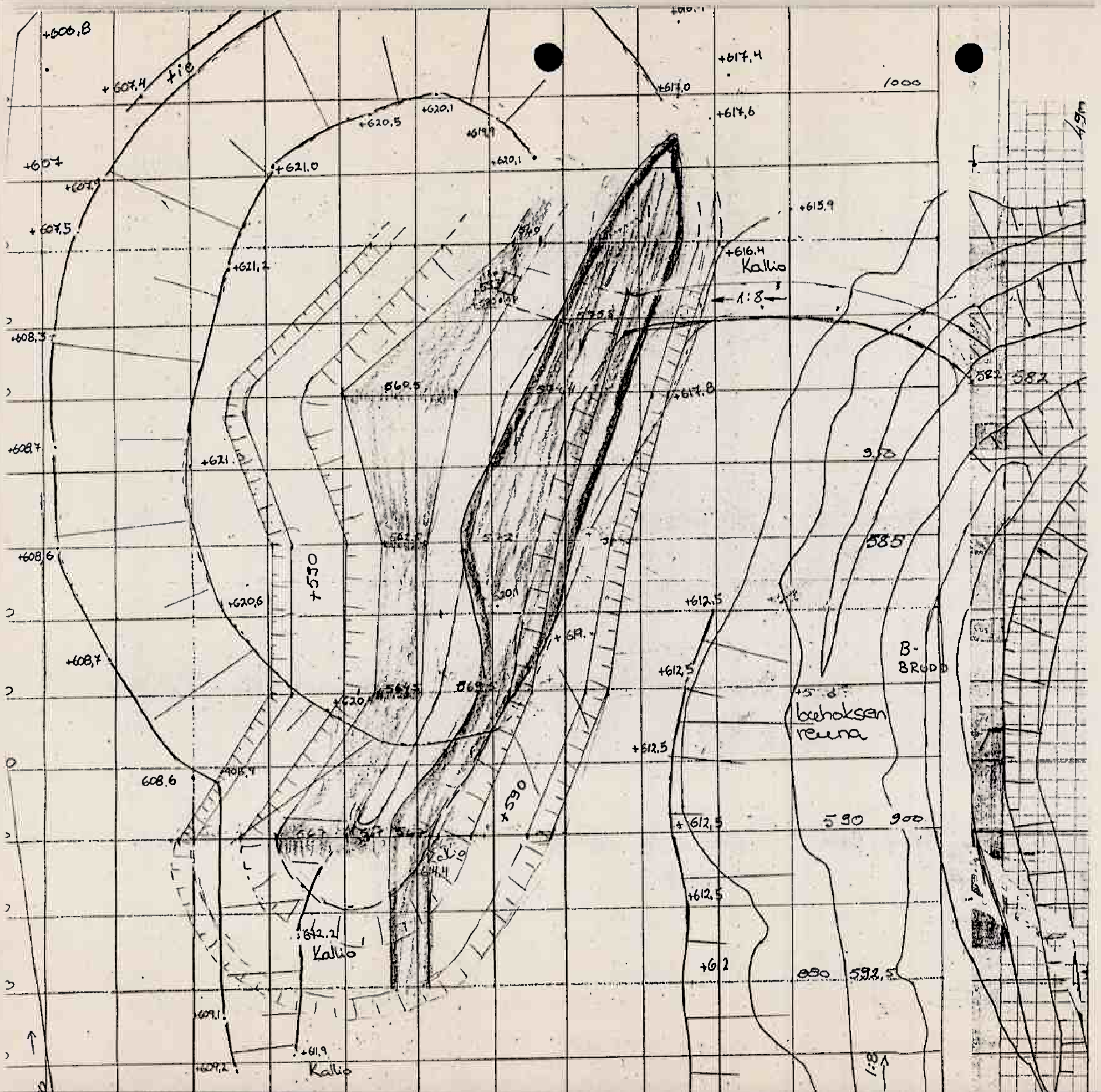
	Malm			Gråberg		
Leikk	ton	Cu-%	Au-g/ton	k-m³	ton	Jordavdekkin
900	6×39×20×2,8 = 13.100	0,3	0,7	47×13×20 − 4700 k-m³ = 7500		65×10×20 =
				27×23×20 − = 12400		
920	4×45×20×2,8 = 10.000	1,0	5,0	43×18×20 − 3600 k-m³ = 11900		60×10×20 =
				22×22×20 = 9700		
940	9×45×20×2,8 = 22700	0,3	9,0	46×15×20 − 8100 k-m³ = 5700		65×15×20 =
				25×20×20 = 10.000		
960	10×50×20×2,8 = 28.000	0,3	10,0	58×20×20 − 10.000 k-m³ = 13.200		75×10×20 =
				32×30×20 = 19200		
980	7×45×20×2,8 = 17.600	0,4	8,0	45×15×20 − 6300 k-m³ = 7200		65×15×20 =
				30×18×20 = 10.800		
	91.500	0,4	7,5	107.600	290.000	80.000 k-m³

Tunnelia 70 jm

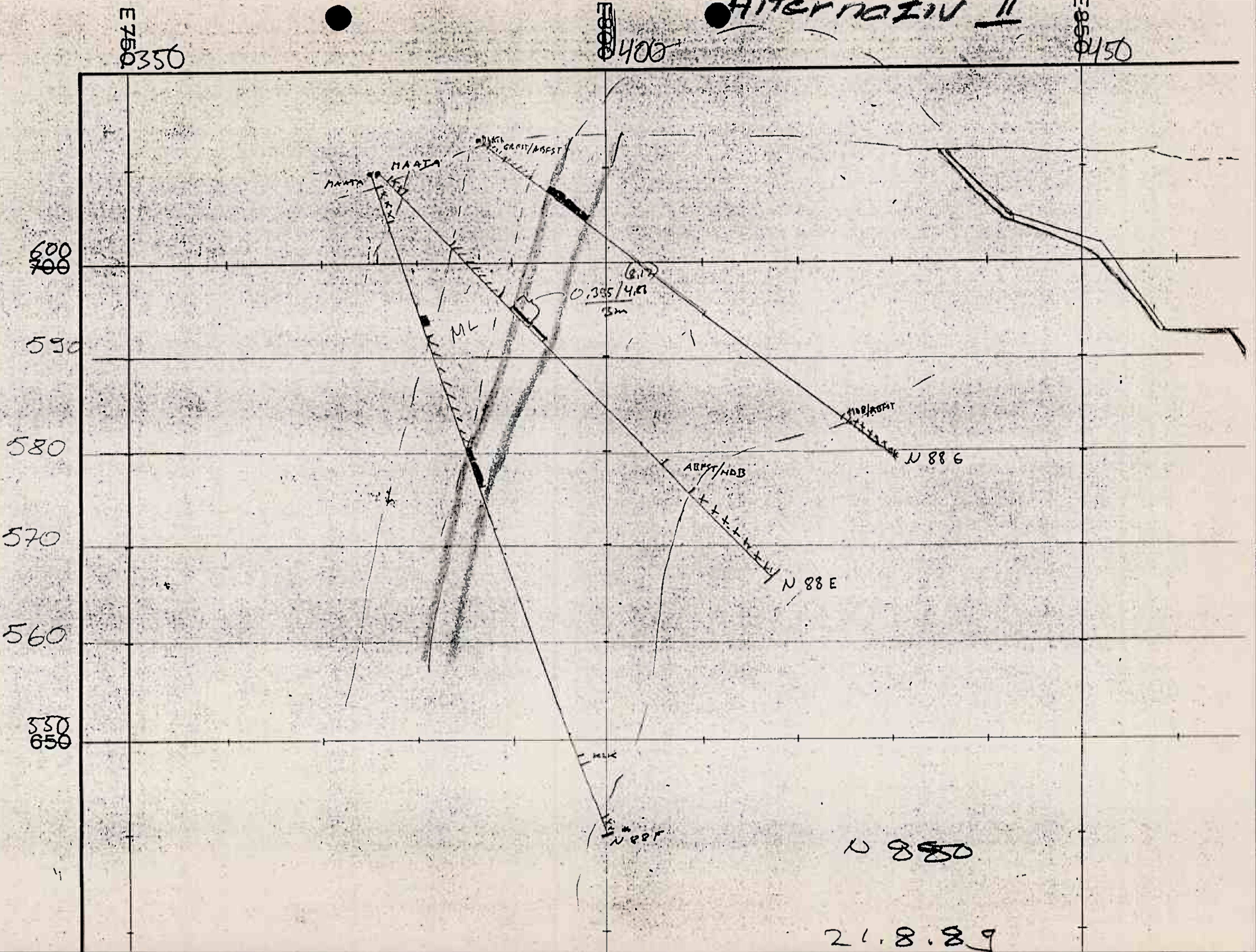
yht. louhinta: 383.000 ton

1 : 3,2

25.8/AS

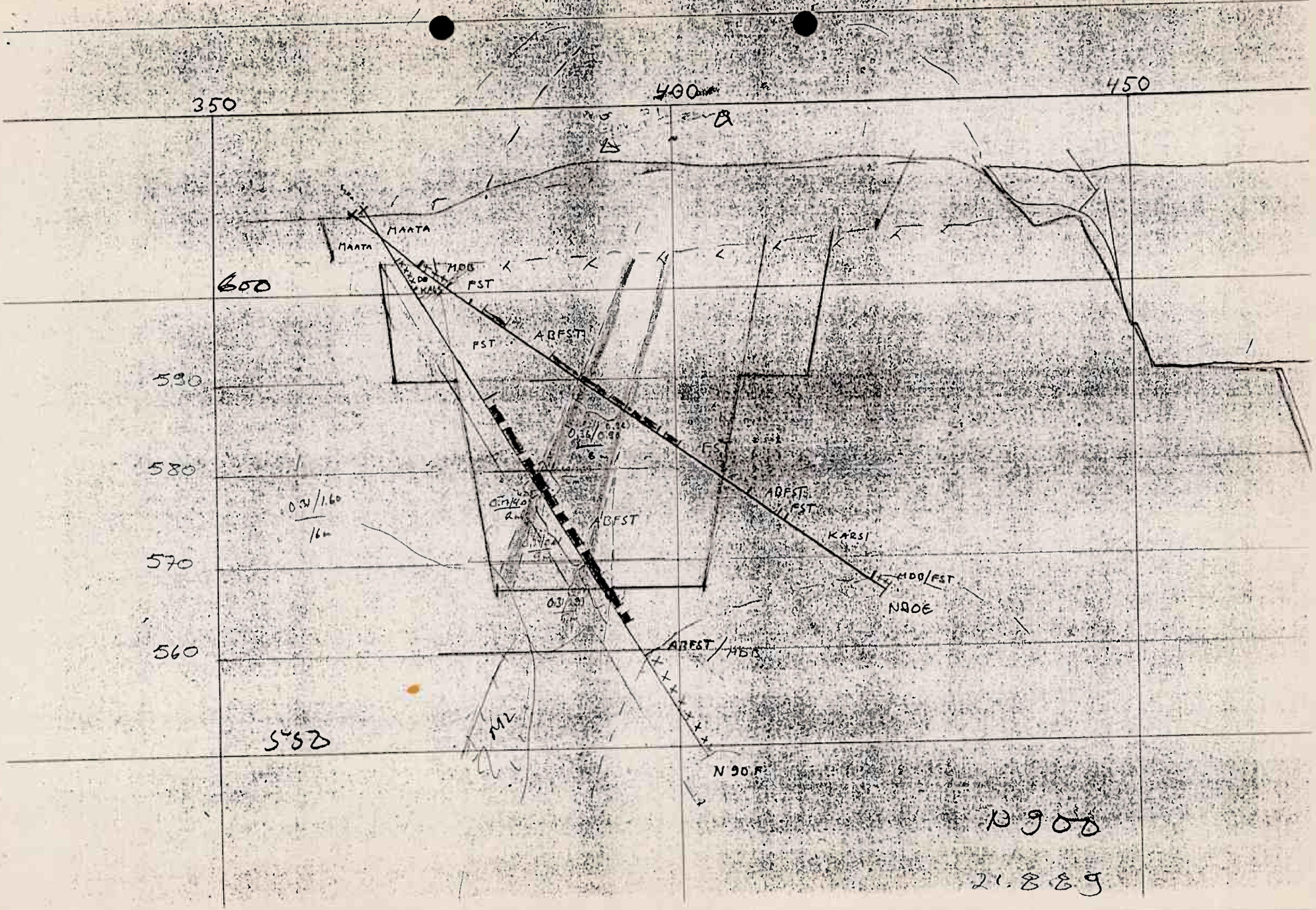

+608,8
+607,4
tie
+620,5
+620,1
+619,9
+620,1
+617,4
+617,0
+617,6
1000
+607
+607,9
+621,0
+607,5
+615,9
+616,4
Kallio
1:8
+621,2
+608,3
560,5
+617,8
582
582
+608,7
+621
9,0
585
+608,6
+530
+620,6
+612,5
+619
B-
BRUDD
+608,7
+612,5
+620
+5
laahoksen
reuna
+612,5
608,6
+608,4
+590
590
900
+612,5
Kallio
644,4
+612,5
612,2
Kallio
+612
880
592,5
609,1
+61,9
609,2
Kallio
1:8
4,9m

Alternativ II



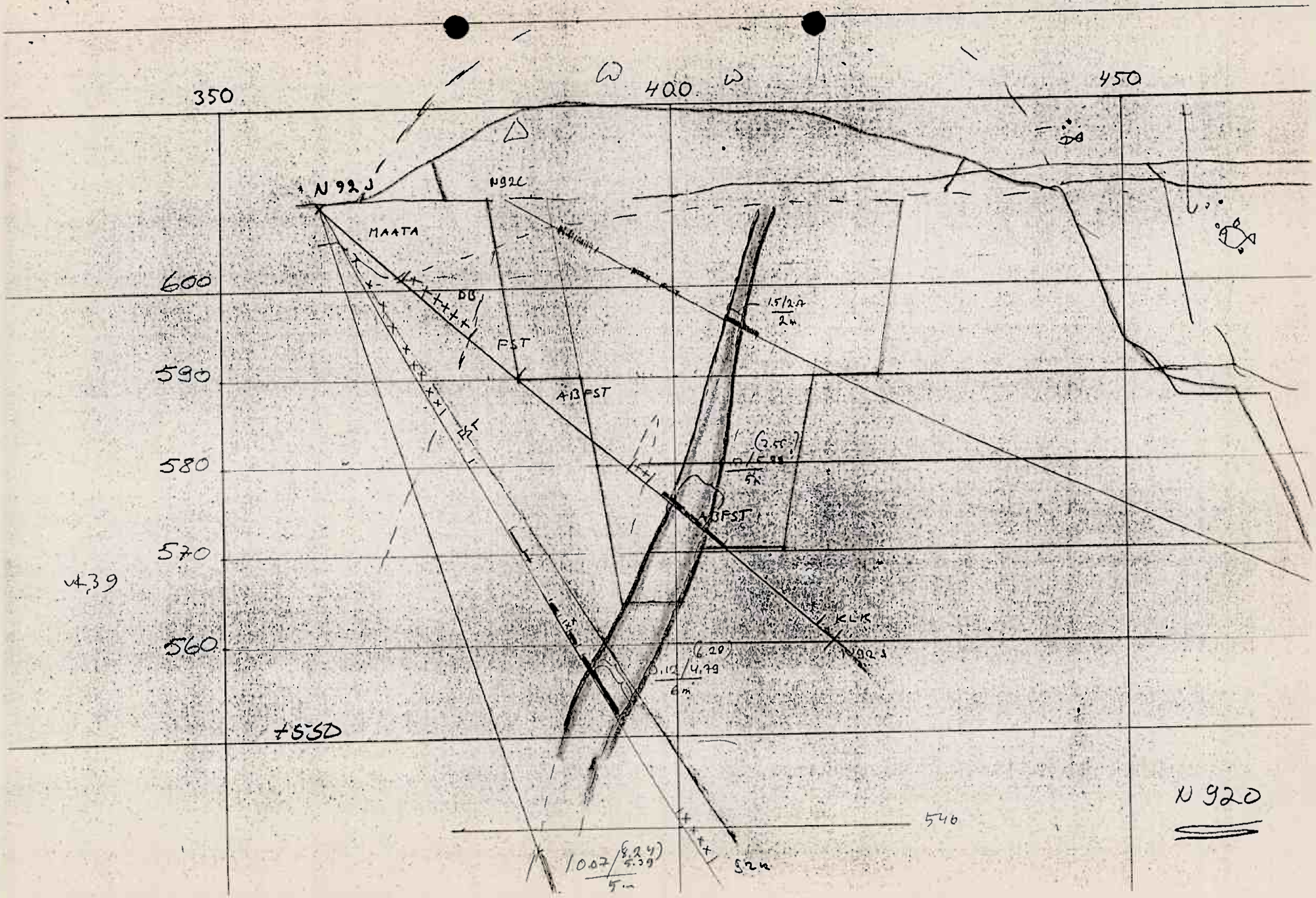
N ~~880~~ 850

21.8.89

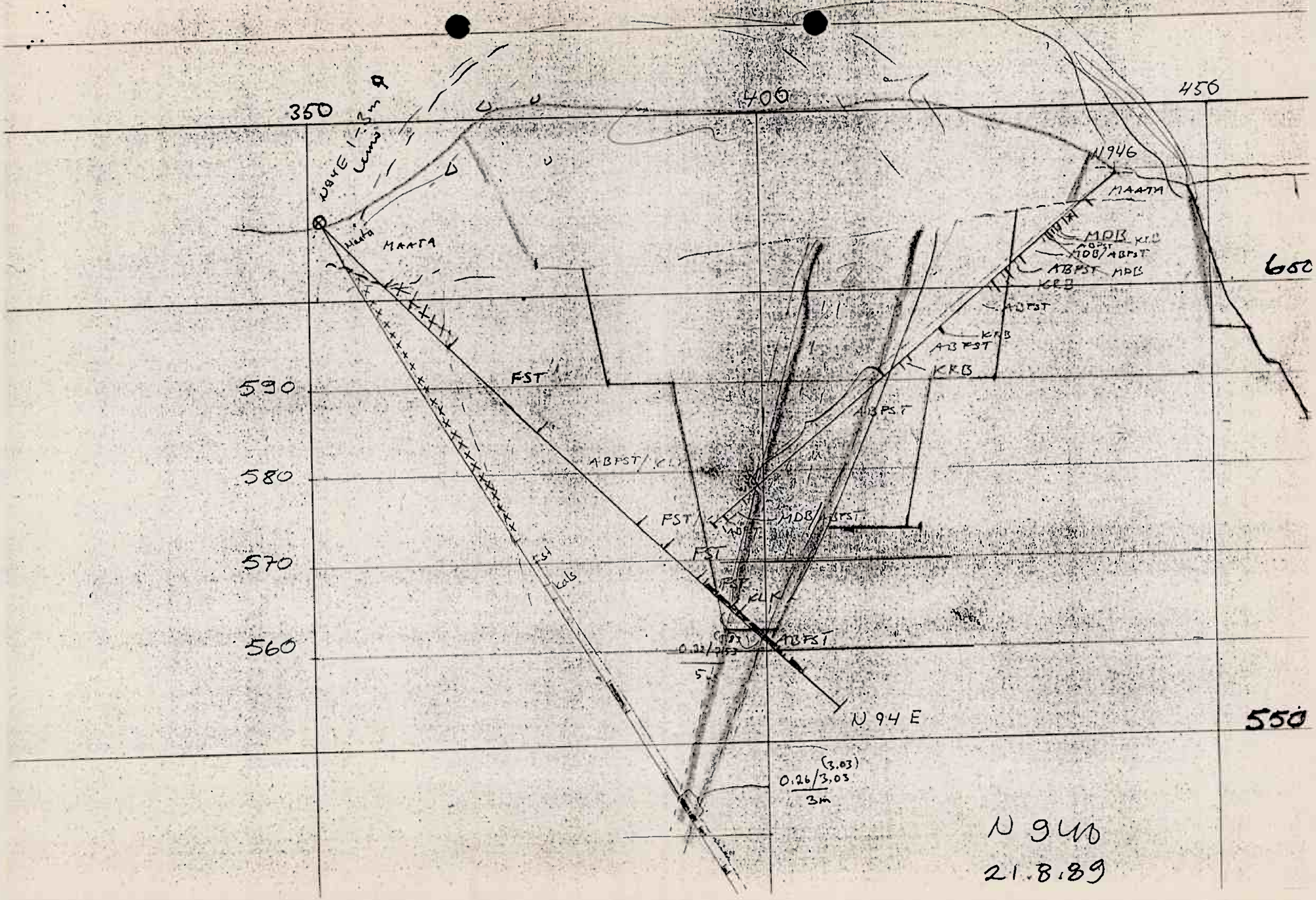

350
400
450
600
590
580
570
560
550
MAATA
MAATA
MOB
FST
FST
ABFST
0,36/0,90
8 m
0.11/40
2 m
0.34/1.60
16 m
ABFST
0.31/2.31
FST
ABFSTs
FST
KARSI
MOO/FST
N90E
ABFST/MOB
M2
N 90 F

N 908

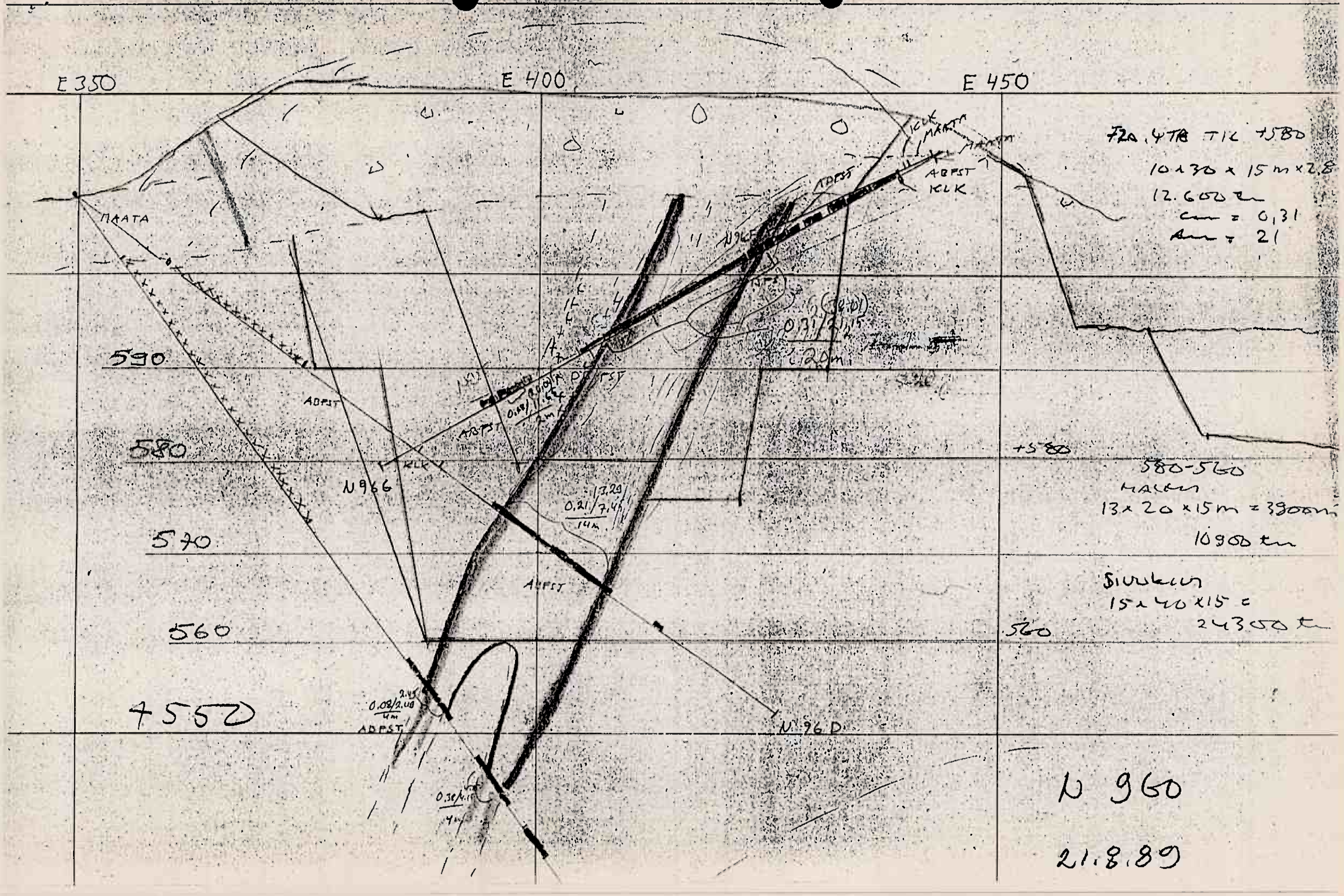
21.8.89


350
400
450
ω
ω
N 92 J
N92C
MAATA
DB
FST
ABFST
FST
ABFST
KLK
N92J
600
590
580
570
560
550
540
v4,39
1.5/2.7
2m
(2.55)
0/5.88
5m
(6.20)
0.12/4.79
6m
(8.24)
10.07/5.39
5m
92K

N 920


350
400
450
N84E
Lens 3m
Maata
MAATA
FST
ABFST/KLK
FST
FST
FST
KLK
ABFST
0.32/7.53
5
N94E
0.26/3.03
(3.03)
3m
FST
kals
N946
MAATA
MDB
KLC
ABPST
MDB/ABFST
ABFST
MDB
KRB
ABPST
KRB
ABFST
KRB
ABFST
MDB/ABFST
ABFST
600
590
580
570
560
550

N 946
21.8.89



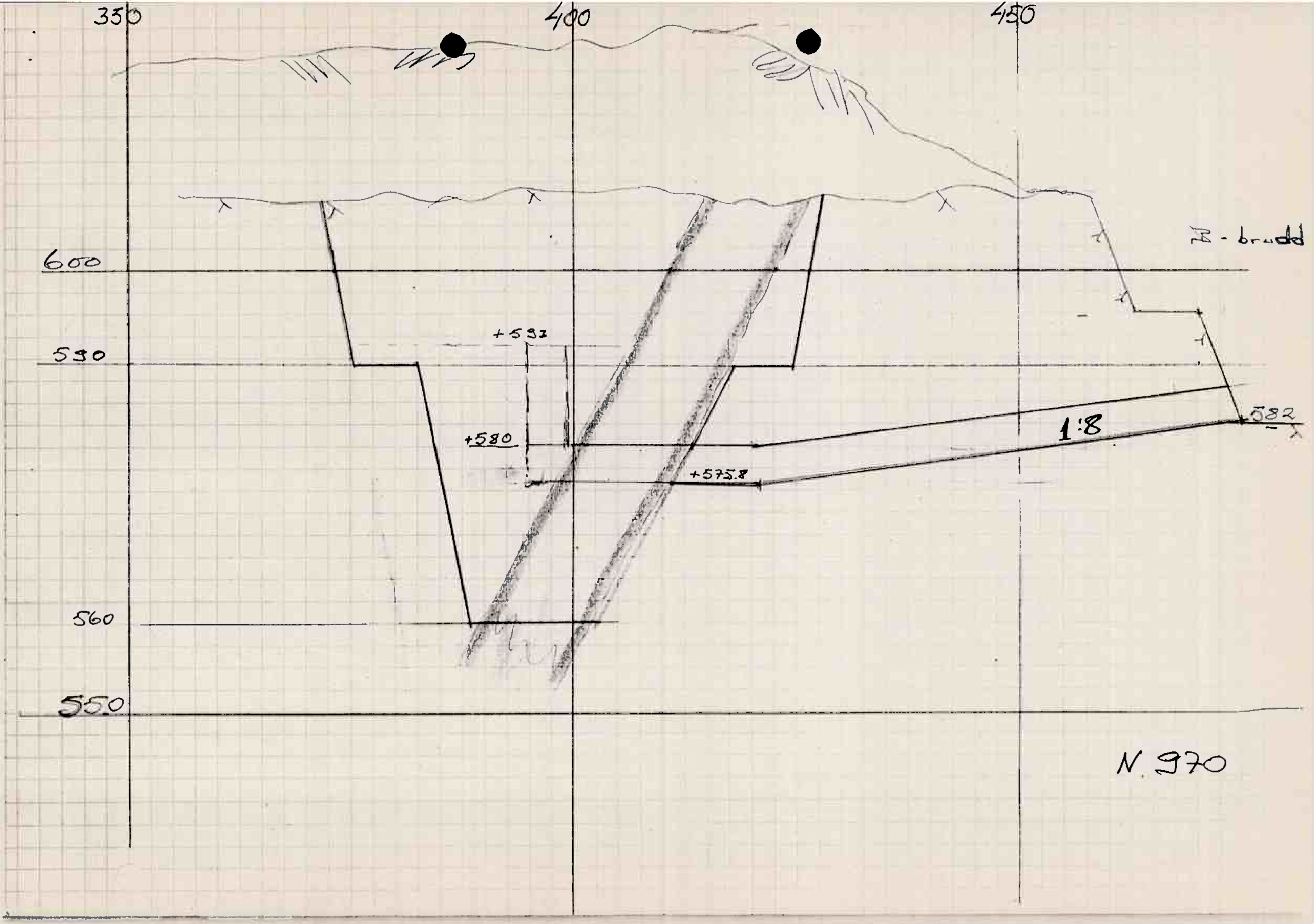
Fza, 4TB TIK +580
10 x 30 x 15 m x 2,8
12.600 tn
Cu = 0,31
Au = 21

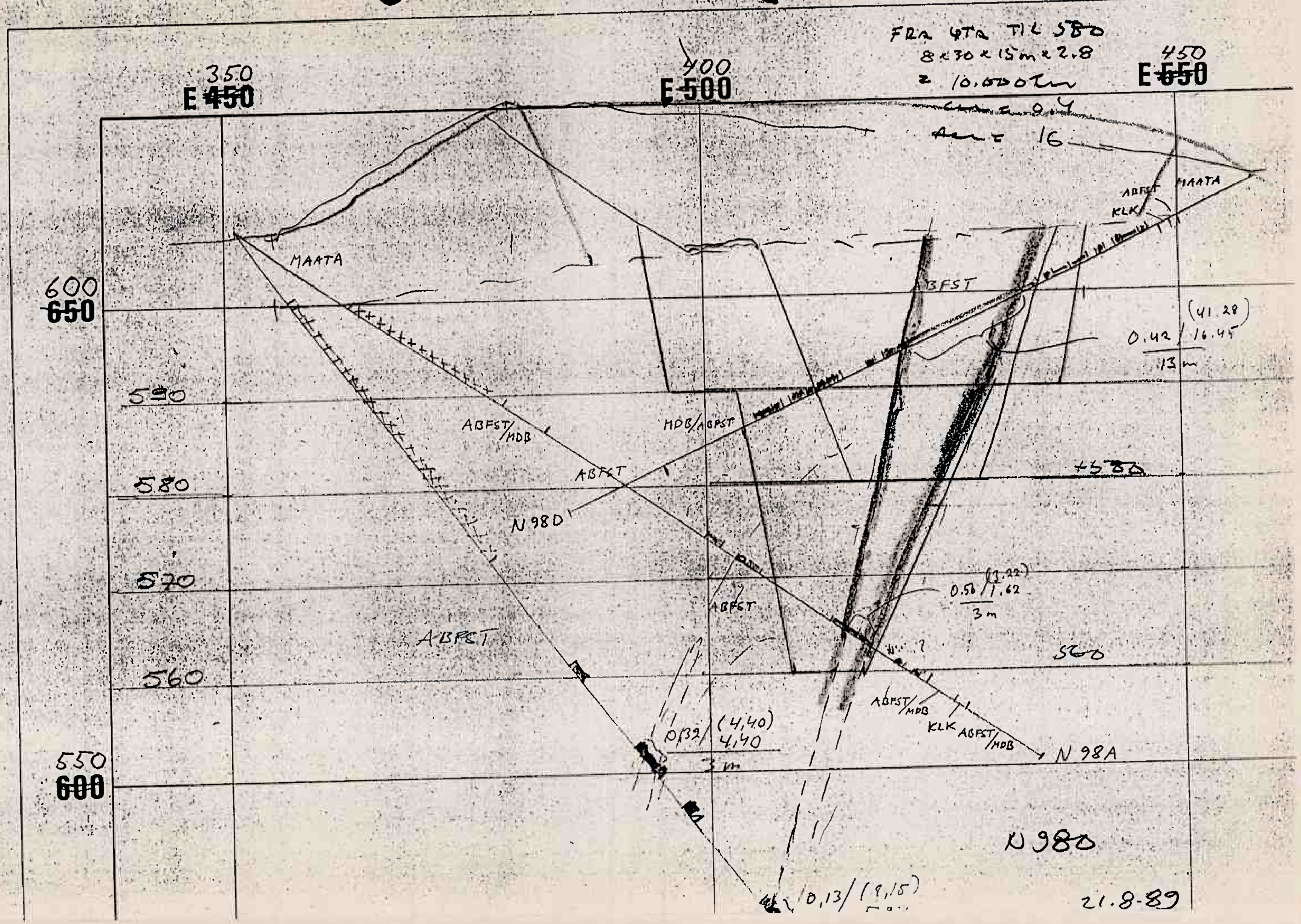
580-560
Malmi
13 x 20 x 15 m = 3900 m³
10900 tn

Sivukivi
15 x 40 x 15 =
24300 tn

N 960

21.8.89


350
400
450
600
590
560
550
+593
+580
+575.8
582
1:8
B - brudd
N. 970



FRA 610 TIL 580
8 × 30 × 15m × 2.8
= 10,080 tn
~~Cu~~ = 0.4
~~Au~~ = 16

N980

21.8-89

(U) [illegible] K-Dagbrudd Vaihtoehto II pohja + 580

Laikk	Malmi ton	Cu-%	Au g/ton	Sivukivi k-m³		ton	yht ton
①							
880	4×30×20×2,8= 6720	0,4 (27,0)	4.5	30×11×20 =	6600	×2.7 = 17.820	Maanpoistoa n. 60.000 k-m³
900	5,5×25×20×2,8 = 7700	0,4 (30,8)	1.5	25×14×20 =	7000	×2.7 = 18.900	
920	3,0×27×20×2,8 = 4536	1.5 (68.0)	2.0	29×12×20 =	6960	×2,7 = 18.800	
940	9×26×20×2.8= 13.104	1.5 (196.5)	2.0	25×12×20 =	6000	×2,7= 16.200	
960	10×30×20×2.8= 16.800	0,3 (50,4)	20.0	30×15×20 =	9000	×2,7 = 24 300	
980	8×26×20×2,8 = 11.648	0,4 (46,5)	16,0	30×11×20 =	6600	×2,7 = 17 820	
		(369)					
	yht 60.508	0,6	9.9	km³	42.160	ton: 113.840	175.000

Under Jord +580 – +551

900	7×29×20×2,8= 11.400	0,3	2,9
920	5×29×20×2,8 = 8100	0,25	5,0
940	5×29×20×2,8 = 8100	0.3	7,0
960	11×29×20×2,8 = 17.900	0,2	7,0
~~980~~	~~3×29×20×2,8 = 4900~~	~~0,5~~	~~3,0~~
	yht 45.500	0,25	5,6

Tunnelia raakussa: 175m 8500

–"– malmissa: 85m

on tässä → 45.500

HUOM

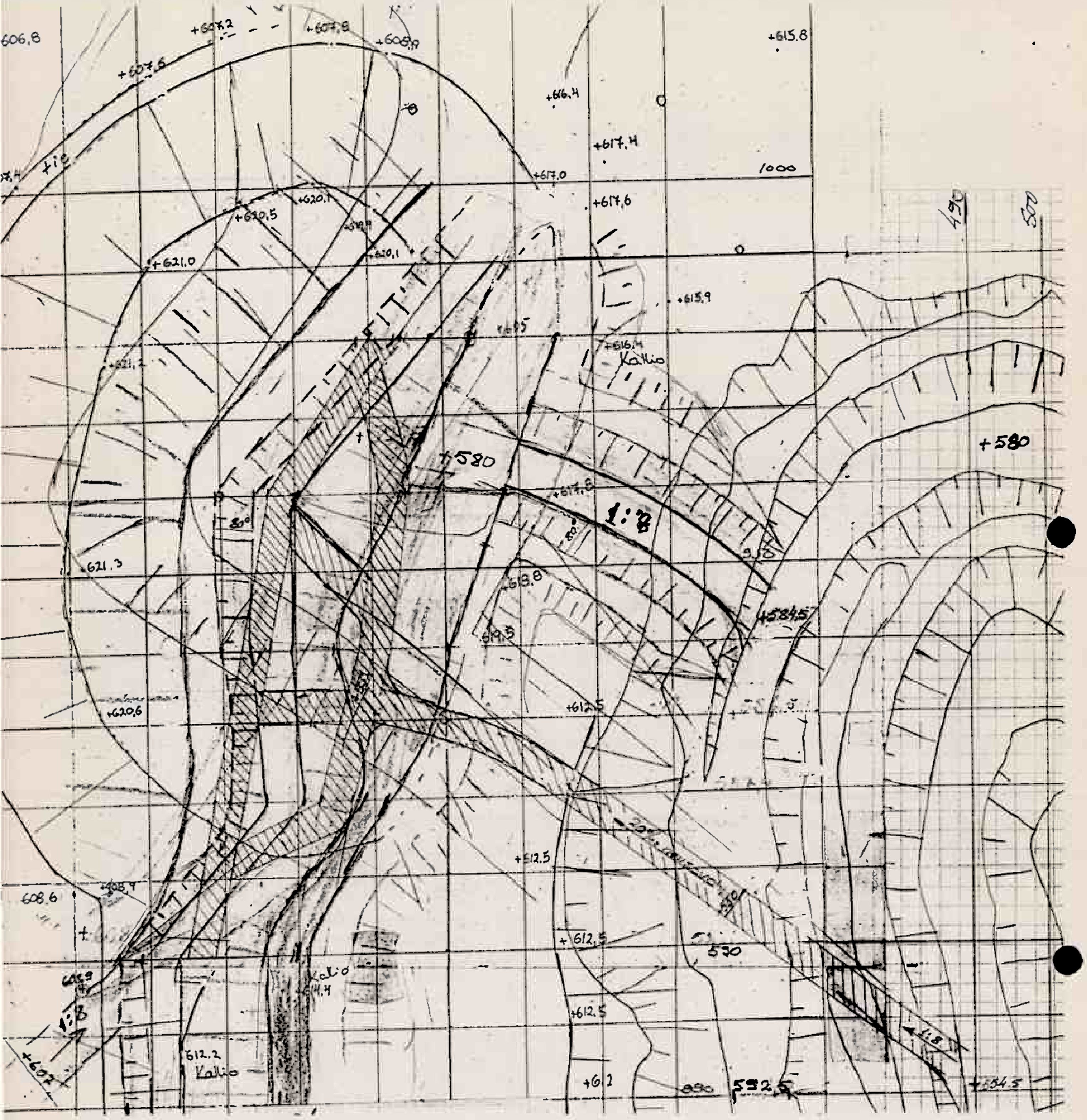
① PESSIMISTINEN VAIHTOEHTO = malmia 66.000 - 16.000 = 50.000

yht 229.000 ton

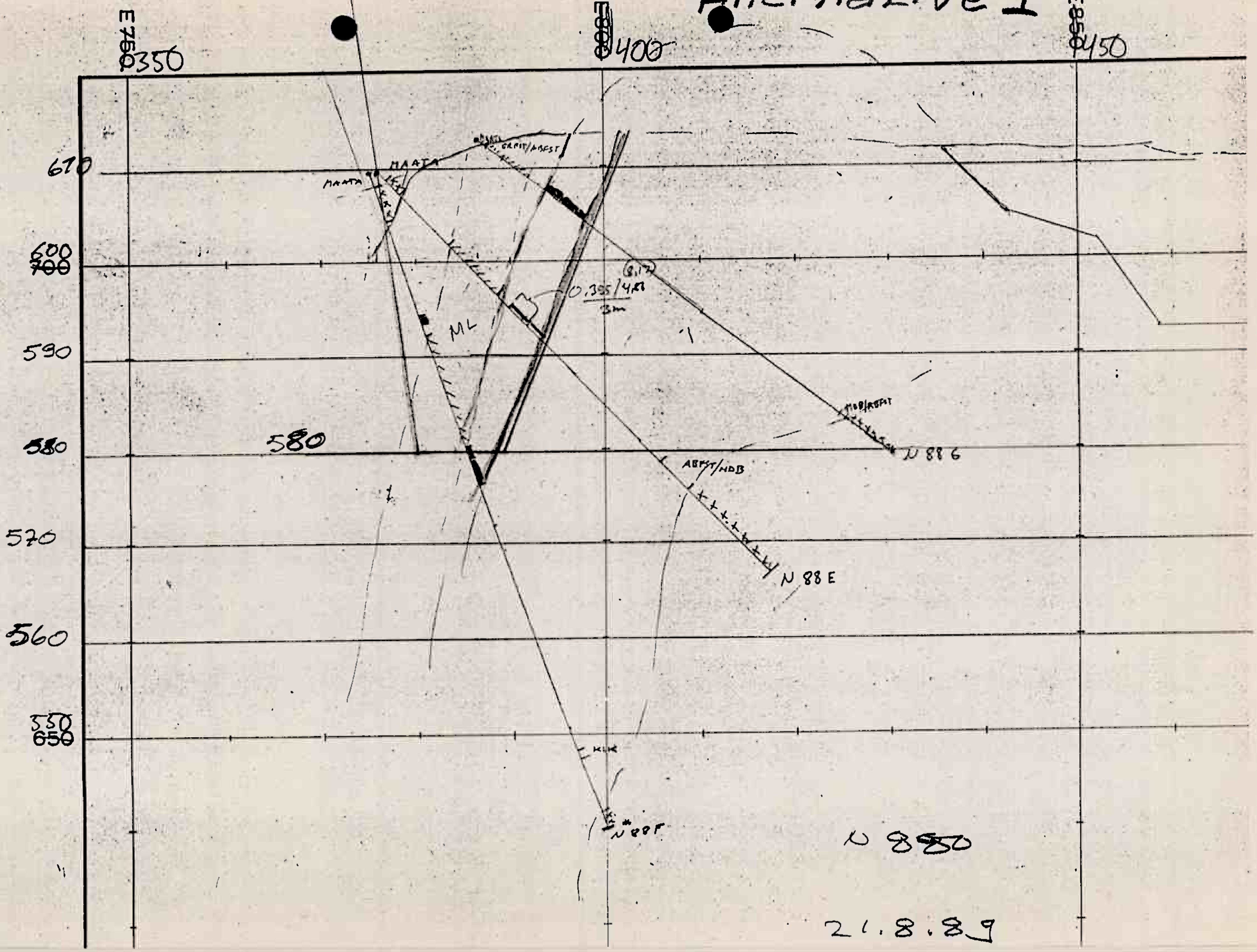
jósta –"– malmia 106.000 –"–

–"– rakkua 123.000 –"–

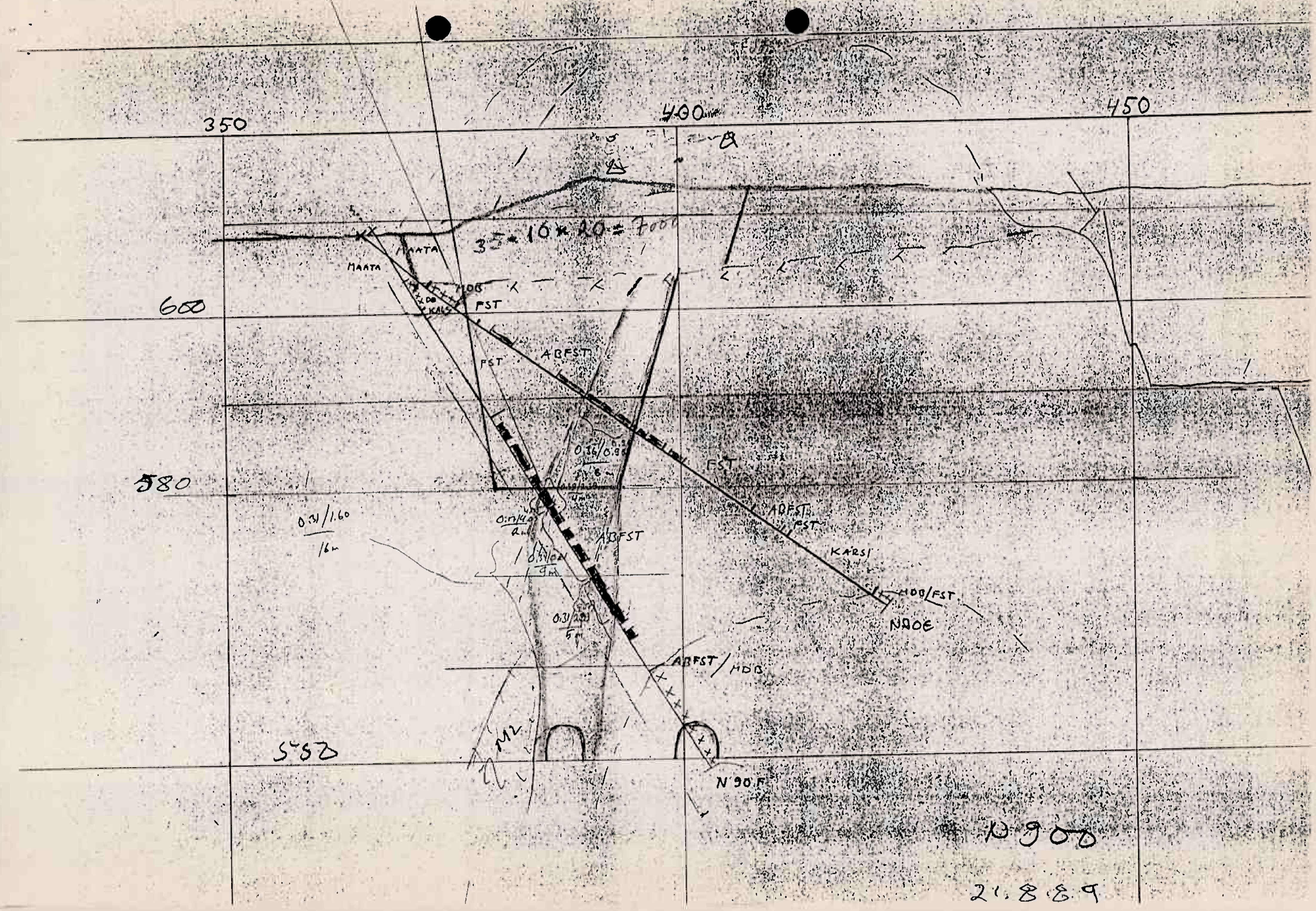
24.8/75

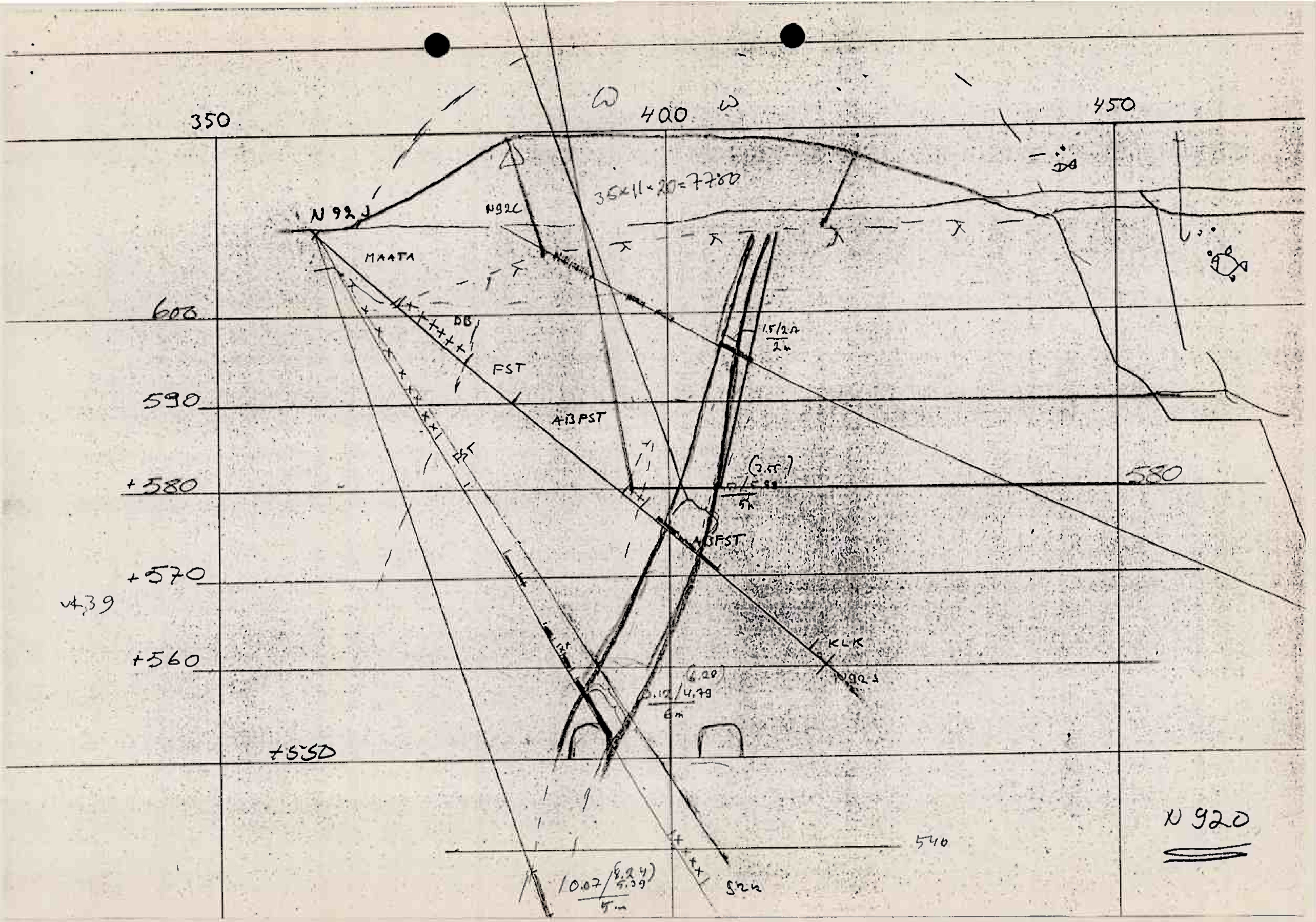

606.8
+607.2
+607.8
+608.9
+607.6
+615.8
+616.4
+617.4
tie
+617.0
1000
+617.6
+620.1
+620.5
+619.9
+620.1
+621.0
+615.9
+616.4
Kallio
490
500
+621.2
+580
+580
80°
1:7
+617.8
80°
621.3
613.8
619.5
+584.5
+620.6
+612.5
+612.5
608.6
+608.9
+612.5
570
605.9
Kallio
614.4
1:3
+612.5
612.2
Kallio
+607
+612
850
592.5
1:8
+584.5

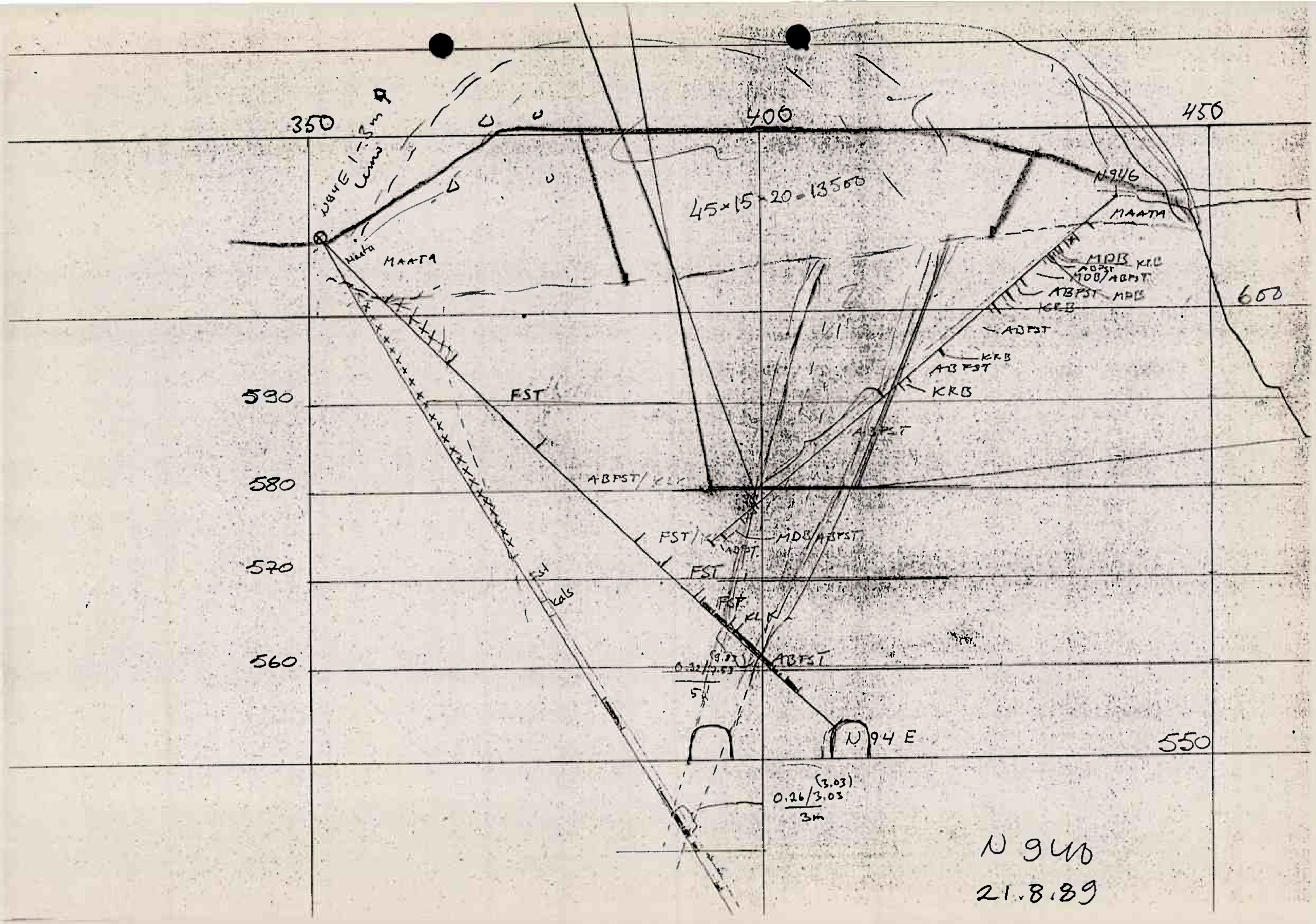
Alternative I



21.8.89

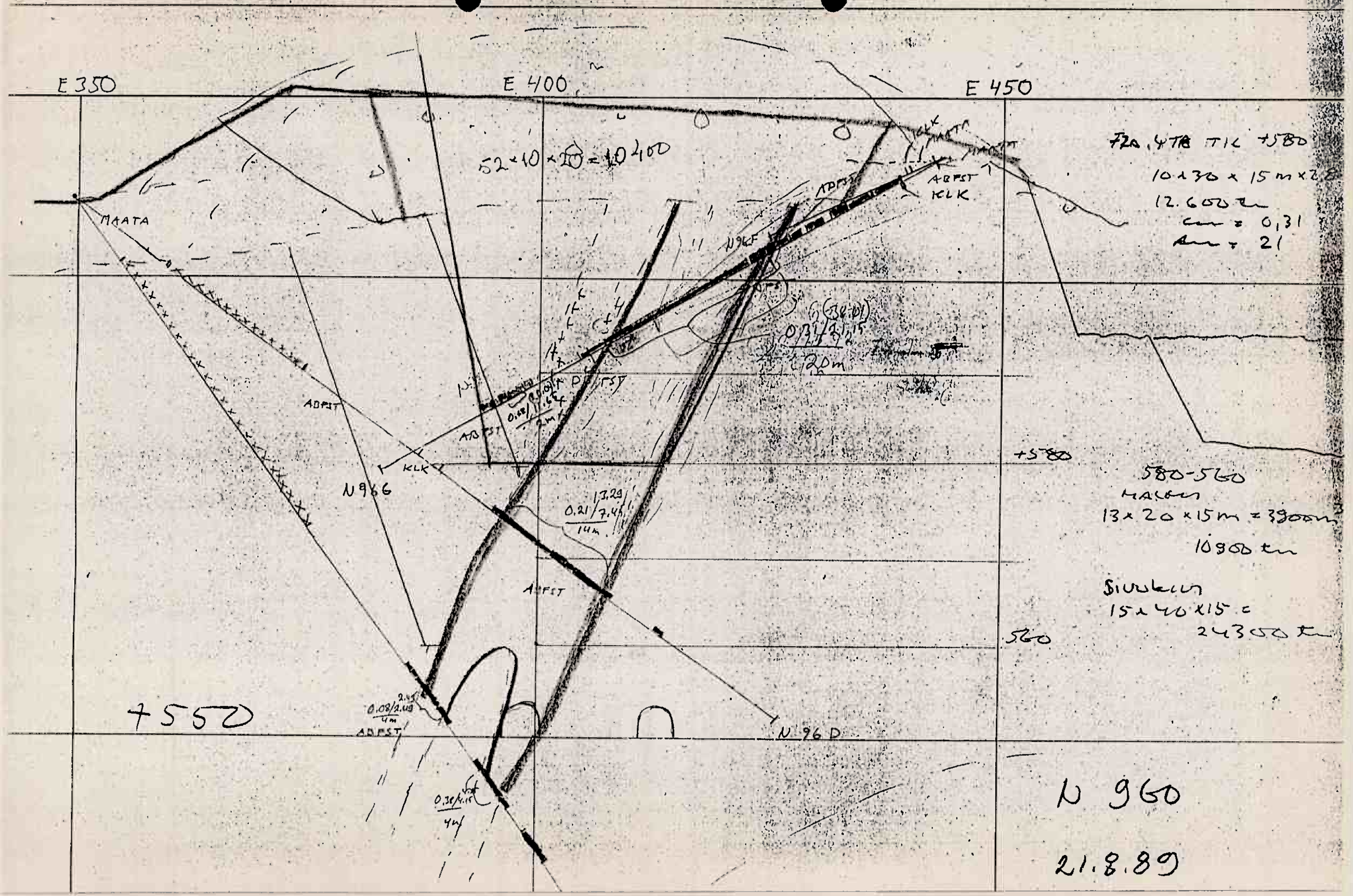

350
400
450
600
580
560
35 * 10 * 20 = 7000
MAATA
MAATA
HOB
KALS
FST
FST
ABFST
0.36/0.96
6m
0.19/2.38
4m
0.31/1.60
16m
0.17/4.0
2m
ABFST
0.34/0.2
9m
0.31/2.21
5m
FST
ABFST
FST
KARSI
HOB/FST
N90E
ABFST / HOB
M2
N 90 F
N 900
21.8.89


350
400
450
35×11×20=7700
N92J
N92C
MAATA
600
DB
FST
590
ABPST
FST
+580
580
1.5/2.?
2m
(2.55)
?/5.9?
5m
ABFST
+570
v4,39
KLK
N92J
+560
(6.20)
0.12/4.79
6m
+550
540
10.07/(8.24) 5.39
5m
52m
N 920


350
400
450
N94E
1-3m
Maata
MAATA
45×15×20=13500
N946
MAATA
MDB KLC
ABFST
MDB/ABFST
ABFST MDB
KRB
ABFST
KRB
ABFST
KRB
ABFST
600
590
580
570
560
550
FST
ABFST/KLK
FST/KLK
ABFST
MDB/ABFST
FST
FST
KLK
ABFST
(9.83)
0.32/7.53
5m
fst
kals
N 94 E
(3.03)
0.26/3.03
3m

N 946

21.8.89



Tza. 4TB TIK +580

10×30 × 15 m × 2,8

12.600 tn

Cu = 0,31

Au = 21

580-560

MALMI

13 × 20 × 15 m = 3900 m³

10900 tn

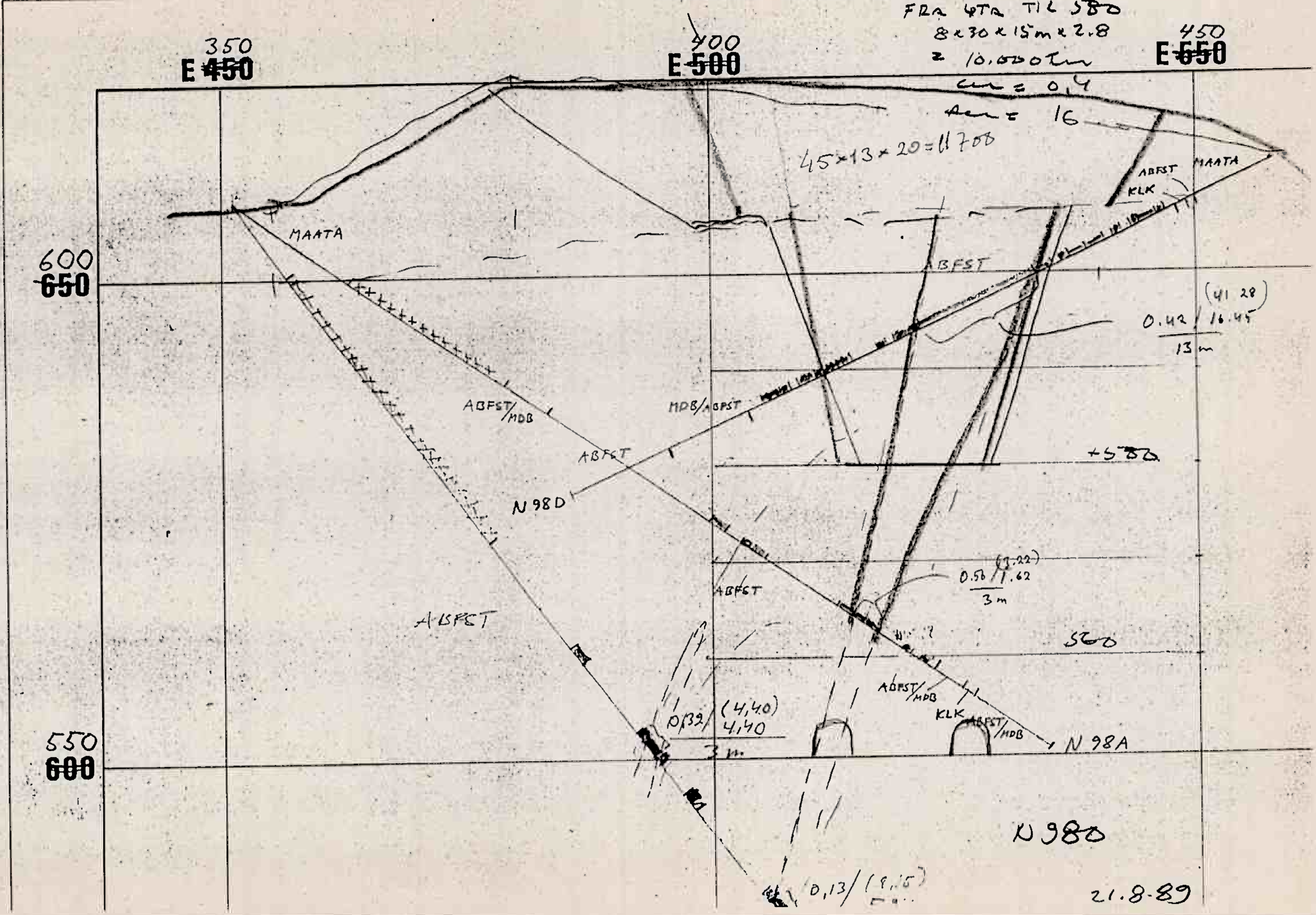
Sivukivi

15 × 40 × 15 =

24300 tn

N 960

21.8.89

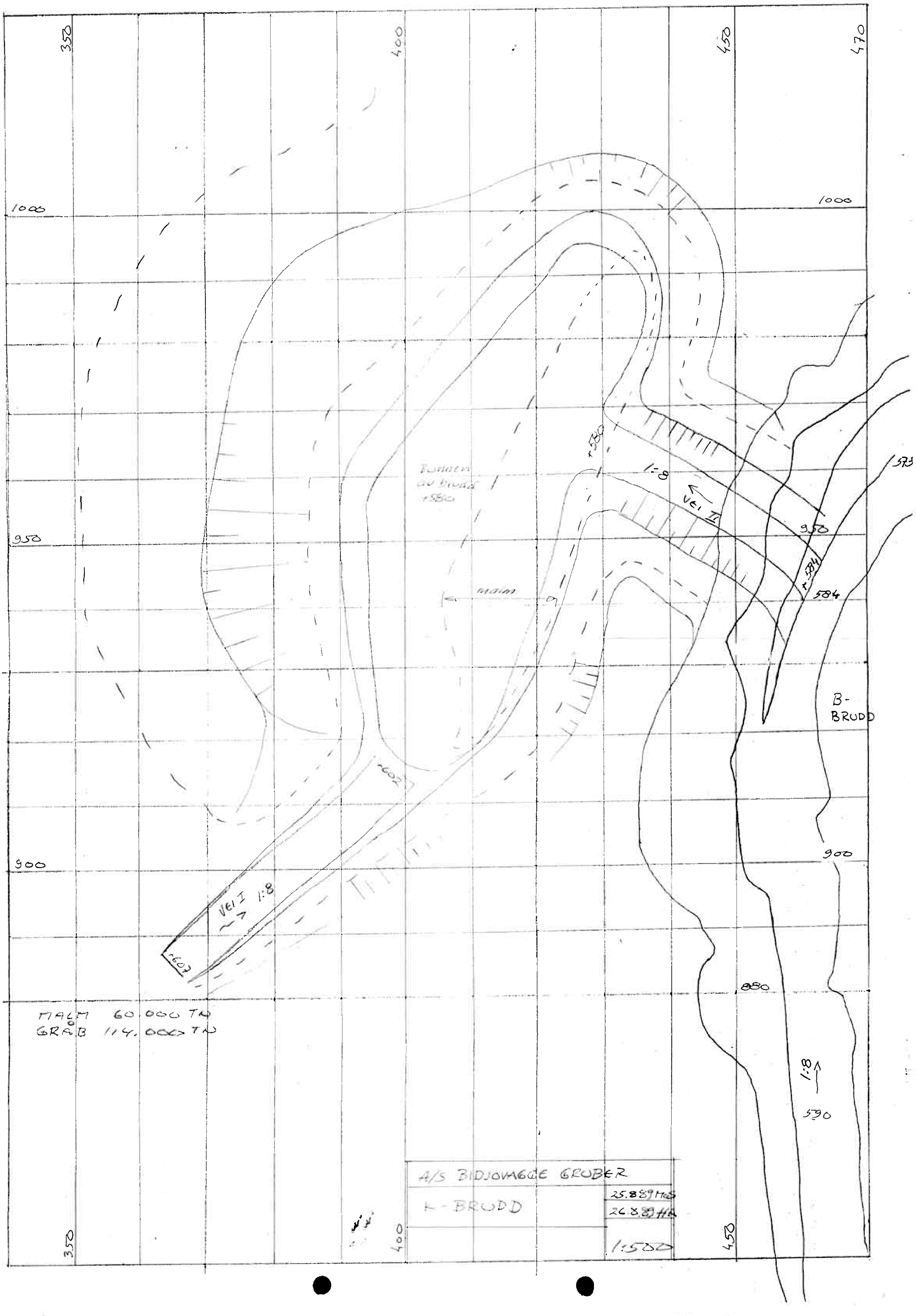


FRA 4TA TIL 580
8×30×15m×2.8
= 10.000 Tn
Cu = 0,4
Au = 16

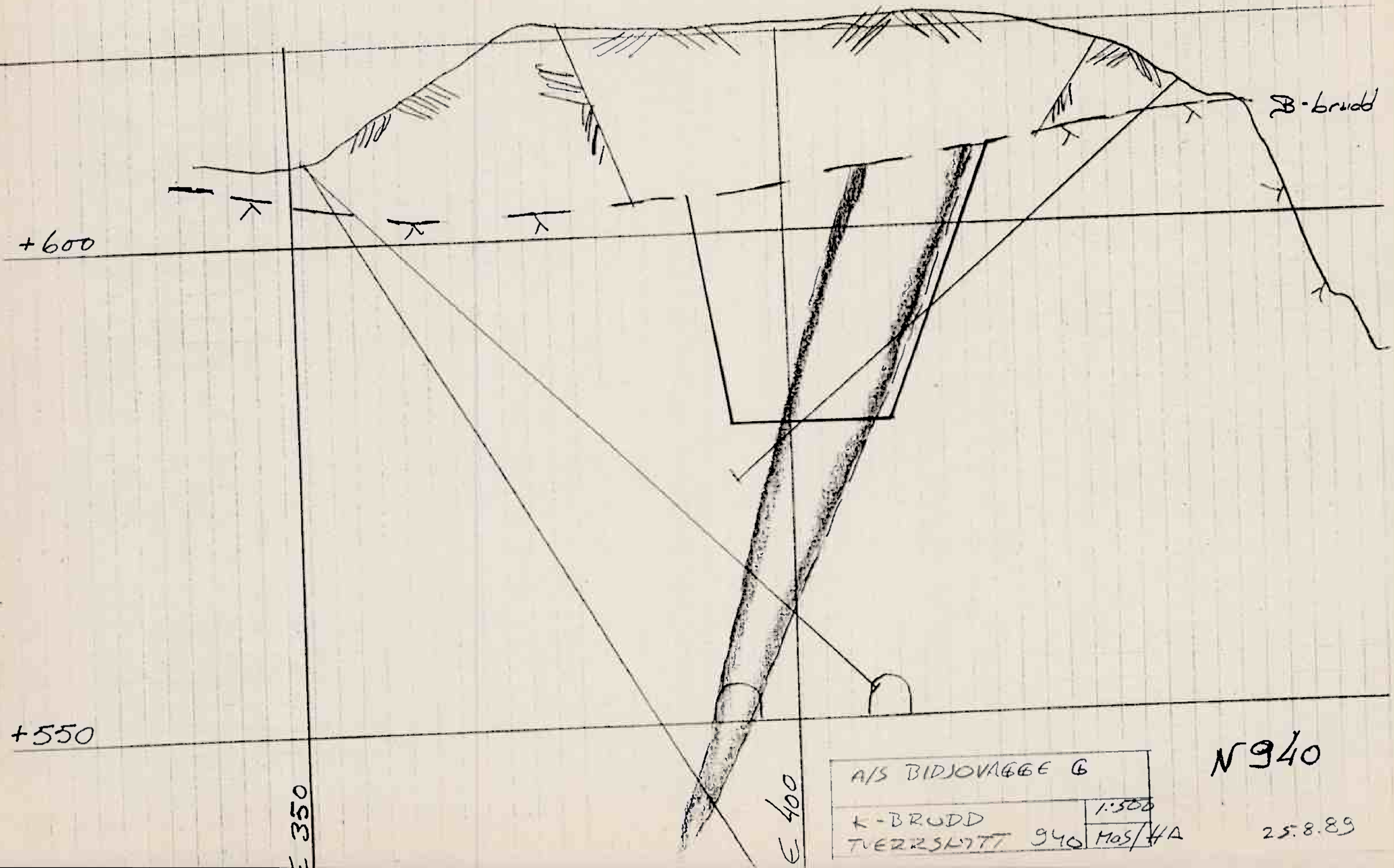
45×13×20=11700

N980

21.8-89



A/S BIDJOVAGGE GRUBER
K-BRUDD
25.8.89 MoS
26.8.89 HA
1:500



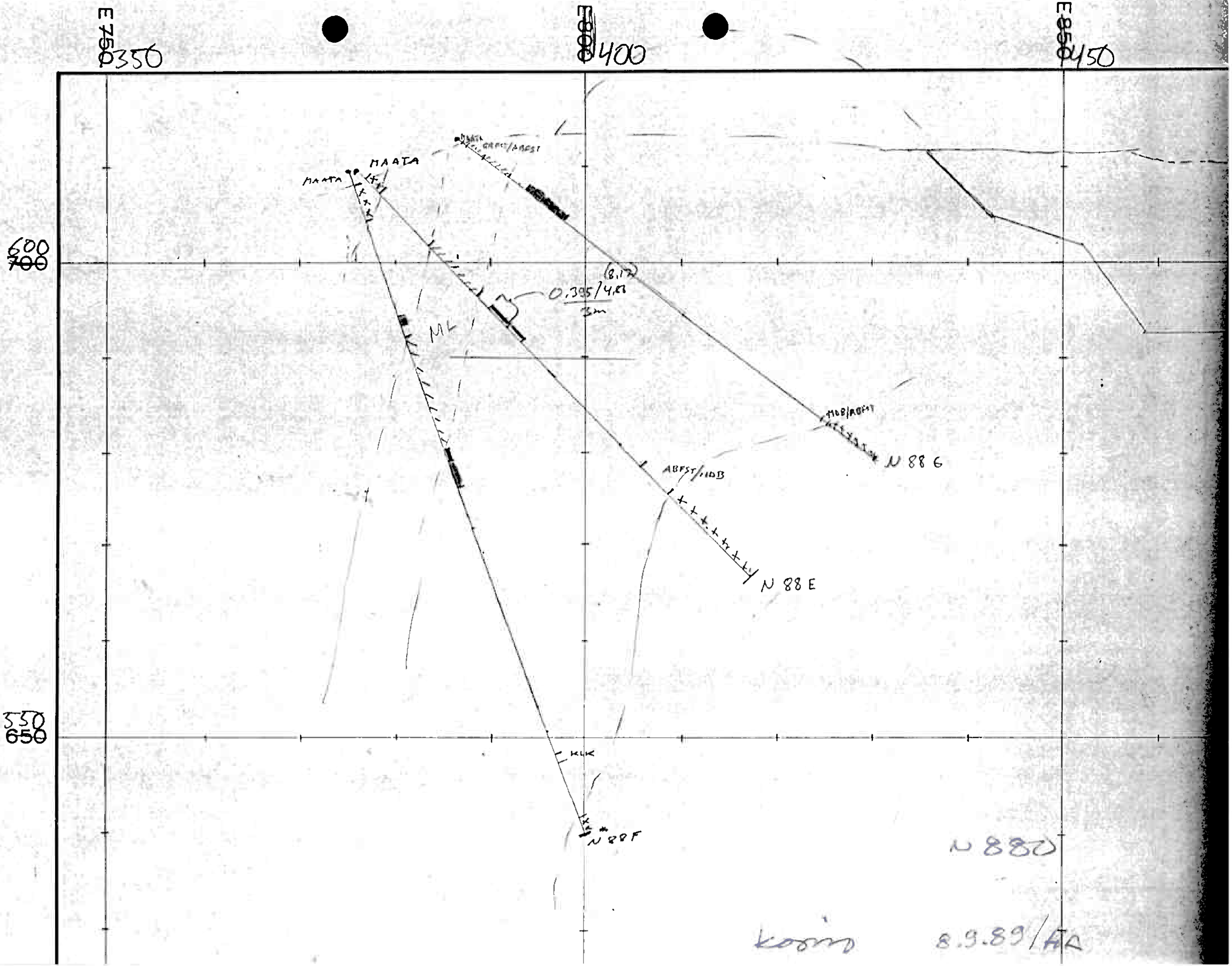
N940

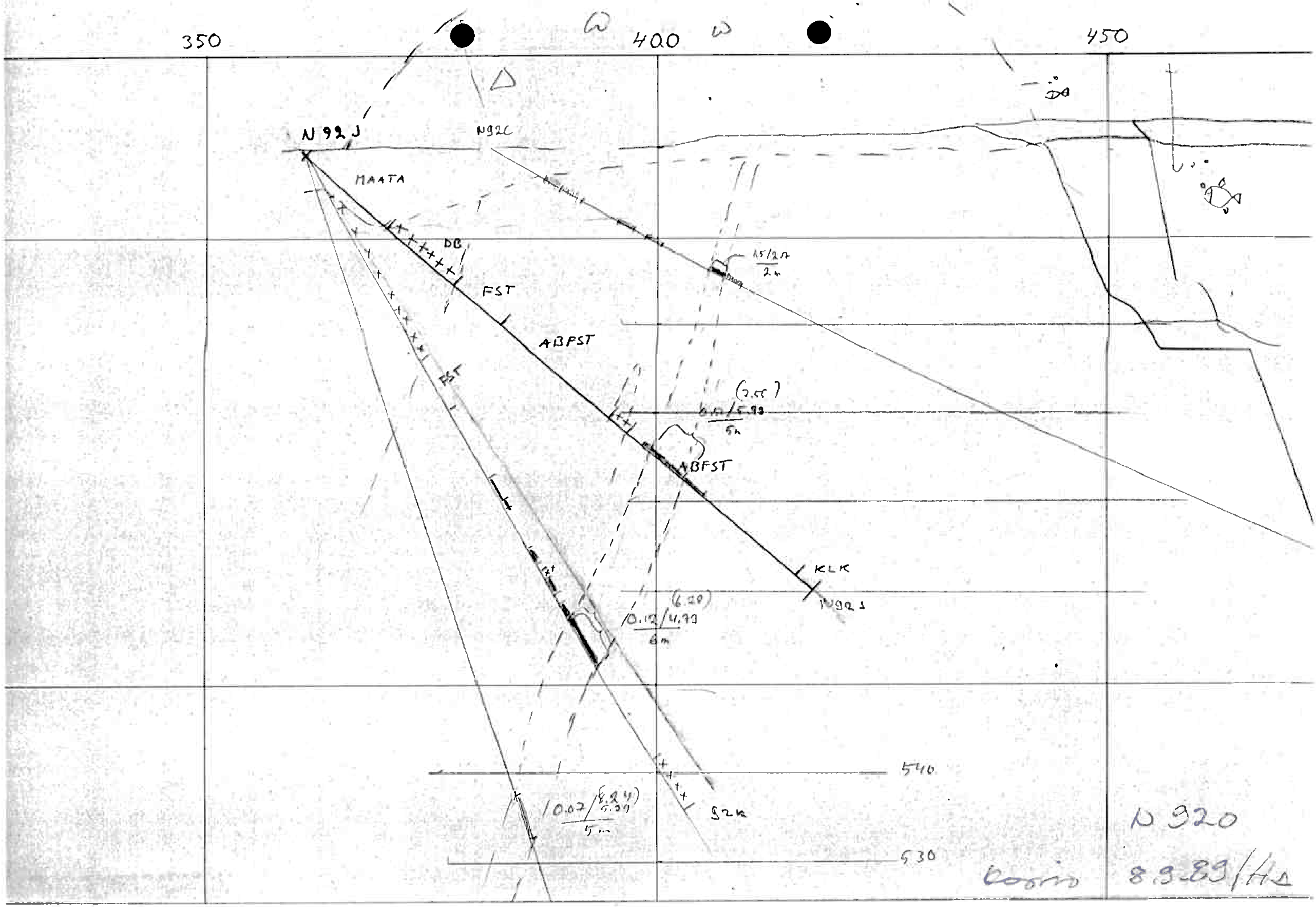
A/S BIDJOVAGGE 6

K-BRUDD
TVERRSNITT 940

1:500
MOS/HA

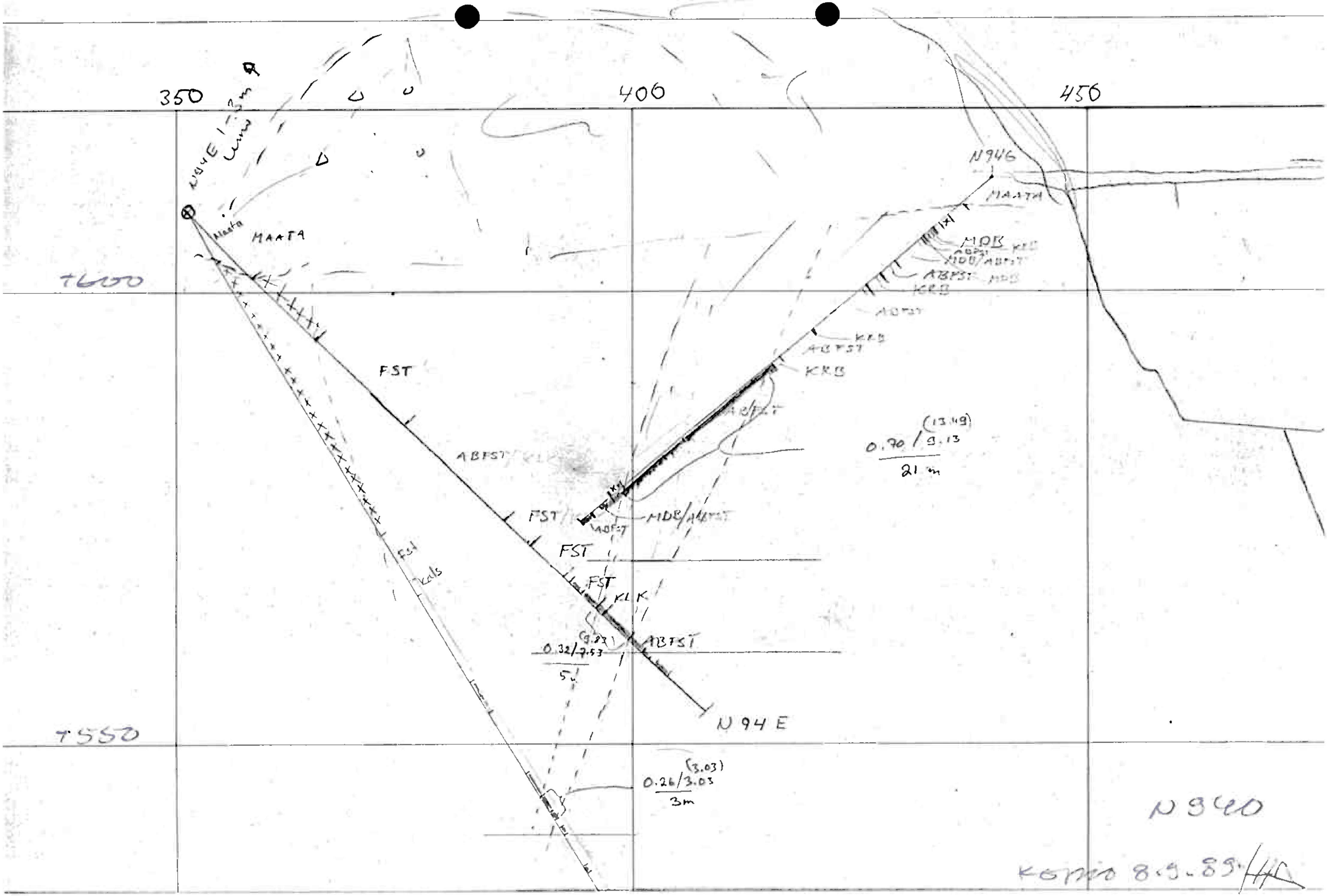
25.8.89

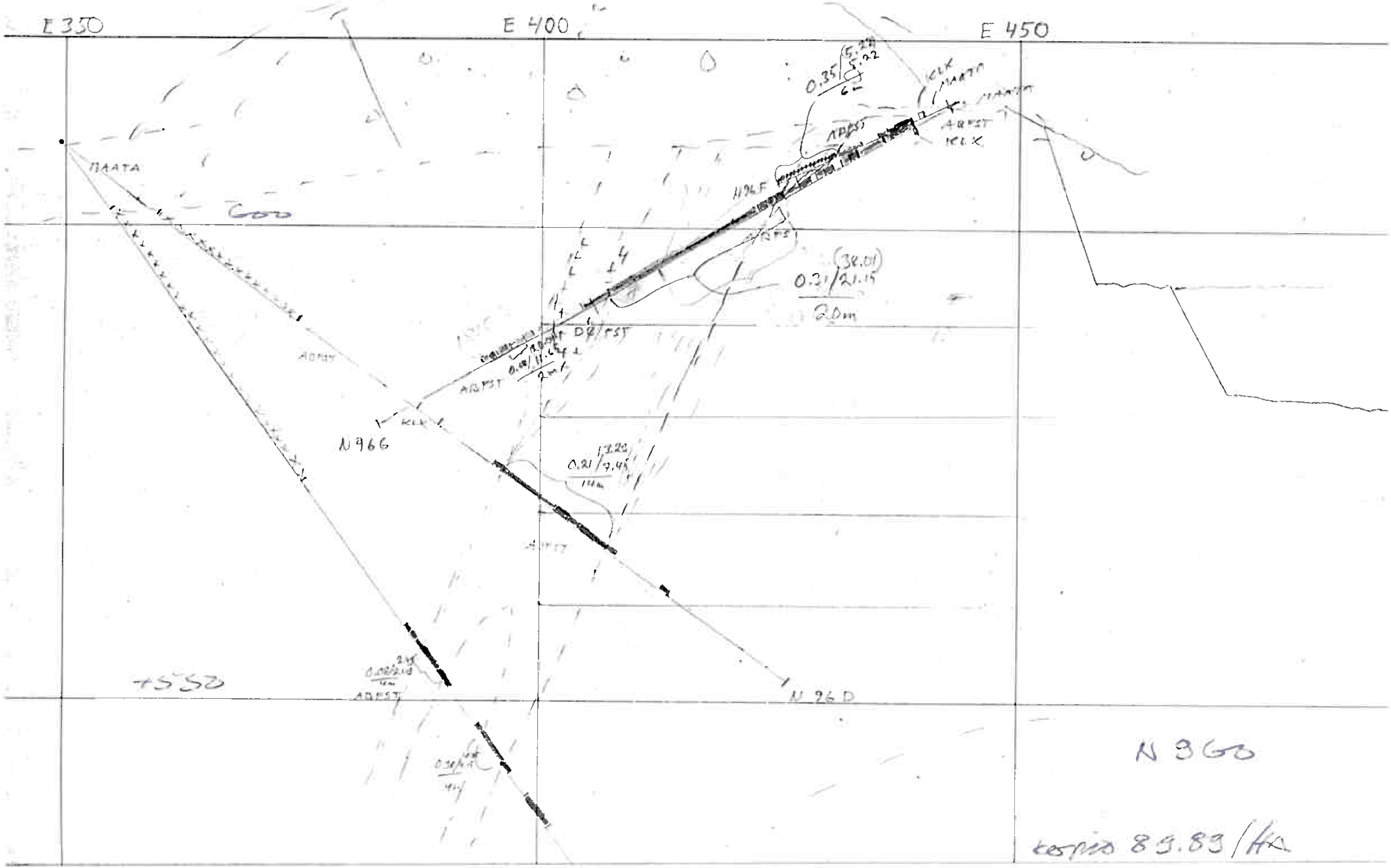

E ~~750~~ 0350
E ~~800~~ 0400
E ~~850~~ 0450
600 ~~700~~
550 ~~650~~
MAATA
MAATA
MAATA
GRFST/ABFST
0,395/4,83
3m
(8,17)
ML
MDB/ABFST
N 88 G
ABFST/MDB
N 88 E
KLK
N 88 F
N 880
koord 8.9.89/AR



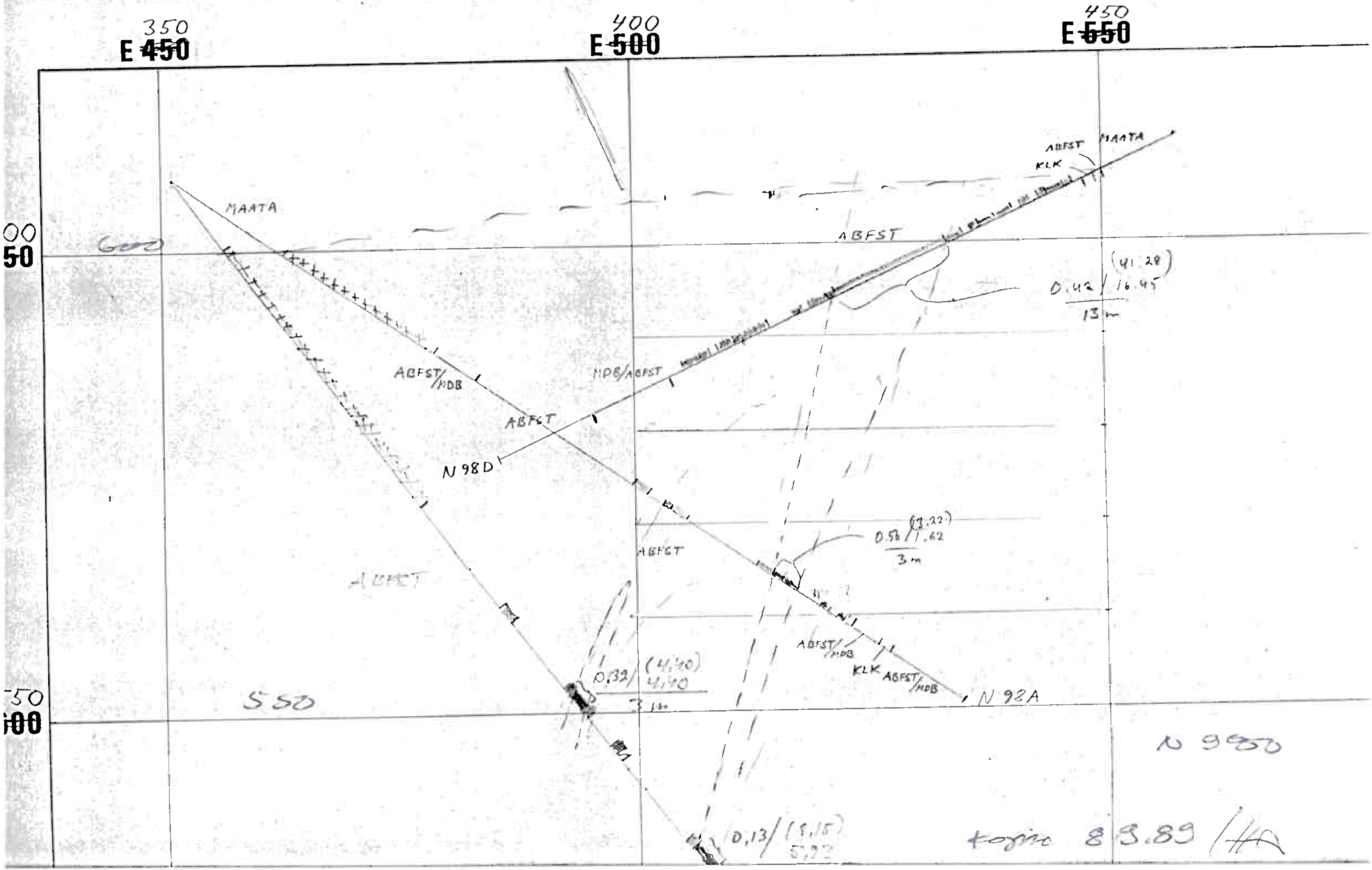
N 920

Kosio 8.9.89/HS

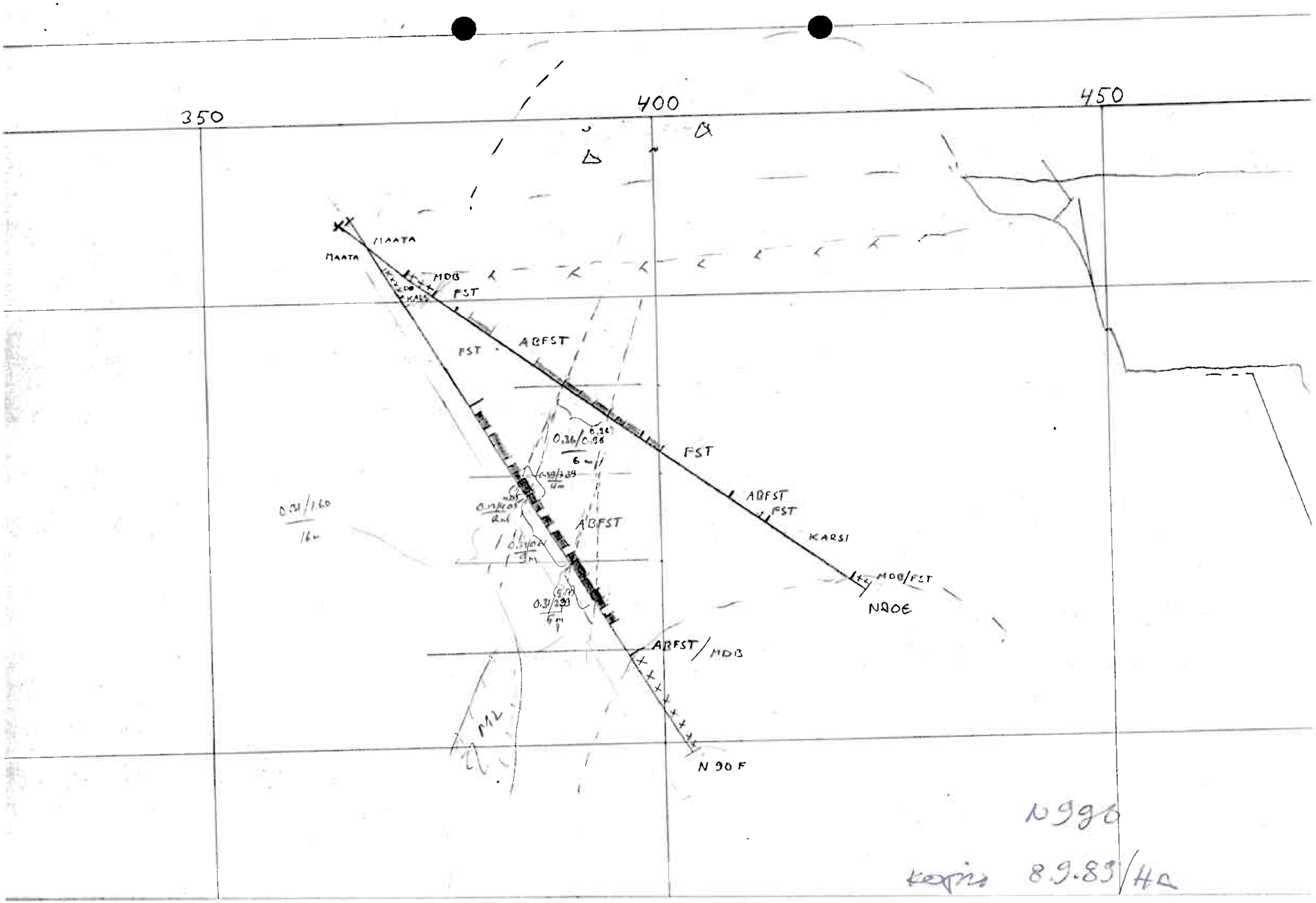

350
400
450
N94E 1-3m
Maata
MAATA
7600
FST
ABFST
FST
FST
FST
KLK
ABFST
(9.87)
0.32/7.53
5m
N94E
7550
Fst
Kals
(3.03)
0.26/3.03
3m
N946
MAATA
MDB
KRB
MDB/ABFST
ABFST
MDB
KRB
ABFST
KRB
ABFST
KRB
ABFST
MDB/ABFST
ABFST
(13.49)
0.70/9.13
21 m
N940
KOMO 8.9.89



kopio 8.9.83 / Hx

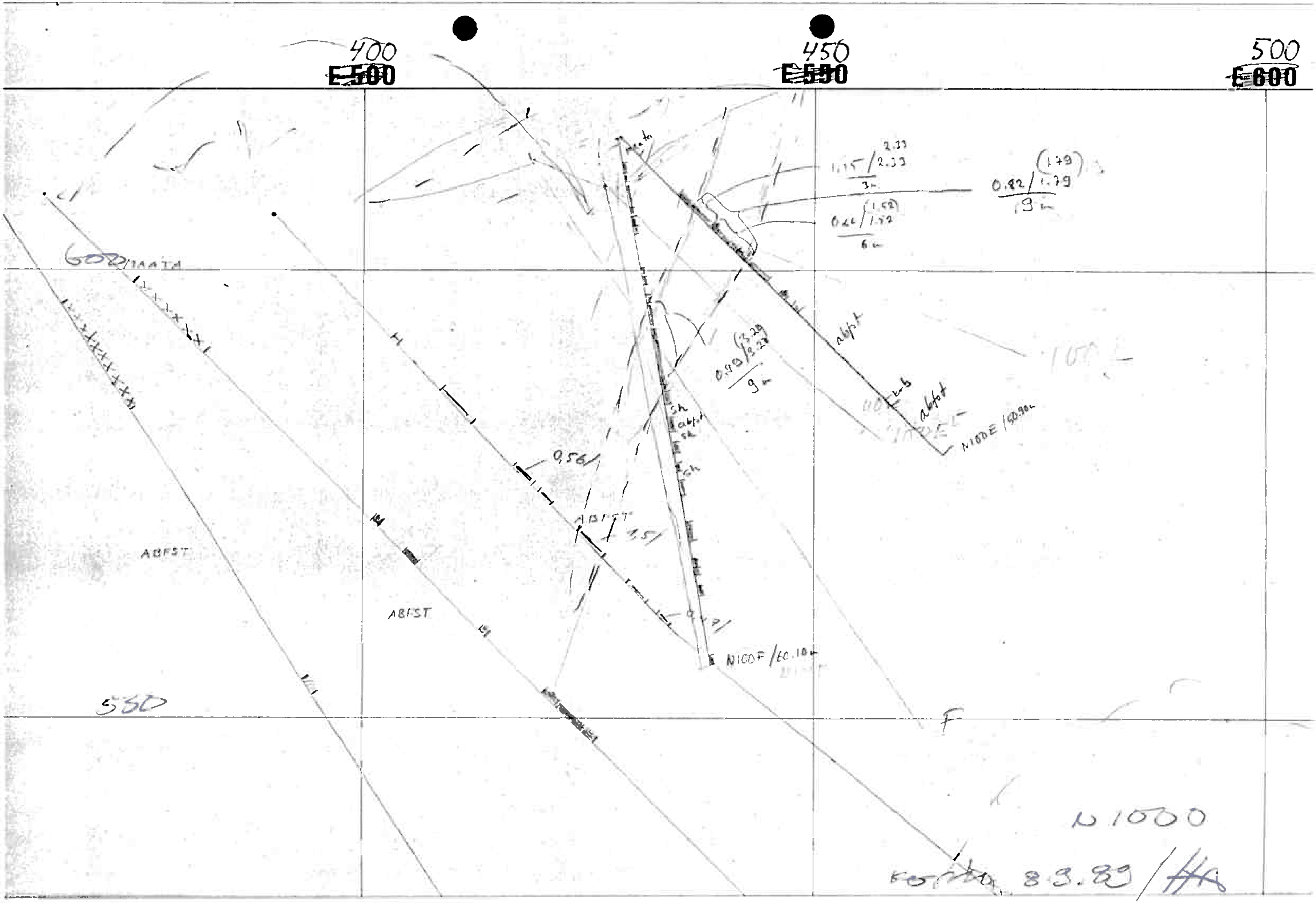


350
E ~~450~~
400
E ~~500~~
450
E ~~550~~
00
50
Geo
MAATA
ABFST
MAATA
KLK
ABFST
ABFST/MDB
MDB/ABFST
ABFST
N 98D
(41.28)
0.42/16.45
13 m
ABFST
ABFST
(3.22)
0.56/1.62
3 m
ABFST/MDB
KLK
ABFST/MDB
N 98A
0.32/(4.40)
4.40
3 m
550
50
00
N 950
0,13/(9.15)
5.22
kopio 8.3.89 /HA



N996

kexpis 8.9.89/Ha



400
~~E 500~~
450
~~E 550~~
500
~~E 600~~
maata
1.15 / 2.33
2.33
3m
0.82 / 1.79
(1.79)
9m
0.46 / 1.52
(1.52)
6m
600 MAATA
0.99 / 3.28
(3.29)
9m
abfpt
abfpt
N100E / 50.90m
sh
abfpt
sh
sh
0,56/
ABFST
1,5/
ABFST
ABFST
0,49/
N100F / 60.10m
550
F
N1000
8.3.89

K-Dagbrudd II-alternativ botn +560

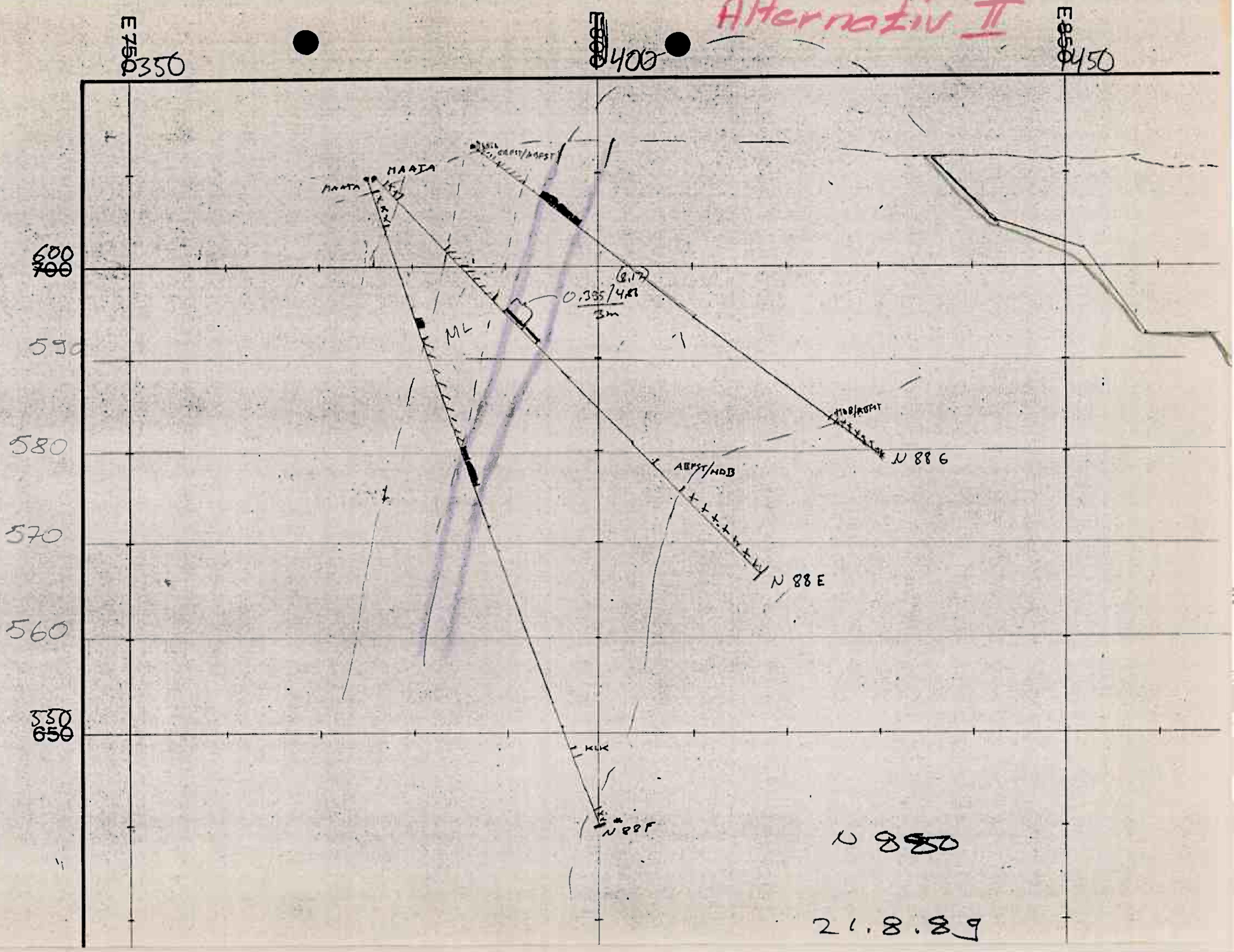
Leikk	Malm ton	Cu-%	Au-g/ton	Gråberg f-m³	ton	Jordavdekking
900	6×33×20×2,8 = 13.100	0,3	0,7	47×13×20 – 4700k-m³ = 7500		65×10×20 =
				27×23×20 = 12400		
920	4×45×20×2,8 = 10 000	1.0	5,0	43×18×20 – 3600k-m³ = 11900		60×10×20 =
				22×22×20 = 9700		
940	9×45×20×2,8 = 22 700	0,3	3.0	46×15×20 – 8100k-m³ = 5700		65×15×20 =
				25×20×20 = 10.000		
960	10×50×20×2.8 = 28 000	0,3	10.0	58×20×20 – 10.000k-m³ = 13.200		75×10×20 =
				32×30×20 = 13200		
980	7×45×20×2,8 = 17.600	0,4	8,0	45×15×20 – 6300k-m³ = 7200		65×15×20 =
				30×18×20 = 10.800		
	91.500	0,4	7,5	107.600	290.000	80.000 k-m³

Tunnelia 70 jm

yht. louhinta: 383.000 ton

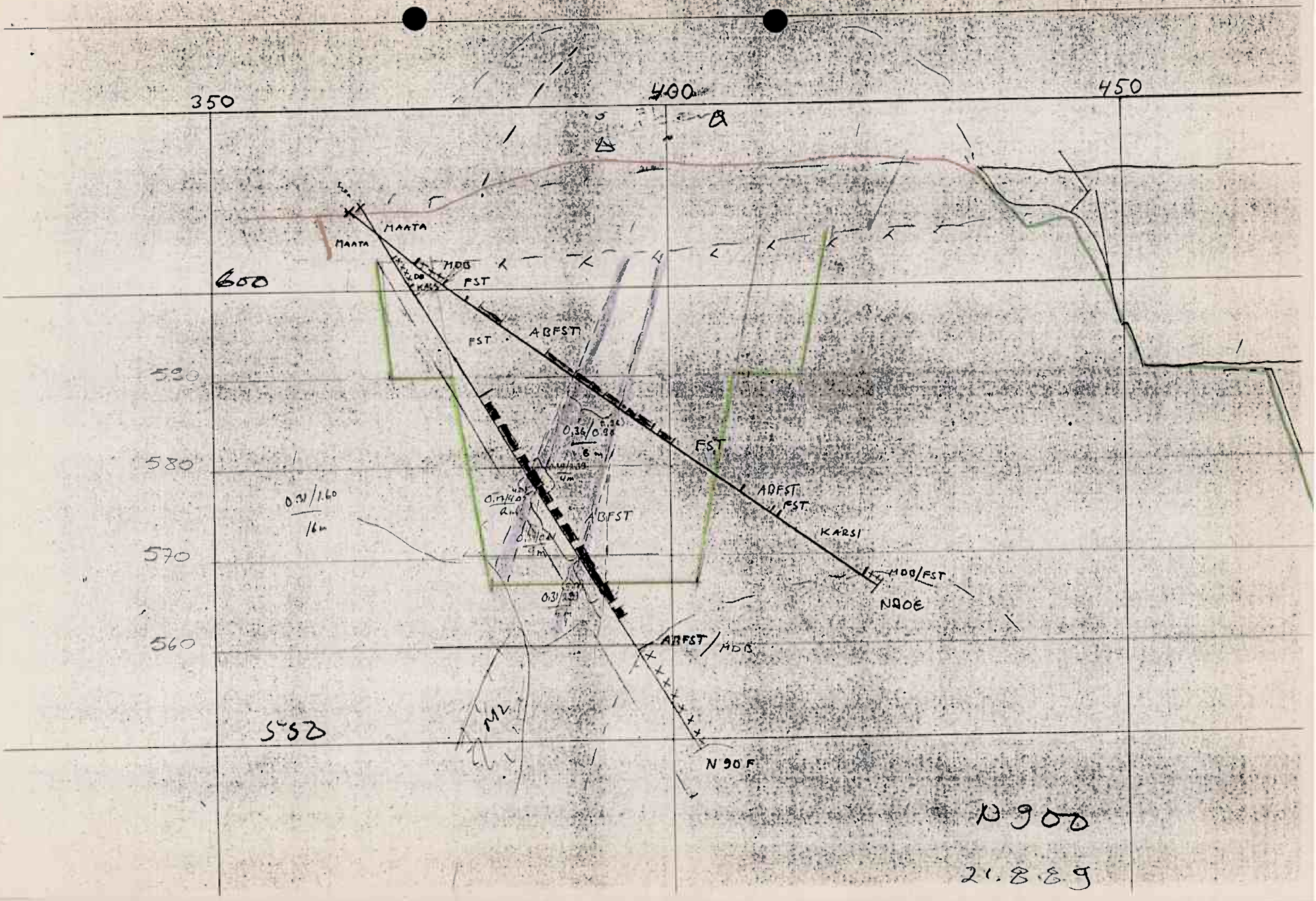
25.8/HS

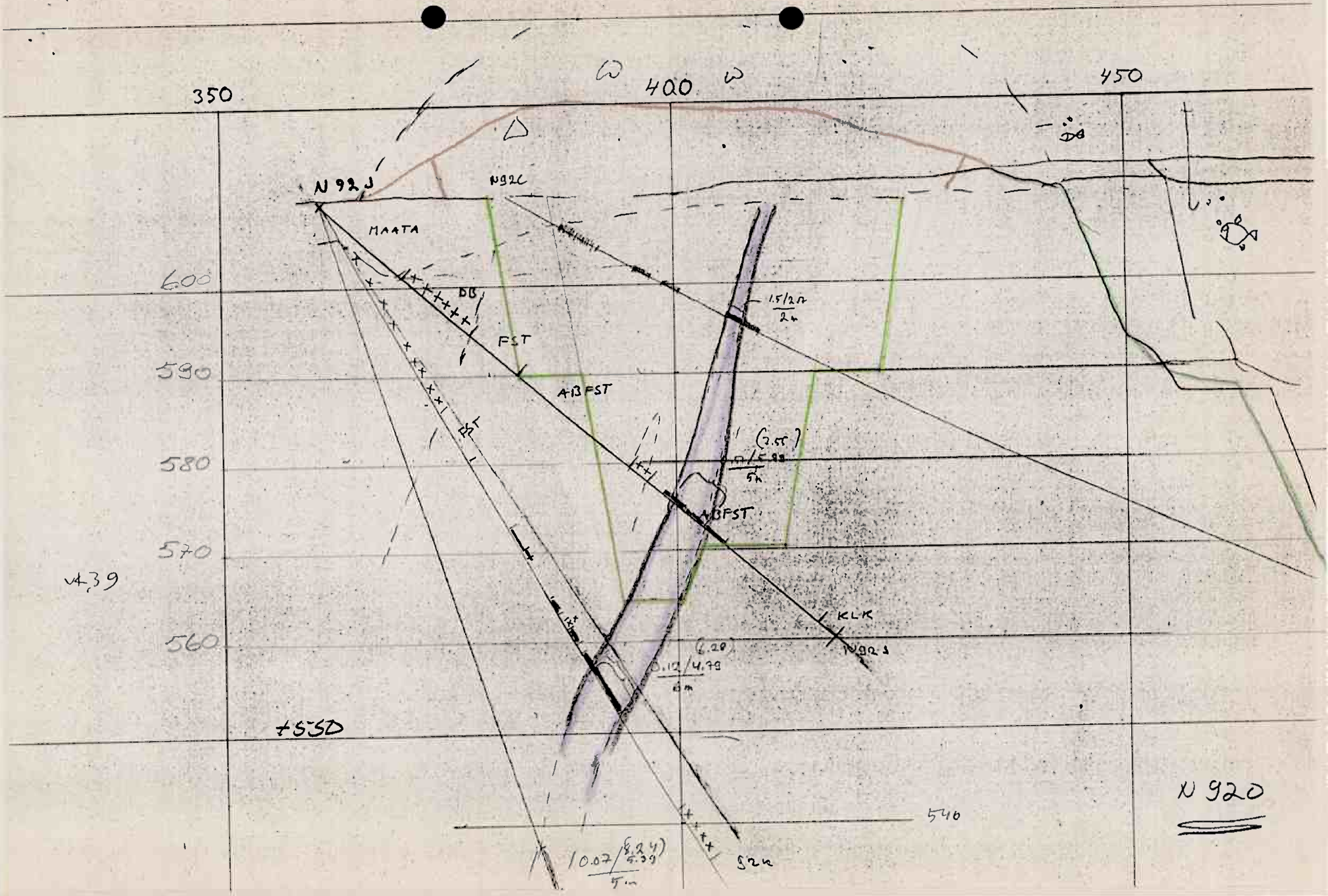
Alternativ II



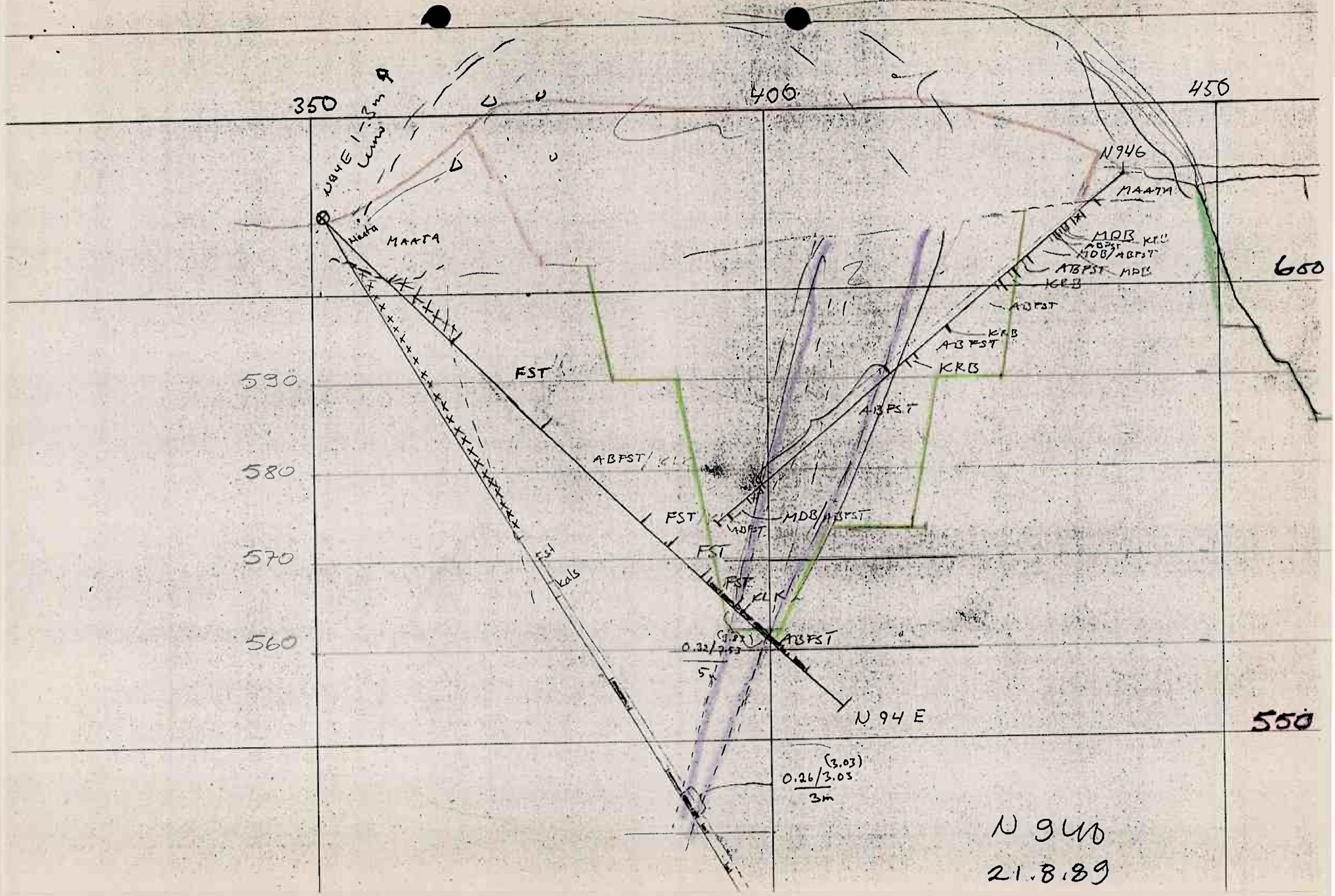
N 8850

21.8.89

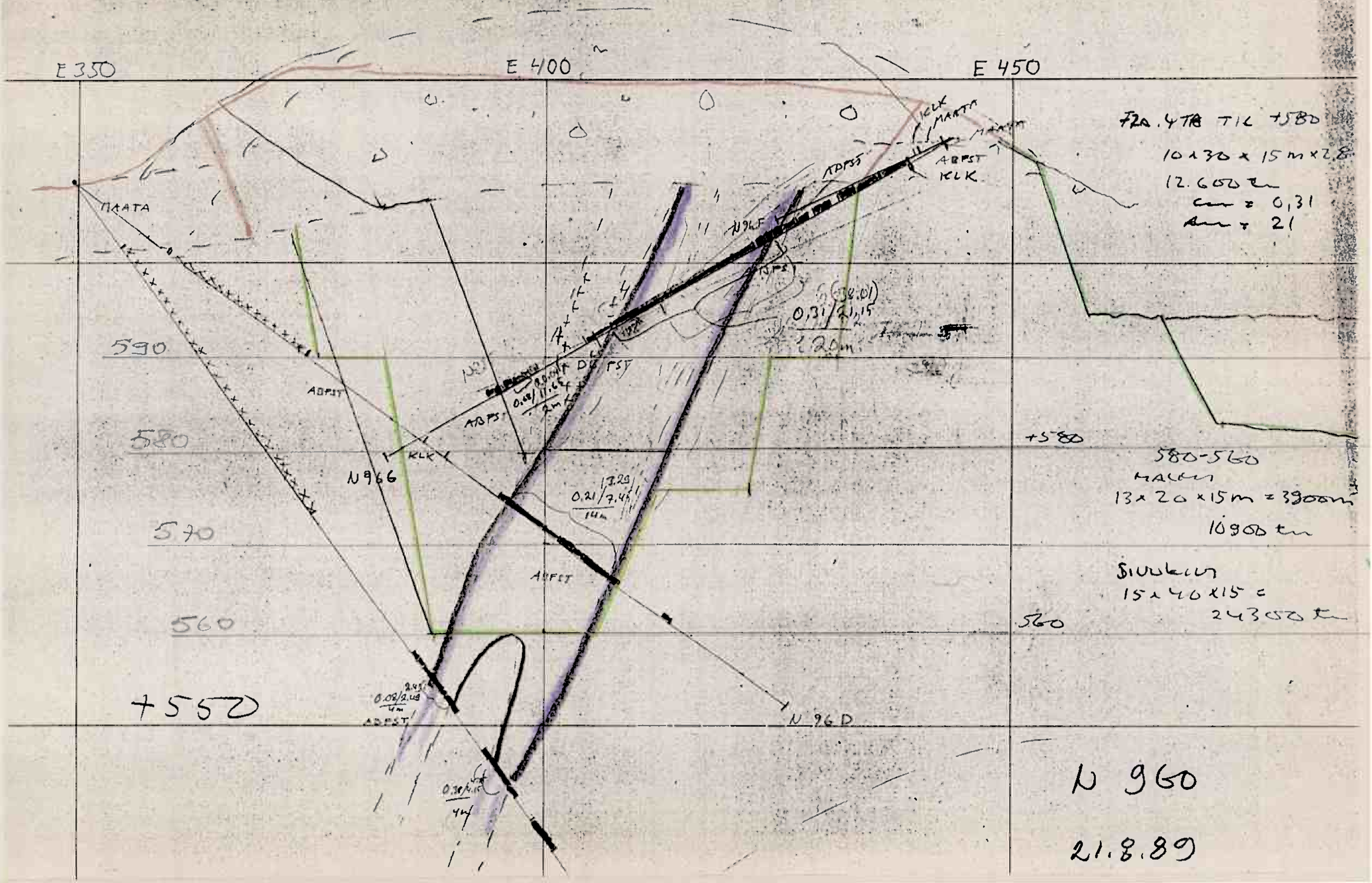

350
400
450
600
590
580
570
560
550
MAATA
MAATA
MDB
FST
KARS
ABFST
FST
0,36/0,98
8 m
0,19/2,39
4m
0,17/4,05
2m
0,14/c4
3m
0,31/2,91
5m
0,31/1,60
16m
ABFST
FST
ABFST
FST
KARSI
MDB/FST
N90E
ABFST/MDB
N 90 F
M2
N900
21.8.89


350
400
450
N92J
N92C
MAATA
DB
FST
ABFST
600
590
580
570
560
+550
540
v439
1.5/2m
2m
(7.55)
?/5.9?
5m
ABFST
KLK
N92J
(6.20)
0.12/4.79
5m
10.07/(8.24)
5.39
5m
52m

N920


350
400
450
600
590
580
570
560
550
N94E 1-3m
Maata
MAATA
FST
ABFST/KLK
FST
FST
FST
KLK
ABFST
(1.87)
0.32/1.53
5m
N 94 E
(3.03)
0.26/3.03
3m
fst
kals
N946
MAATA
MDB
KRB
ABFST
MDB/ABFST
ABFST MDB
KRB
ABFST
KRB
ABFST
KRB
ABFST
MDB/ABFST
ABFST

N 946
21.8.89



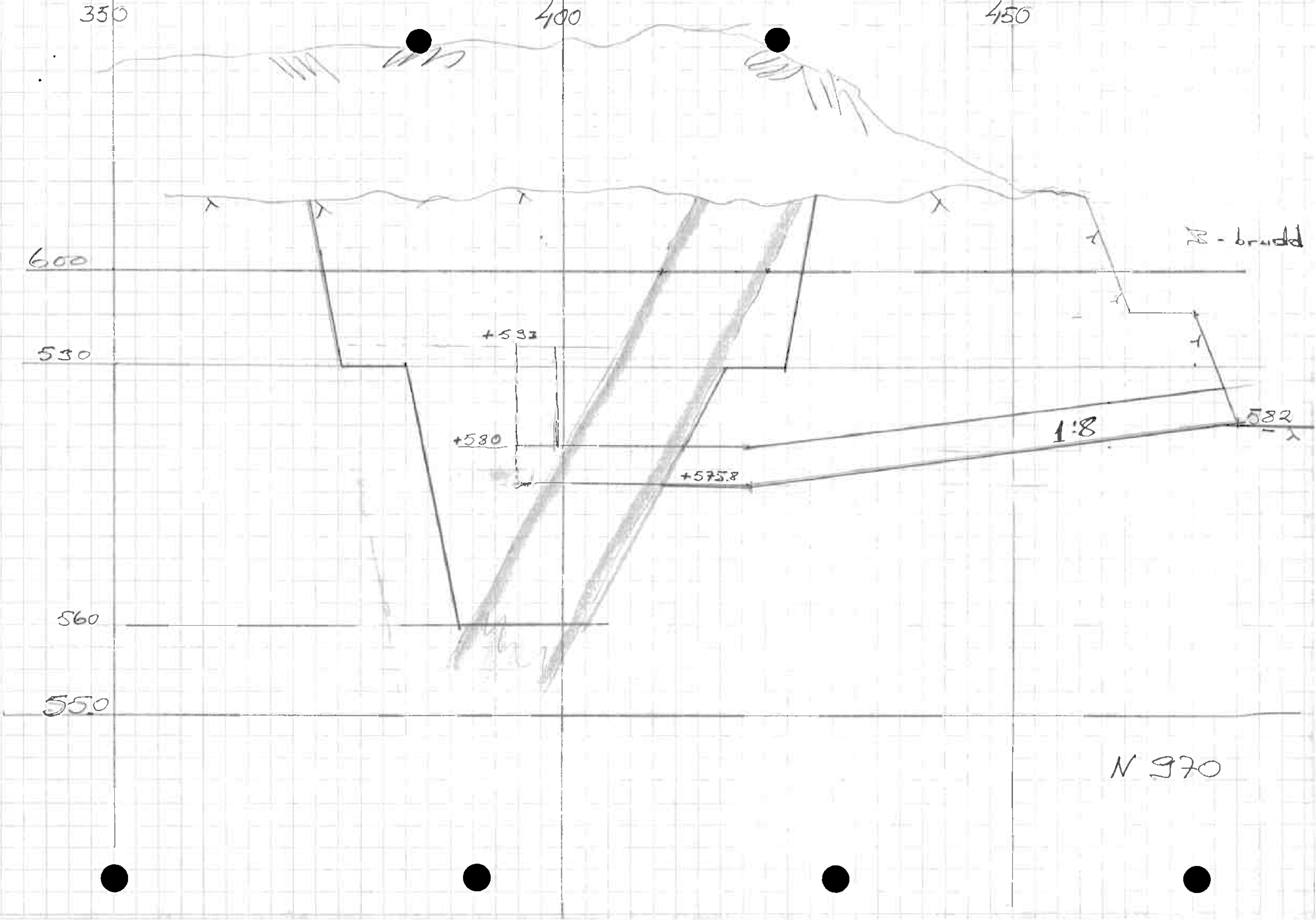
Fra. 4TB TIL +580
10 x 30 x 15 m x 2.8
12.600 tn
Cu = 0,31
Au = 21

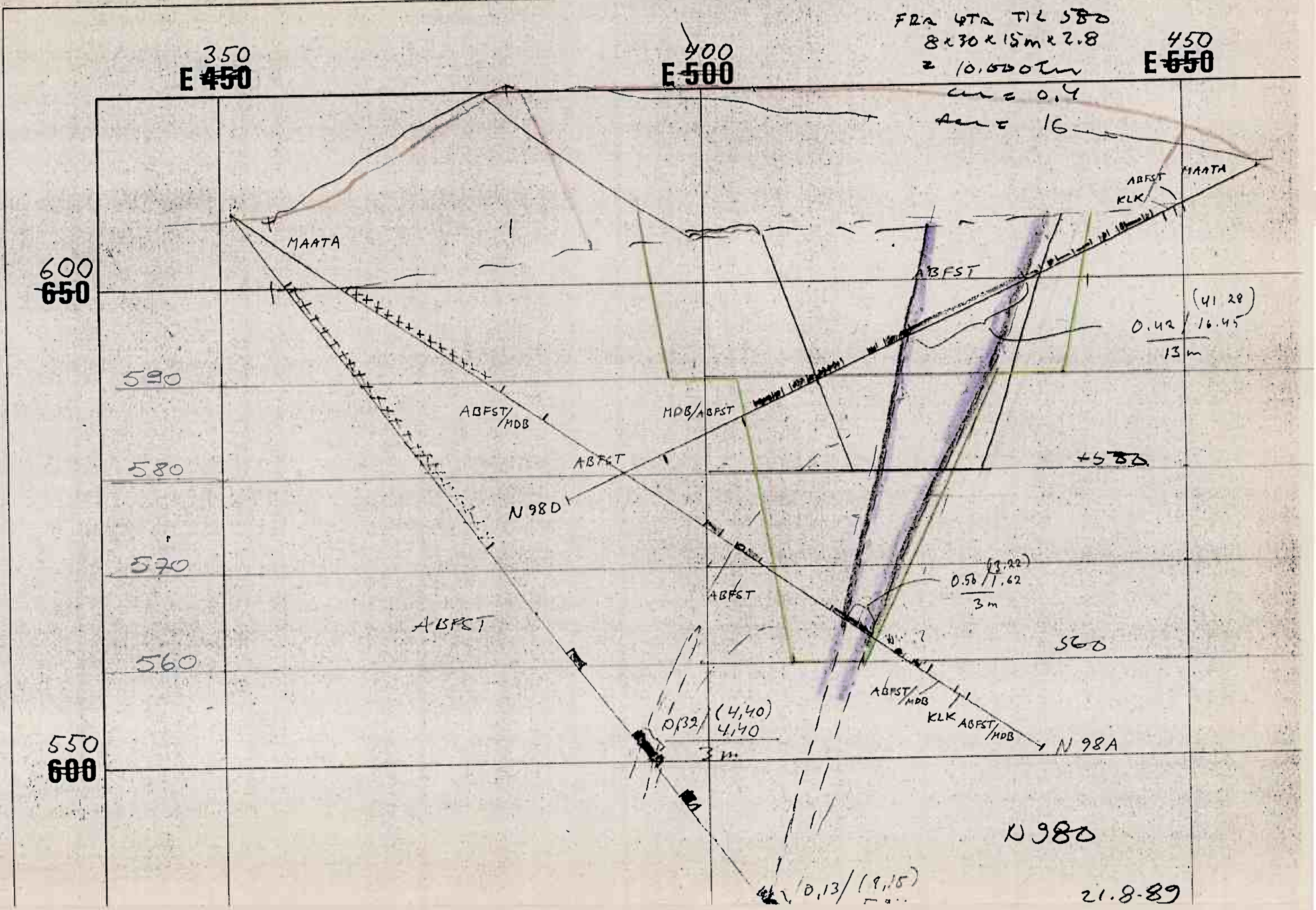
580-560
MALMI
13 x 20 x 15 m = 3900 m³
10900 tn

Sivukivi
15 x 40 x 15 =
24300 tn

N 960

21.8.89


350
400
450
600
590
+593
+580
+575.8
560
550
Z - brudd
1:8
582
N 970



FRA 4TA TIL 580
8x30x15m x 2.8
= 10.080 Tn
Cu = 0.4
Au = 16

N 980

21.8-89

(J) ~~torunn~~ K-Dagbrudd Vaihtoehto I pohja + 580

Leikk	Malmi ton	Cu-%	Au g/ton	Sivukivi k-m³	ton	yht ton
880	4×30×20×2,8 = 6720	0,4 (27,0)	4.5	30×11×20 = 6600	×2.7 = 17.820	
900	5,5×25×20×2,8 = 7700	0,4 (30,8)	1.5	25×14×20 = 7000	×2.7 = 18.900	
920	3,0×27×20×2,8 = 4536	1.5 (68.0)	2.0	29×12×20 = 6960	×2,7 = 18.800	
940	9×26×20×2,8 = 13.104	1.5 (196.5)	2.0	25×12×20 = 6000	×2.7 = 16.200	
960	10×30×20×2.8 = 16.800	0,3 (50,4)	20.0	30×15×20 = 9000	×2,7 = 24 300	
980	8×26×20×2,8 = 11.648	0,4 (46,5)	16,0	30×11×20 = 6600	×2,7 = 17 820	
		(369)				
	yht 60.508	0,6	9.9	km³ 42.160	ton: 113.840	175.000

Maanpoistoa n. 60.000 k-m³

Under Jord +580 – +551

900	7×29×20×2,8 = 11.400	0,3	2.9
920	5×29×20×2,8 = 8100	0,25	5.0
940	5×29×20×2,8 = 8100	0.3	7.0
960	11×29×20×2,8 = 17.900	0,2	7,0
~~980~~	~~3×29×20×2,8 = 4900~~	~~0.5~~	~~3,0~~
	yht. 45.500	0,25	5,6

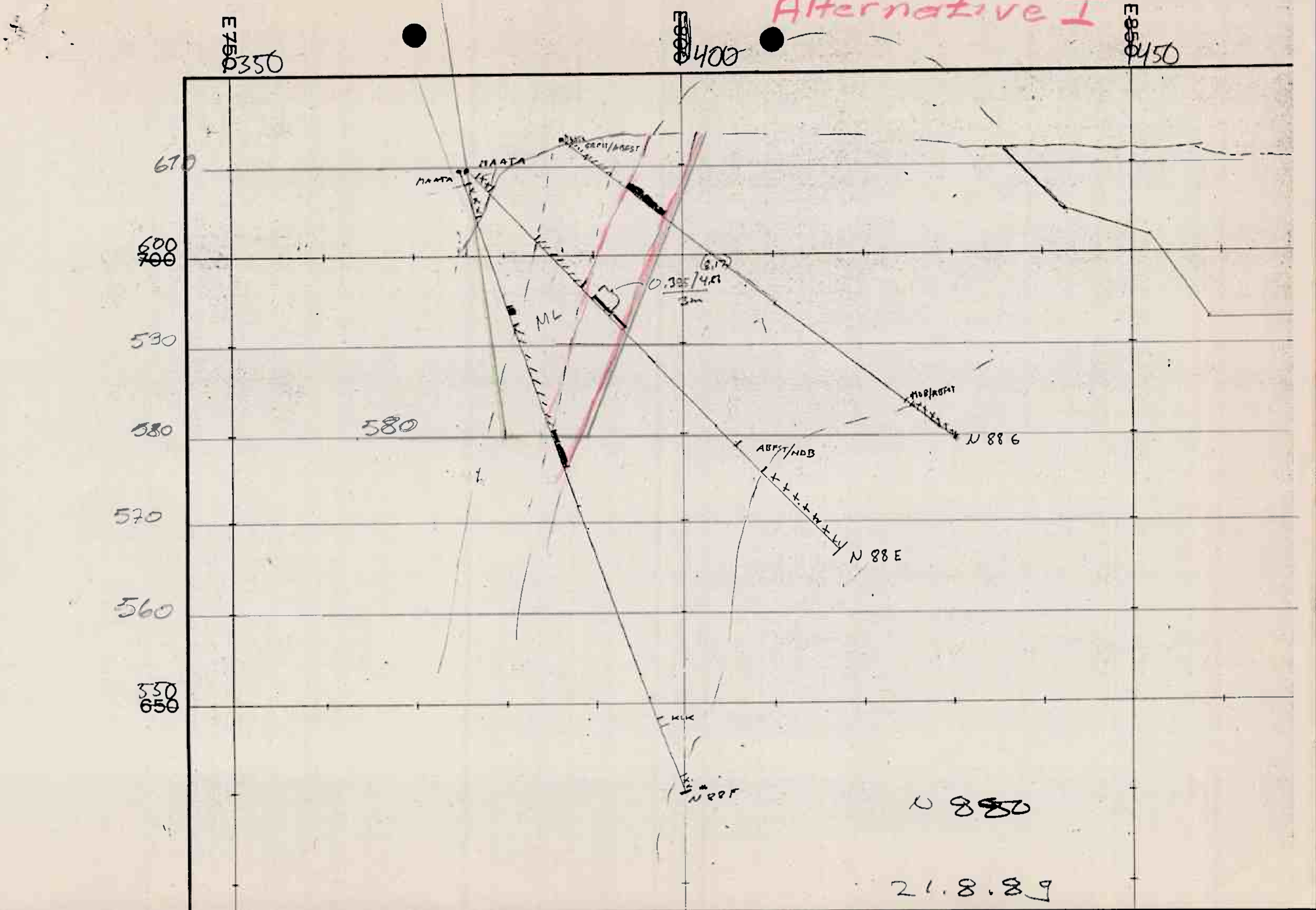
Tunnelia raakussa: 175m 8500
-"- malmissa: 85m

on tässä → 45.500

yht 229.000 ton
josta -"- malmia 106.000 -"-
-"- rokkua 123.000 -"-

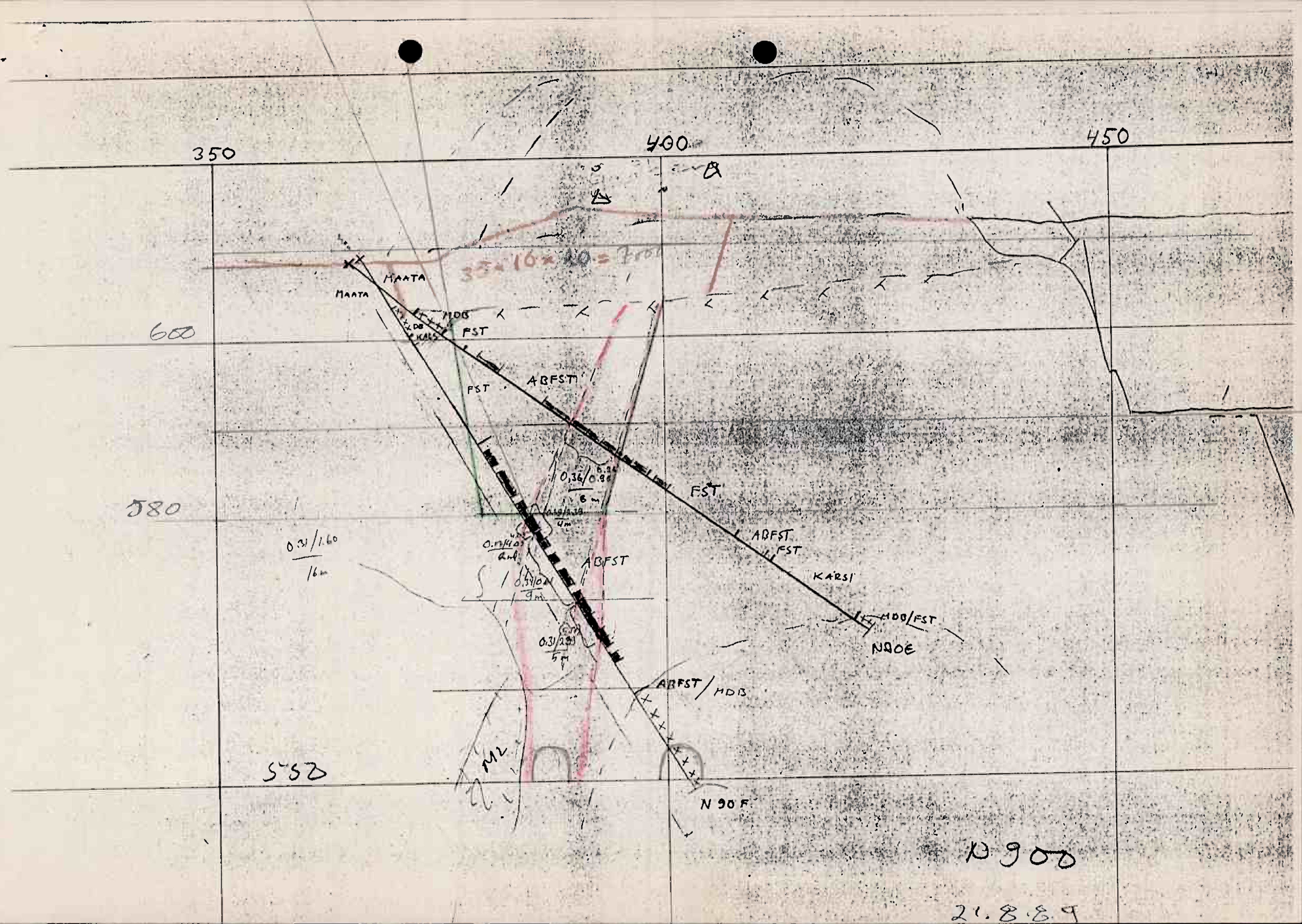
24.8/45

Alternative I



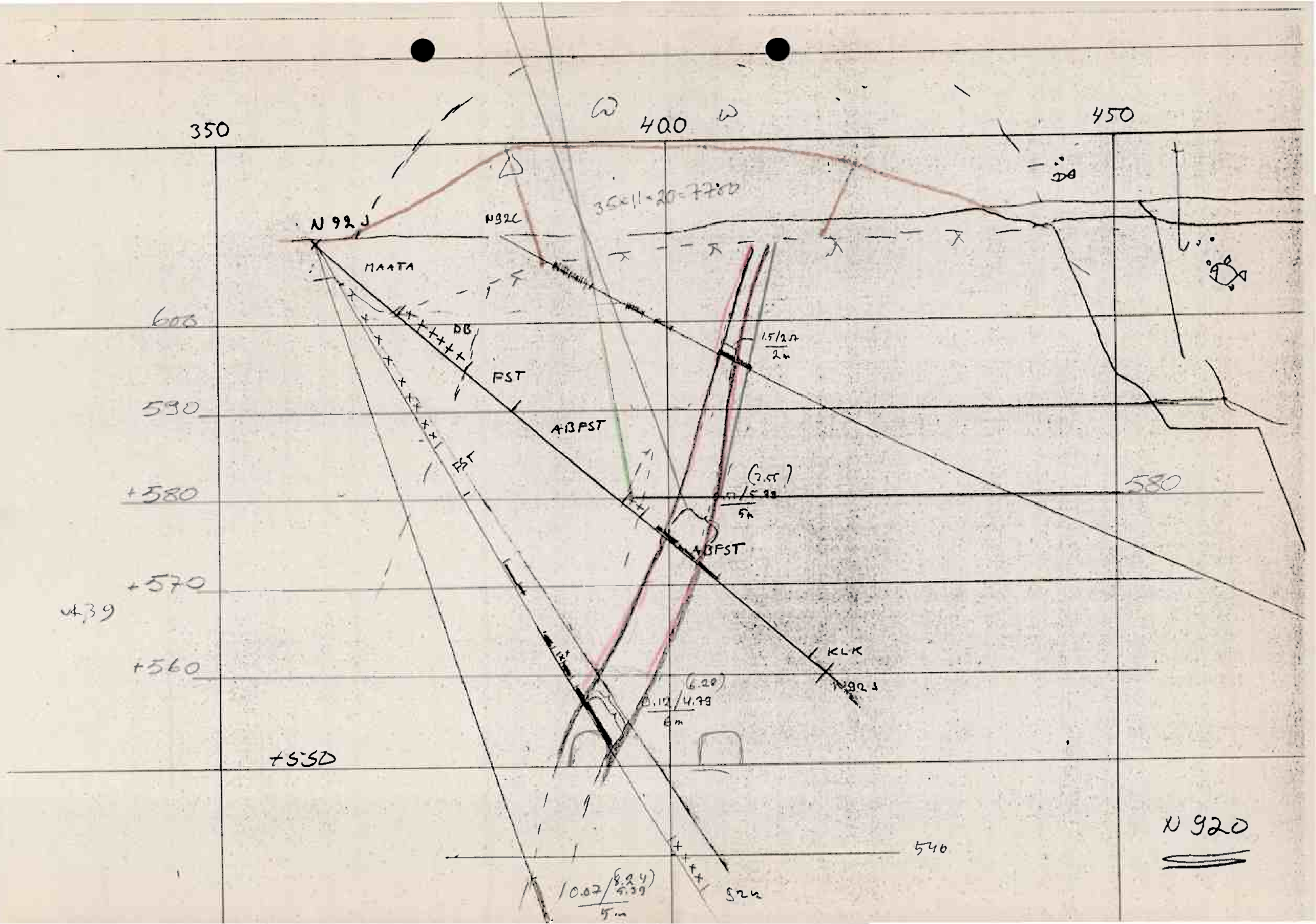
N 880

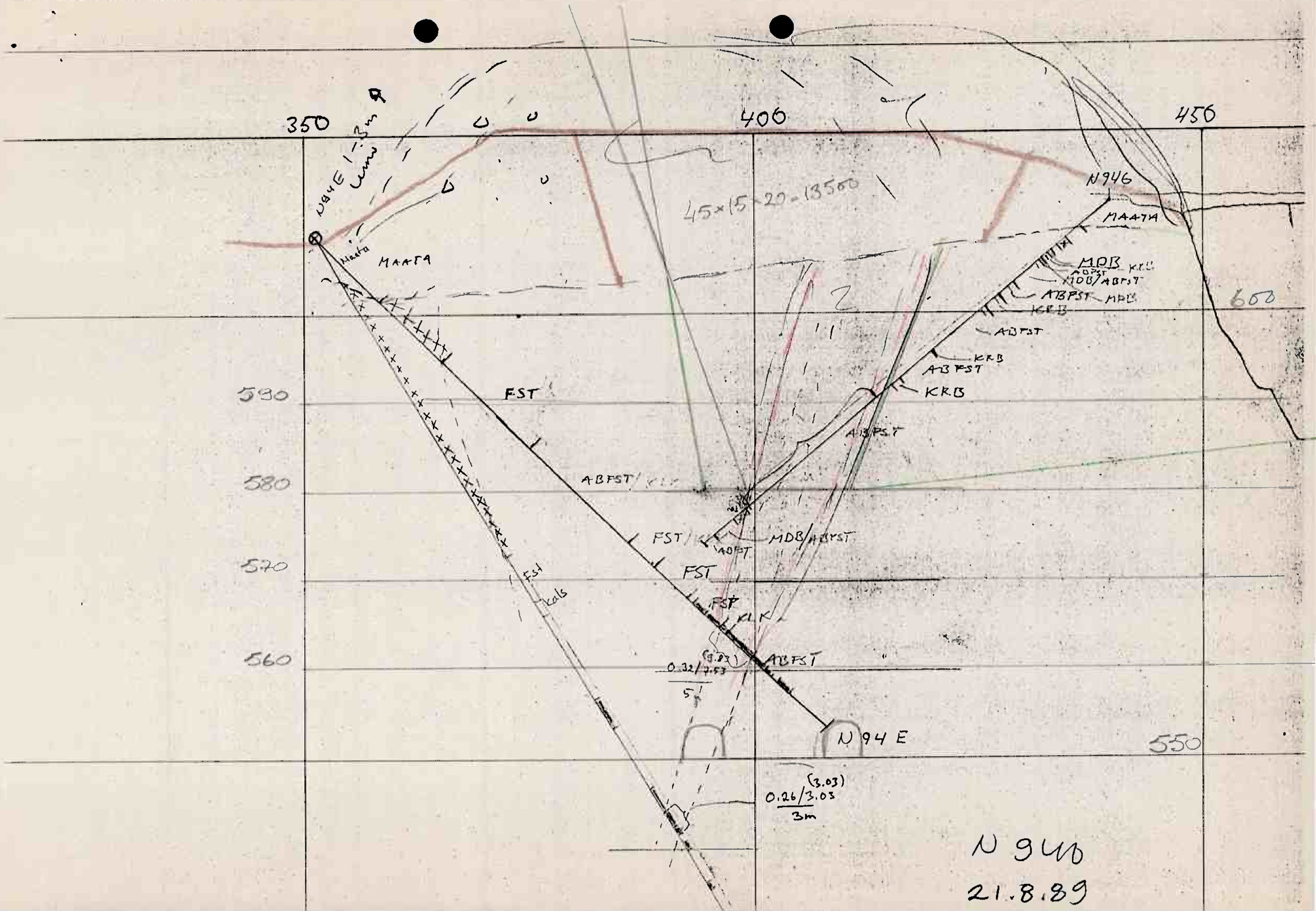
21.8.89


350
400
450
600
580
552
MAATA
MAATA
MDB
KARS
FST
FST
ABFST
FST
ABFST
FST
KARSI
MDB/FST
N90E
0,36/0.98
6m
0.19/2.39
4m
0.31/1.60
16m
0.17/4.03
ABFST
0.34/0
9m
0.31/2.51
5m
ABFST/MDB
M2
N 90 F
35×10×20 = 7

N 900

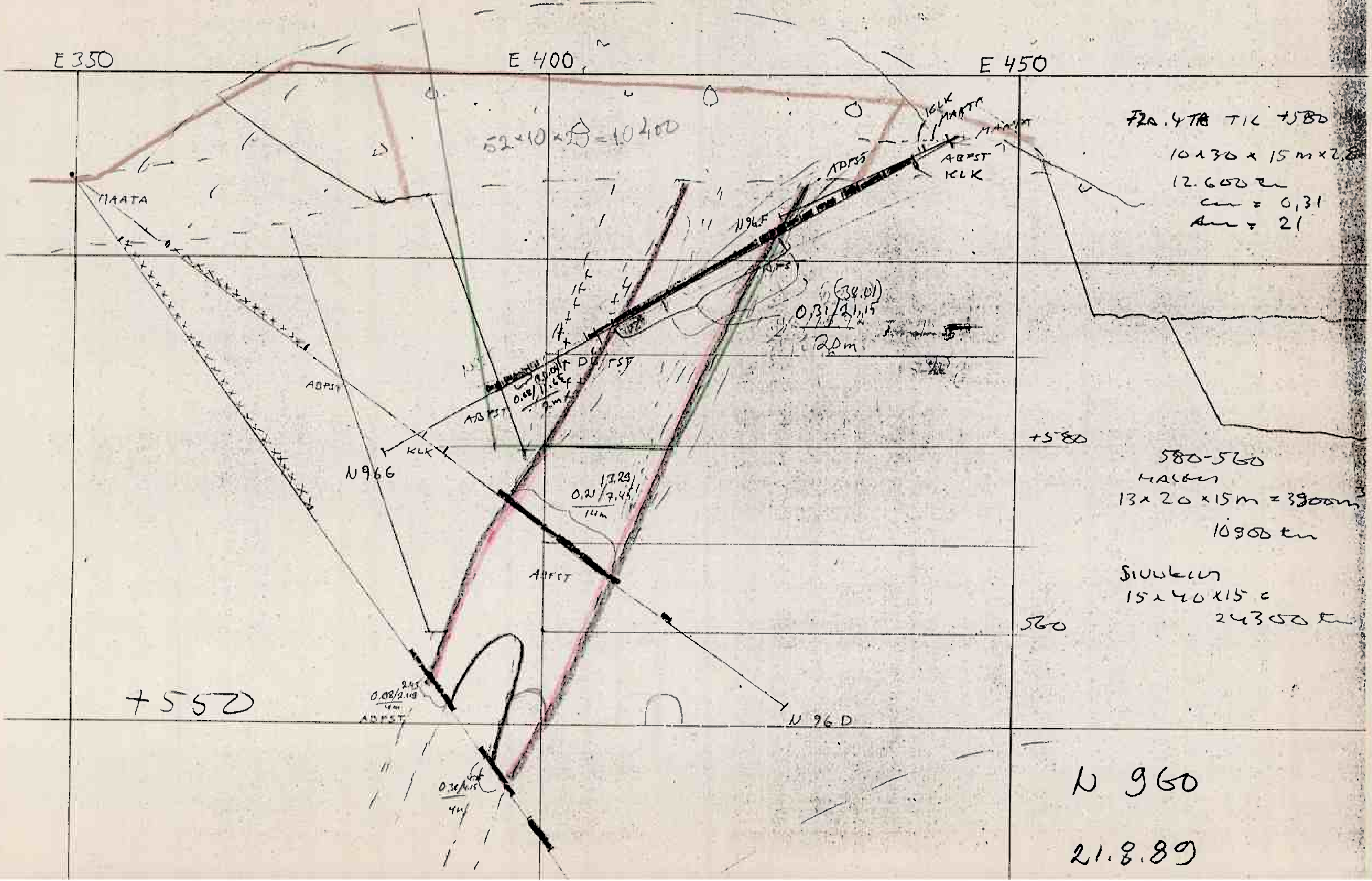
21.8.89


350
400
450
35×11×20=7700
DA
N92J
N92C
MAATA
DB
FST
ABFST
FST
600
590
+580
580
+570
439
+560
+550
540
1.5/2.7
2m
(2.55)
[illegible]/5.33
5m
ABFST
KLK
N92J
(6.20)
0.12/4.79
6m
10.07/(8.24)
5.39
5m
92m
N 920


350
400
450
N94E l=3m
Maata
MAATA
45×15×20=13500
N946
MAATA
MDB
ABFST
KKC
MDB/ABFST
ABFST
MDB
KKB
ABFST
KKB
ABFST
KKB
ABFST
600
590
FST
580
ABFST/KLK
FST/KLK
ABFST
MDB/ABFST
570
FST
FSP
KLK
fst
kals
(7.83)
0.32/7.53
5'
ABFST
560
N94E
550
(3.03)
0.26/3.03
3m

N946

21.8.89



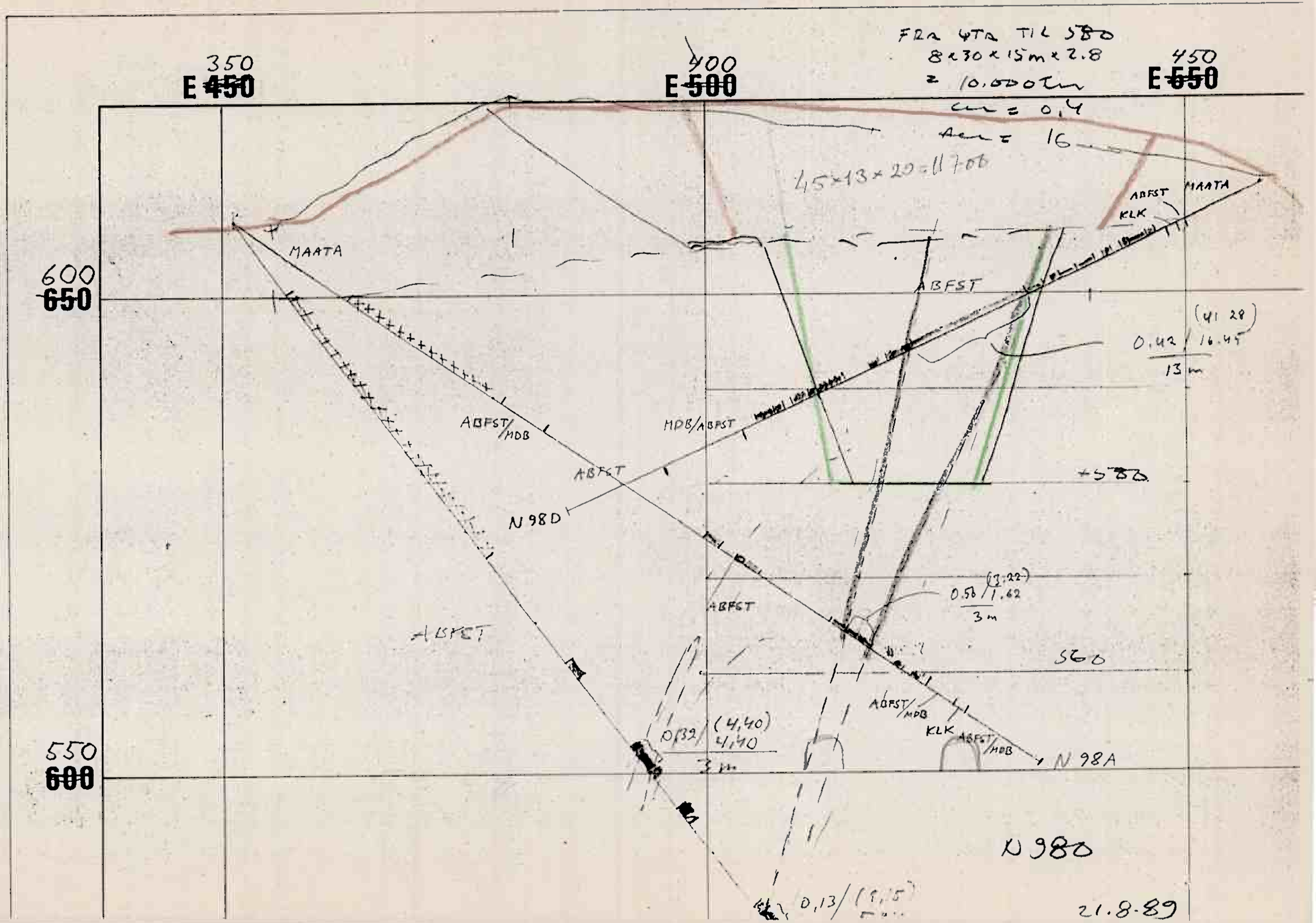
FRA 4TB TIL +580
10×30×15 m×2,8
12.600 tn
Cu = 0,31
Au = 21

580-560
MALM
13×20×15m = 3900m³
10900 tn

Siuukeiu
15×40×15 =
24300 tn

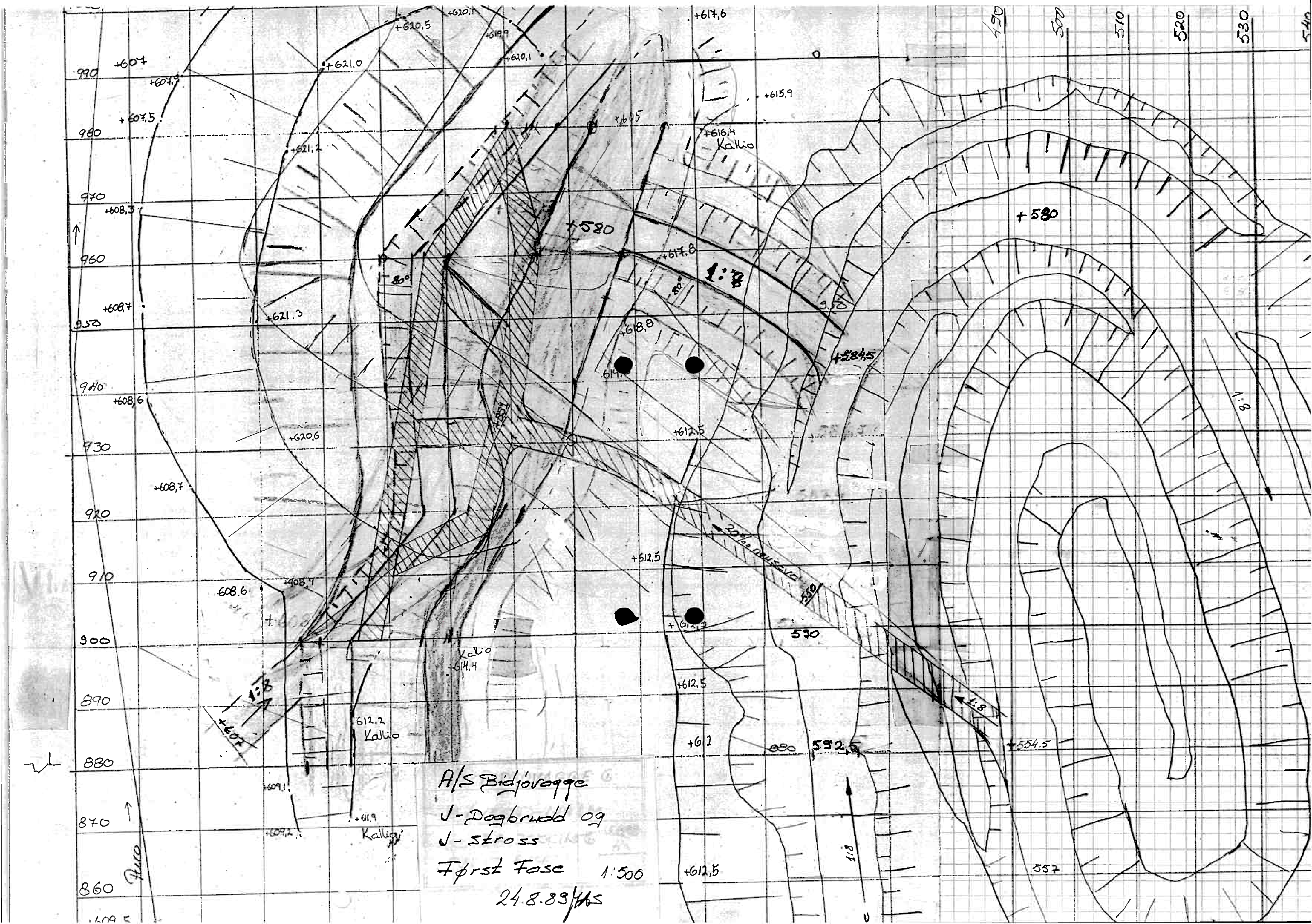
N 960

21.8.89


FRA 4TA TIL 580
8x30x15m x 2.8
= 10.000 t
Cu = 0,4
Au = 16
45x13x20=11706
350
E ~~450~~
400
E ~~500~~
450
E ~~550~~
600
~~650~~
550
~~600~~
MAATA
ABFST
KLK
ABFST
ABFST/MDB
MDB/ABFST
ABFST
N 98D
(41 28)
0.42 / 16.45
13 m
+580
(3.22)
0.56 / 1.62
3 m
560
ABFST
ABFST/MDB
KLK
ABFST/MDB
N 98A
0,32 / (4,40)
4,40
3 m
0,13 / (1,5)

N 980

21.8.89



A/S Bidjovagge
J-Dagbrudd og
J-stross
Først Fase 1:500
24.8.89/AS

A:n malmiarvio dagbrudd – +580

Leikk.	Malmi ton		Cu-%	Au-g/ton	
110	10×15×10×2.8=	4200	2.3	1,2	(50,4)
120	12×9×10×2.8=	3000	1.9	1.7	(51)
130	8×15×10×2,8=	3300	2.6	0,8	(26.4)
140	14×8×10×2.8=	3100	1.8	1,3	(40.3)
150	15×4×10×2.8=	1700	4.3	0.5	(8.5)
		15.300	2.4	1.15	

Tunnelia 40m

250 kr/t

3.5 mmk

perä 0.4

louh + tehdas 110 kr/t 1.7

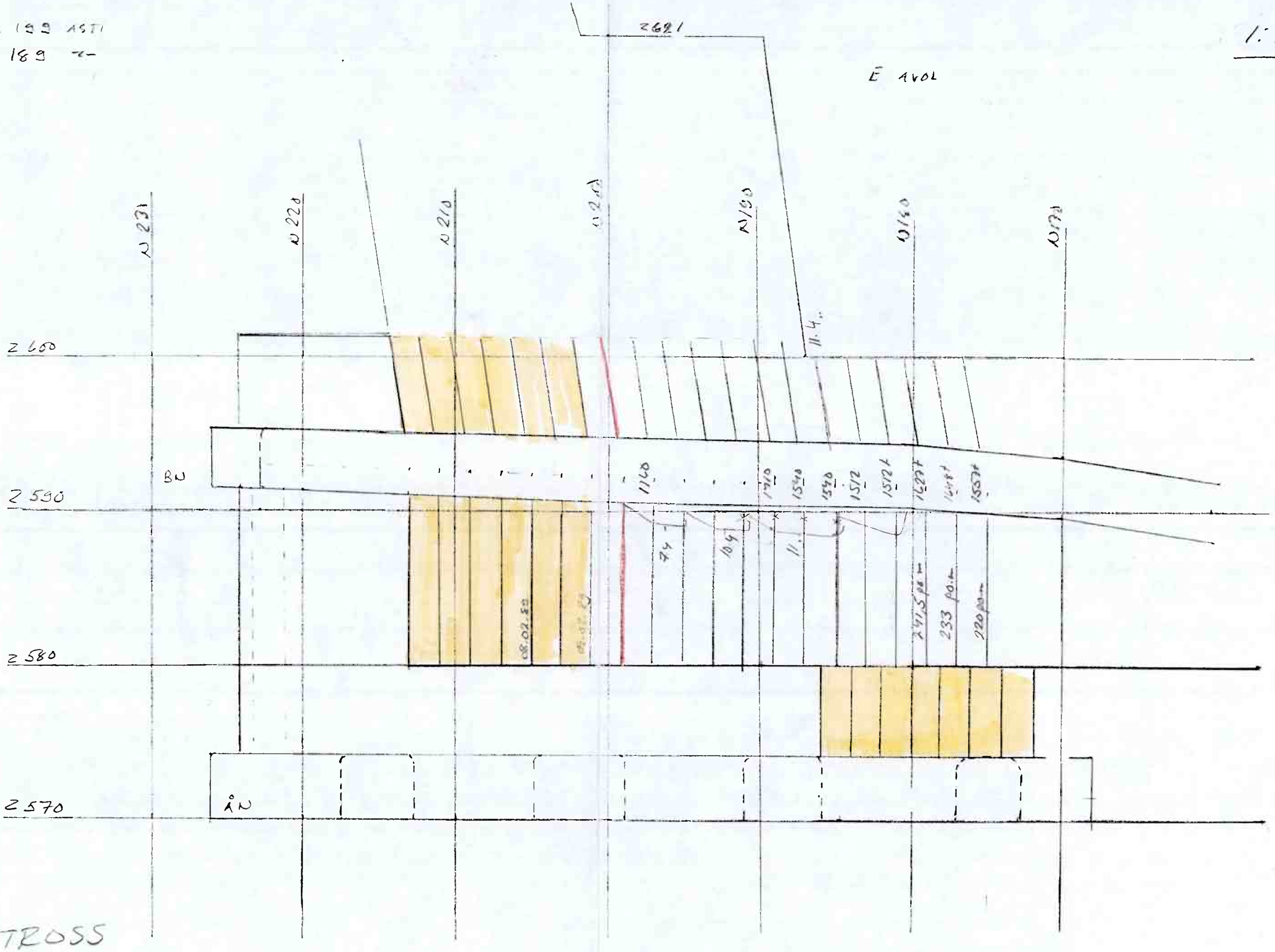
kiinteät 0.6

28.8/65

E

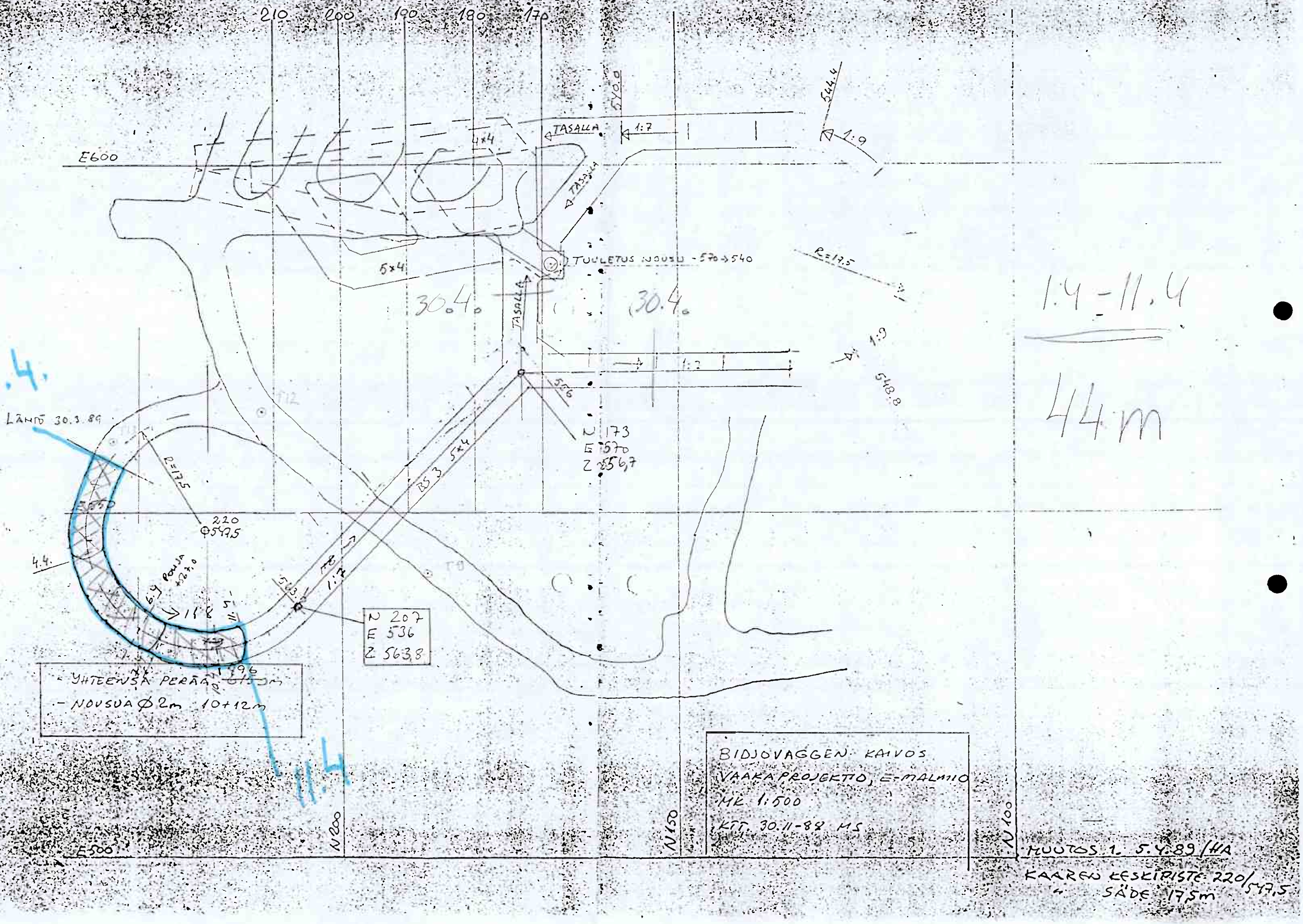
I vaiIIe
RÅJ. 590 V. 199 ASTI
FOR. –"– V. 189 –"–

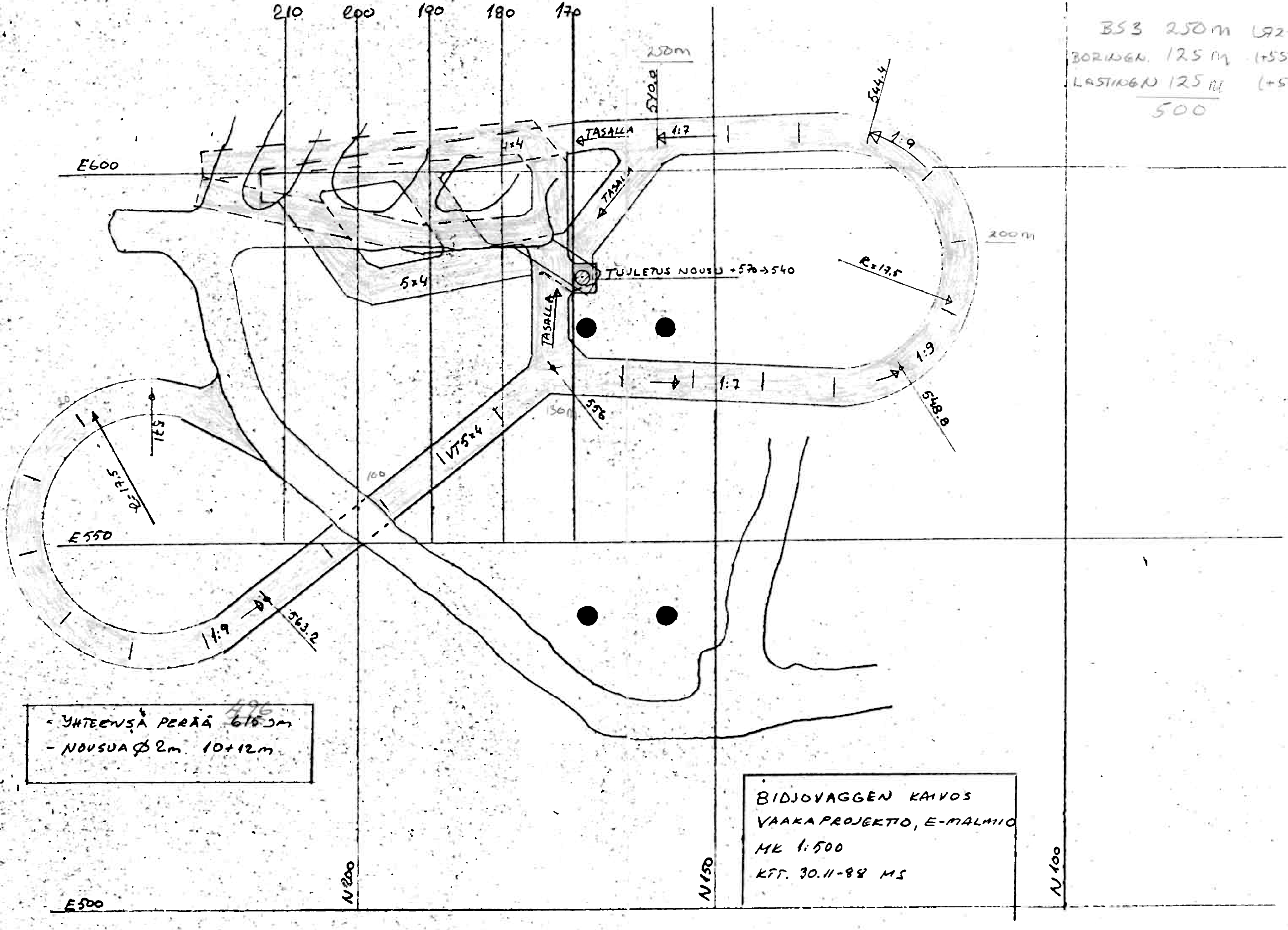
1: 250



E1-STROSS

Nivå 590 v 199 - 175 18.150 t

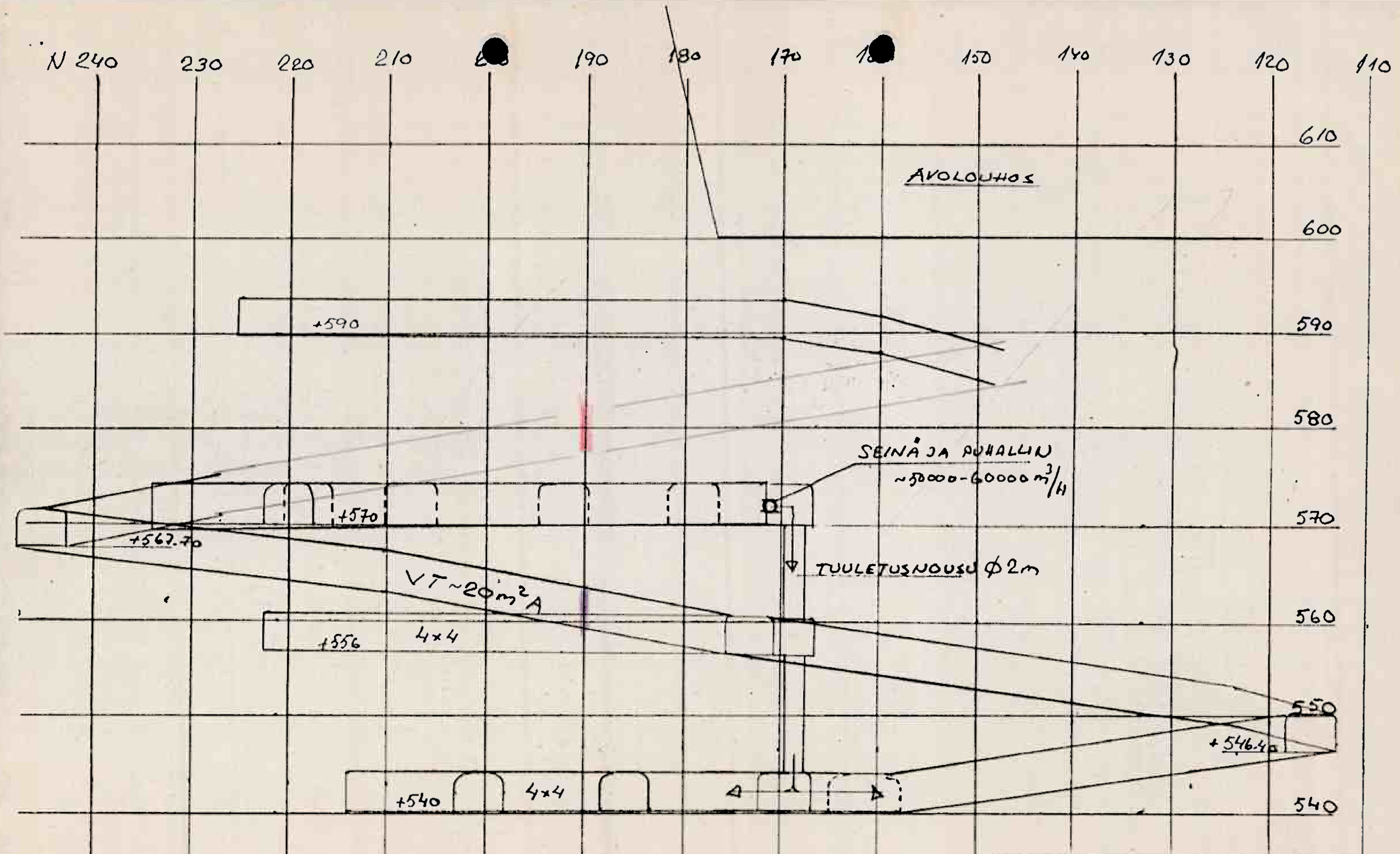

210
200
190
180
170
E600
4×4
TASALLA
1:7
540.0
544.4
1:9
TASALLA
TUULETUS NOUSU -570→540
R=17.5
5×4
30.4.
30.4.
TASALLA
1:9
1:2
548.8
566
N 173
E 570
Z 556,7
1.4.
LÄHTÖ 30.3.89
R=17.5
220
547.5
E550
BS 3 5×4
4.4.
6.4 POHJA +567.0
>11.8
5.
1:7
563.
N 207
E 536
Z 563.8
1.96
- YHTEENSÄ PERÄÄ ~~61.5m~~
- NOUSUA Ø2m 10+12m
11.4
1.4 - 11.4
44m
E500
N200
N150
N100
BIDJOVAGGEN KAIVOS
VAAKAPROJEKTIO, E-MALMIO
MK 1:500
KTT. 30.11-88 MS
MUUTOS 1. 5.4.89 / HA
KAAREN KESKIPISTE 220/547,5
" SÄDE 17,5m



BS3 250m (572-540)
BORINGN. 125 m (+556)
LASTINGN 125 m (+540)
500

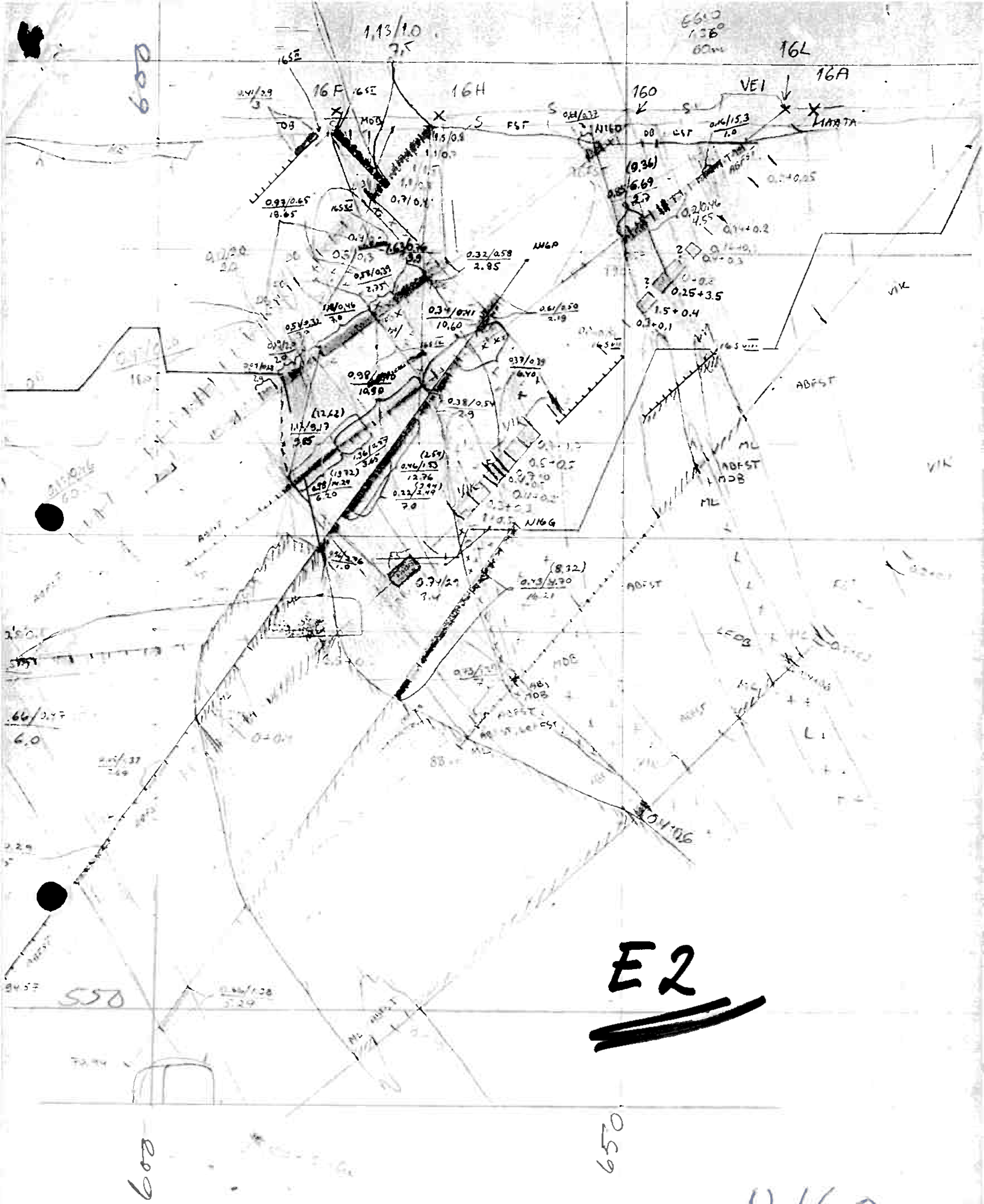
- YHTEENSÄ PERÄÄ 496 ~~615~~ m
- NOUSUA Ø2m 10+12m

BIDJOVAGGEN KAIVOS
VAAKAPROJEKTIO, E-MALMIO
MK 1:500
KFT. 30.11-88 MS



BIDJOVAGGEN KAIVOS
PITUUSLEIKKAUS 1:500
E-MALMIO
30.11-88 MS/KTT

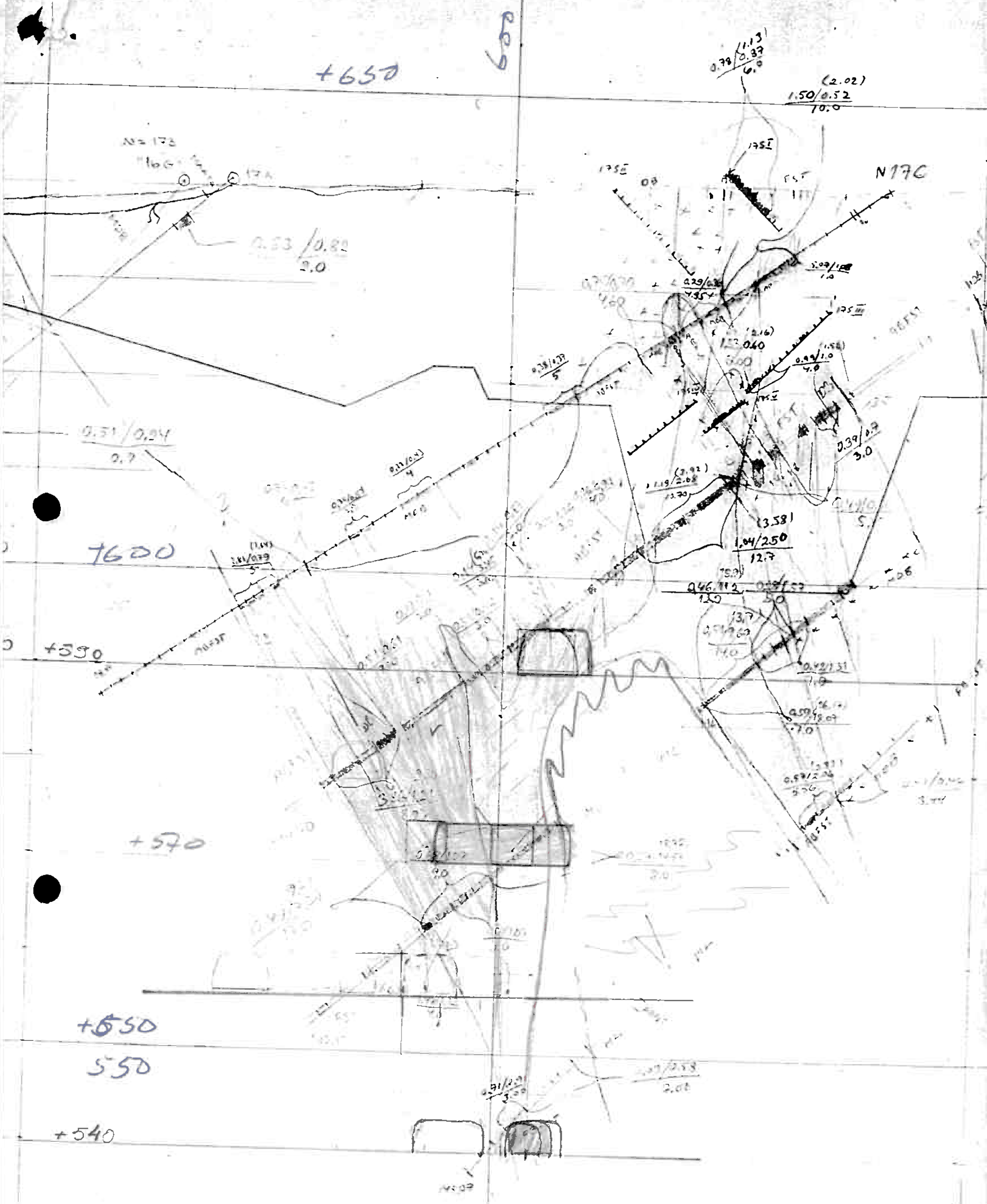
30.11.88/Hn



E2

N160

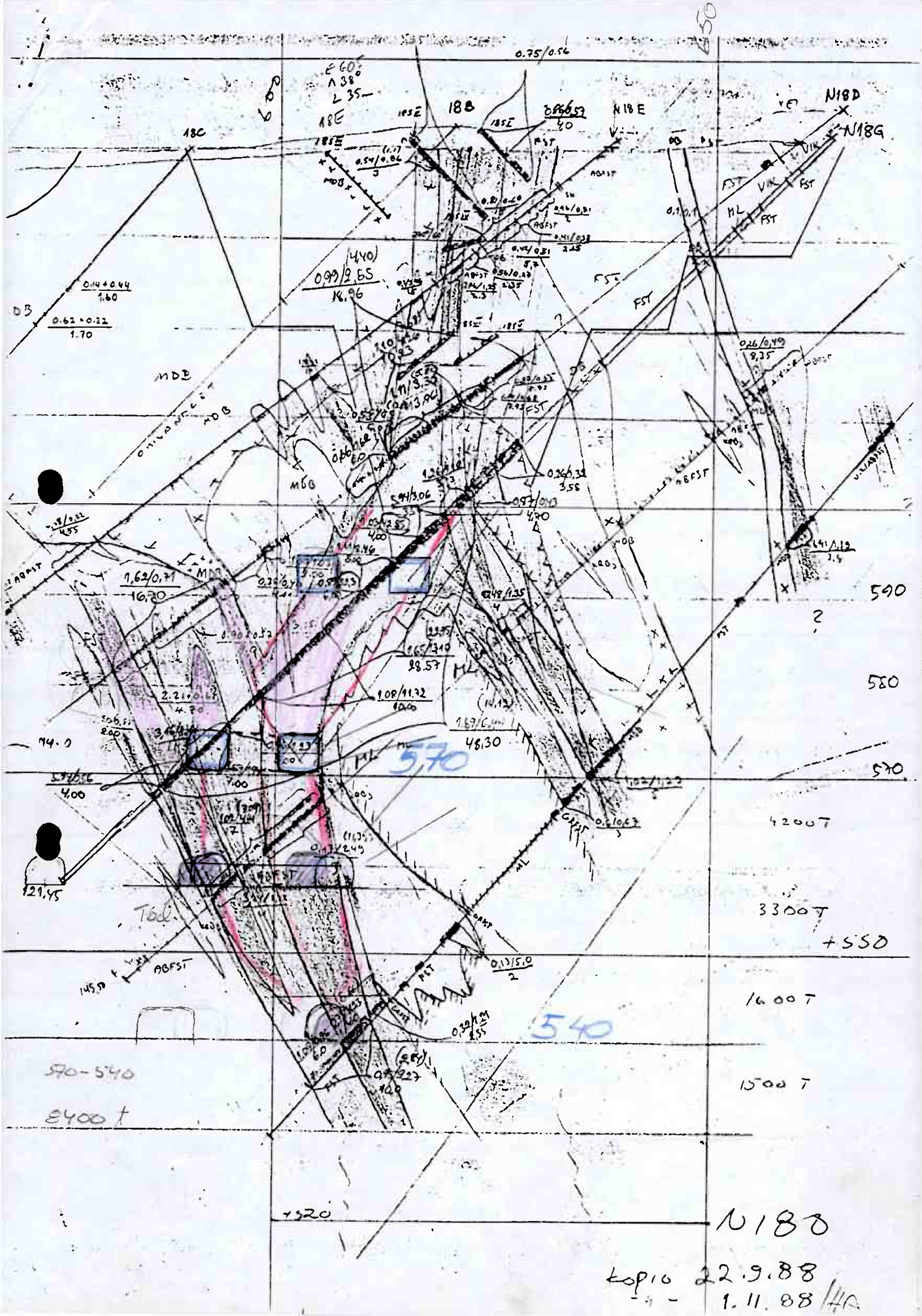
26.4.85



N 170

650

26-4.89



N180

Kopio 22.9.88
1.11.88 /HA

190	20×10=200	1+6
200	20×~~10~~ 9=180	1+4
210	20×9=180	4+3
220	20×10=200	5+1
	760tm³	

21.050

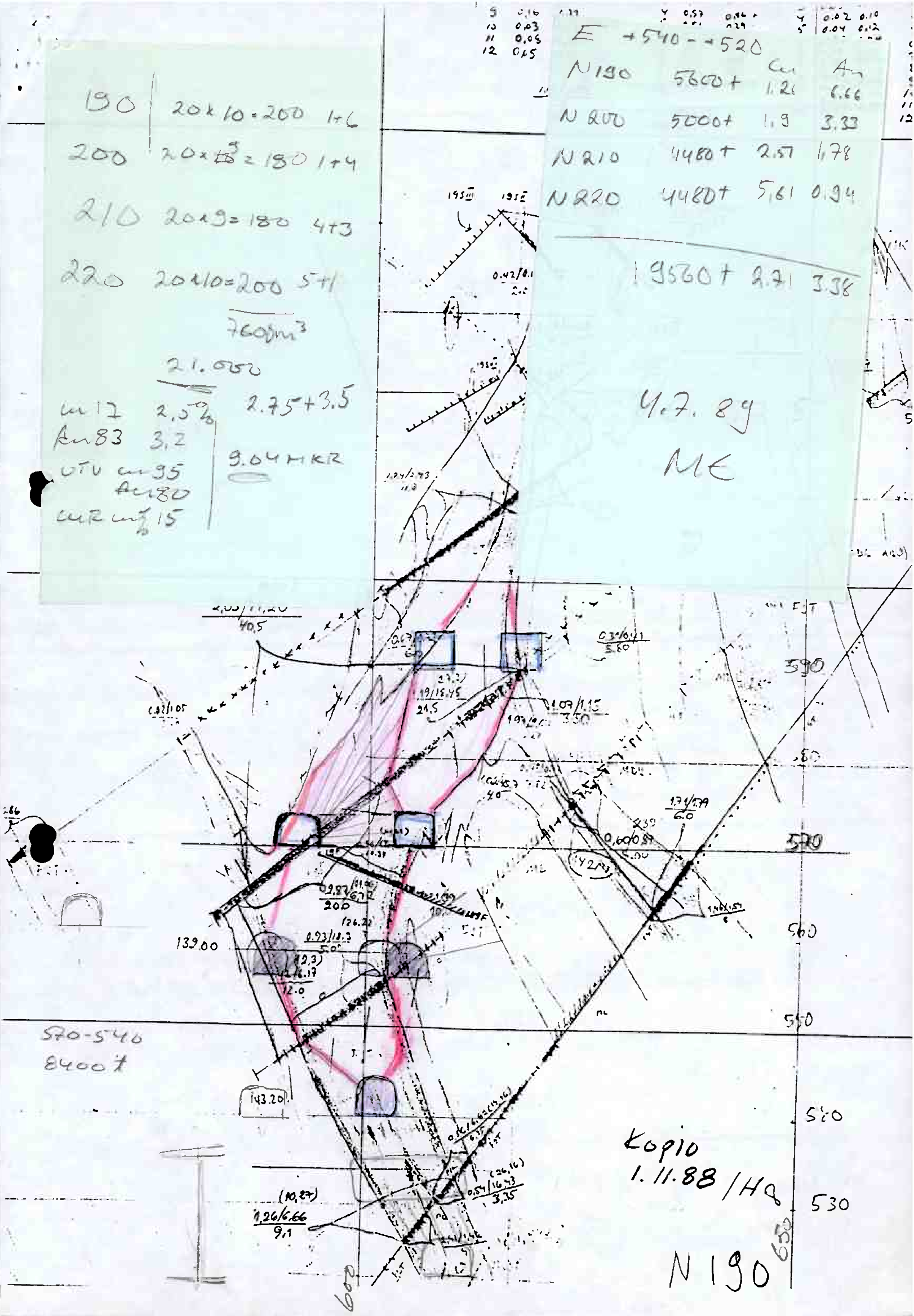
Cu 17	2,5%	2.75+3.5
Au 83	3,2	
UTU Cu 95 Au 80		9.04 MKR
CuR Cu% 15		

E +540 – +520

		Cu	Au
N190	5600t	1.26	6.66
N200	5000t	1.9	3.33
N210	4480t	2.57	1.78
N220	4480t	5.61	0.94
	19560t	2.71	3.38

4.7.89

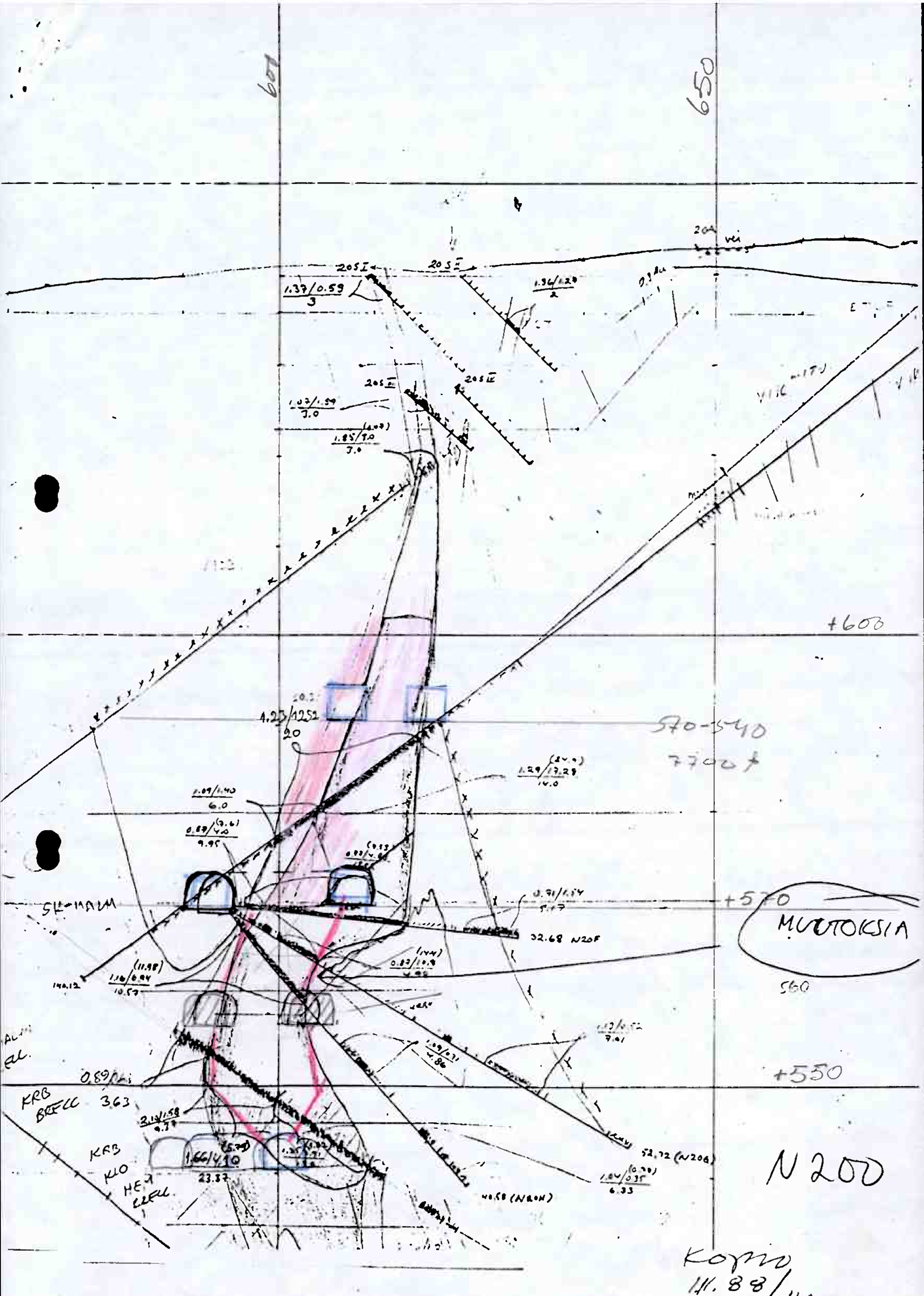
ME

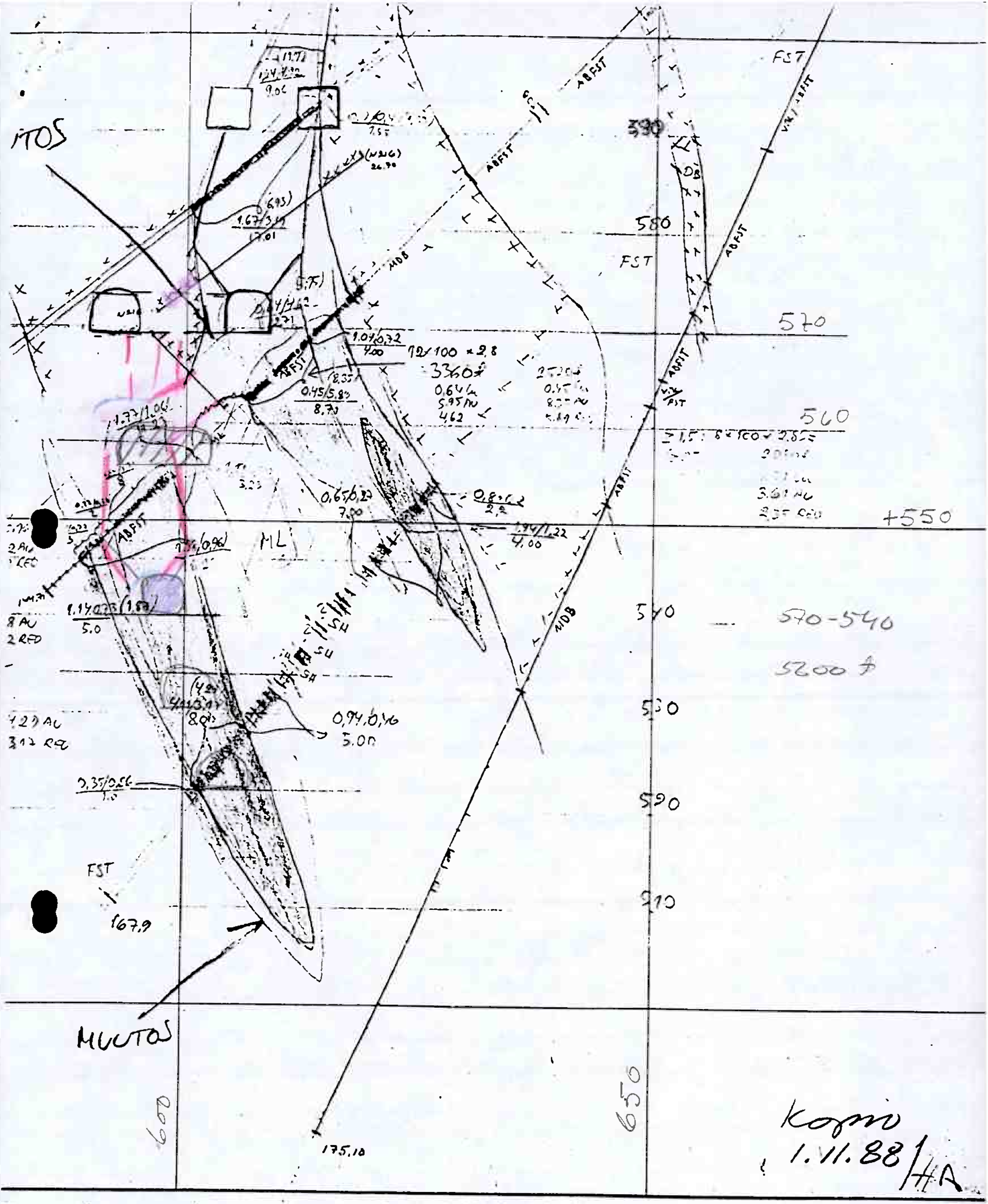


570-540
8400t

Kopio
1.11.88 /HQ

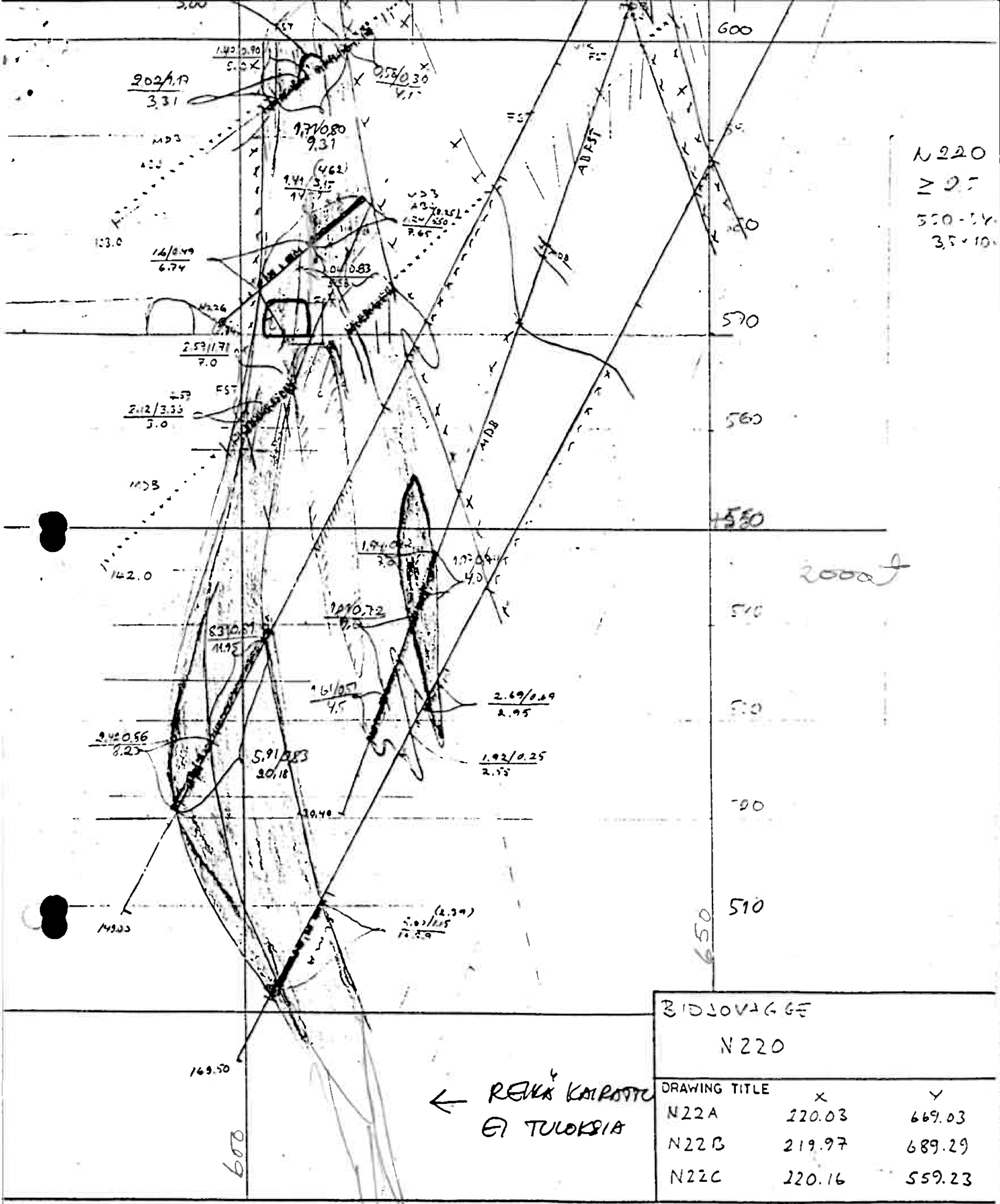
N190


600
650
204
205 I
205 II
1.37/0.59
3
1.36/1.29
2
205 III
205 IV
1.07/1.59
3.0
(4.07)
1.85/3.0
3.0
+600
4.23/12.52
20
570-540
7700 t
(24.4)
1.29/17.28
14.0
1.09/1.40
6.0
(7.61)
0.87/4.0
9.95
SK-MALM
0.91/1.54
5.17
32.68 N20F
+570
MUUTOKSIA
560
(11.98)
1.16/6.94
10.57
144.12
(144)
0.87/10.9
4.95
1.13/1.52
7.41
1.09/0.71
4.86
+550
0.89
KRB
BRECC
3.63
2.14/1.58
9.37
KRB
KLO
HEM
BRECC
(5.79)
1.66/4.10
23.37
52.72 (N206)
(0.90)
1.04/0.35
6.33
40.58 (N204)
N200
Kopio
11.88/HA



Kopio 1.11.88/HA

N 210



← REIKÄ KAIROTTU
EI TULOKSIA

BIDJOVAGGE
N220

DRAWING TITLE	X	Y
N22A	220.03	669.03
N22B	219.97	689.29
N22C	220.16	559.23

Kopio
1.11.88/HA

E7 + E2 in situ malmit

N170	+595 - +540	450 m²	=> 12600 t
N180	+600 - +540	925 m²	=> 25900 t
N190	+600 - +540	862 m²	=> 24150 t
N200	+600 - +540	775 m²	=> 21700 t
N210	+600 - +540	595 m²	=> 16600 t
N220	+600 - +540	325 m²	=> 9100 t
			110050 t

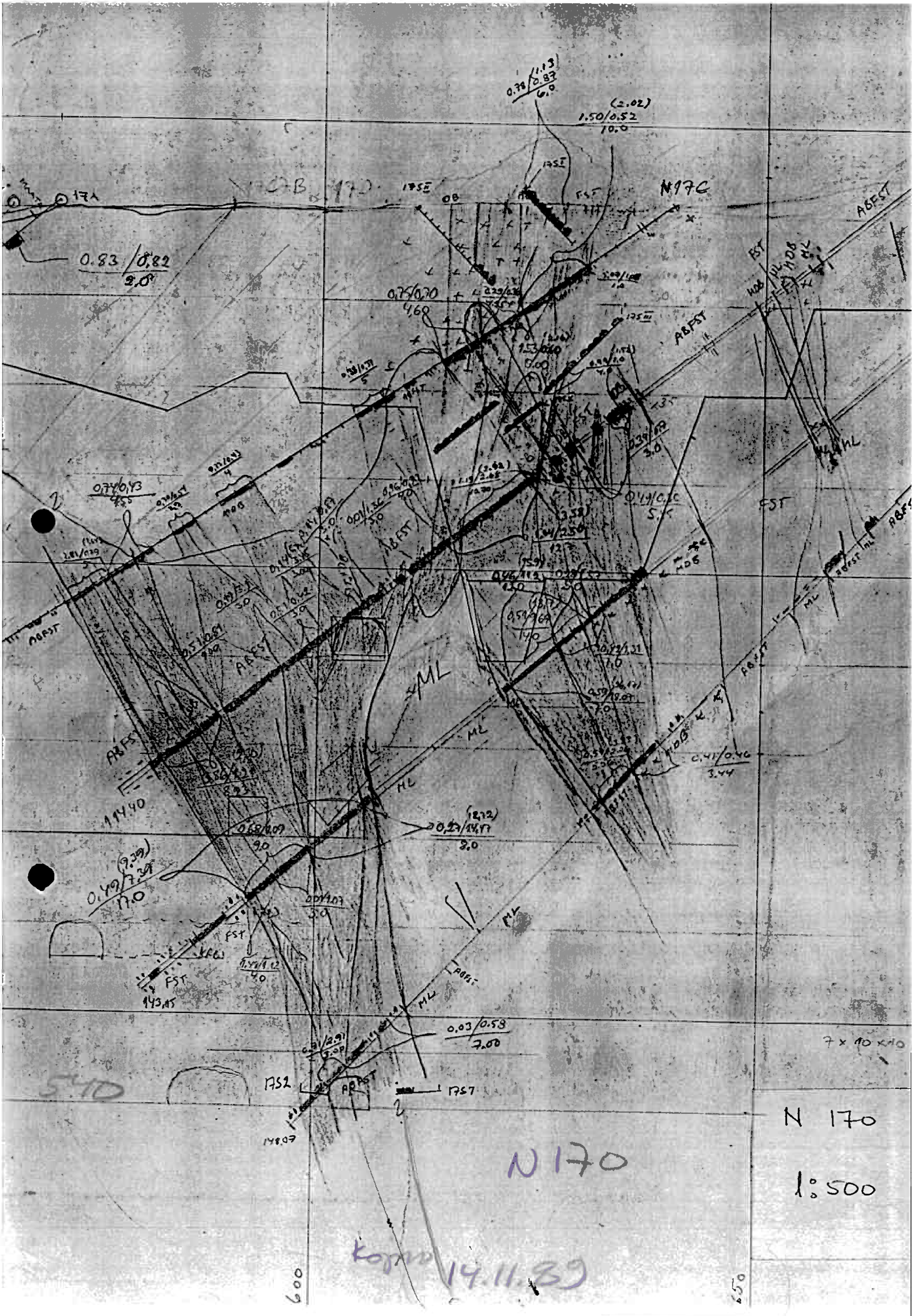
d = 2.8

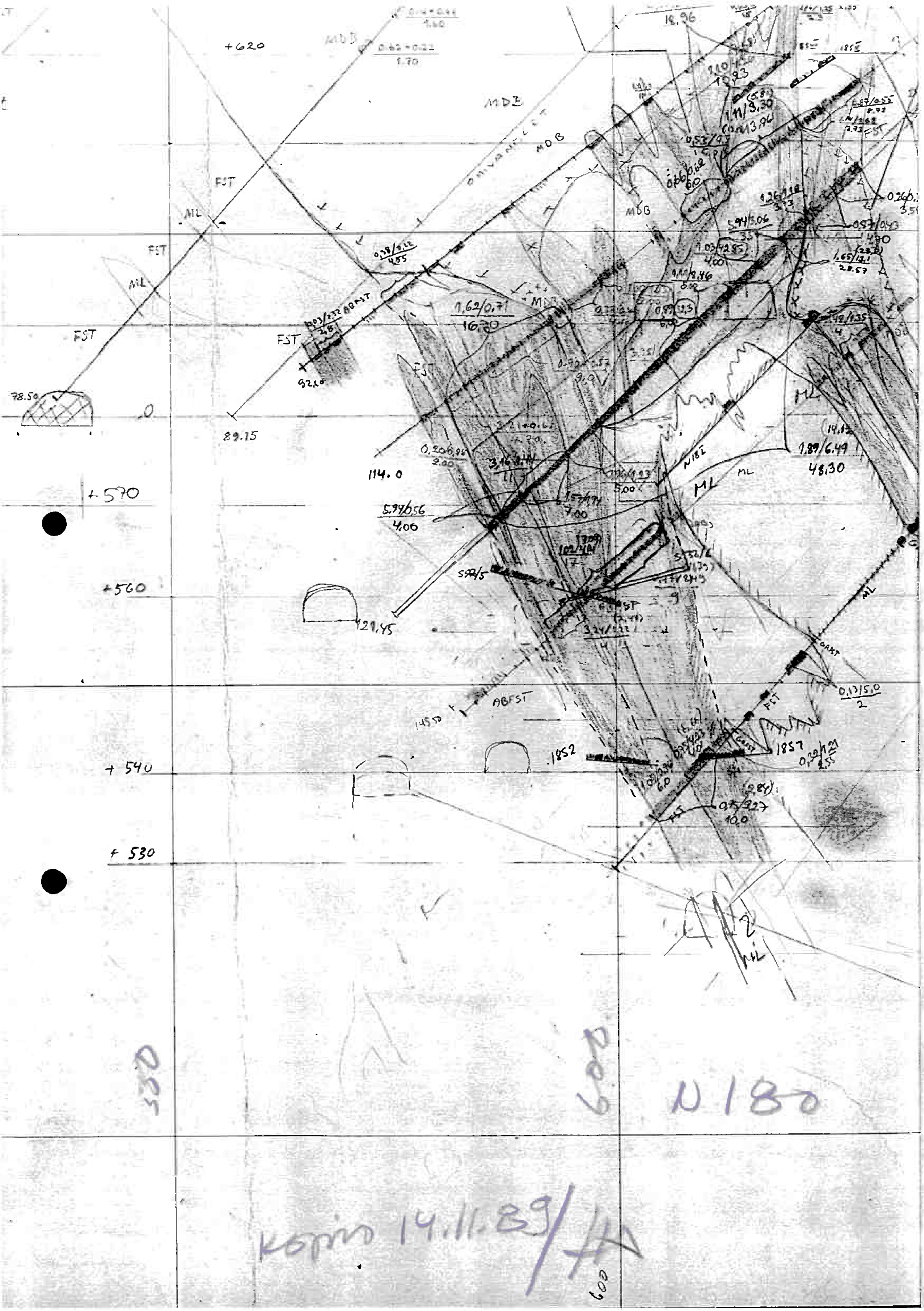
+590 taso ~ 100 m perään
+570 -"- ~ 100 m -"-
+556 -"- ~ 80 m -"-
+540 -"- ~ 80 m -"-

4 × 5 m = 20 m² => 20160 t

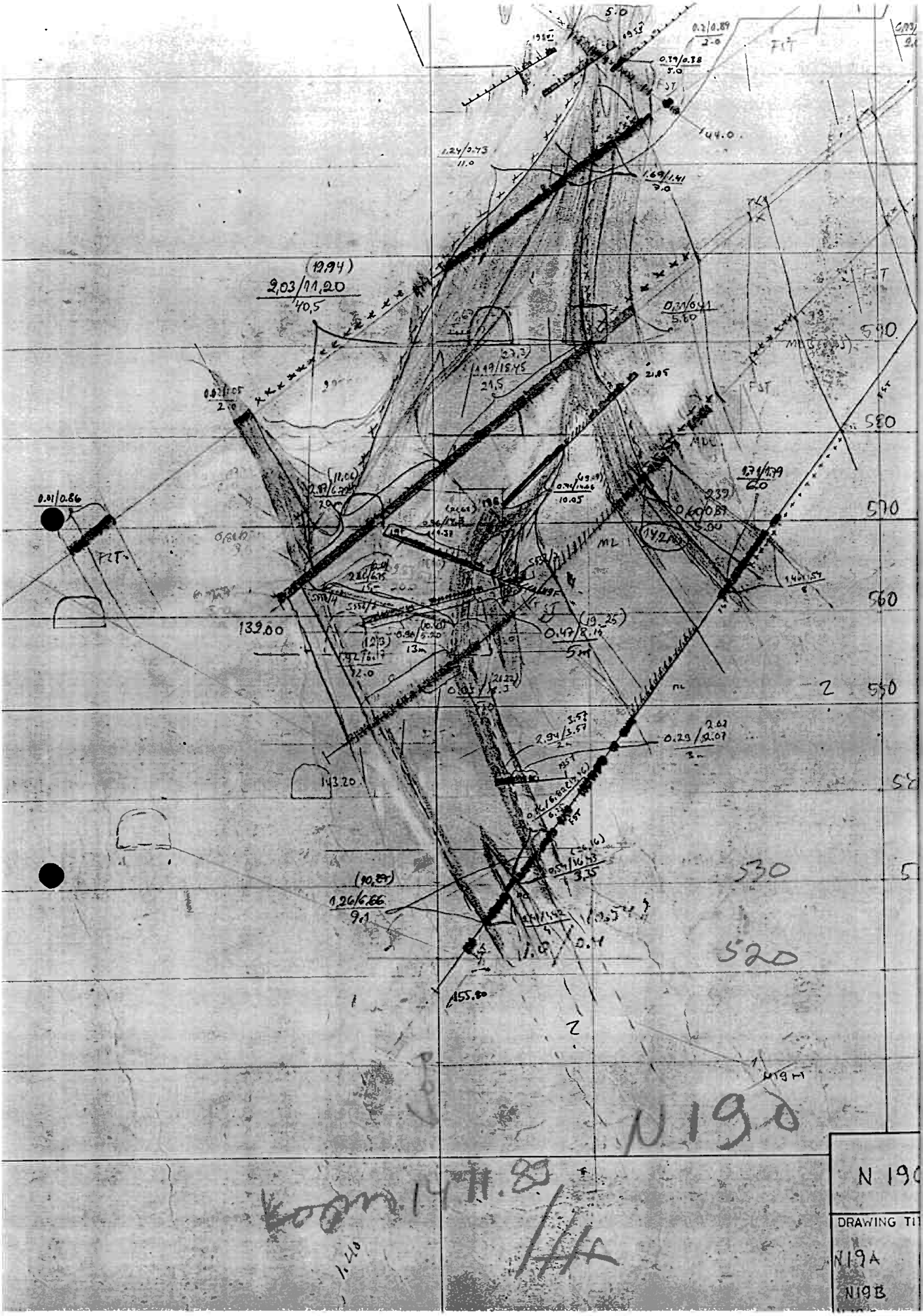
~ 90000 t

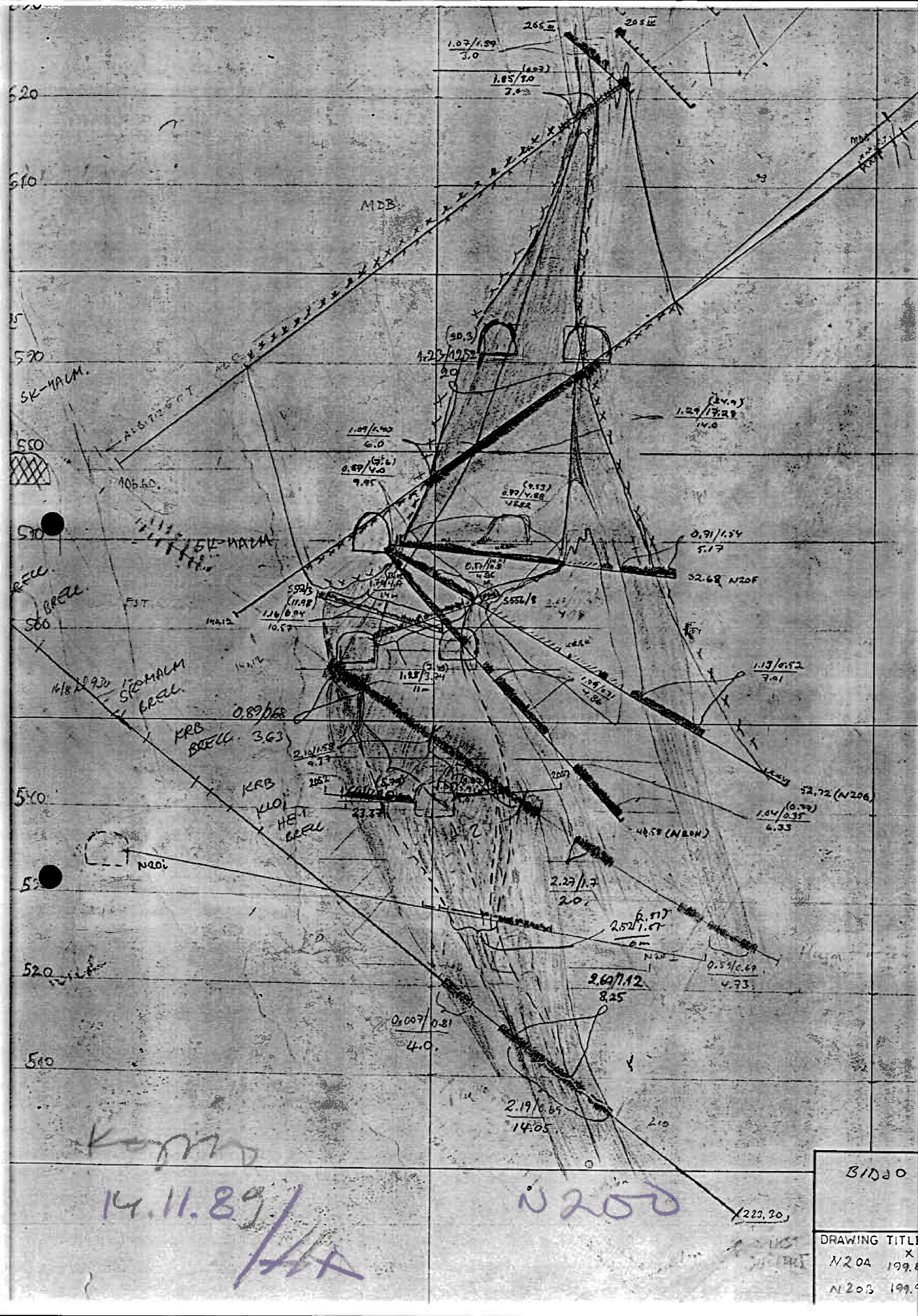
4.12 M€





Kopia 14.11.89/


5.0
0.2/0.89
2.0
0.39/0.38
5.0
44.0
FST
1.24/0.43
11.0
1.69/1.41
7.0
(19.94)
2.03/11.20
40.5
0.71/6.41
5.60
590
FST
0.82/1.05
2.0
(27.3)
1.19/15.45
21.5
21.05
580
MDC
1.74/1.79
6.0
0.01/0.86
FST
(11.06)
2.57/6.77
2.0
0.74/14.66
10.05
0.60/0.87
(14.2)
ML
570
560
139.00
(19.25)
0.47/8.14
5m
0.56/5.20
13m
1.92/10.17
12.0
550
2
2.94/3.57
2m
0.29/2.07
3m
FST
143.20
530
(10.89)
1.26/6.86
9.1
0.54/16.43
3.35
520
155.80
2
N19M
N19D
Koon 14.11.83
N 19
DRAWING TI
N19A
N19B



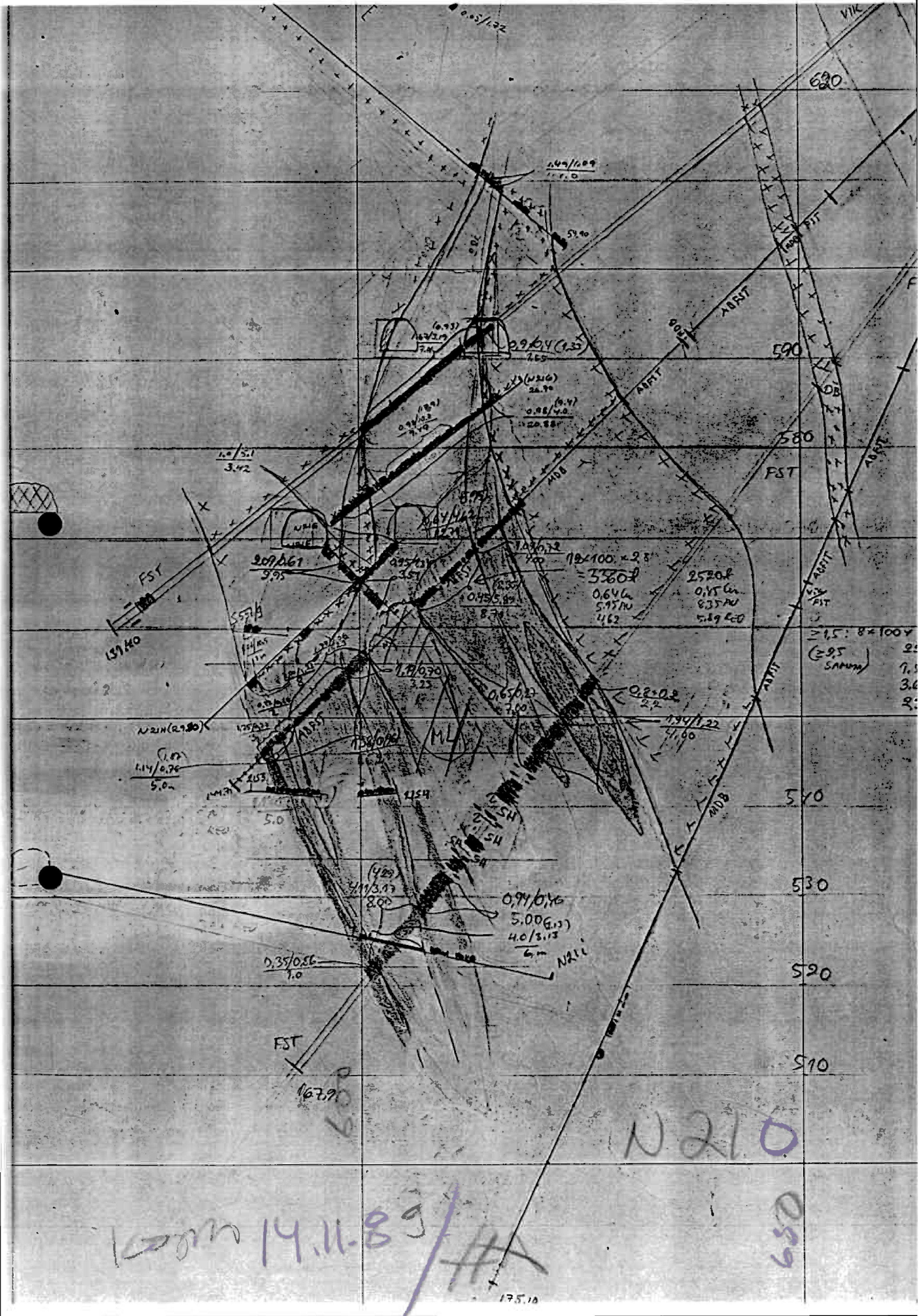
Kopia

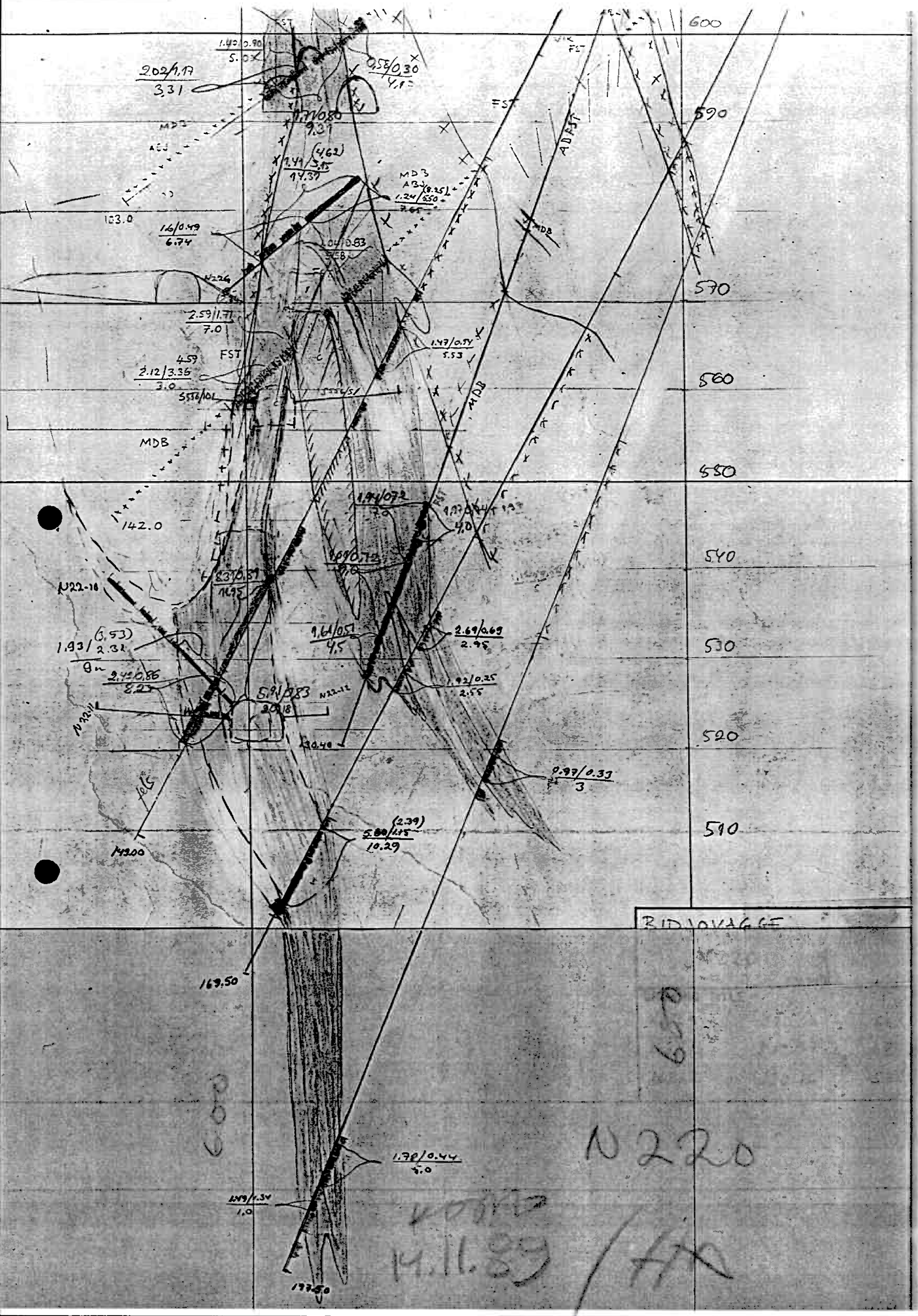
14.11.89

N200

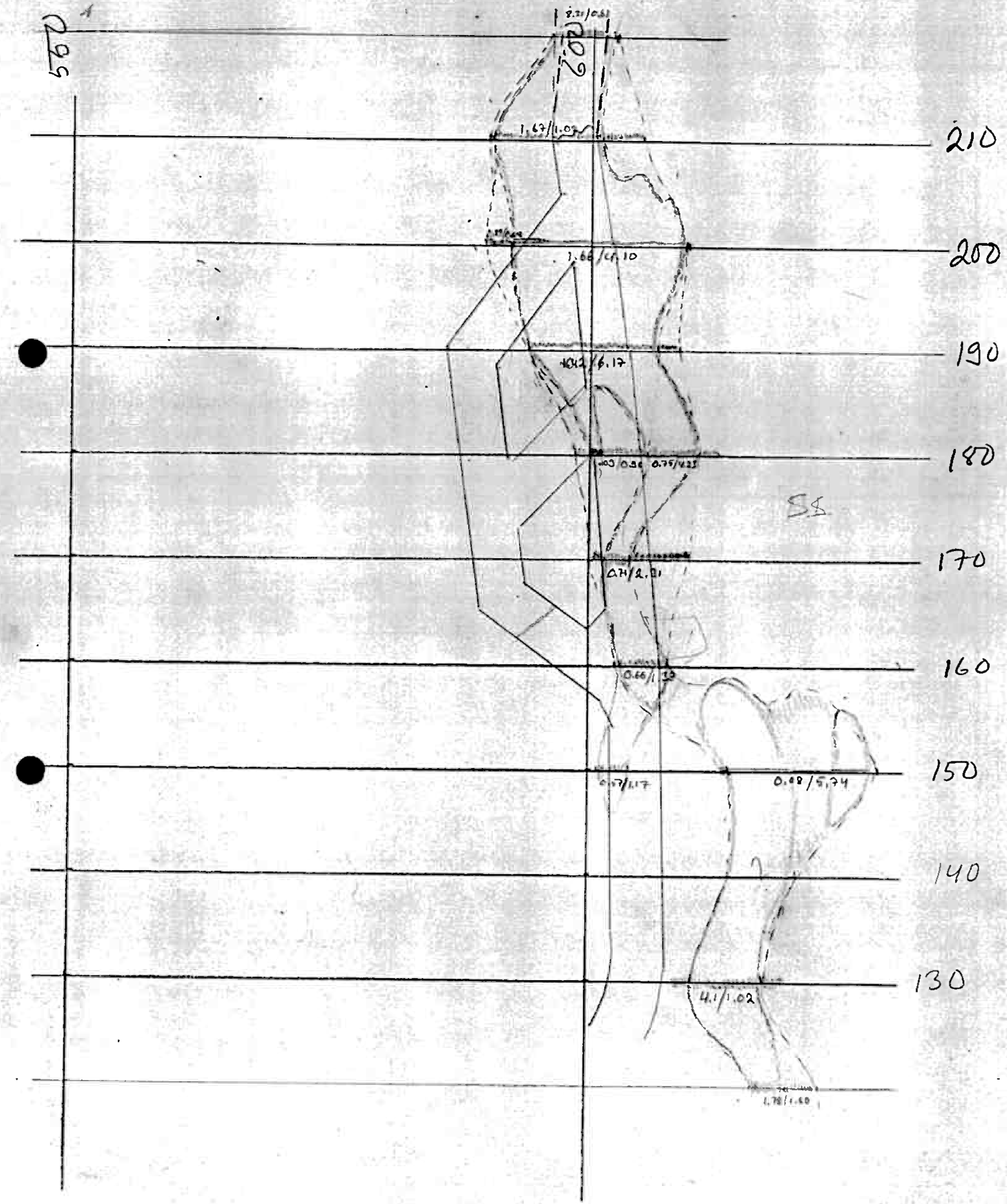
BIDJO

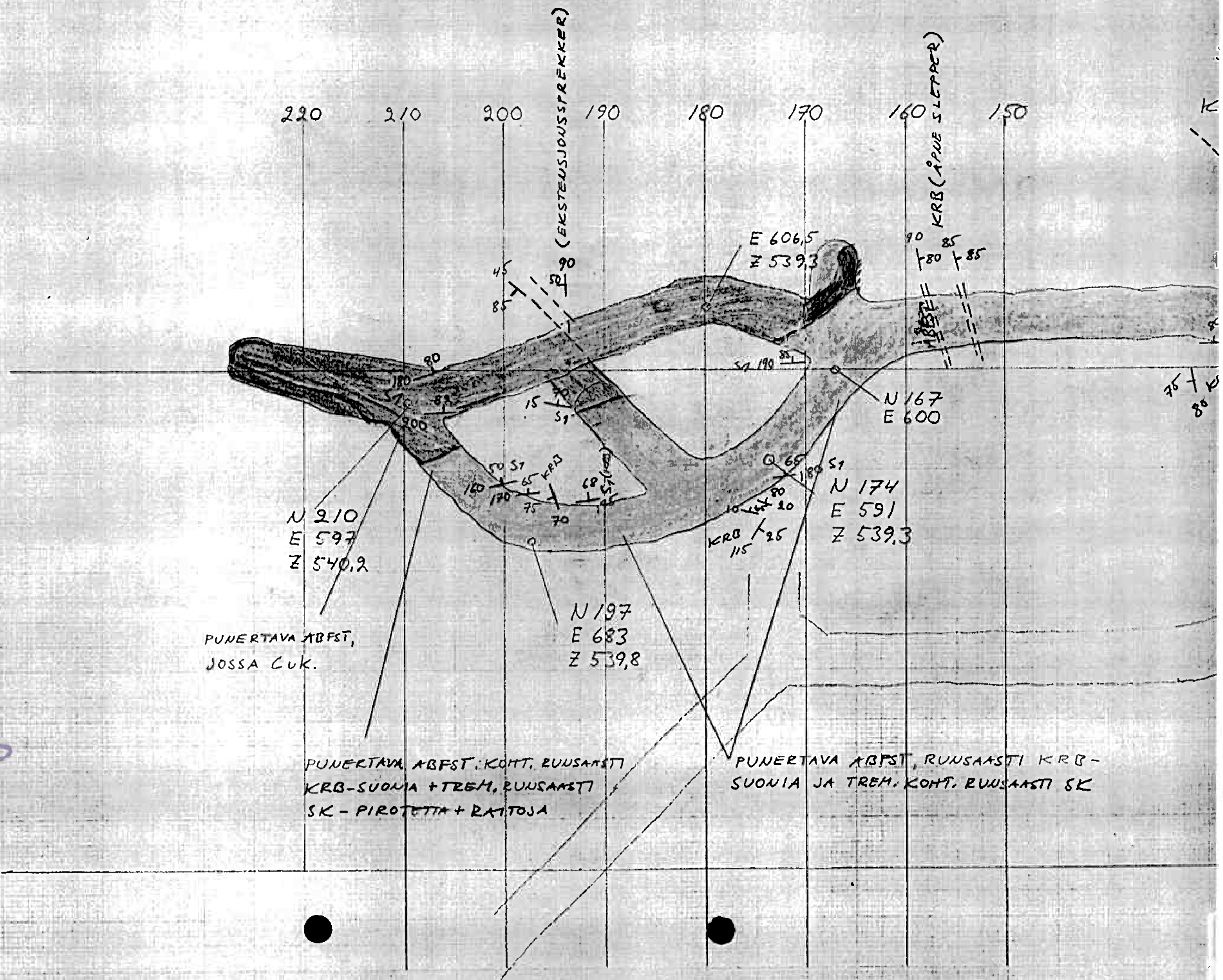
DRAWING TITLE
X
N204 199.
N203 199.


0.05/1.72
VIK
620
1.49/1.09
1.1.0
59.90
ABFST
590
DB
580
FST
MDB
(6.93)
1.67/3.19
7.4
2.9/0.4 (1.33)
2.65
(N216)
26.90
(9.4)
0.98/4.0
20.88
(12.9)
0.98/0.3
9.49
1.0/5.1
3.42
N216
8.79
0.64/1.62
12.71
209/0.61
9.95
0.95/1.31
3.57
1.09/0.72
4.0
19×100×2.8
=5360 t
0.64
5.95 AU
4.62
2520 t
0.45
8.35 AU
5.89
(2.50)
0.45/5.89
8.74
FST
139.40
557 β
≥1,5 : 8×100×
(≥2.5 SAMUM)
1.19/0.70
3.23
0.65/0.27
7.00
0.2+0.2
2.2
1.94/1.22
4.60
N21H (29.80)
(1.87)
1.14/0.76
5.0
1.54
ML
5.0
1.54
SH
540
530
(4.29)
4.11/3.17
8.00
0.94/0.46
5.00 (2.13)
4.0/3.13
6 m
N211
0.35/0.56
1.0
520
510
FST
167.97
600
N210
1:200 14.11.89
HA
650
175.10


600
590
570
560
550
540
530
520
510
FST
1.40/0.90
5.0
2.02/1.17
3.31
0.58/0.30
4.1
1.77/0.80
9.37
MDB
ABJ
(4.62)
1.41/3.15
14.37
MDB
ABJ (8.25)
1.24/5.50
7.65
103.0
1.6/0.49
6.74
1.04/0.83
3.58
N226
ADFST
2.59/1.71
7.0
4.59
FST
2.12/3.36
3.0
5556/101
5556/51
1.47/0.54
5.53
MDB
MDB
142.0
1.94/0.72
7.0
1.27/0.44
4.0
1.69/0.72
9.0
N22-10
8.37/0.87
11.95
(3.53)
1.93/2.32
9.0
1.61/0.57
4.5
2.69/0.69
2.95
2.40/0.86
8.23
5.91/0.83
20.18
N22-12
N22-11
1.92/0.25
2.55
130.40
9.97/0.33
3
felS
(2.39)
5.80/1.15
10.29
149.00
169.50
BIDJOVAGGE
650
600
N220
1.78/0.44
5.0
1.49/1.34
1.0
197.50
14.11.89

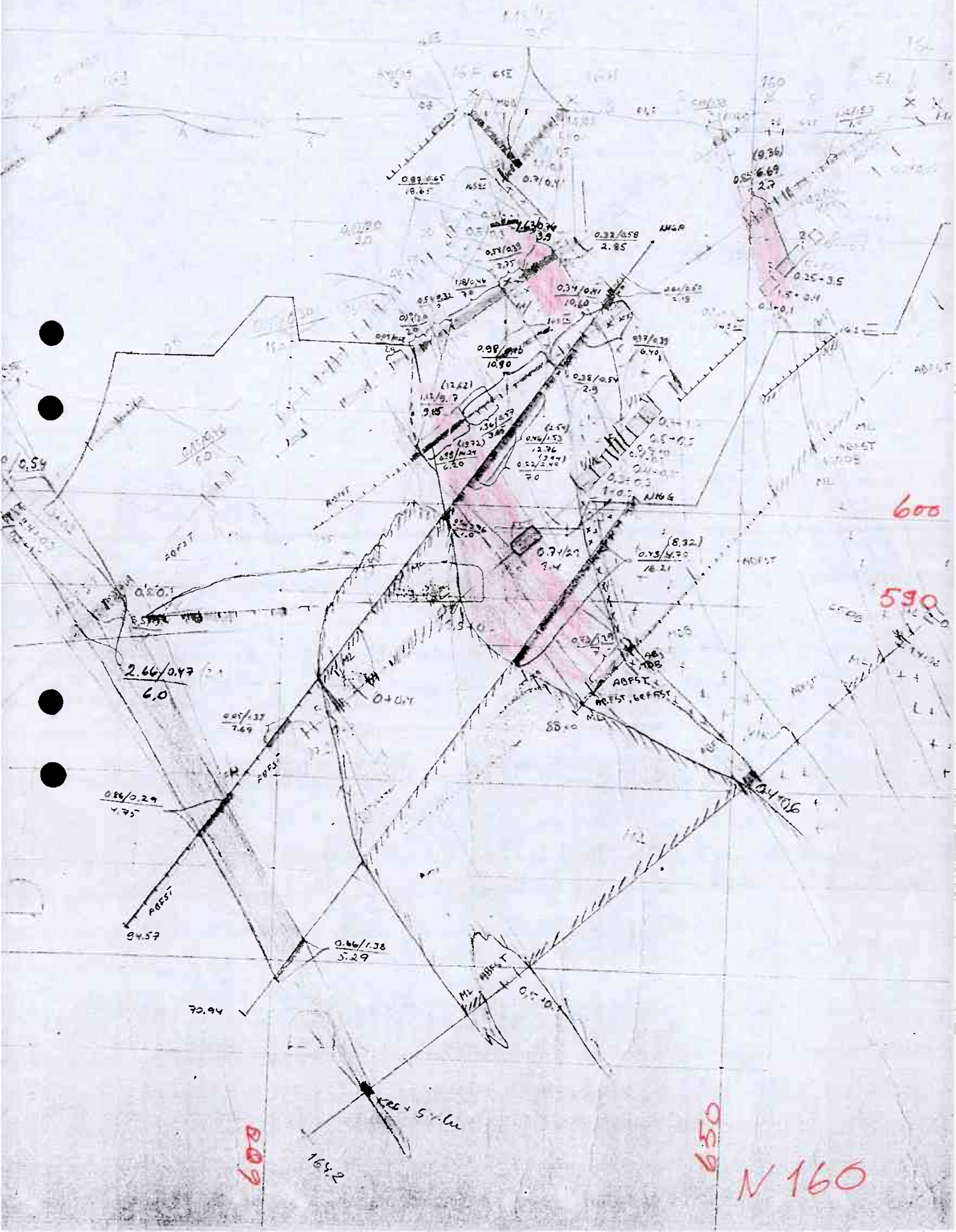
E – malminrajat +545 (= katto)



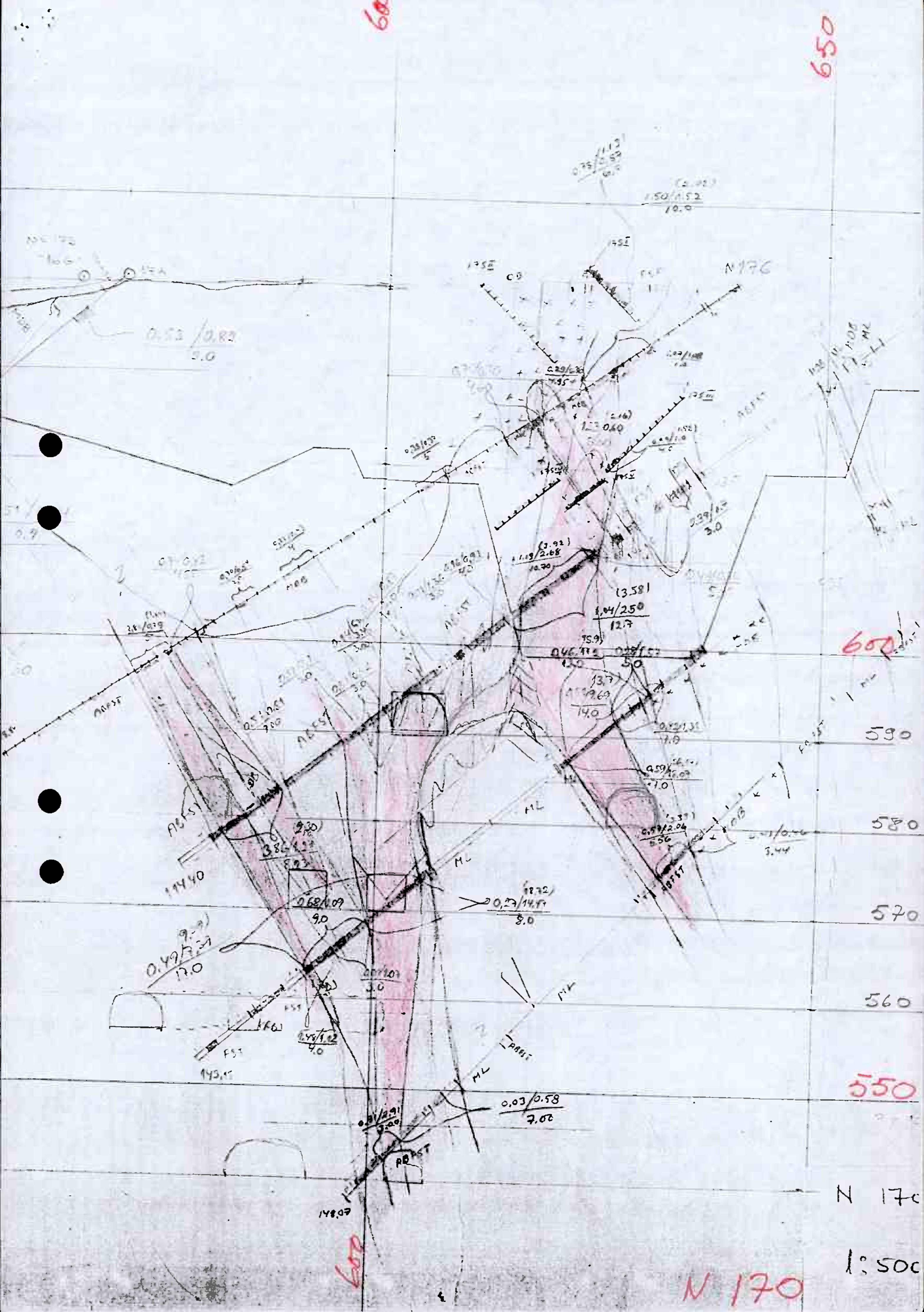

220
210
200
190
180
170
160
150
(EKSTENSJONSSPREKKER)
KRB (ÅPNE SLEPPER)
45
85
90
50
80
180
S1
82
200
15
70
S1
S1 190
85
E 606,5
Z 539,3
90
80
85
85
N 167
E 600
N 210
E 597
Z 540,2
50 S1
160
170
65
KRB
75
70
68
S1
145
65
180 S1
80
10
20
KRB
25
115
N 174
E 591
Z 539,3
75
80
N 197
E 683
Z 539,8
PUNERTAVA ABFST,
JOSSA CuK.
PUNERTAVA ABFST: KOHT. RUNSAASTI
KRB-SUONIA + TREM, RUNSAASTI
SK - PIROTETTA + RAITOJA
PUNERTAVA ABFST, RUNSAASTI KRB-
SUONIA JA TREM. KOHT. RUNSAASTI SK

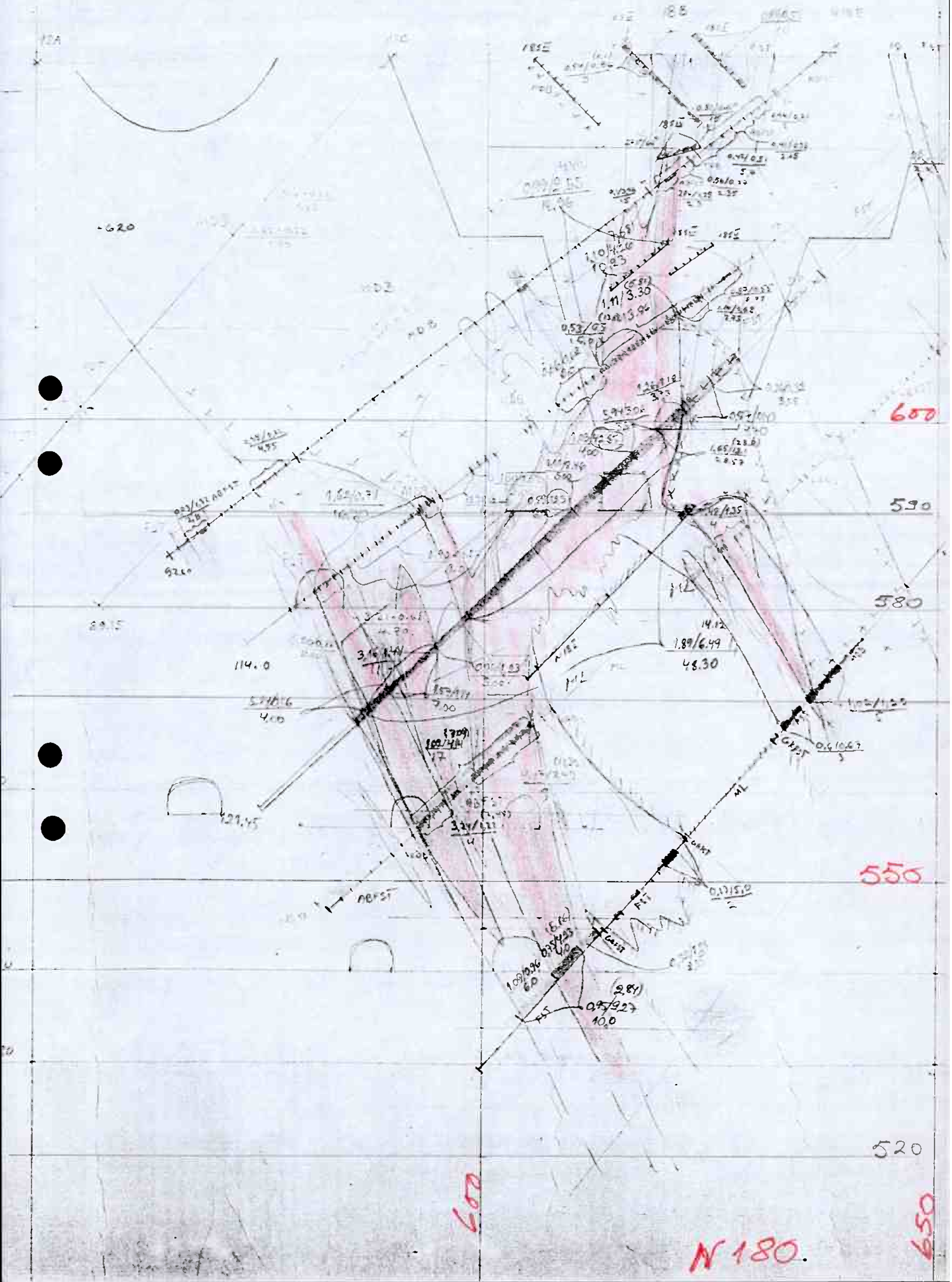
+540

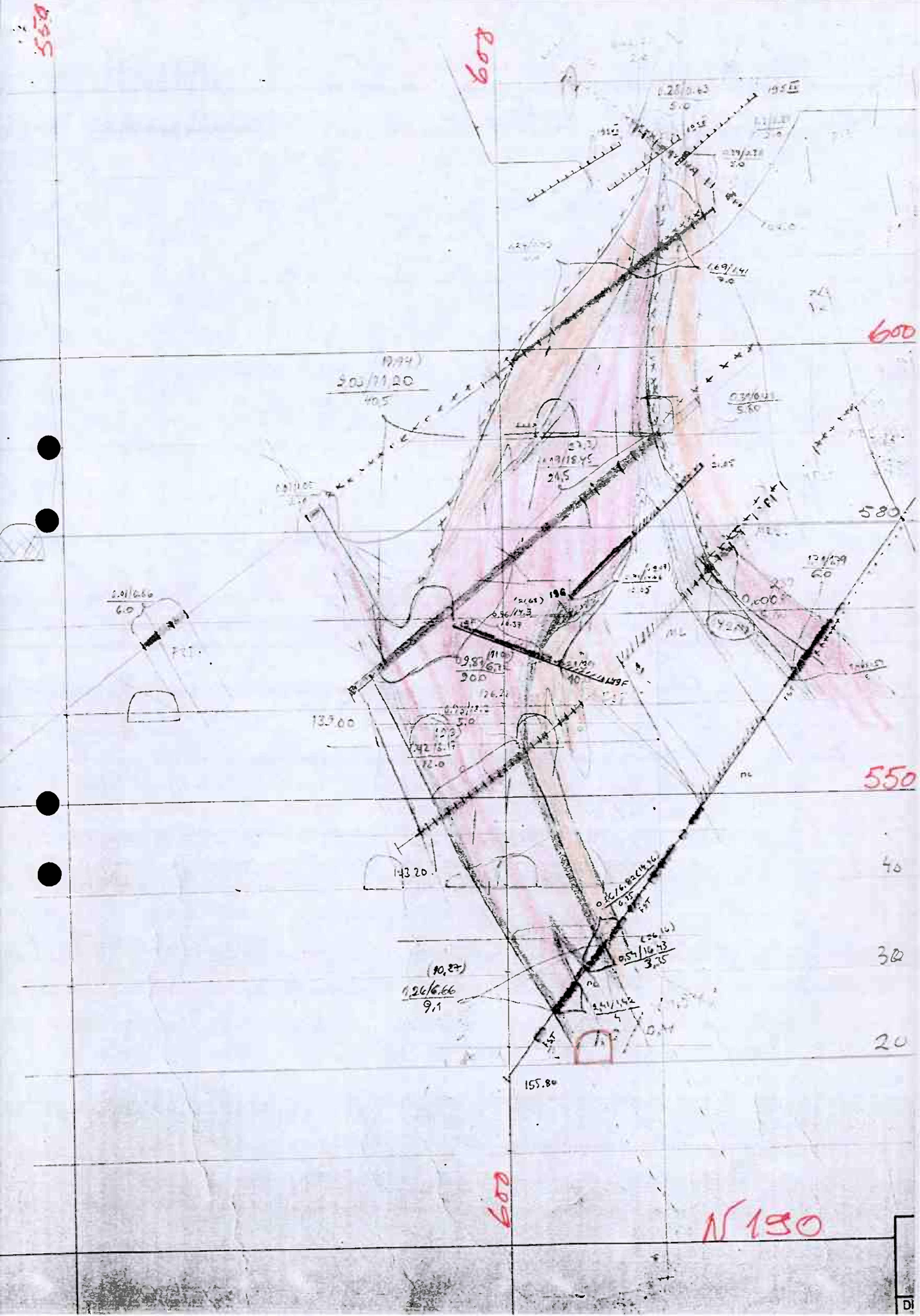
MA5

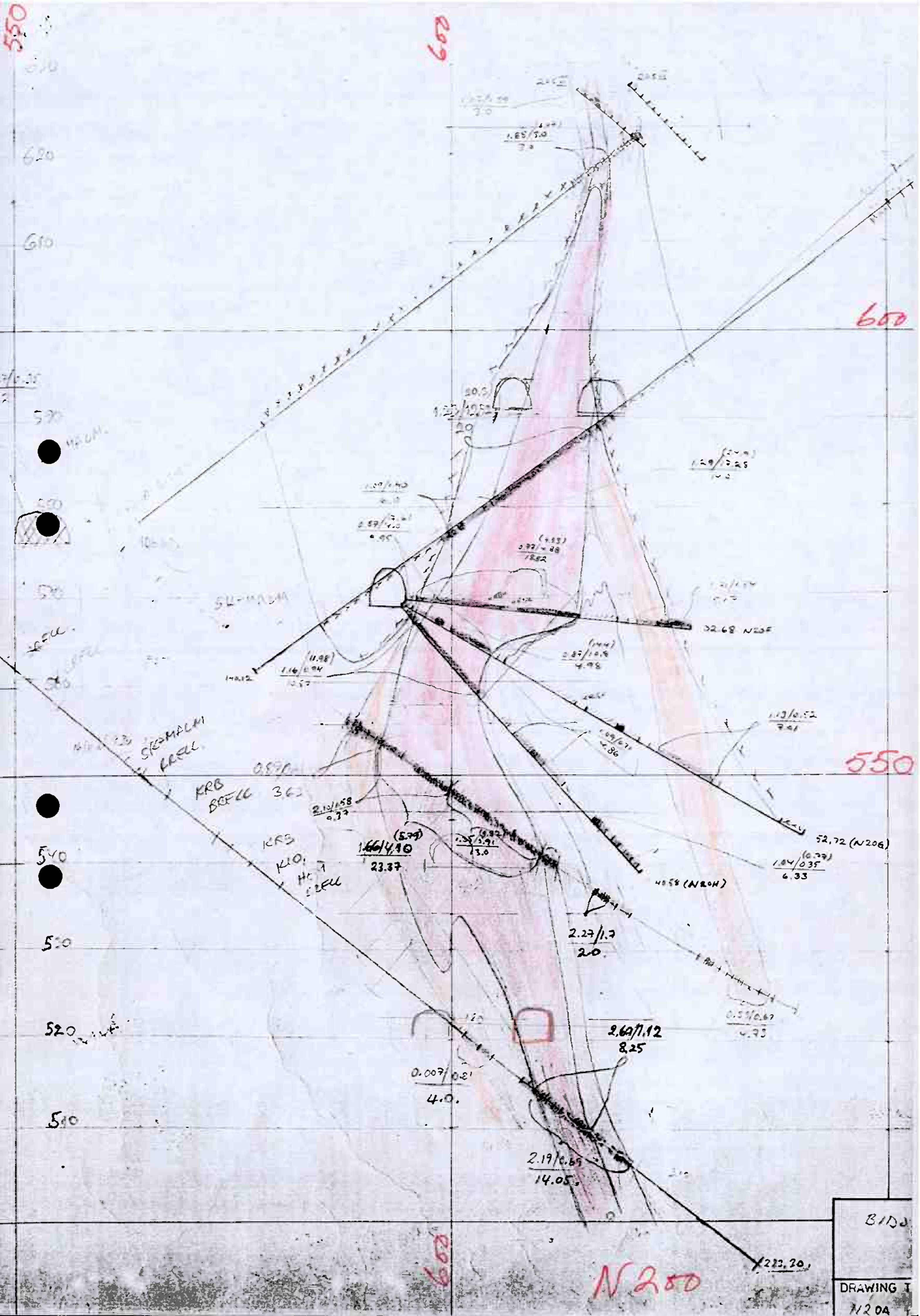

0.97/0.65
18.65
0.7/0.41
1.63/0.76
3.9
0.32/0.58
2.85
0.57/0.39
2.75
1.8/0.46
7.0
0.34/0.41
10.60
0.61/2.50
2.15
0.98/0.96
10.90
0.37/0.39
6.40
0.38/0.54
2.9
(12.62)
1.12/9.7
9.15
1.36/2.57
3.44
(2.54)
0.46/1.53
12.76
(3.72)
0.98/14.24
6.20
0.22/(3.97) 2.49
7.0
(9.36)
0.55 6.69
2.7
0.25+3.5
1.5+0.41
0.1+0.1
NH6A
NH6G
0.71/2.7
3.4
(8.32)
0.73/4.70
16.21
ABFST
ML
600
590
0.54
2.66/0.47
6.0
0.05/1.37
7.69
0.86/0.29
4.75
0+0.4
88.00
ABFST, 6EFEST
0.4+0.6
94.57
0.66/1.38
3.29
70.94
0.5+0.1
KRG + 5% lu
164.2
609
650

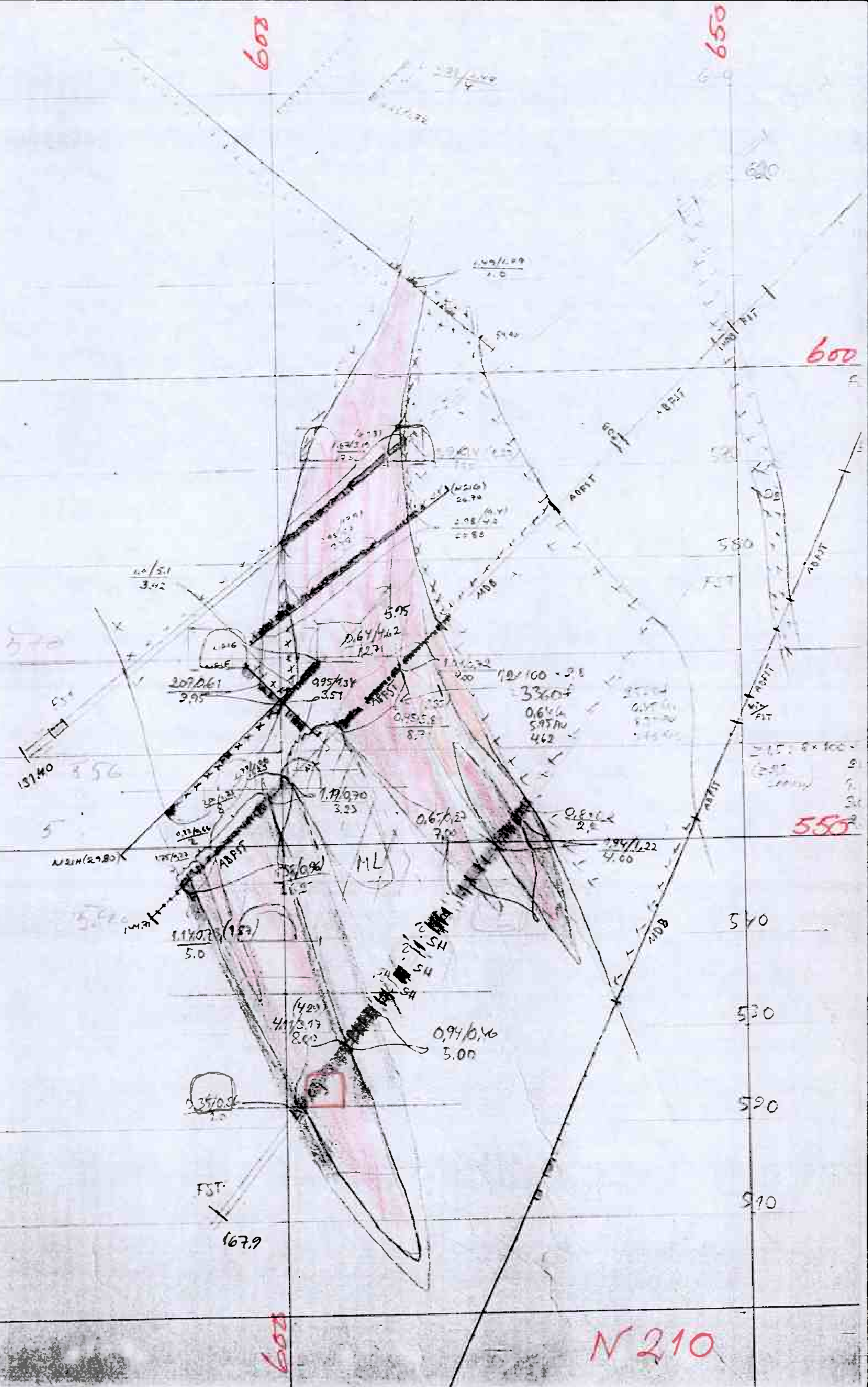
N 160

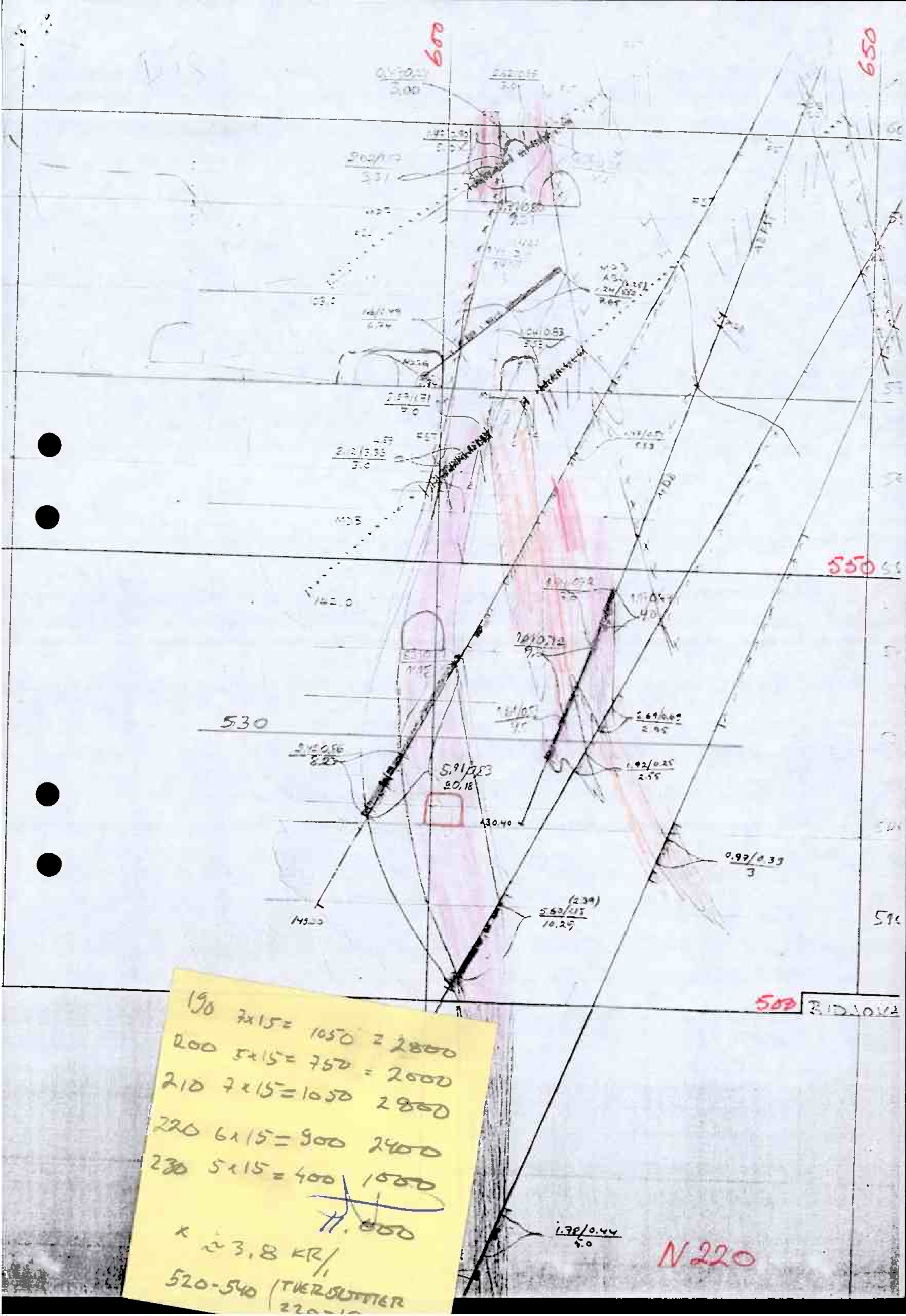

68
650
N176
175 II
175 III
175 V
CD
1.50/1.52
10.0
0.29/0.30
4.95
(3.92)
1.19/2.68
10.70
(3.58)
1.04/2.50
12.7
0.46/...
1.50
0.28/1.57
5.0
(13.7)
14.0
0.39/1.2
3.0
0.59/...
17.0
(3.37)
0.57/2.04
5.56
0.53/0.82
5.0
2.8/0.79
0.51/0.81
7.00
(2.30)
3.86/4.27
8.93
114.40
0.68/1.09
9.0
(8.72)
0.27/14.51
8.0
0.49/...
17.0
1.45/1.02
4.0
0.07/1.07
3.0
143.15
0.03/0.58
7.02
0.31/2.91
3.00
148.07
ABFST
FST
ML
600
590
580
570
560
550
N 170
1:500
68
N 170


185
-620
600
590
580
550
520
114.0
121.45
1.89/6.49
48.30
14.12
3.16/1.41
5.78/0.6
4.00
1.11/3.30
1.10/4.20
10.23
0.53/0.53
15.0
0.95/9.27
10.0
(2.84)
1.09/0.96
6.0
3.24/1.21
4
0.17/15.0
0.6/0.67
ML
FST
GAST
ABFST
N 180
600
650

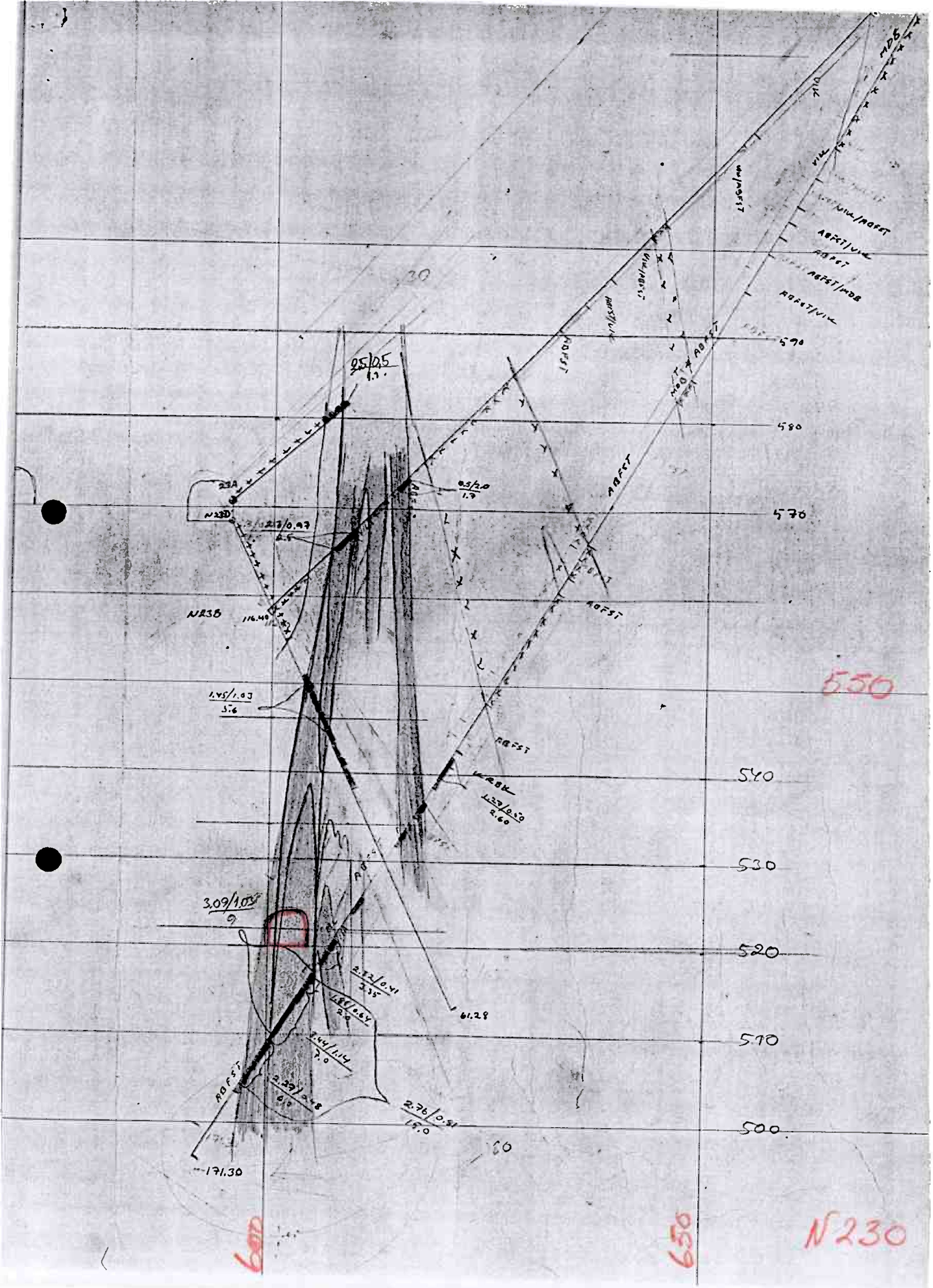

550
600
1.28/10.63
5.0
195 II
600
1.69/1.41
9.0
(19.94)
3.00/11.20
40.5
0.36/6.41
5.50
(27.3)
1.19/18.45
21.5
580
0.01/6.66
6.0
196
(21.68)
0.56/14.3
16.37
0.00
9.87/6.72
(11.0)
20.0
40
139F
126.20
0.93/13.2
5.0
(12.3)
1.42/15.17
12.0
137.00
550
143.20
40
0.56/6.82(14.36)
6.35
FST
(26.6)
0.54/16.43
3.35
30
(10,27)
1.26/6.66
9,1
2.41/1.42
4
FST
20
155.80
600
N190


550
600
630
620
610
600
1.85/3.0
7.0
590
580
570
560
550
540
530
520
510
SK-MALM
BRECC.
SKOMALM
BRECC.
KRB
BRECC
3.62
KRB
KIO.
BRECC
20.5
1.25/10.52
20
1.07/1.40
2.57/4.0
4.95
(4.53)
3.77/4.88
18.82
1.29/7.25
32.68 N20F
140.12
(11.98)
1.16/0.94
10.57
(14.4)
2.87/10.8
4.98
1.13/0.52
7.41
1.09/6.71
4.86
0.89
2.10/1.58
9.37
(5.79)
1.66/4.10
23.37
(9.82)
1.35/3.91
13.0
52.72 (N20G)
1.04/0.35
(0.77)
6.33
40.58 (N20H)
2.27/1.7
20.
0.57/0.67
4.73
2.60/1.12
8.25
0.007/0.21
4.0.
2.19/0.65
14.05
223.20
N200
BIDJ
DRAWING
N20A

600
650
620
600
590
580
570
560
556
550
540
530
520
510
600
N210
1.49/1.09
1.67/3.10
(N210)
26.70
1.0/5.1
3.42
FST
ABFST
MDB
131.40
2.09/0.61
3.95
0.95/4.54
3.57
0.64/4.62
12.71
5.95
1.9/100
336.0+
0.45/5.8
8.7
1.17/0.70
3.23
0.67/0.27
7.00
0.8/0.2
2.8
1.94/1.22
4.00
N21H(29.80)
ML
1.11/0.73 (1.57)
5.0
SH
(4.29)
4.11/3.17
8.0
0.94/0.46
5.00
0.35/0.56
1.0
FST
167.9



190 7x15= 1050 = 2800
200 5x15= 750 = 2000
210 7x15=1050 2800
220 6x15=900 2400
230 5x15=400 1000
11.000
x ≈ 3,8 KR/1
520-540 (TVERSNITTER

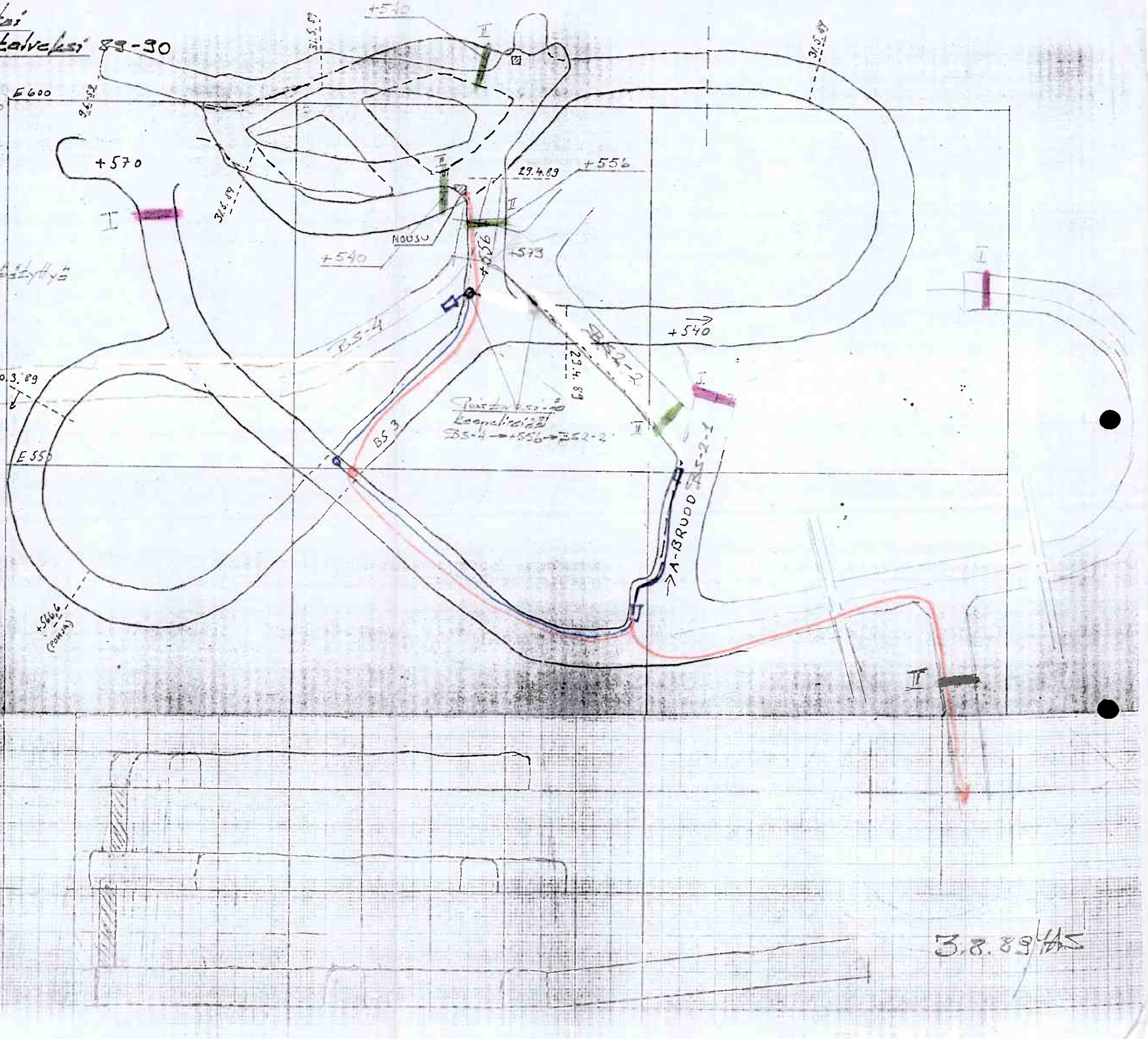

MDB
VIK
VIK
VIK/ABFST
ABFST/VIK
ABFST
ABFST/MDB
ABFST/VIK
VIK/ABFST
VIK/ABFST
ABFST/VIK
ABFST
MDB
ABFST
30
590
580
570
550
540
530
520
510
500
2.5/0.5
1.1
23A
N23D
2.3/0.97
2.5
0.5/2.0
1.7
N23B
116.40
ABFST
ABFST
ABFST
WRBK
1.45/1.03
5.6
1.27/0.10
2.60
3.09/1.05
9
2.32/0.41
3.35
1.86/0.64
2.0
2.44/1.14
7.0
2.29/2.48
6.0
2.76/0.51
15.0
61.28
ABFST
171.30
60
600
650
N230

Tuuliovien rakentaminen tai tunneleiden tukkiminen talveksi 89-90

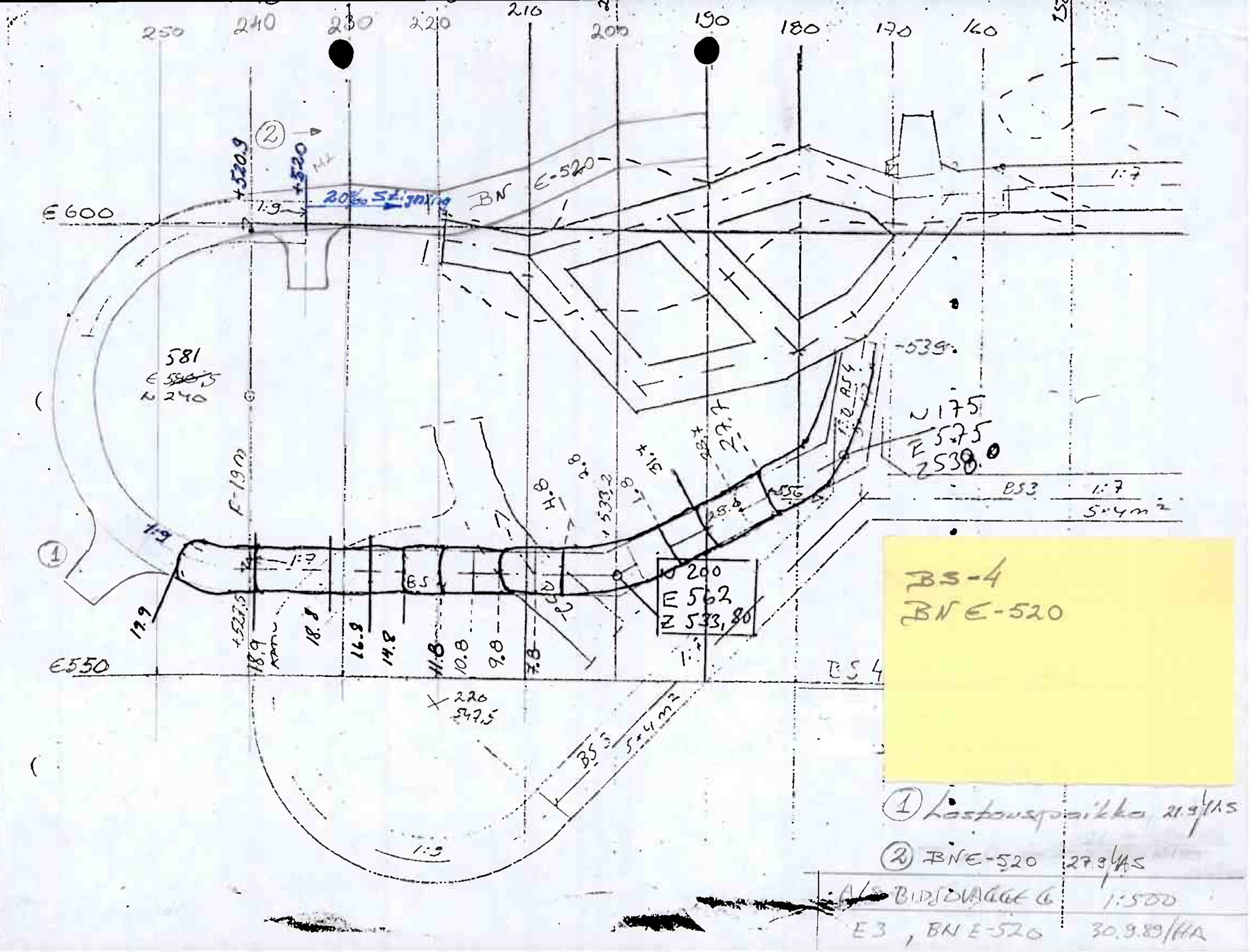
I = 1-vaihe 1.9 jälkeen mahdollinen
- BS-2 ovet
- BS-2-1 ovet tai louhe
- +570 ovet.

II = 2-vaihe (~30.10 - 30.11) tai kulj.päätyttyä
- Jin tunneli louhe
- BS2-2 —"— tai ovet
- +556 ovet
- +540 louhe

E2-3-4 kaapelointi ja poistovesi
- Simba
- Jumbo

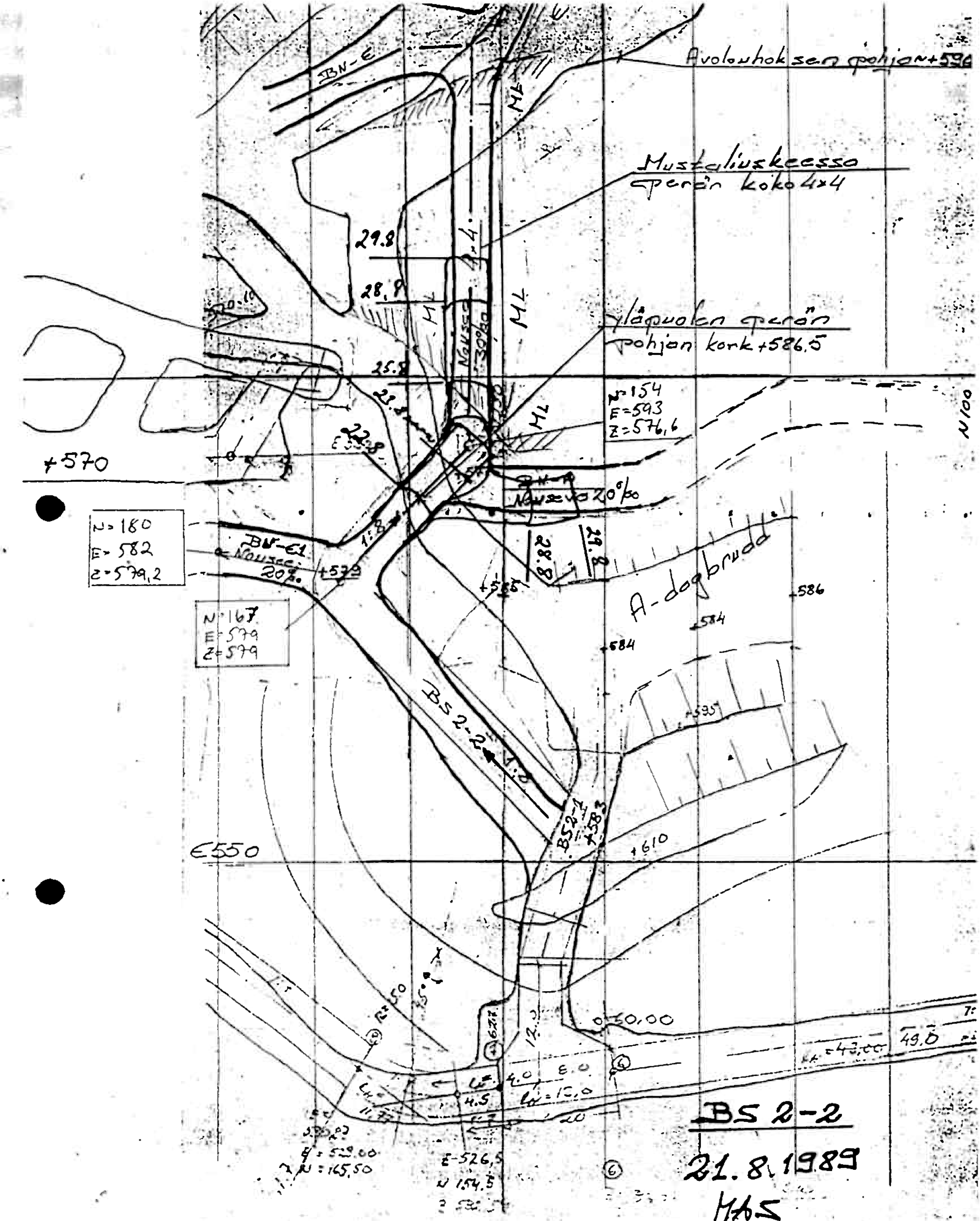


3.8.89/HS



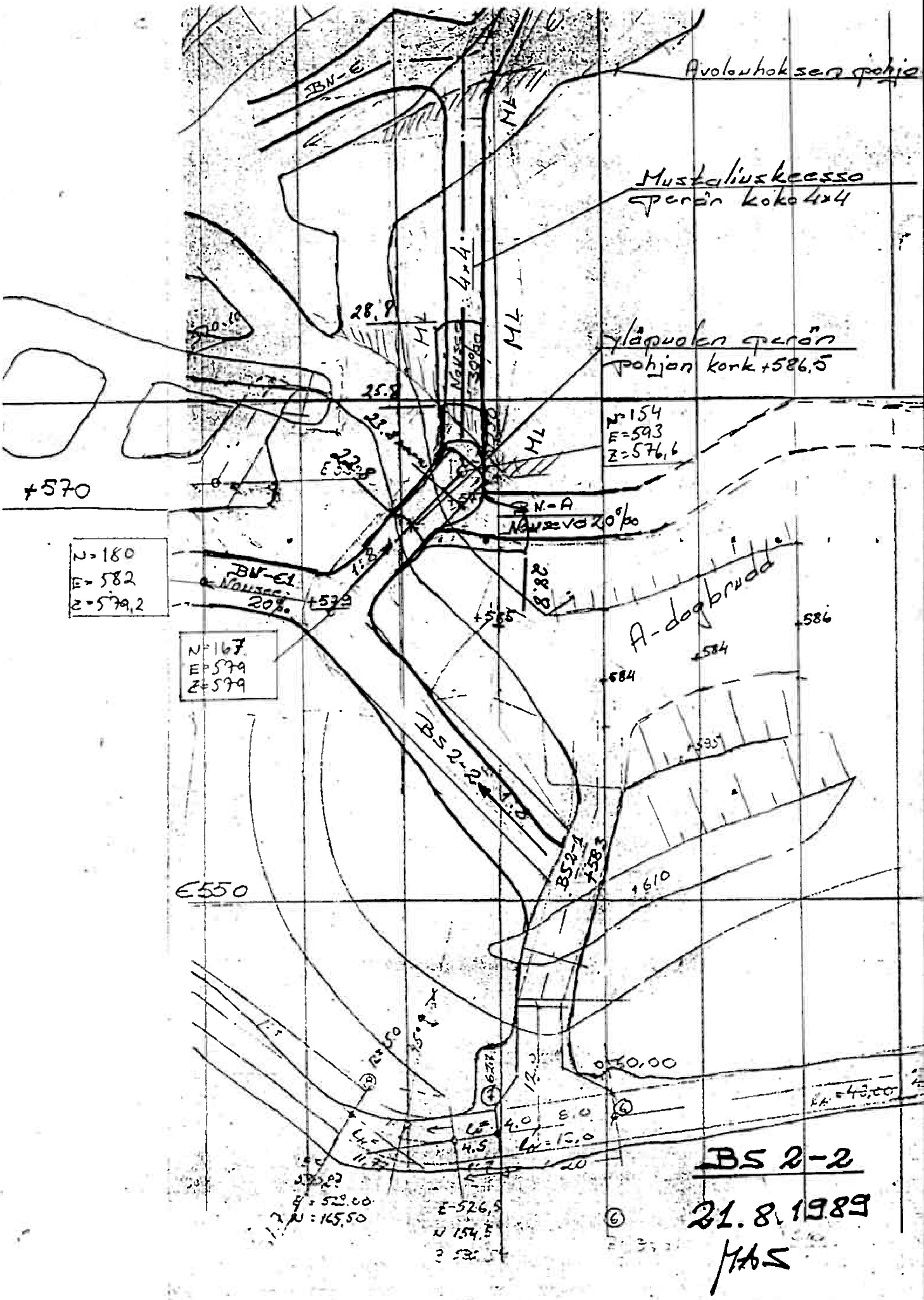
BS-4
BN E-520

① Lastauspaikka 21.9/AS
② BNE-520 27.9/AS
A/S BIDJOVAGGE 1:500
E3, BN E-520 30.9.89/HA



BS 2-2

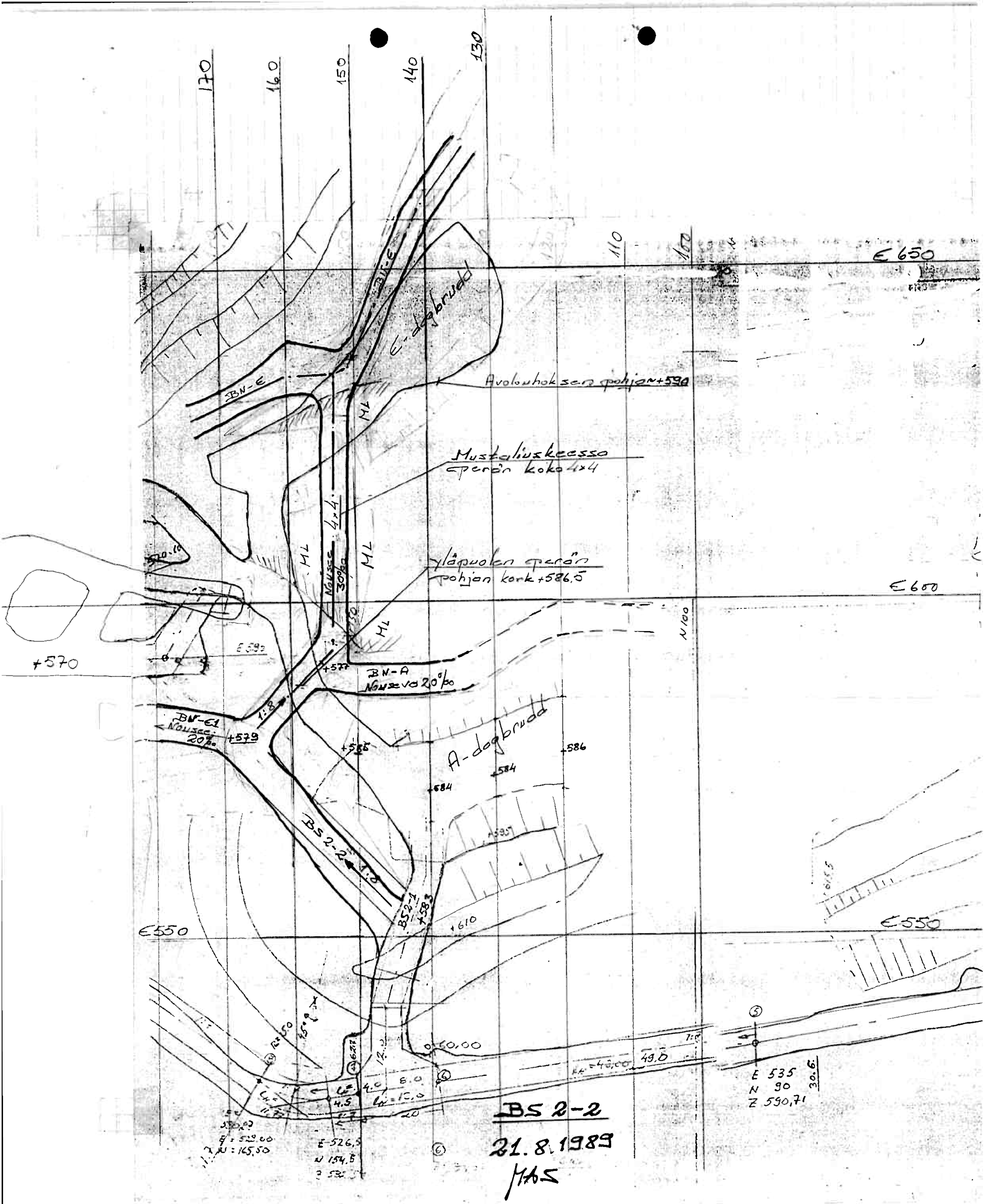
21.8.1989



BS 2-2

21.8.1989

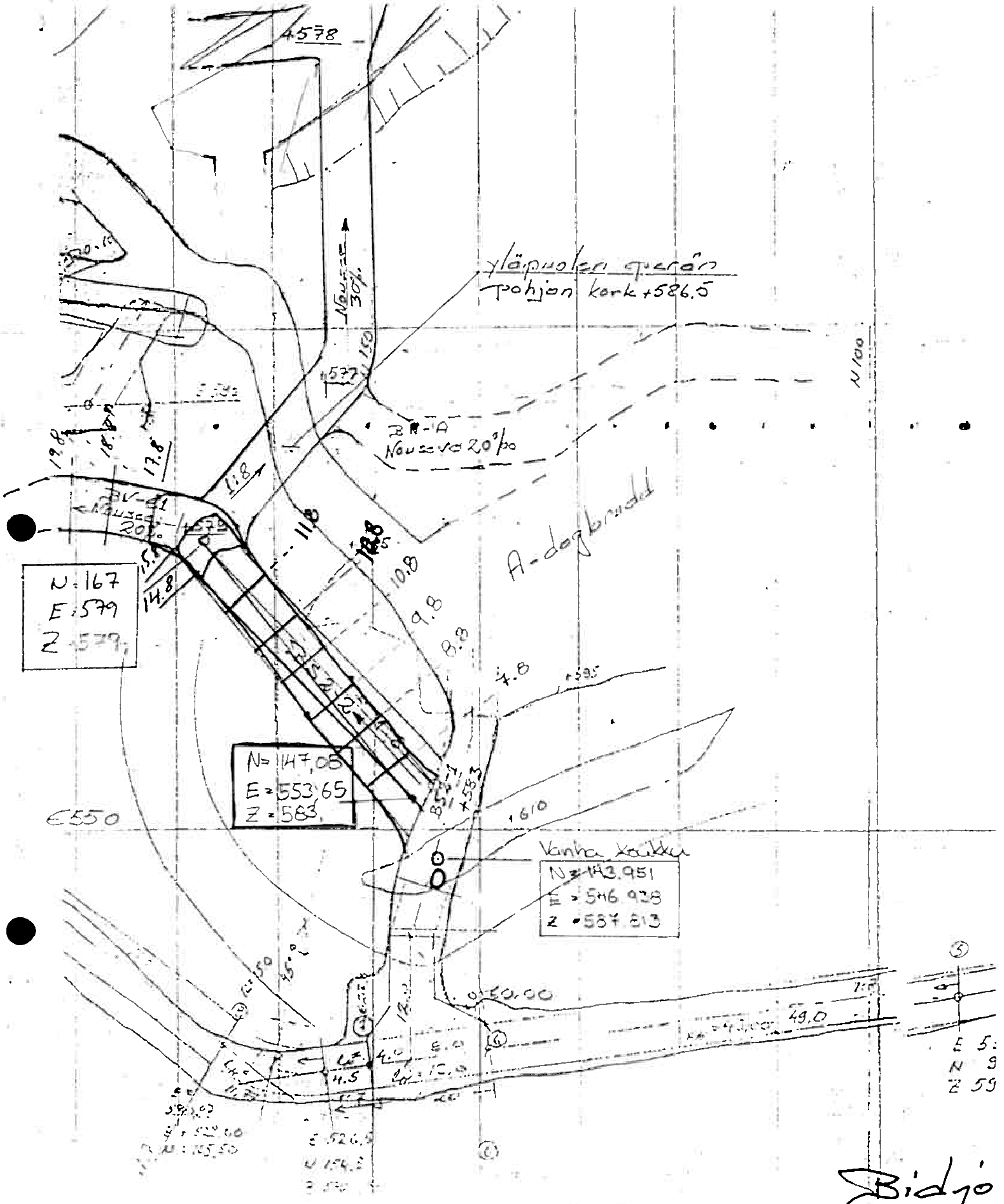
MAS



BS 2-2

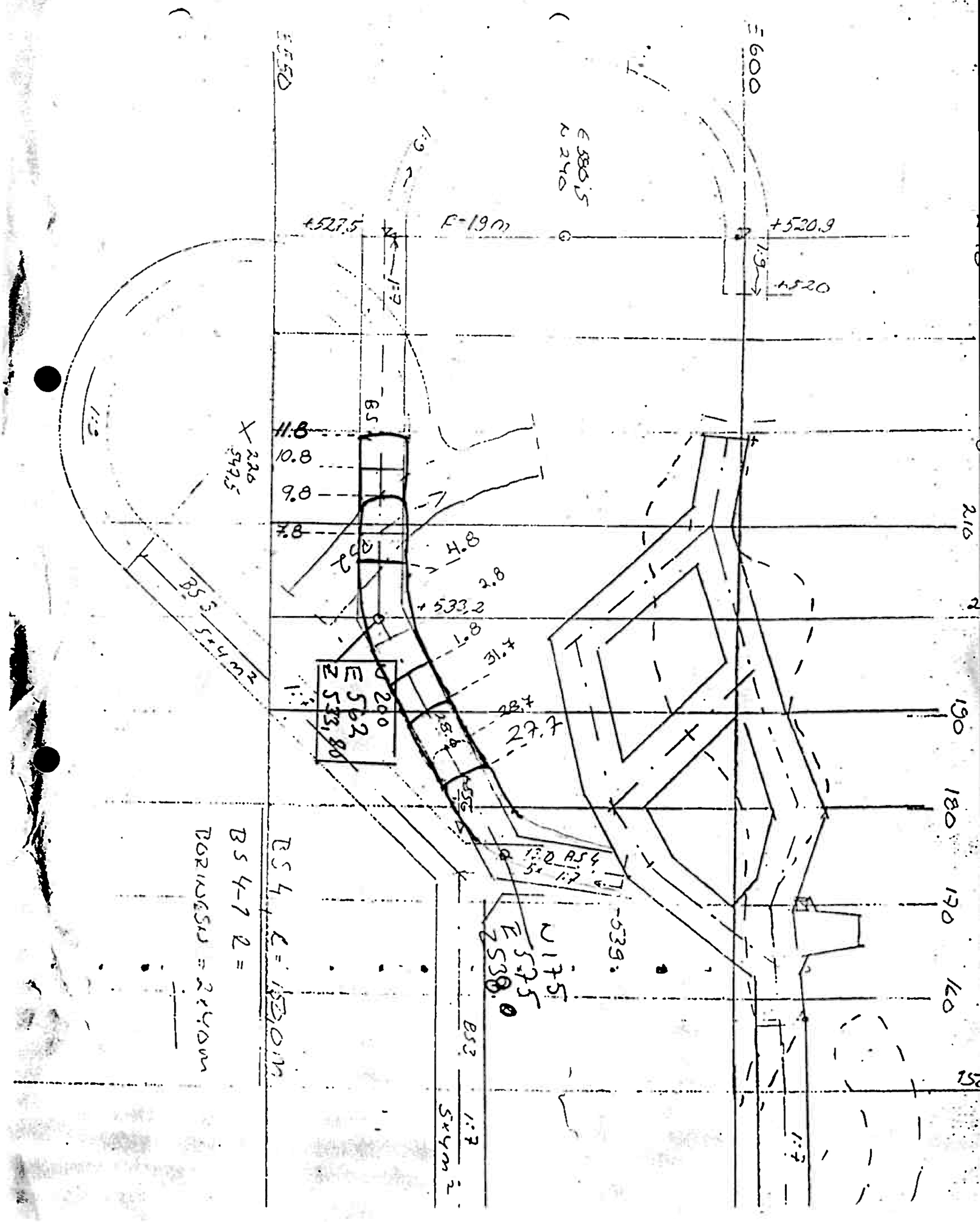
21.8.1989

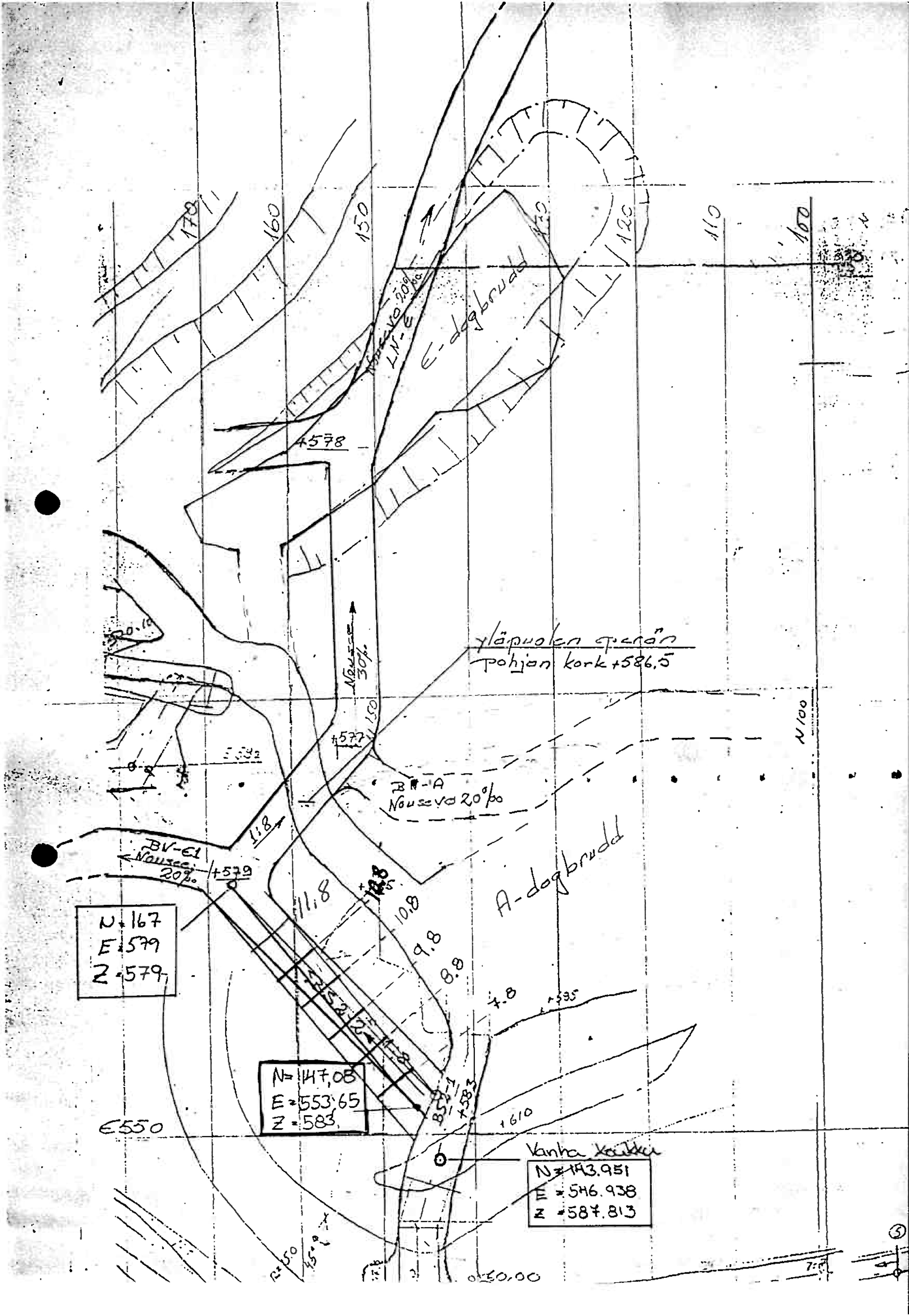
MAS



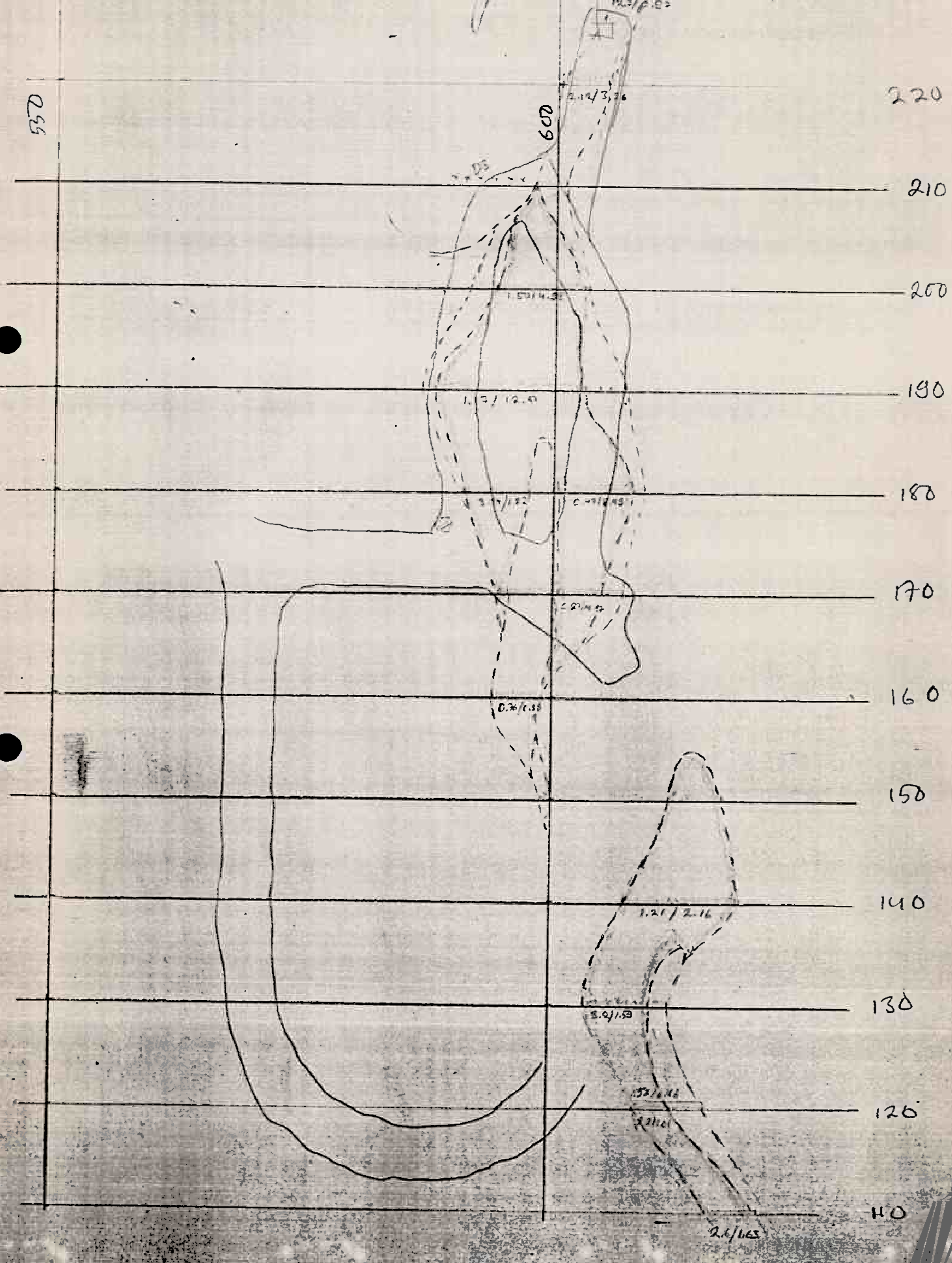
Bidjo
E-avc
Pohjon
Valmis:

11889

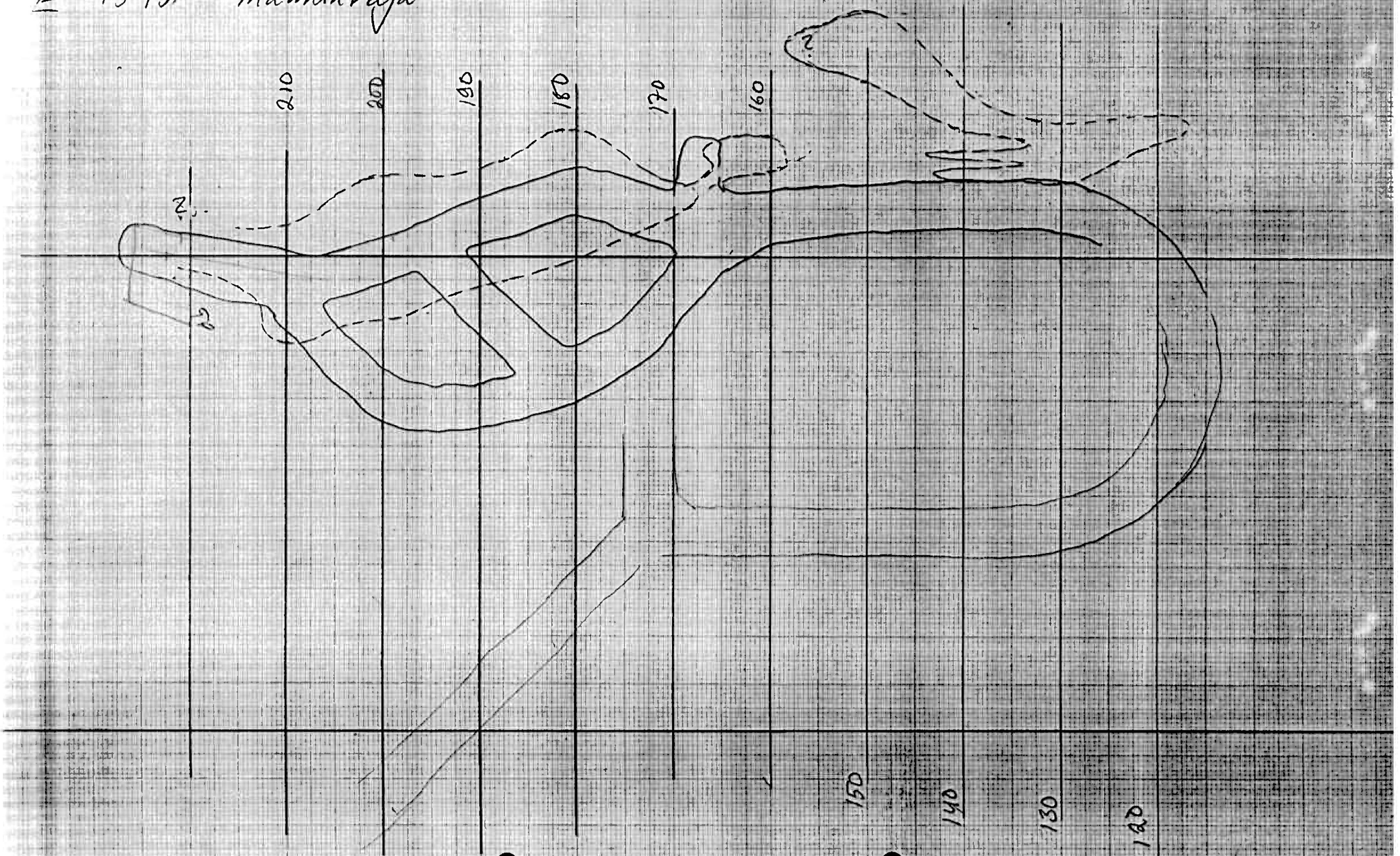

E550
E600
E580.5
+527.5
F-190
+520.9
+520
1:7
1:9
1:1
BS
11.8
10.8
9.8
7.8
4.8
2.8
+533.2
1.8
31.7
28.7
27.7
X 220
547.5
U 200
E 562
Z 533,80
BS 3
5+4 m2
1:0 AS 4
5+ 1:7
-539
U 175
E 575
Z 538.0
BS 4-7 L =
BS 4 L = 150 m
TORIUGSU = 2140 m
BS3
1:7
5x4 m2
210
190
180
170
160
150


170
160
150
130
120
110
100
N
Nousevo 20‰
LN-E
E-dagbrudd
+578
Nousee 30%
yläpuolen perän
pohjan kork +586,5
150
+577
+592
BV-A
Nousevo 20‰
N100
A-dagbrudd
11,8
BV-E1
Nousee 20‰
+579
N=167
E=579
Z=579
11,8
10,8
9,8
8,8
7,8
+595
+583
+610
E550
N=147,08
E=553,65
Z=583
Vanha kaikku
N=143.951
E=546.938
Z=587.813
0=50,00
5

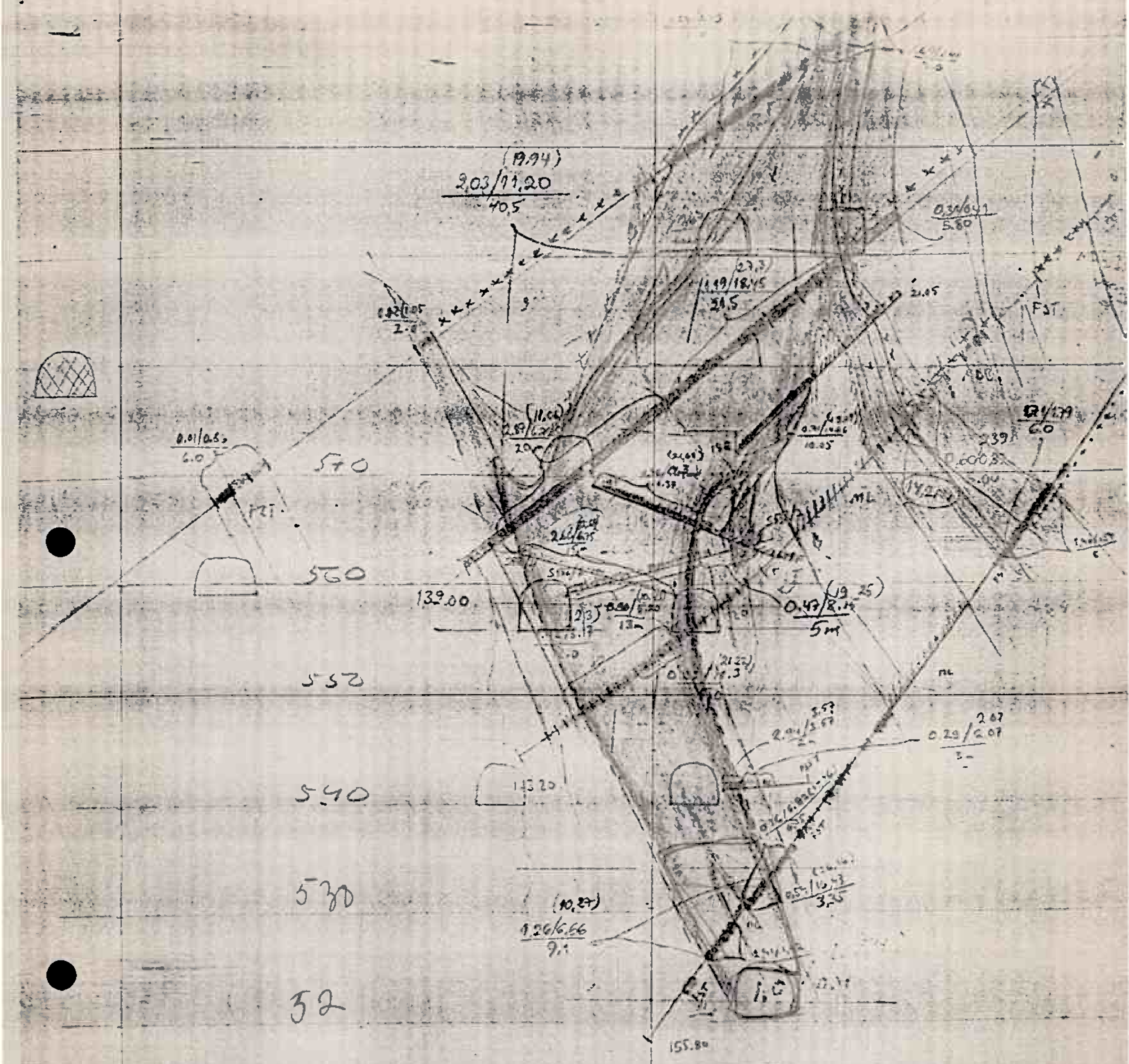
E malminrajat +560 (katto



E +545 malminrajat

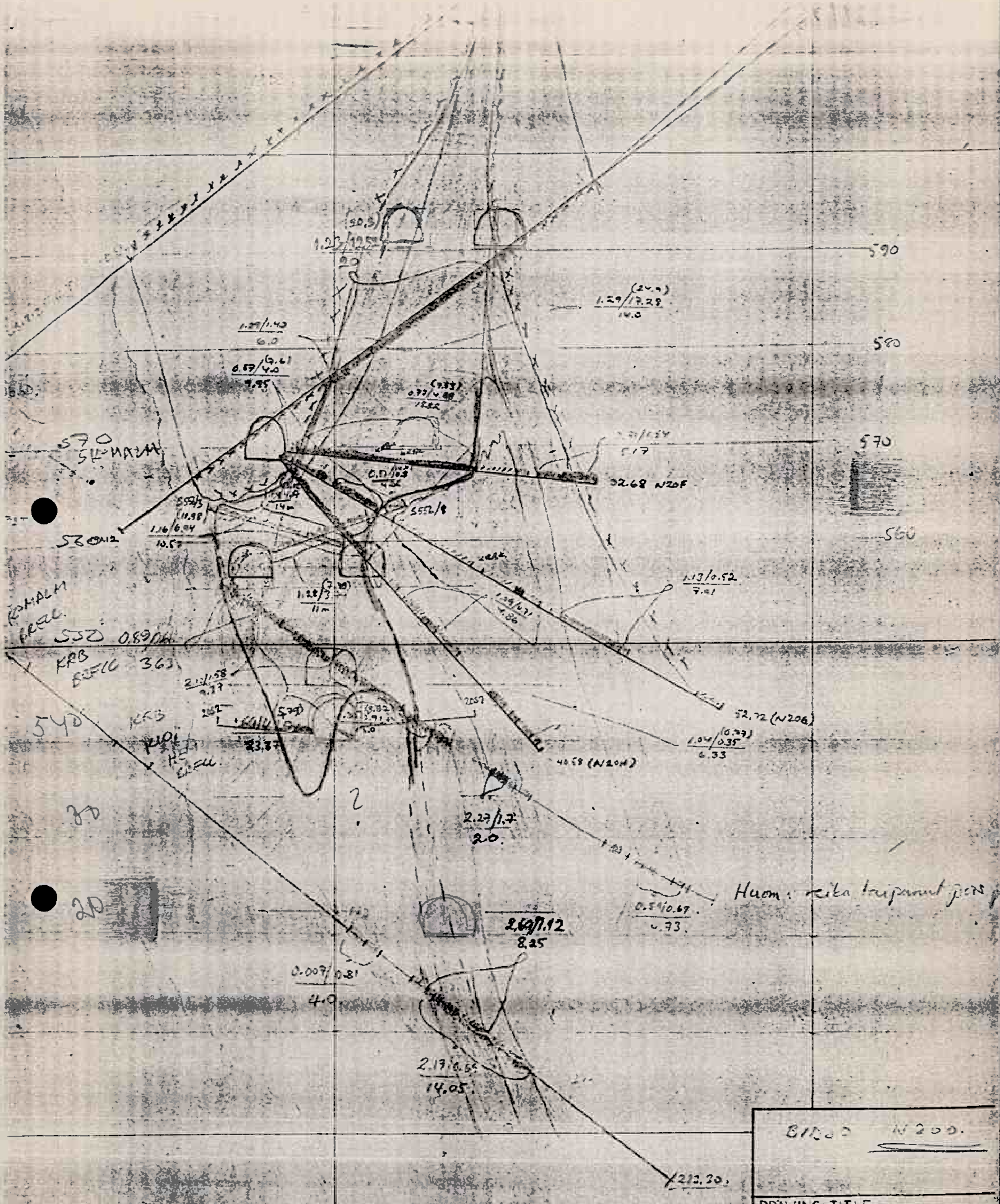


31.7. ME


(19.94)
2.03/11.20
40.5
0.34/6.41
5.80
1.49/18.45
21.5
(27.3)
2.05
FST
570
560
550
540
530
52
0.01/0.55
6.0
HT
139.00
0.47/8.14
5m
(19.25)
(21.22)
(11.66)
2.59/6.71
20m
2.0
2.3
13m
(14.21)
ML
2.39
6.0
0.29/2.07
2.07
3.57
2.04/3.57
143.20
(10.27)
1.26/6.66
9.1
0.59/10.43
3.35
1.0
155.80
FST

N190

Kopie

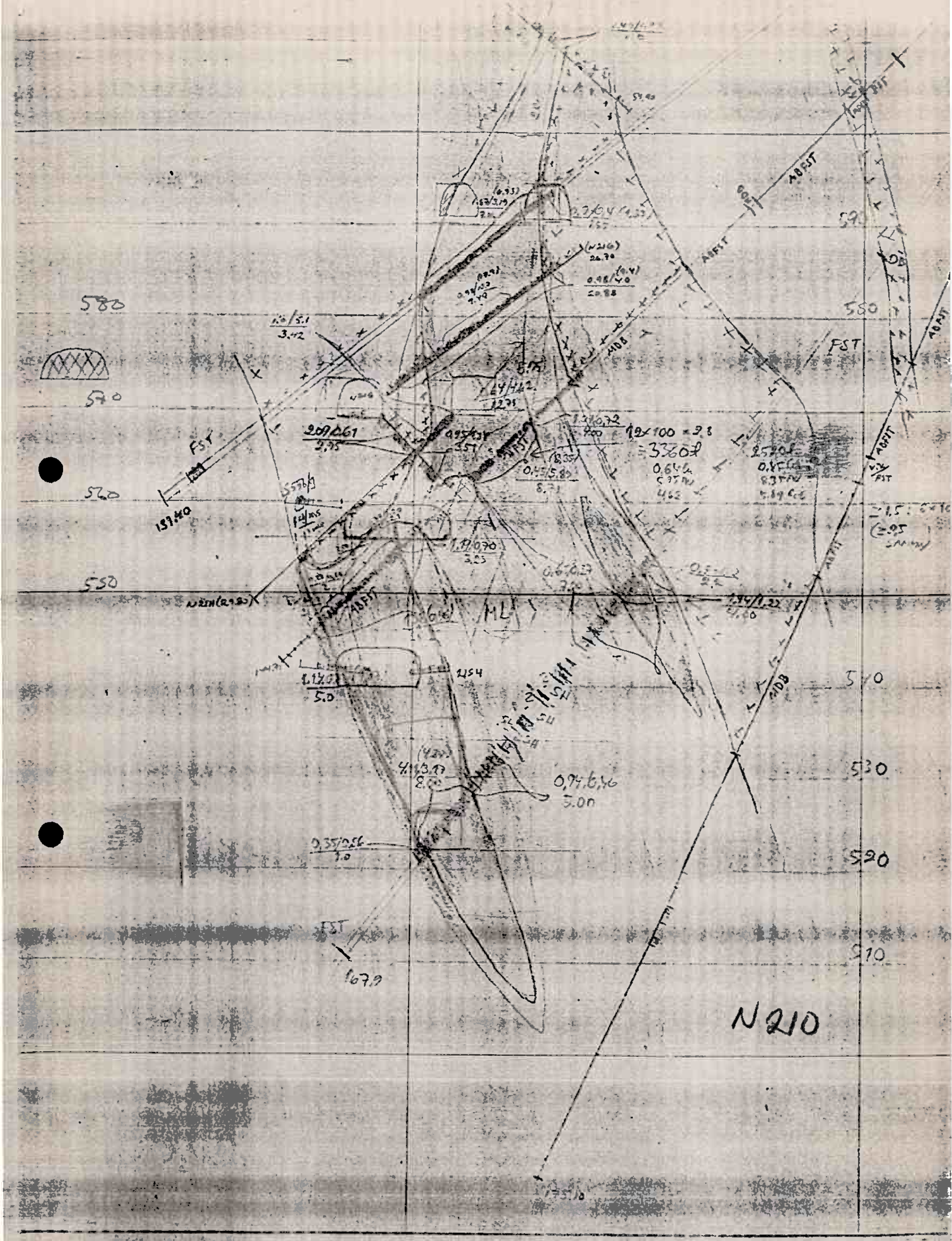


B1[illegible] N200.

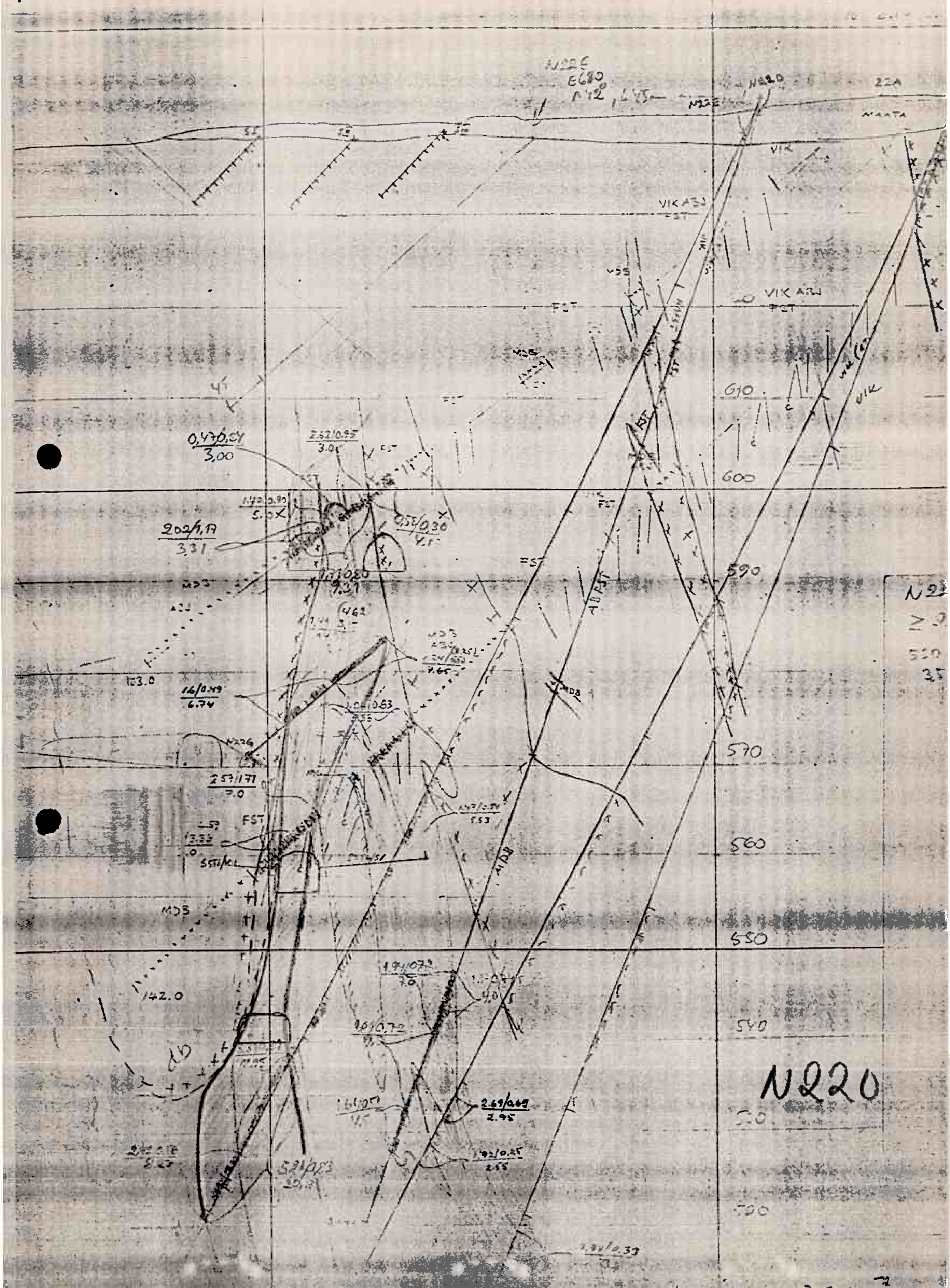
DRAWING TITLE

	x	y
N204	199.[illegible]	[illegible]
N205	199.[illegible]	53[illegible].54
N20C	1[illegible].[illegible]	4[illegible].37
N20E	1[illegible]	[illegible].00

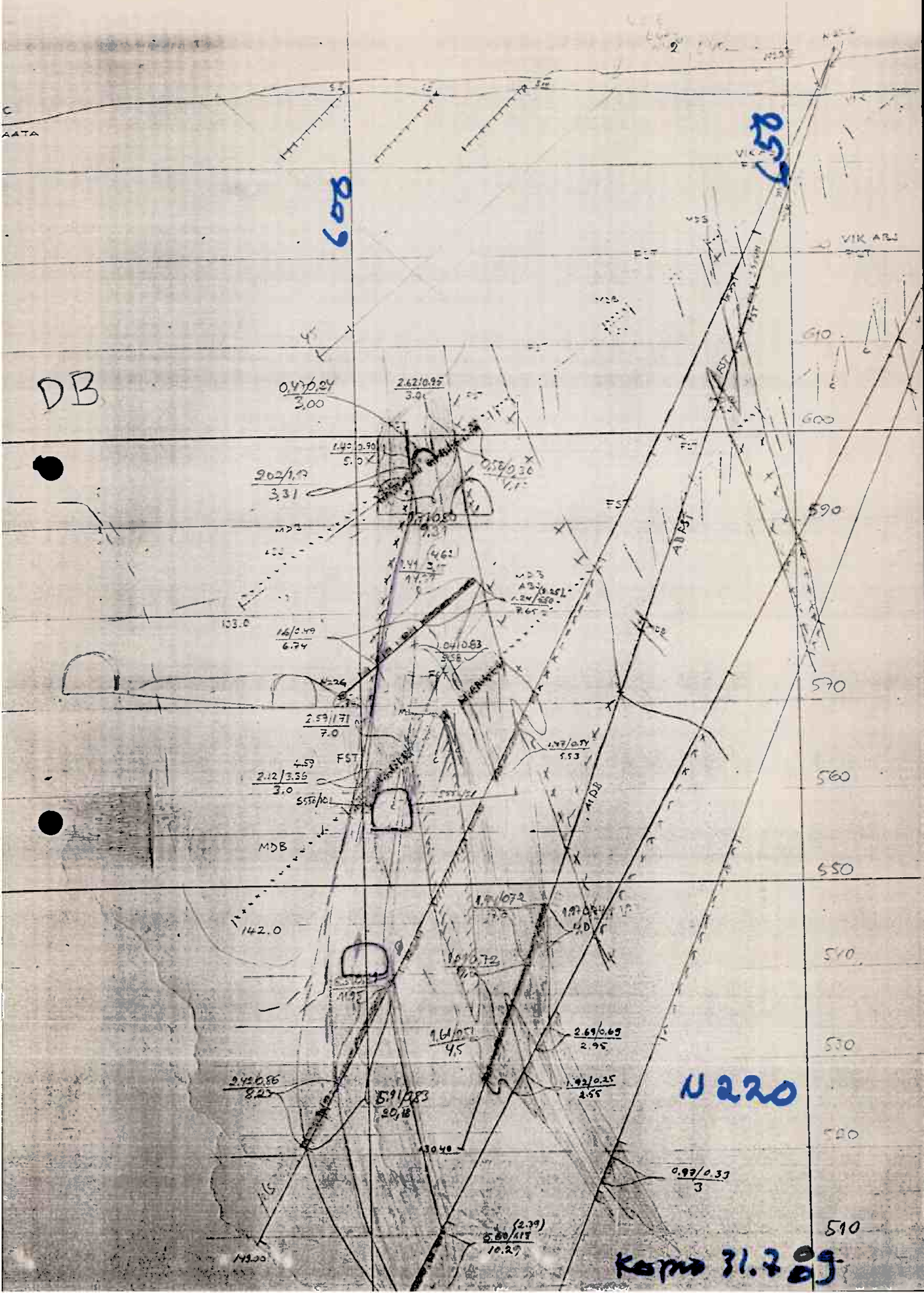
Kojro 31.7.89



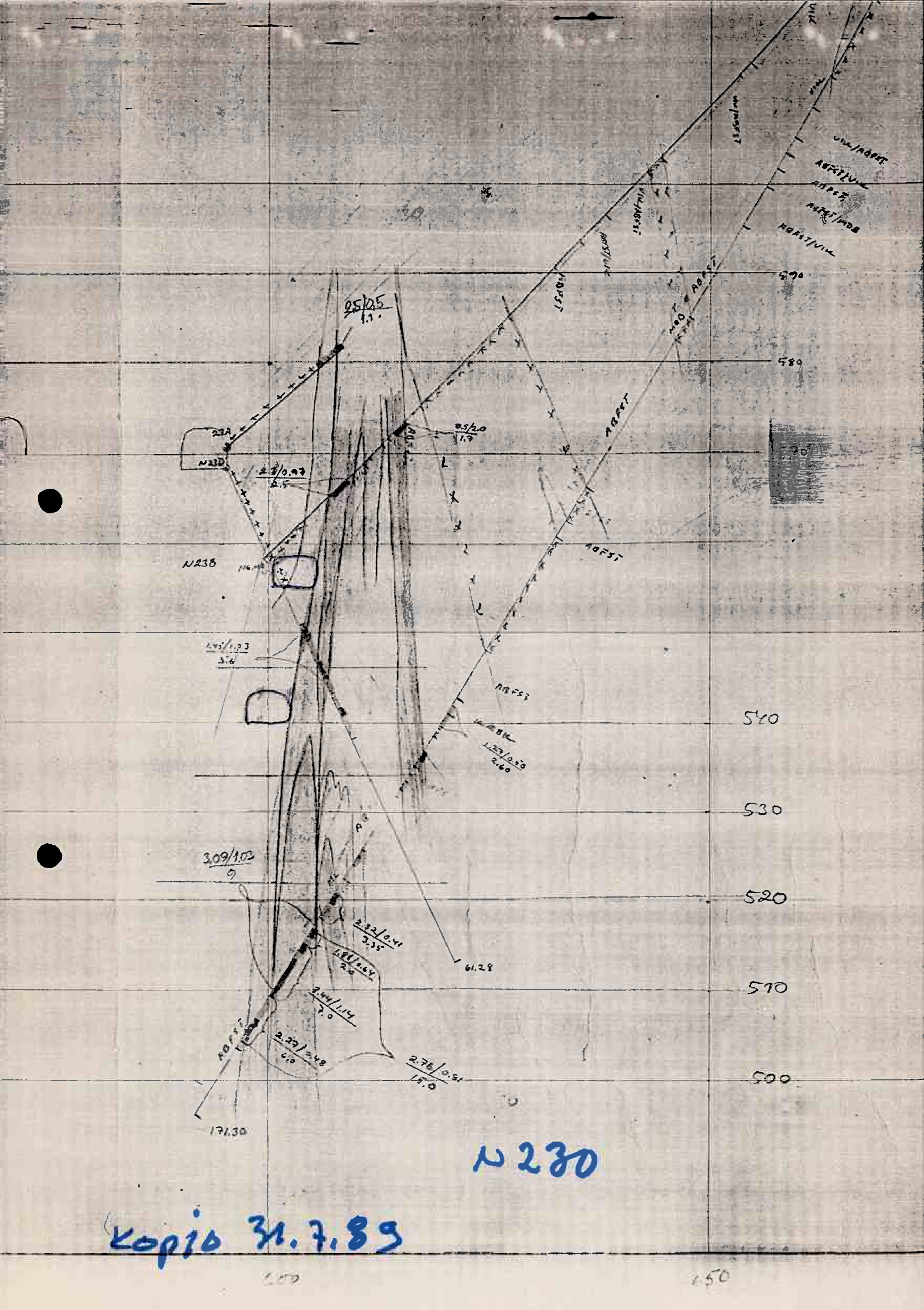
tosiio 31,2.89


N226
E680
A 42°
N220
22A
N226
MAATA
VIK
VIK ABJ
FST
VSS
VIK ABJ
FST
MDB
610
VIK
600
590
570
560
550
540
530
520
0,470,04
3,00
2.62/0.95
3.05
1.42/0.90
5.0
202/1,17
3,31
0,58/0,30
4,5
1.11/0.80
9.31
4.62
MDB
ABJ
MDB
ABJ/0.25
1.24/0.50
7.65
133.0
1.6/0.49
6.74
1.04/0.83
N226
2.53/1.71
7.0
FST
13.33
.0
SSTI/KL
1.32/0.53
5.53
AUDB
MDB
142.0
1.94/0.79
7.0
1.0/0.72
1.61/0.71
2.69/0.69
2.95
1.92/0.25
2.55
5.21/0.83
1.31/0.33
N220
N22
520
35

Komo 31.7.89


DB
608
658
AATA
VIK ARJ
FST
MDB
610
600
590
570
560
550
540
530
520
510
0,47/0,24
3,00
2.62/0.95
3.0
1.40/0.90
5.0
2.02/1.17
3.31
0.58/0.36
5.71/0.85
9.31
2.41
14.27
1.6/0.49
6.74
1.04/0.83
5.58
1.24/0.50
7.65
103.0
2.57/1.71
7.0
4.59
2.12/3.56
3.0
1.47/0.54
5.53
AB FST
M DB
142.0
1.41/0.72
1.97/0.44
4.0
1.61/0.51
4.5
2.69/0.69
2.95
2.42/0.56
8.23
5.91/0.83
20,18
1.92/0.25
2.55
A30.40
0.97/0.33
3
5.80/4.13
10.29
(2.79)
143.00
N 220

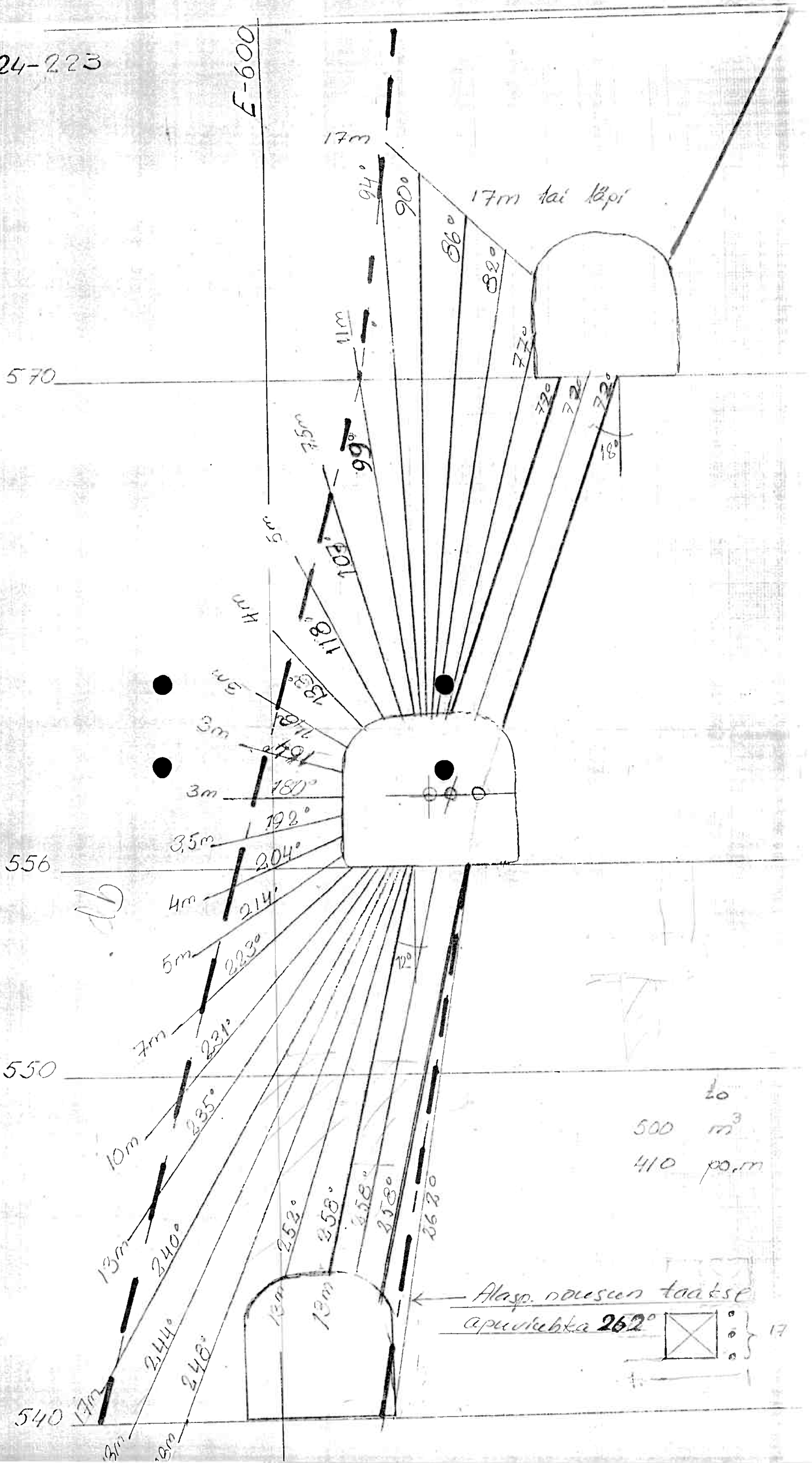
Kopio 31.7.89



N 230

Kopio 31.7.89

N 226-224-223

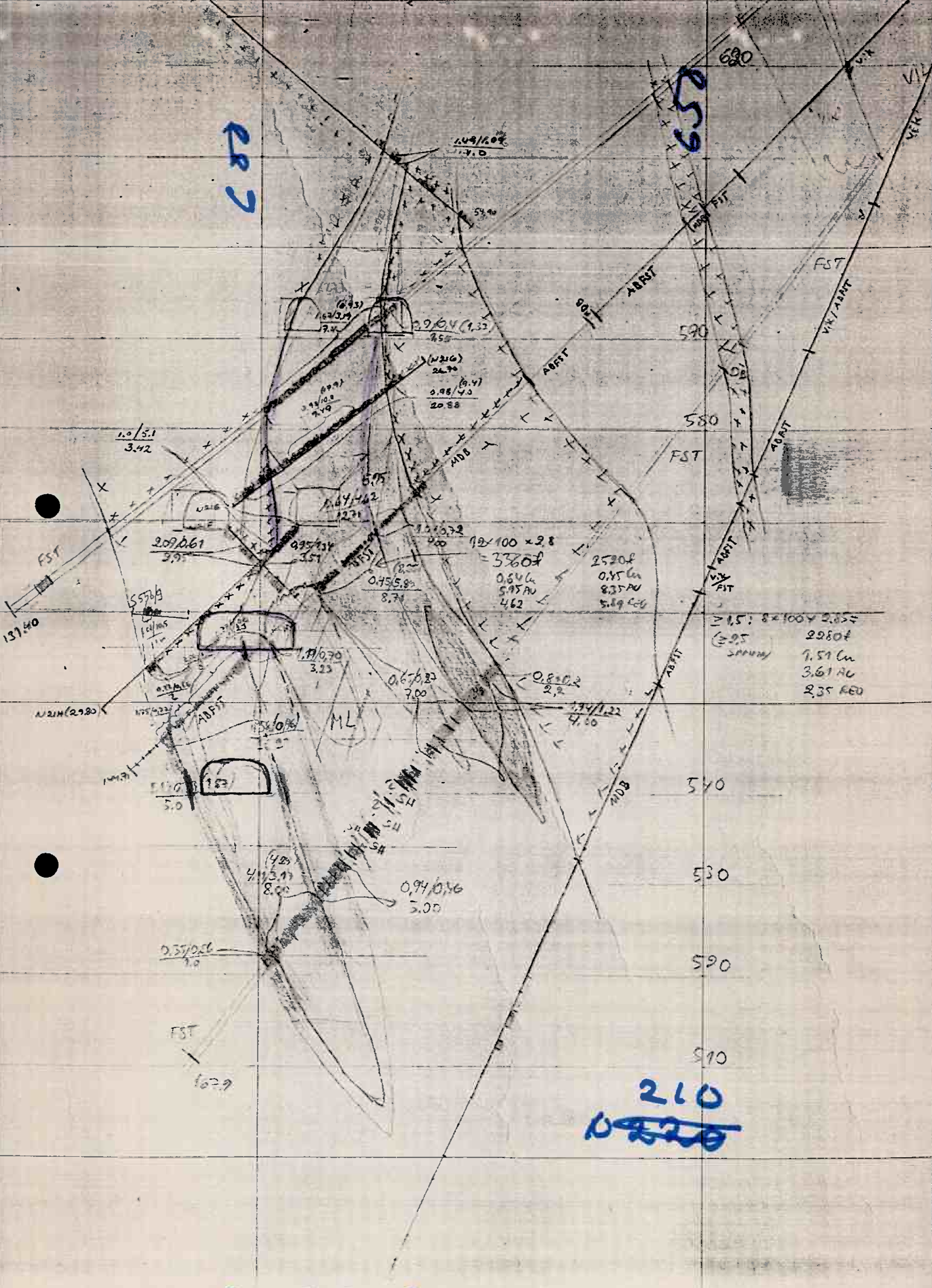


Alasp. nousun taakse apuviuhka 262°

Lo

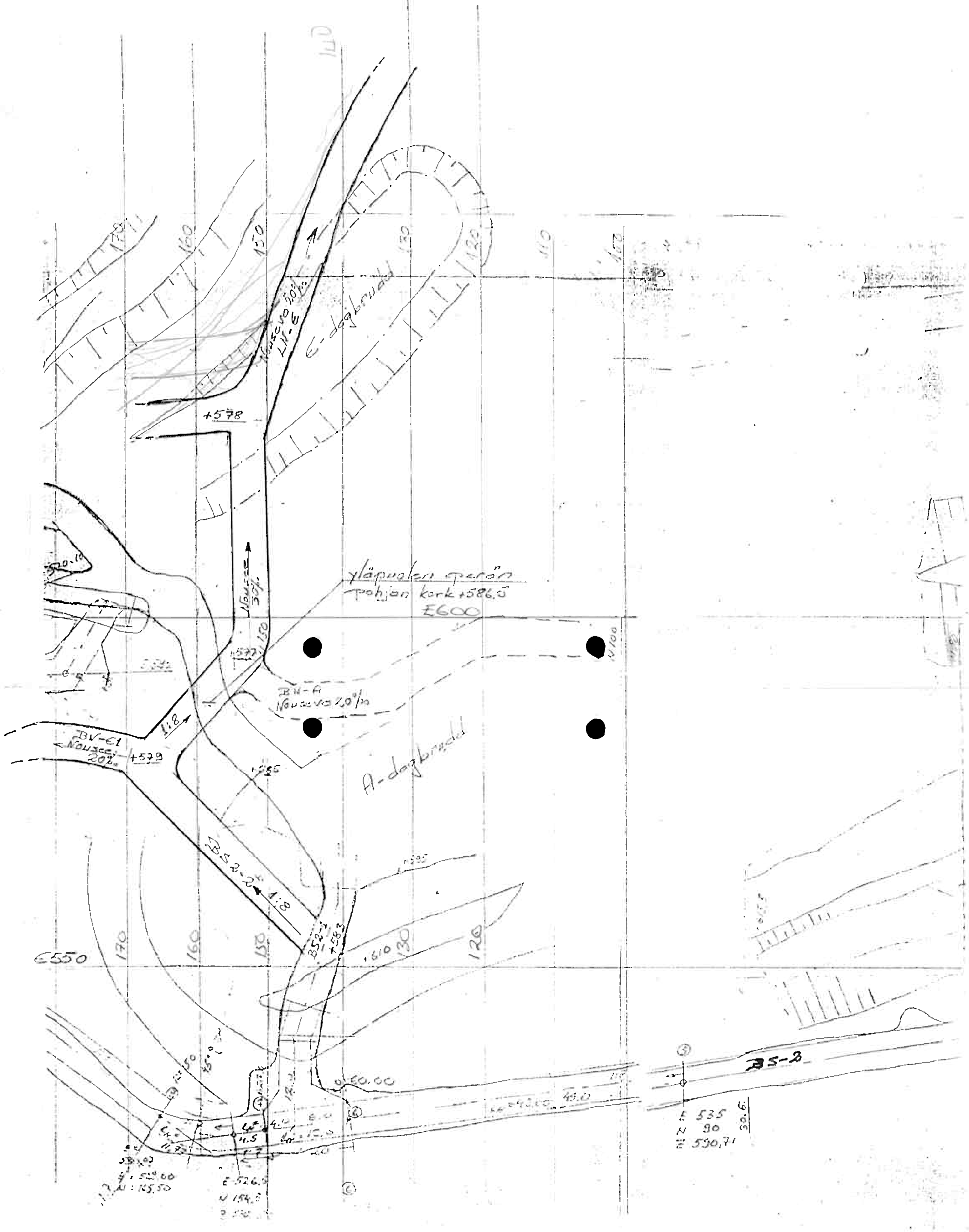
500 m^3

410 po.m



210
~~0220~~

Kopia 31.7.89



E-avolouhos
Pohjan pudotus
Valmistavat työt.
25.7.89/

Erz + 590 - +580

	Cu	Au	
N 140	0.83	14.67	2025 t
N 150	0.24	7.48	2700 t
N 160	0.52	3.67	2700 t
N 170	0.58	10.98	1890 t
	0.52	8.69	9300 t

18.7. ME

Malmiarvio E-avolouhoksen pohjanpudotus.

Leikk.	Cu-%	Au g/ton	Ala		Ton	
140	0,83	9,5	15×8×20×2.9	=	6960	(3500
150	0,24	7.5	15×8×20×2.9	=	6960	~~6000~~ 3500
160	0,50	3,0	12×7×10×2.9	=	2400	2000
170	0,59	10,0	10×6×10×2.9	=	1740	1000
	0,54	7,9		yht =	18.000 ton	12500 t)

Valm. työt: 135 jm peränajoa

A-avolouhoksen pohjan pudotus

Leikk	Cu-%	Au g/ton	Ala	Ton
110	2,1	1.20	10×15×10×2.9 =	4350
120	1.93	1.60	8×14×10×2.9 =	3250
130	2.6	0,84	12×8×10×2.9 =	2780
140	1.82	1,30	8×15×10×2.9 =	3480
150	2.43	0,47	6×15×8×2.9 =	2100
	2,10	1.14	yht =	16.000 ton

Valm. työt 55 jm peränajoa

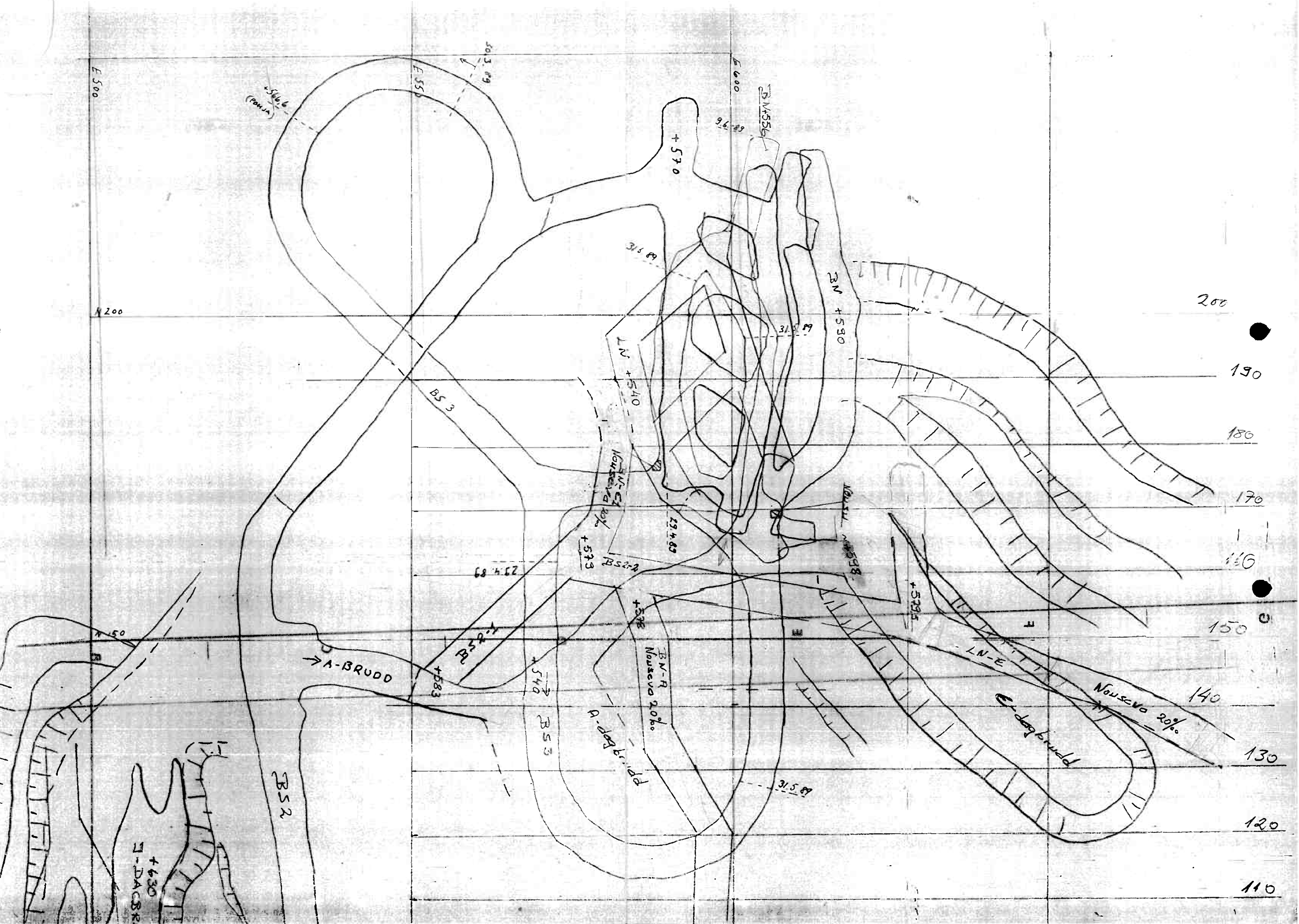
E1-570 tason yläpuoli

Leikk	Cu-%	Au-g/ton	ala	ton
170	3,86	1.20	8×10×10×2.9 =	2300
180	3,0	1.40	10×10×10×2.9 =	2900
	3,5	1.38		~5000 ton

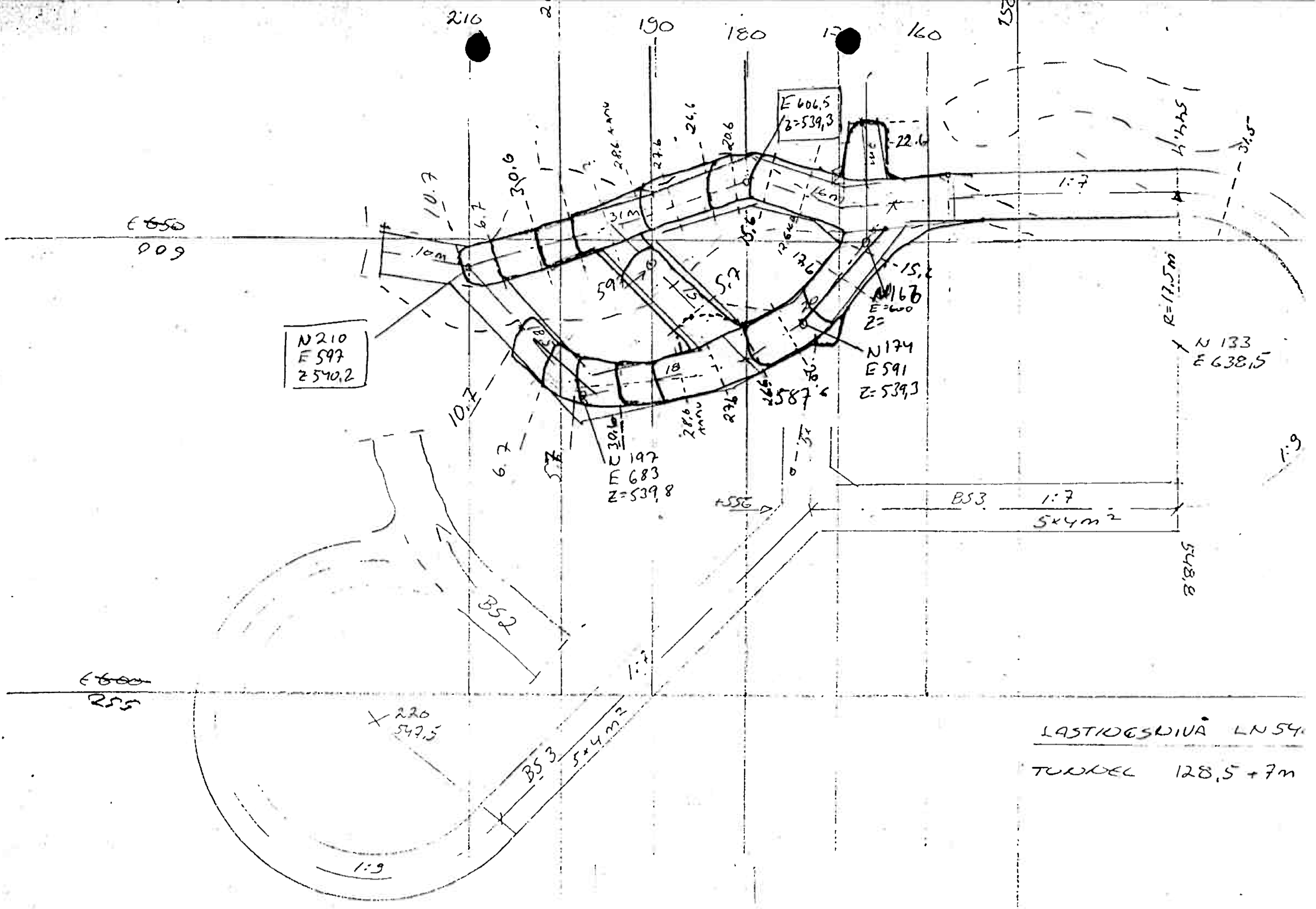
Valm. työt 20 jm peränajoa

25.7/MHS

247/145

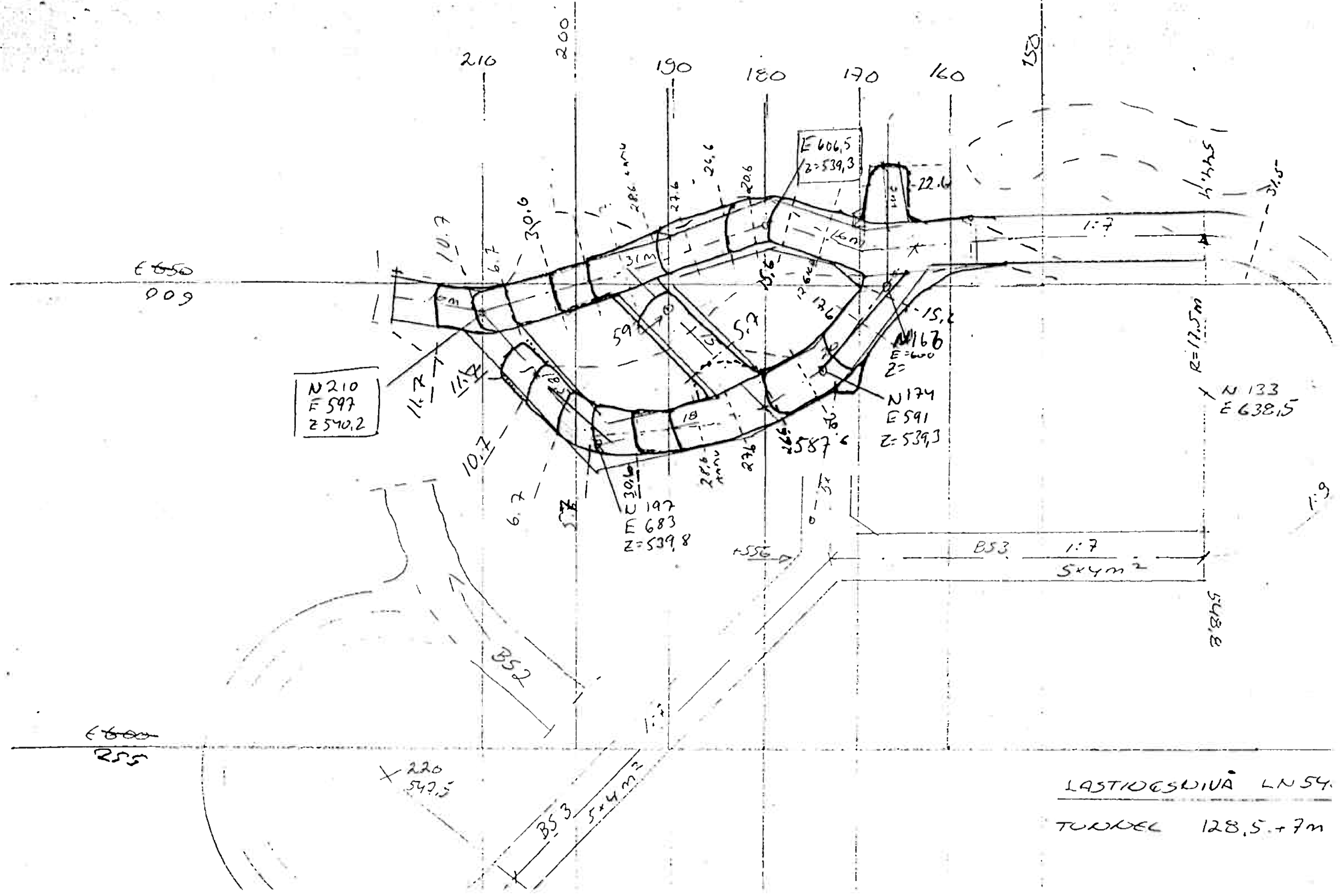


E500
E550
E600
N200
N150
200
190
180
170
160
150
140
130
120
110
30.3.89
+566 (pohja)
+570
BN+556
9.6.89
31.5.89
BN +580
31.5.89
LN +540
BS 3
LN-E1 Nousevo 20‰
23.4.89
23.4.89
+573
BS2-A
Nousu
+598
+579.5
+578
BN-A Nousevo 20‰
A-dagbrudd
→A-BRUDD
+583
BS2-1
+540 →
BS3
BS2
LN-E
Nousevo 20‰
E-dagbrudd
31.5.89
+630
D-DAGBR.



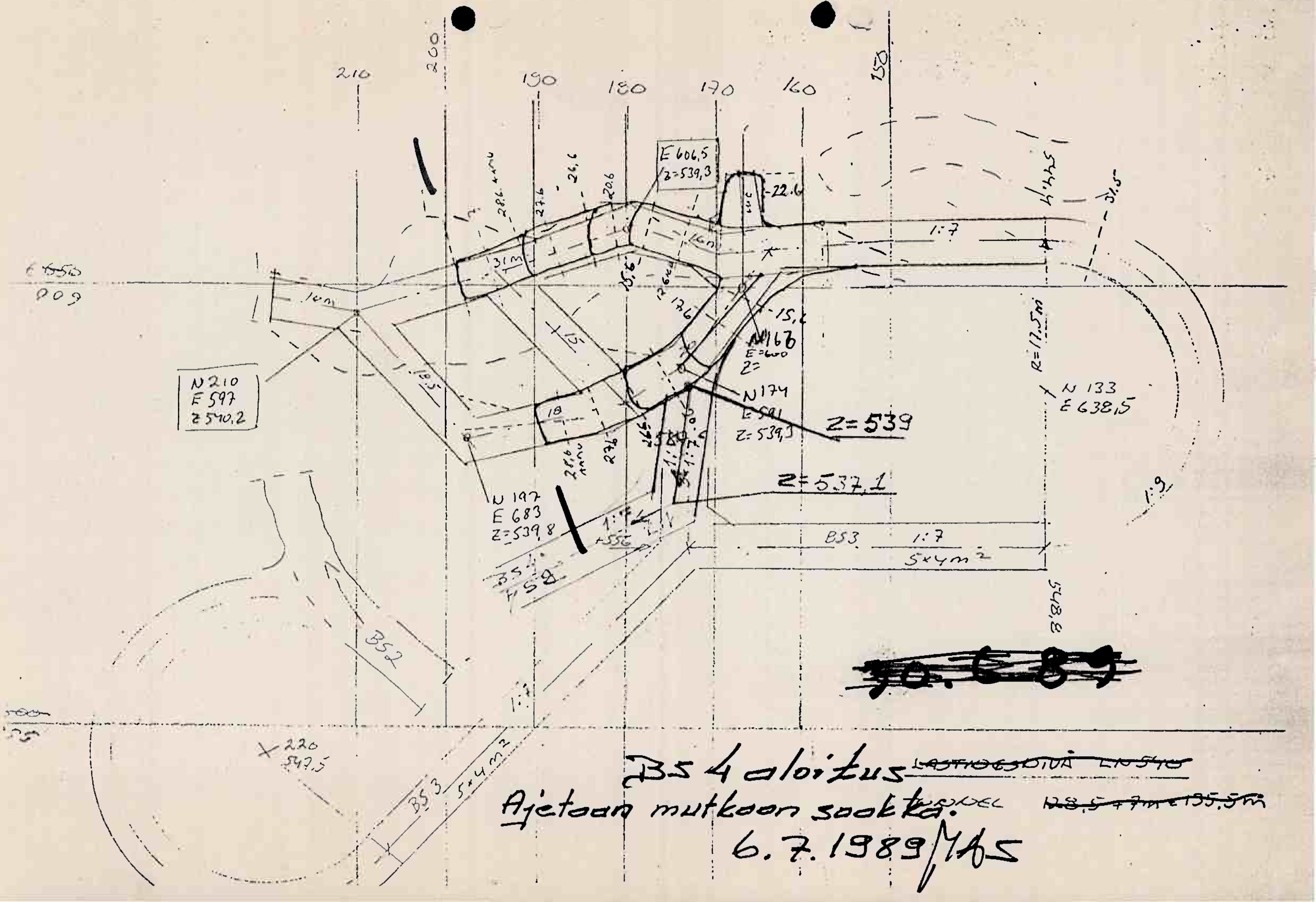
LASTNINGSNIVÅ LN54

TUNNEL 128,5 + 7m



LASTNINGSNIVÅ LN54

TUNNEL 128,5+7m



~~30.6.89~~

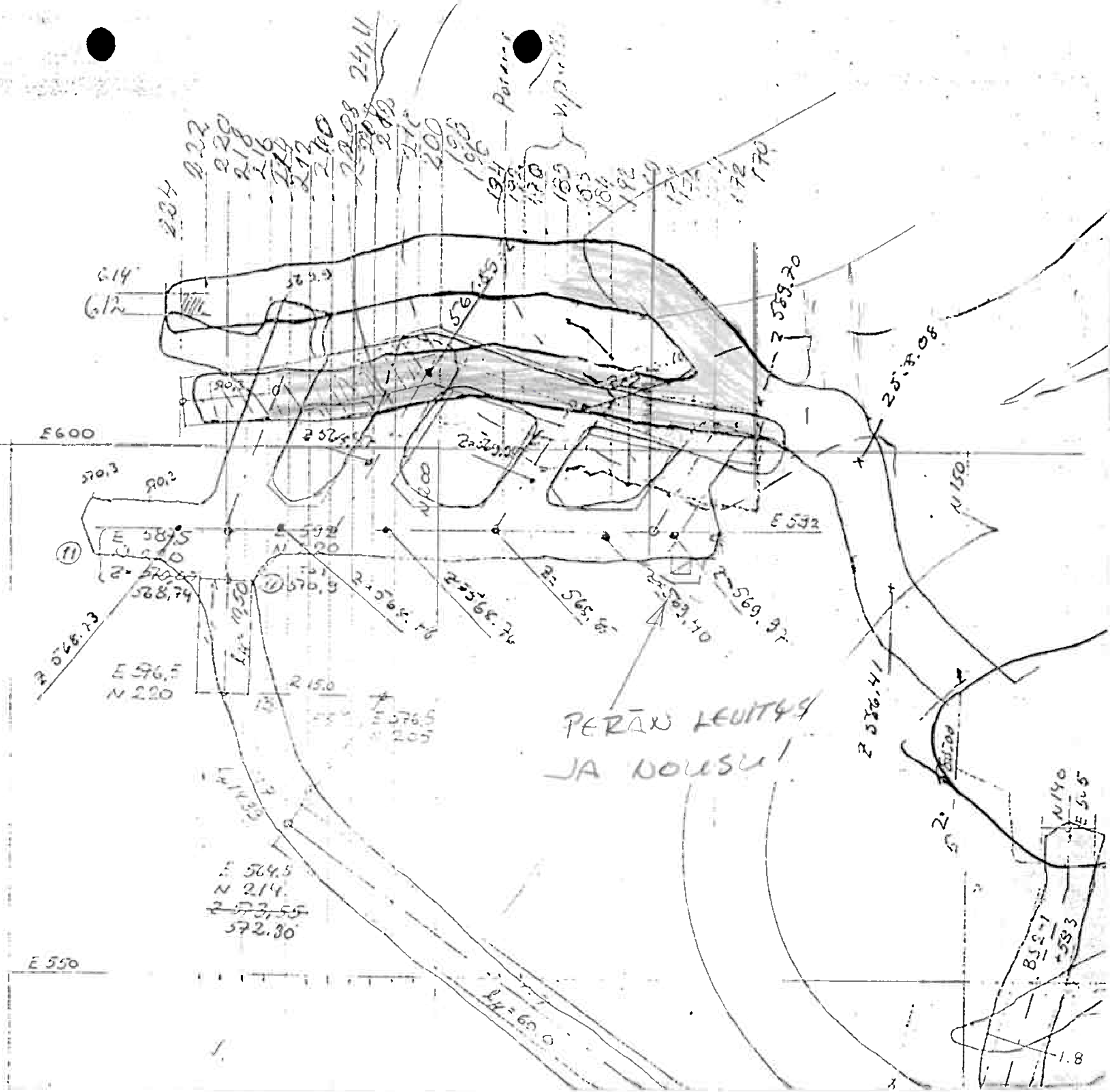
BS 4 aloitus ~~LASTAUSSOIVA EN 540~~

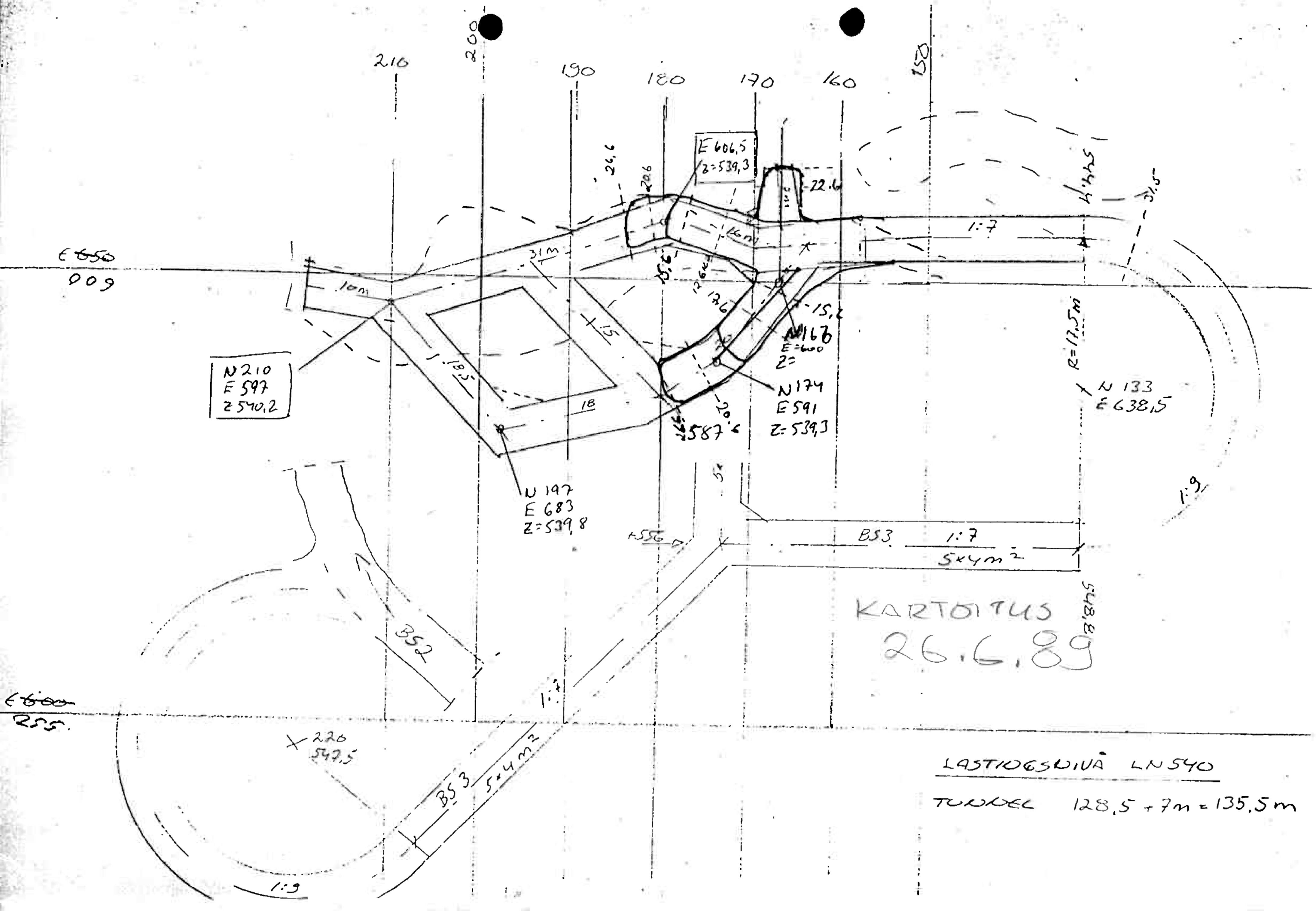
Ajetaan mutkaan saakka. ~~BOXEL~~ ~~128,5+7m=135,5m~~

6.7.1989/MAS

E1 -LOUHOS
TUULETUSNOUSU
570 - 556

5.5.89/HA

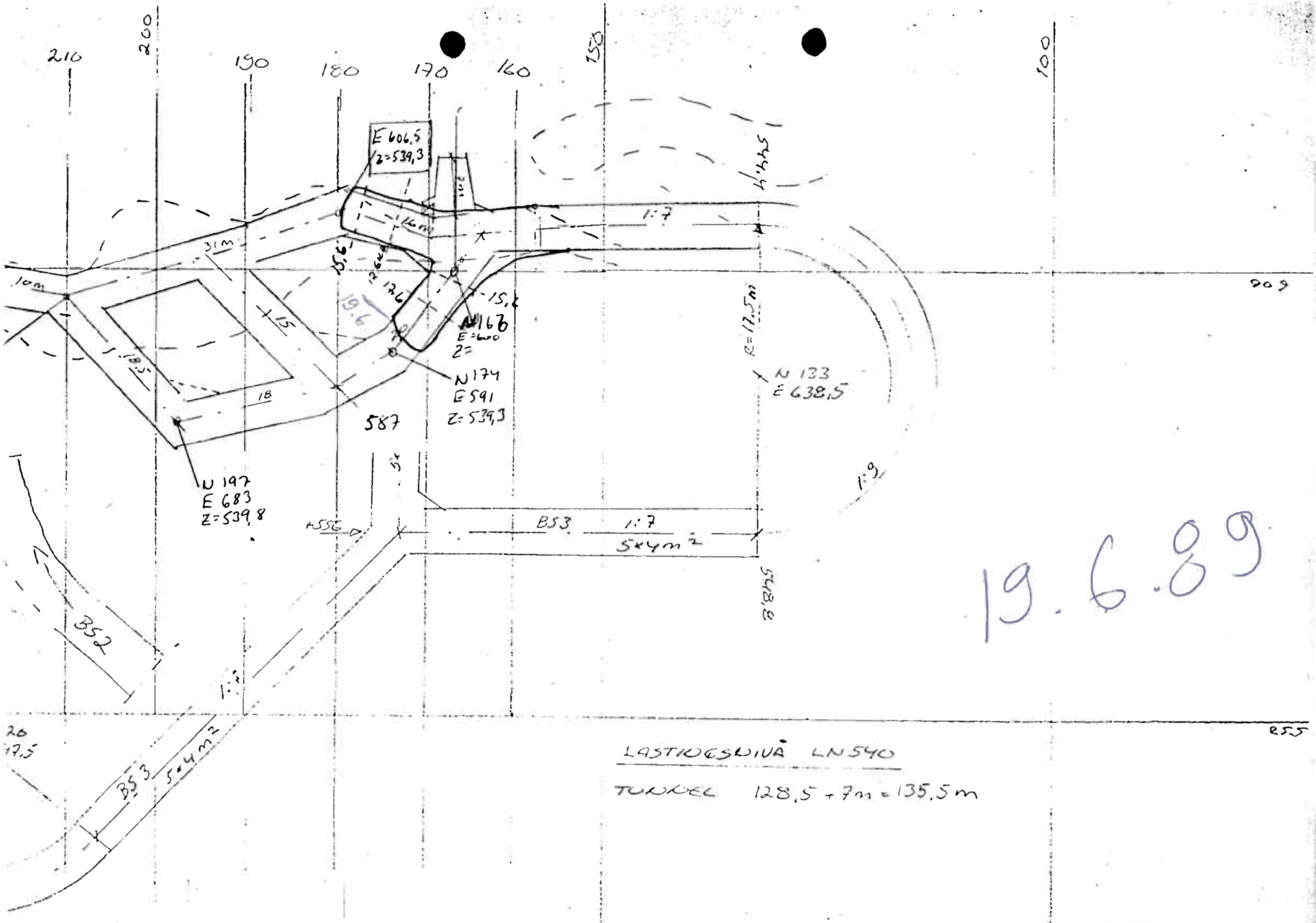




KARTOITUS
26.6.89

LASTNINGSNIVÅ LN540

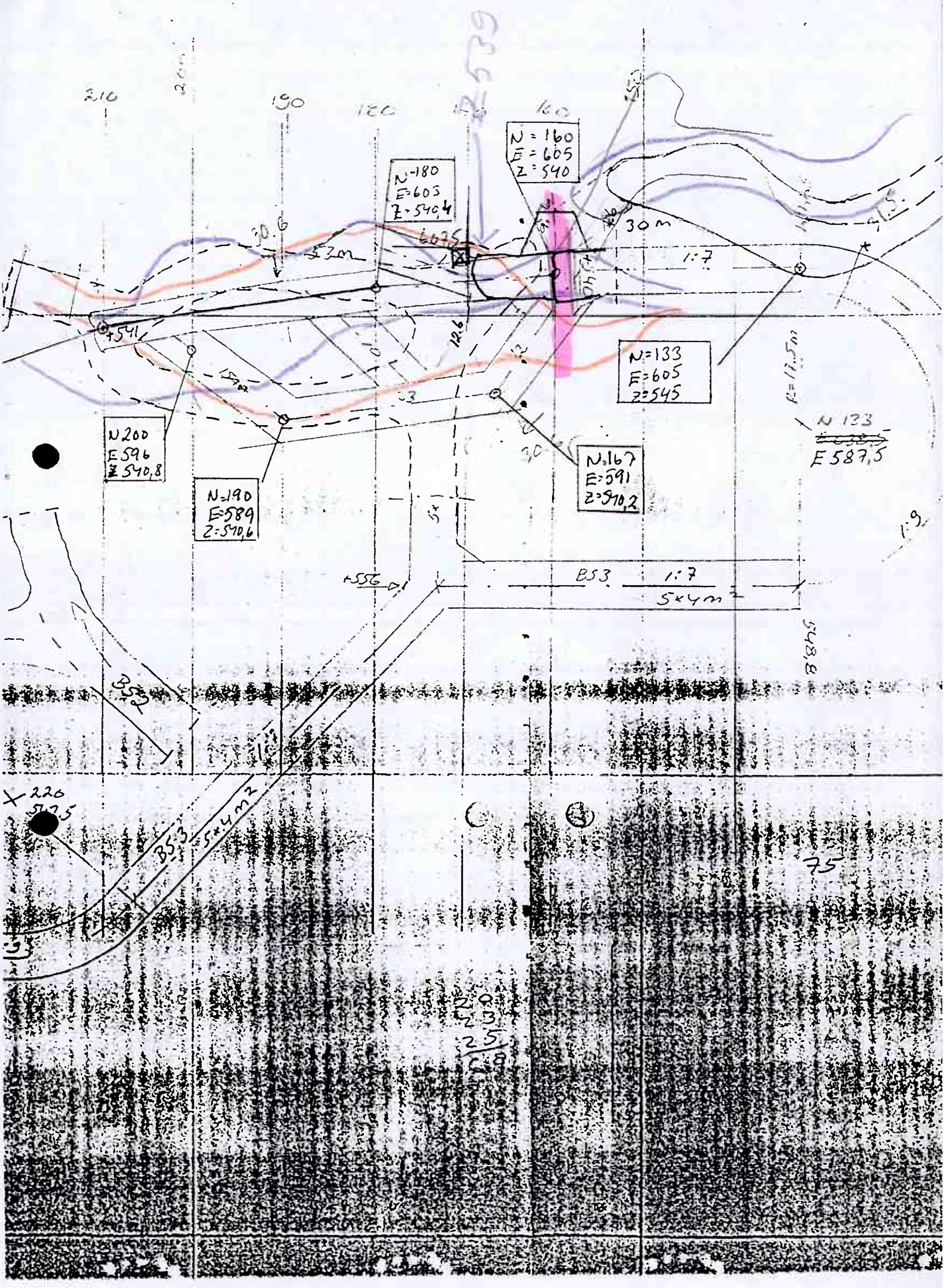
TUNNEL 128,5 + 7m = 135,5m



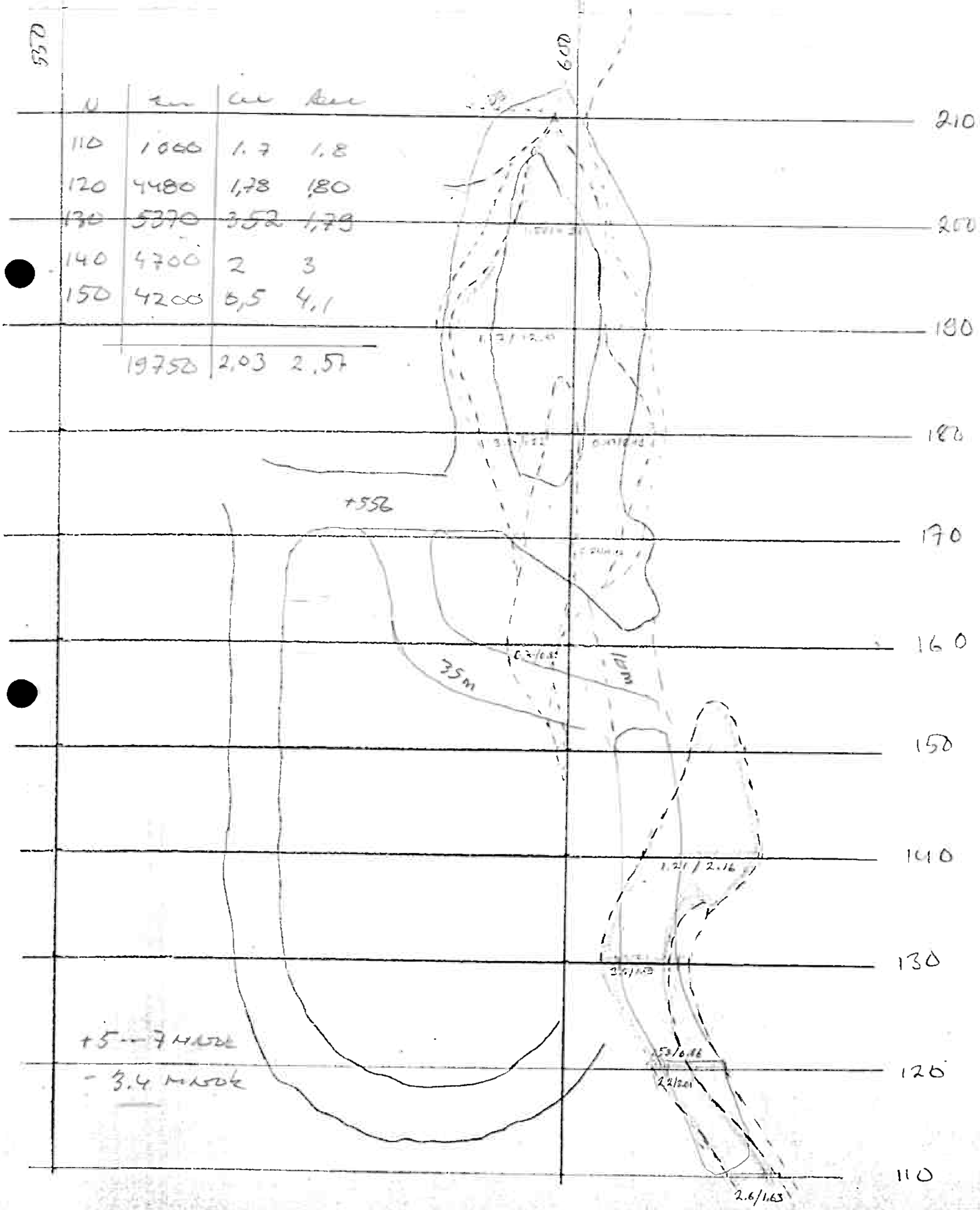
LASTNINGSNIVÅ LN540

TUNNEL 128,5 + 7m = 135,5m

19.6.89

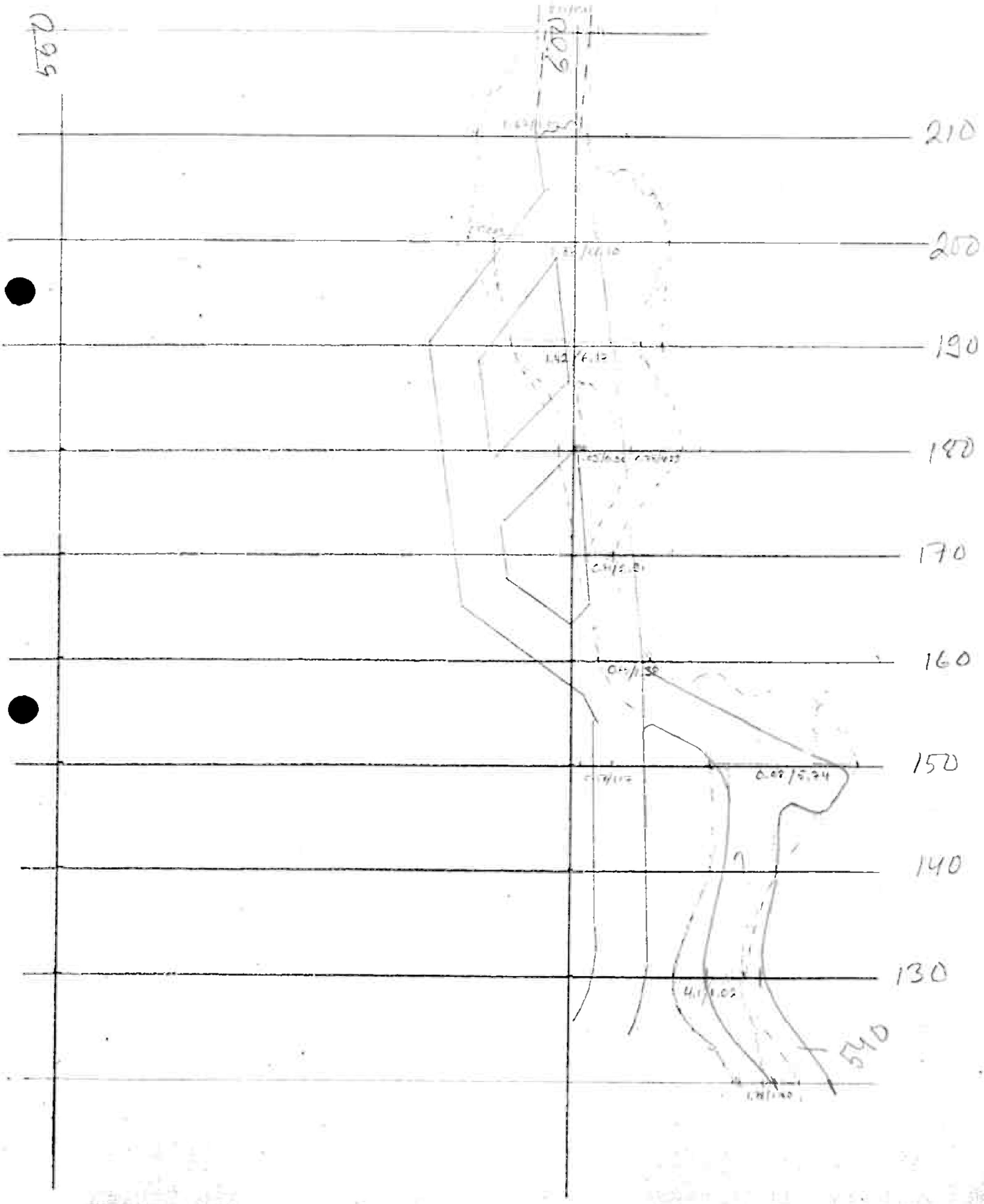

539
210
200
190
180
170
160
150
N=180
E=605
Z=540,4
N=160
E=605
Z=540
30.6
52m
603,5
30m
1:7
+541
N=133
E=605
Z=545
N200
E596
Z540,8
N=190
E=589
Z=540,6
N=167
E=591
Z=540,2
N 133
E 587,5
R=12,5m
12,6
15m
30
1:9
+556
BS3
1:7
5×4m
548,8
BS2
X 220
547,5
BS3
5×4m
75
20
23
25
28

E malminvagat -560 (katto

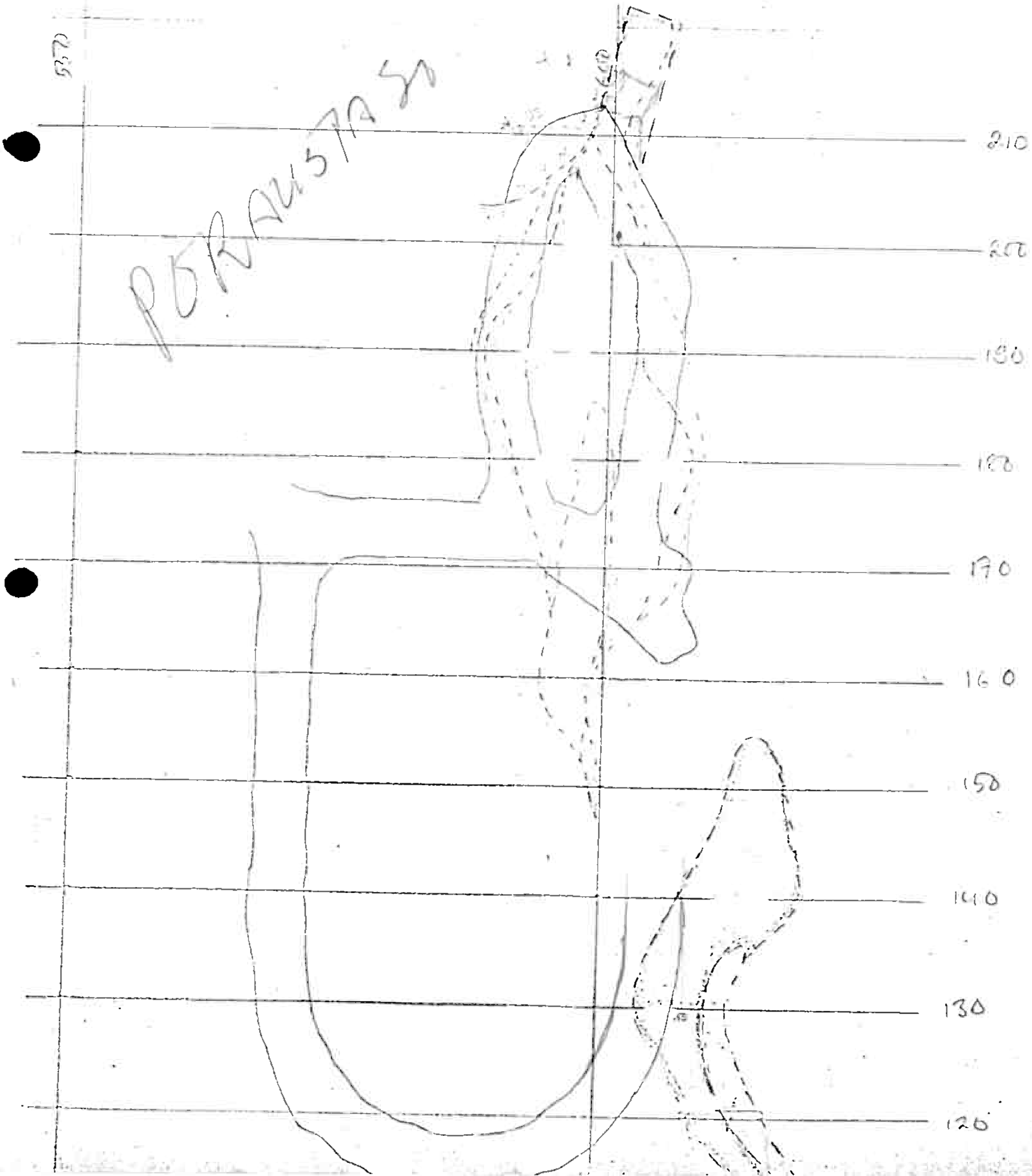


N	m²	Cu	Au
110	1000	1.7	1.8
120	4480	1,78	1,80
130	5370	3,52	1,79
140	4700	2	3
150	4200	5,5	4,1
	19750	2,03	2,57

E - malminrajat +345 (=katto)

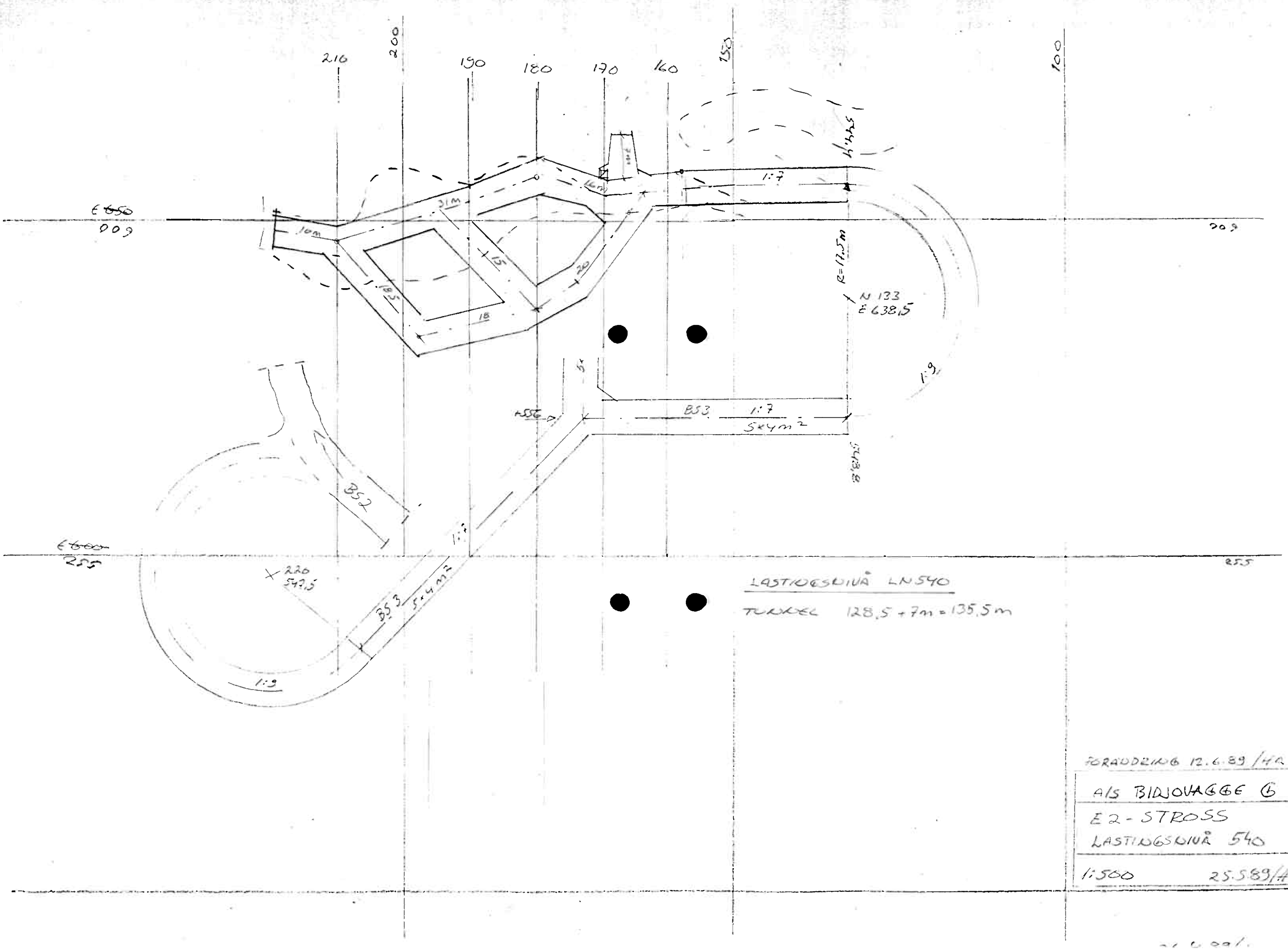


E malmirajat +560 (katto)



4:	96
5	101
6	107
7	113
8	120
9	122
10	129
11	133
12	138
13	144
14	150
15	159
16	169
17	177
18	187
19	196
20	205
21	214
22	222
23-	230
24-	237
25-	243
26-	247
27	250
28	255
29	260
30	260

3	90
4	95
5	103
6	115
7	110
8	116
9	122
10	126
11	130
116	134
12	138
13	144
14	152
15	160
16	168
17	178
18	186
19	196
20	204
21	212
22	220
23	216
24	232
25	238
26	242
27.	246
28	250
29	254
3	250



LASTINGSNIVÅ LN540

TUNNEL 128,5 + 7m = 135,5 m

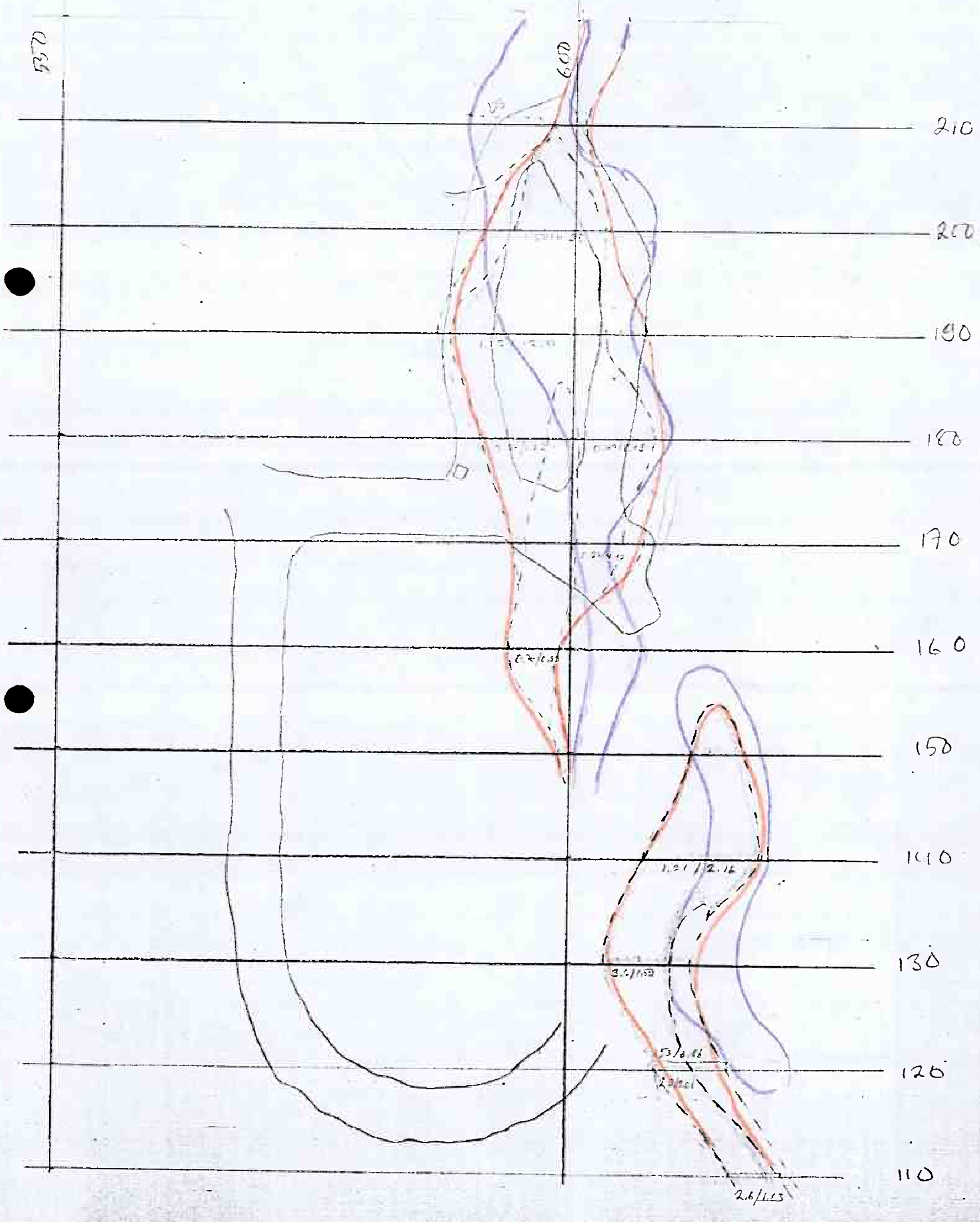
FORANDRING 12.6.89 /HR

A/S BIDJOVAGGE ⑥

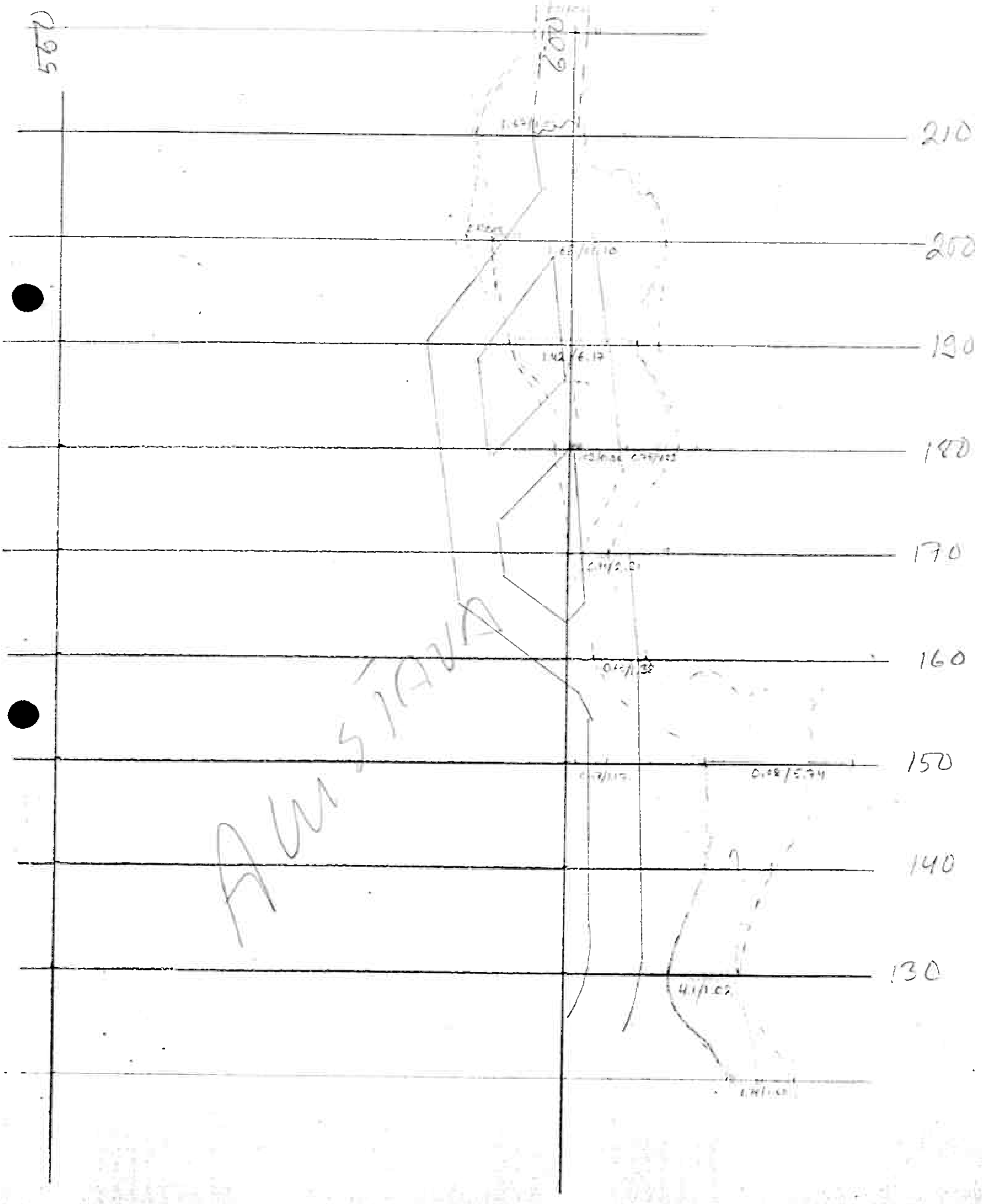
E2 - STROSS
LASTINGSNIVÅ 540

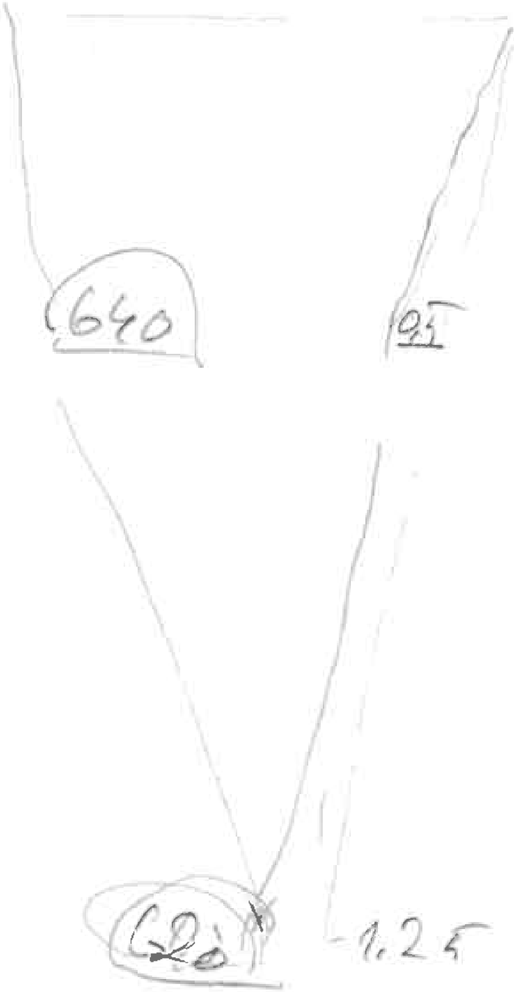
1:500 25.5.89/HR

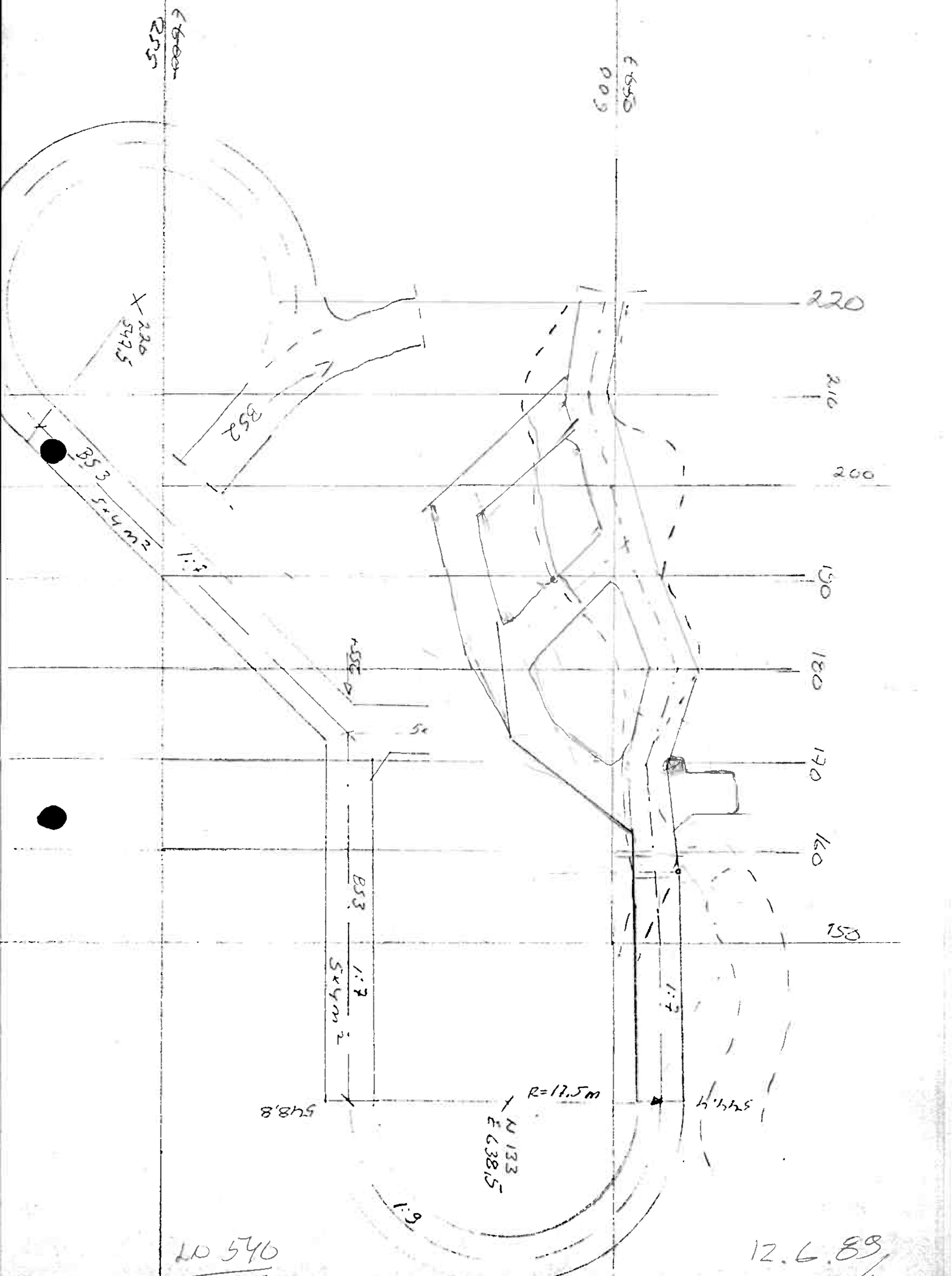
E malmirajat +560 (katto



E– malminrajat +345 (= katto)

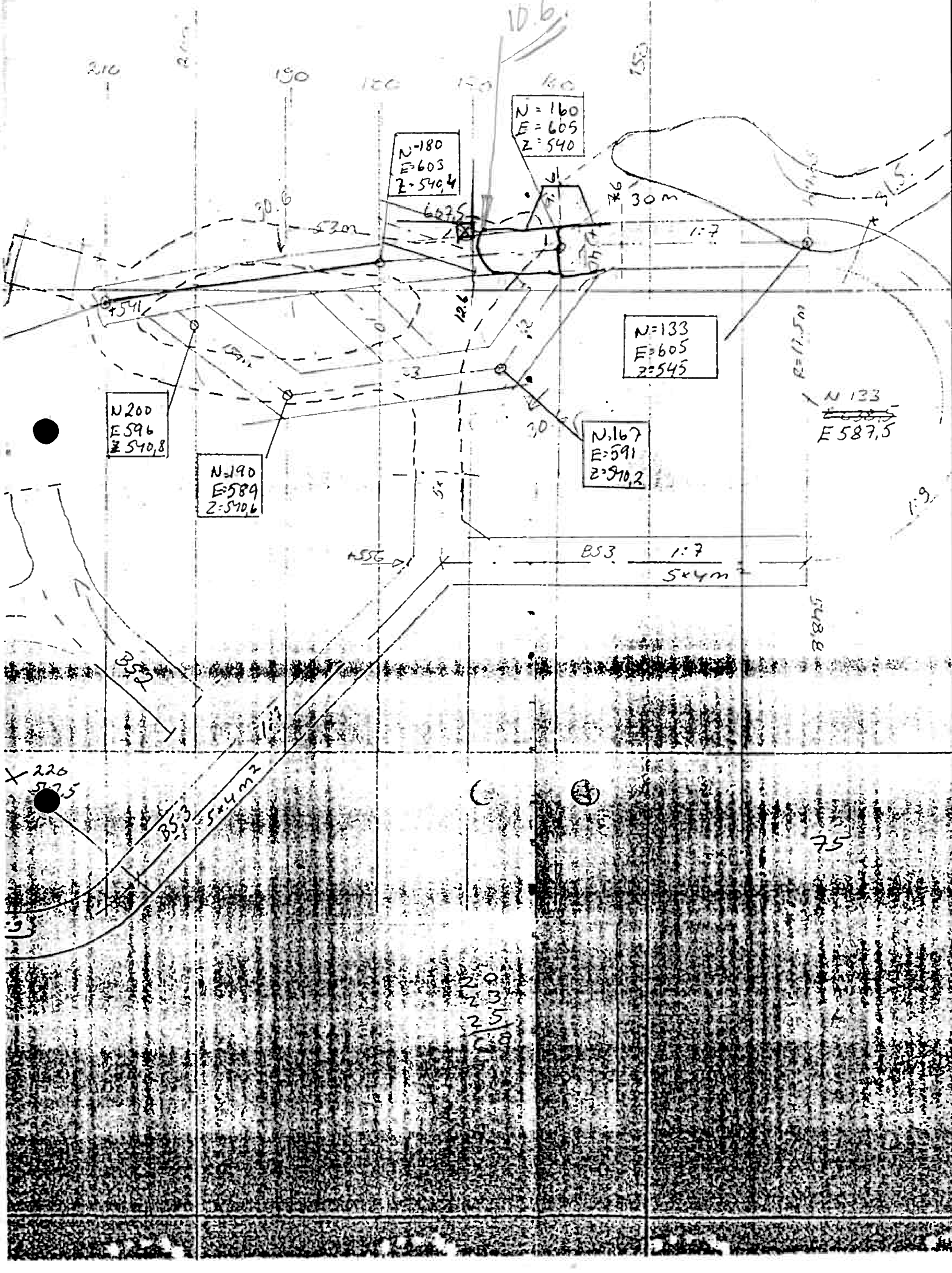


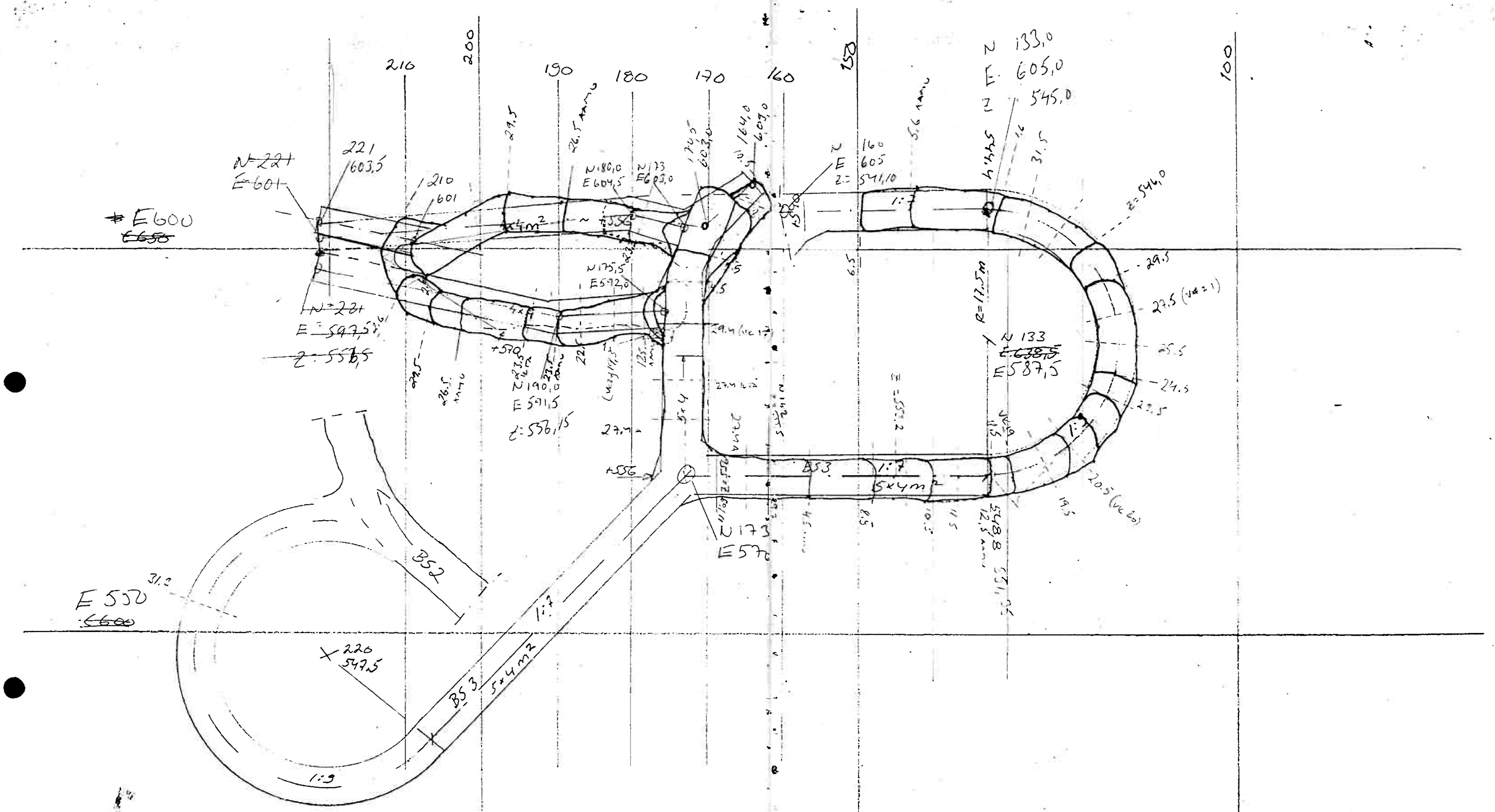

640
9,5
620
1,25



LD 540

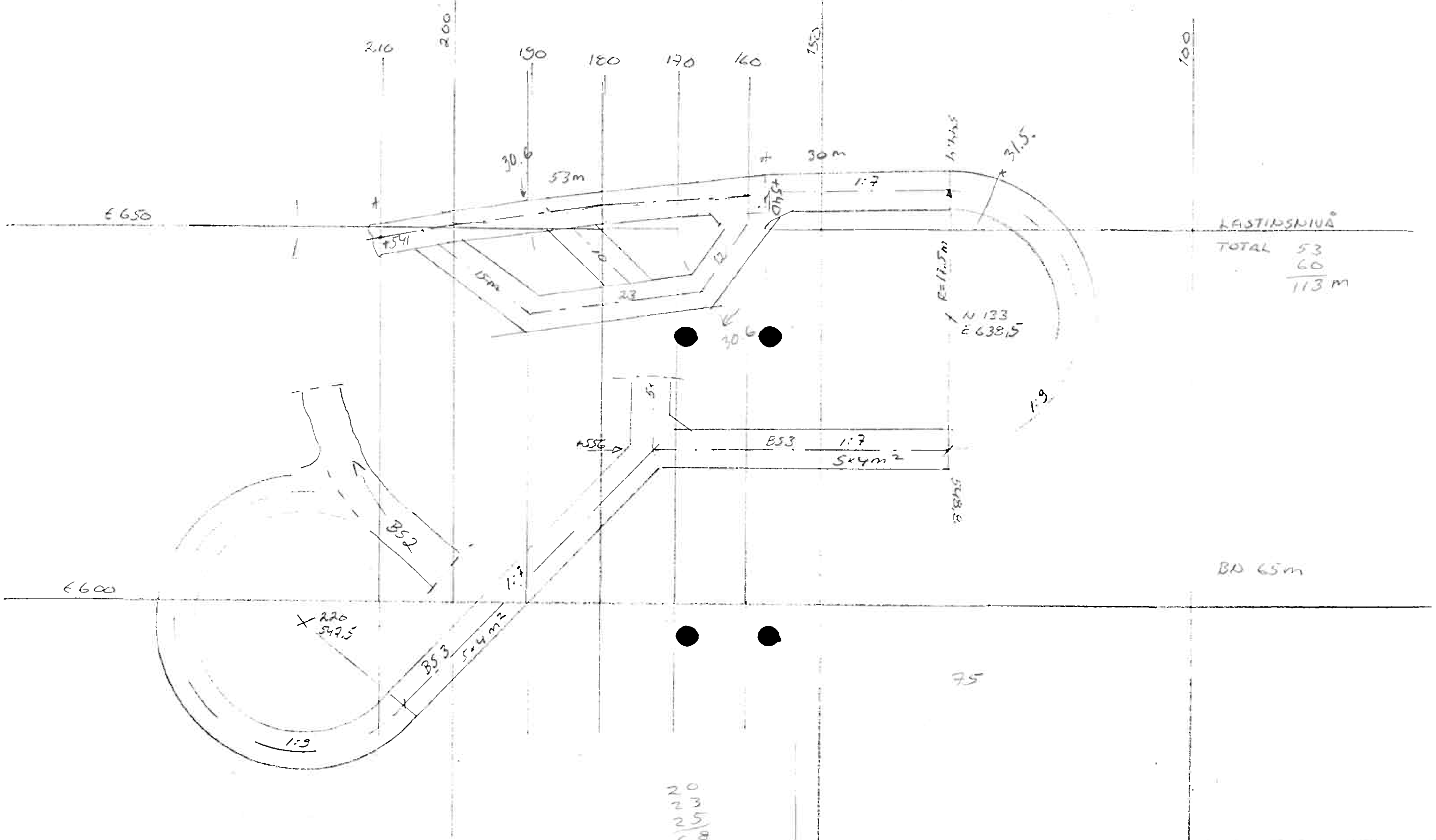
12.6.89
MR/HL


10.6
210
200
190
180
170
160
150
N=160
E=605
Z=540
N-180
E=603
Z=540,4
30.6
52m
6075
30m
1:7
+541
12.6
N=133
E=605
Z=545
R=17,5m
N 133
E 587,5
N200
E596
Z540,8
N=190
E=589
Z=540,6
N,167
E=591
Z=540,2
BS3
1:7
5x4m
BS2
1:9
220
587,5
BS3
5x4m2
548,8
75



1. = VENTILASJON STIGORT
1,5m × 1,5m
FRA NIVÅ 570 TIL 556

A/S BIDJOVAGGE ⓑ
E 2 - STROSS
BORINGSNIVÅ + 556
1:500

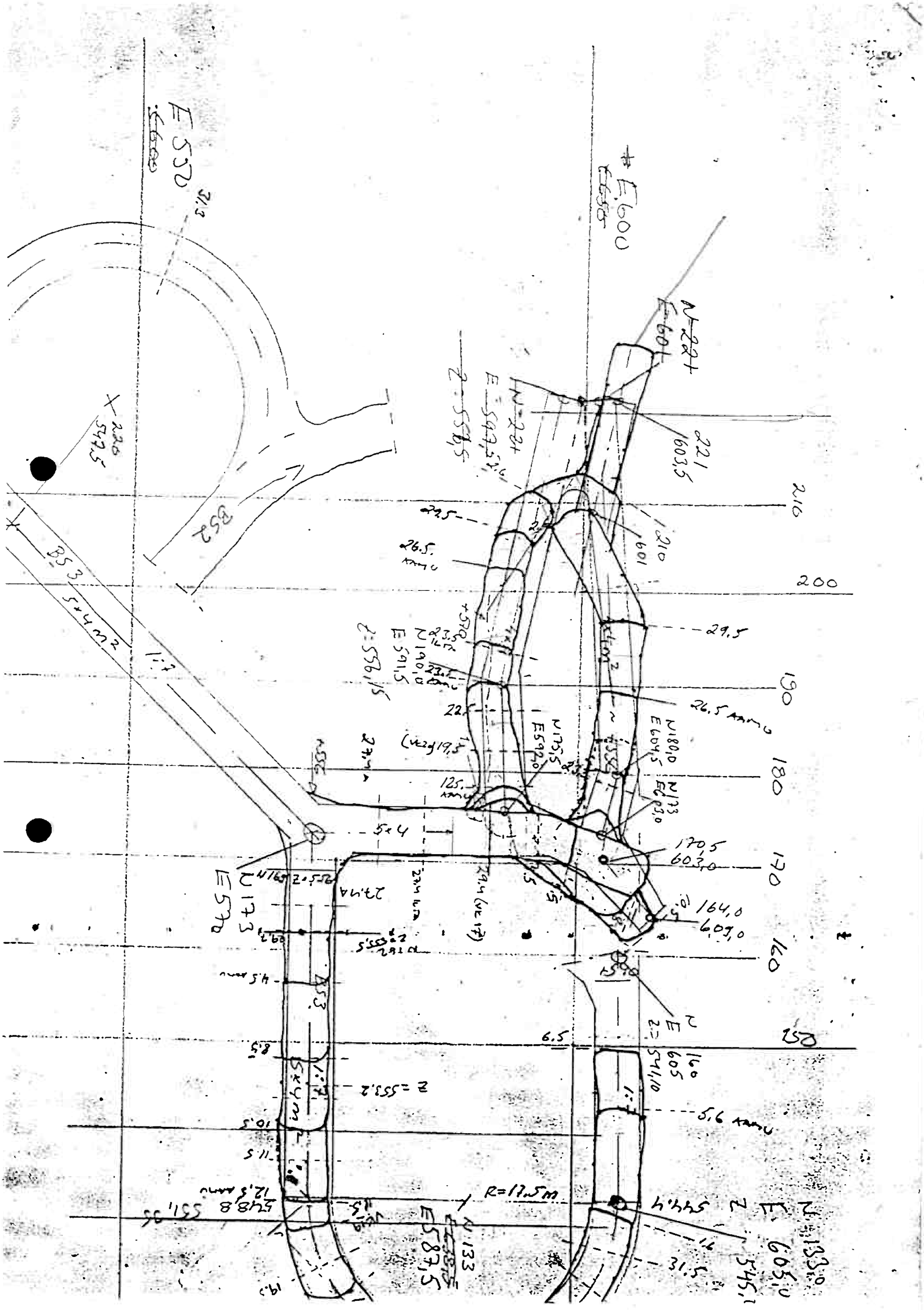


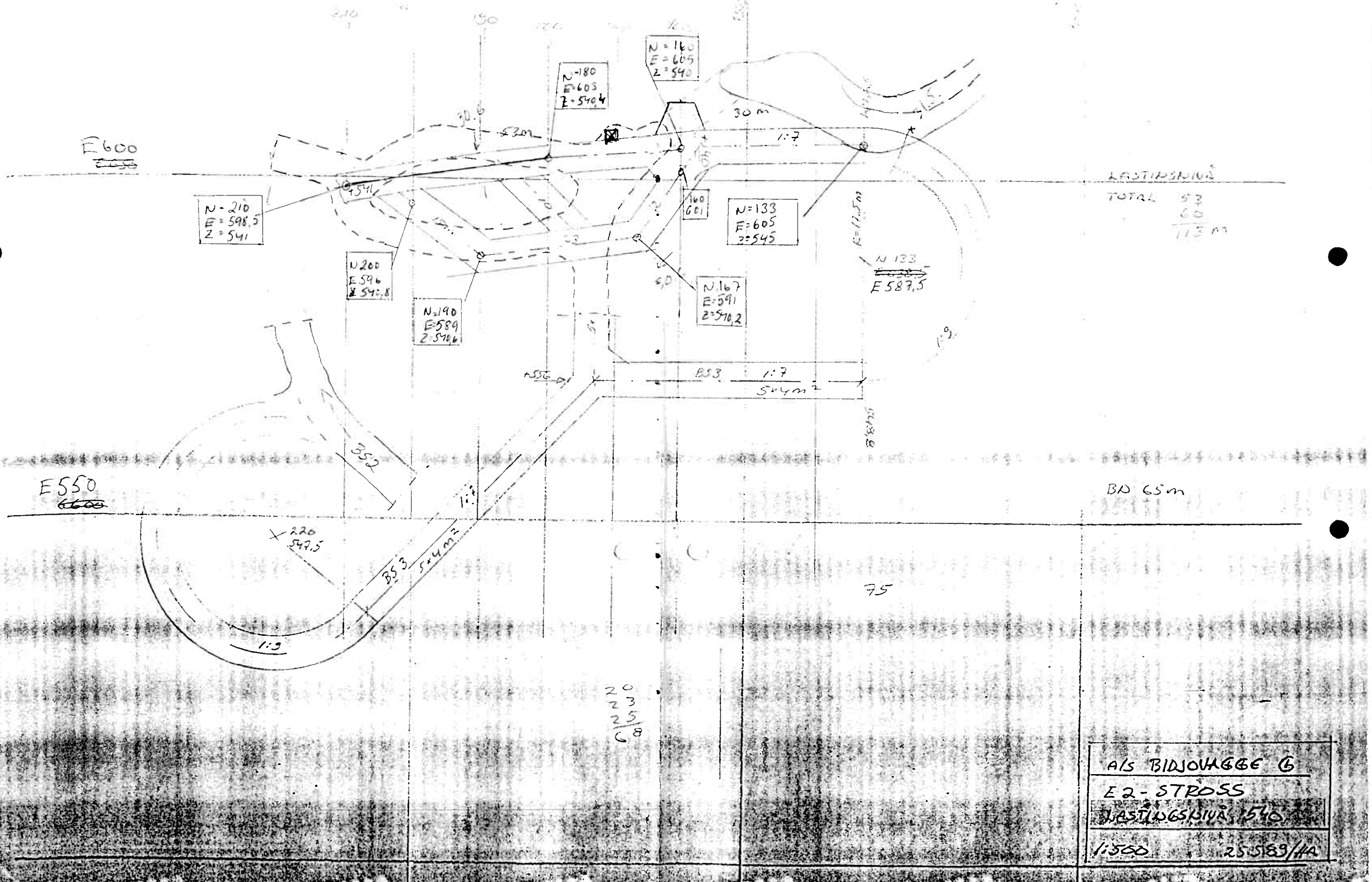
A/S BIDJOVAGGE ⓑ

E 2 - STROSS

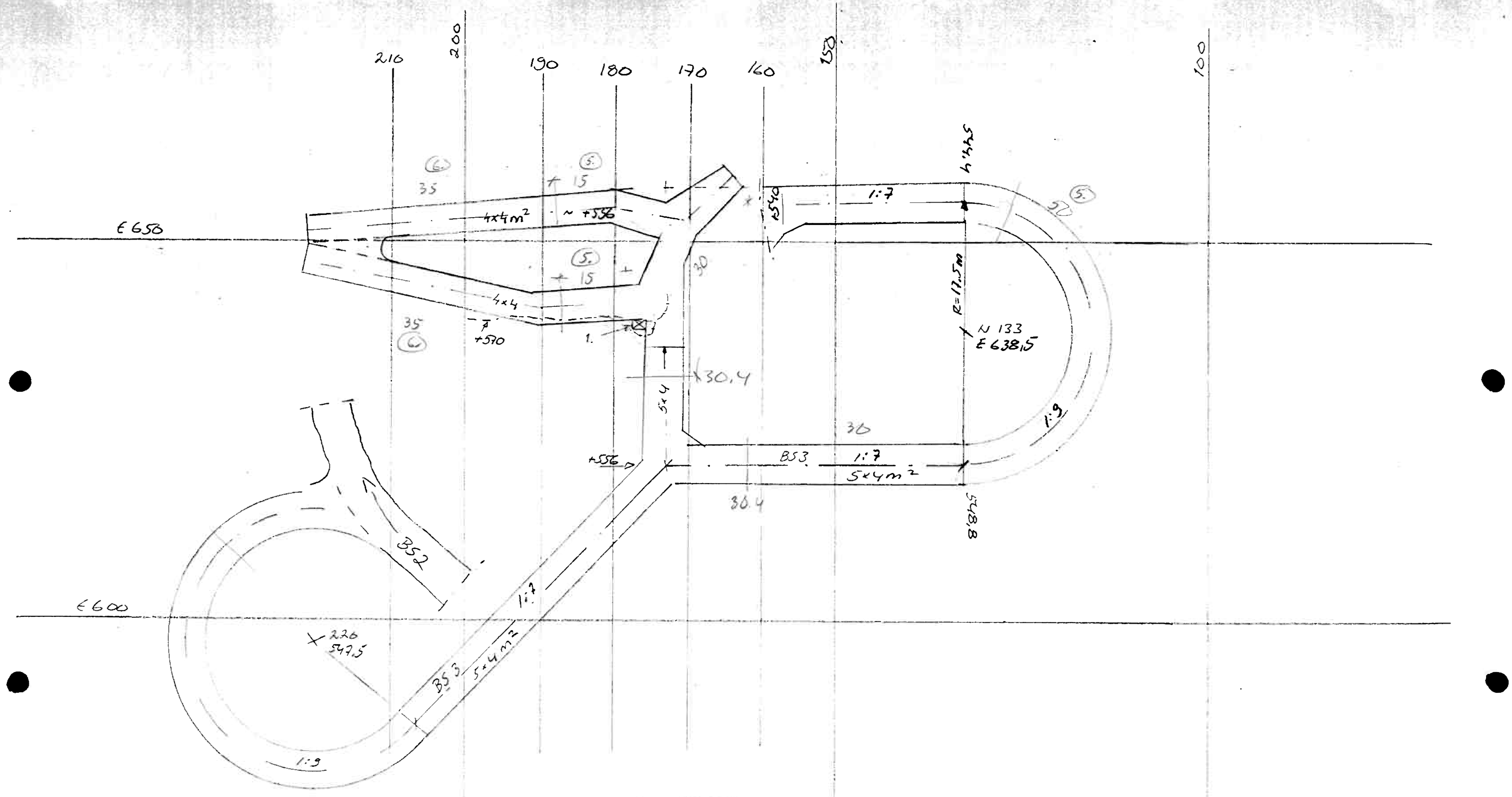
LASTINGSNIVÅ 540

1:500 25.5.89/HA


E 530
E 600
N 221
E 601
N 221
E 597.5
Z 558.5
221
603.5
210
601
210
200
29.5
26.5
23.5
N 190.0
E 591.5
Z 556.15
22
190
26.5
N 180.0
E 604.5
N 175.5
E 592.0
125
N 173
E 603.0
180
170.5
603.0
170
164.0
609.0
160
N
E
Z
150
6.5
160
605
541.10
5.6
1:7
B52
B53
5x4m
1:7
226
597.5
5x4
N 173
E 578
N 165 Z 552
23.14
Z=553.2
4.5
8.5
5x4m
10.5
11.5
12.5
548.8
531.95
R=17.5m
E 587.5
N 133
N 133.0
E 605.0
Z 545.1
544.4
16
31.5



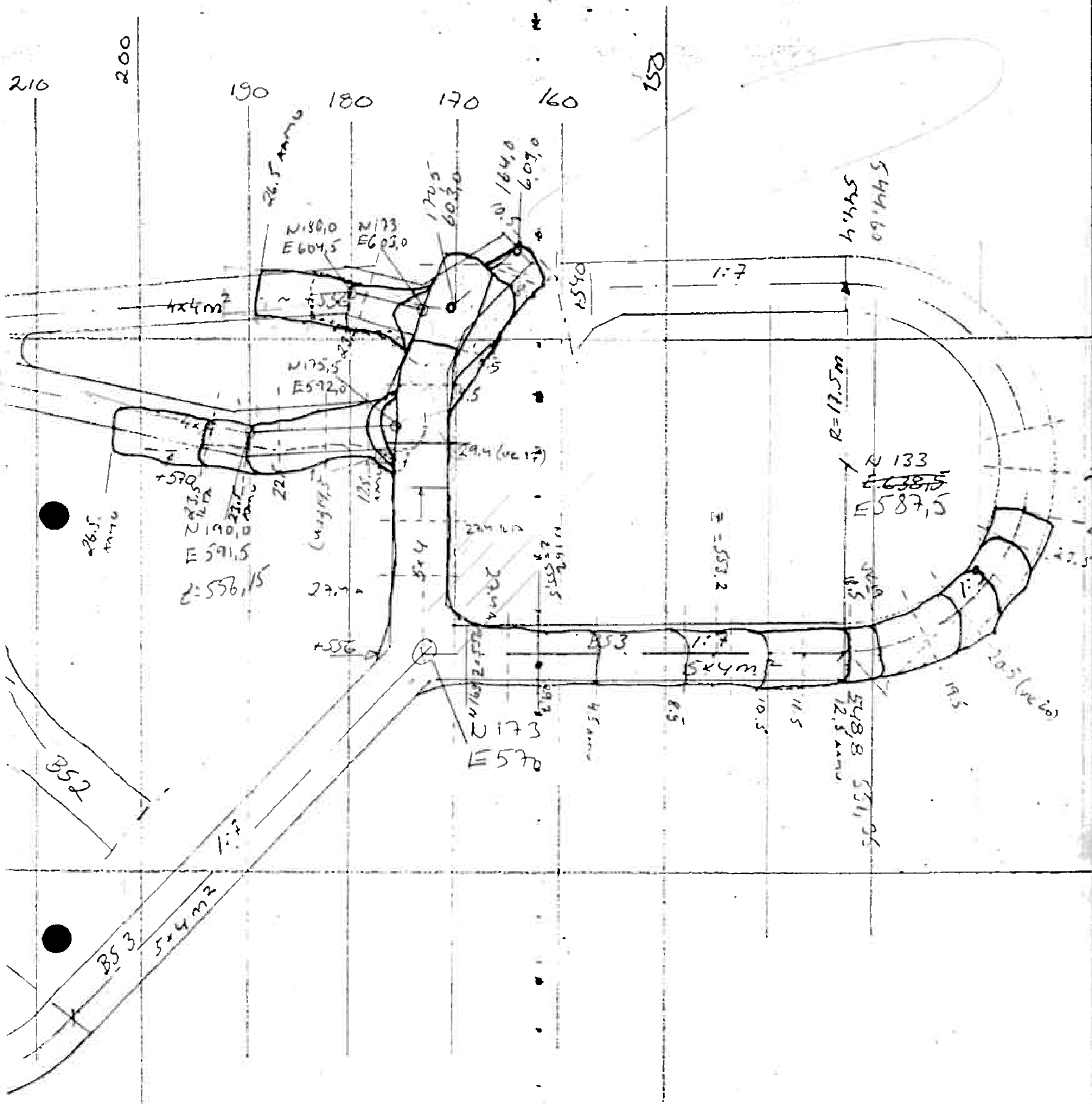
A/S BIDJOVAGGE Ⓖ
E2 - STROSS
LASTINGSNIVÅ 540
1:500 25.589/4A



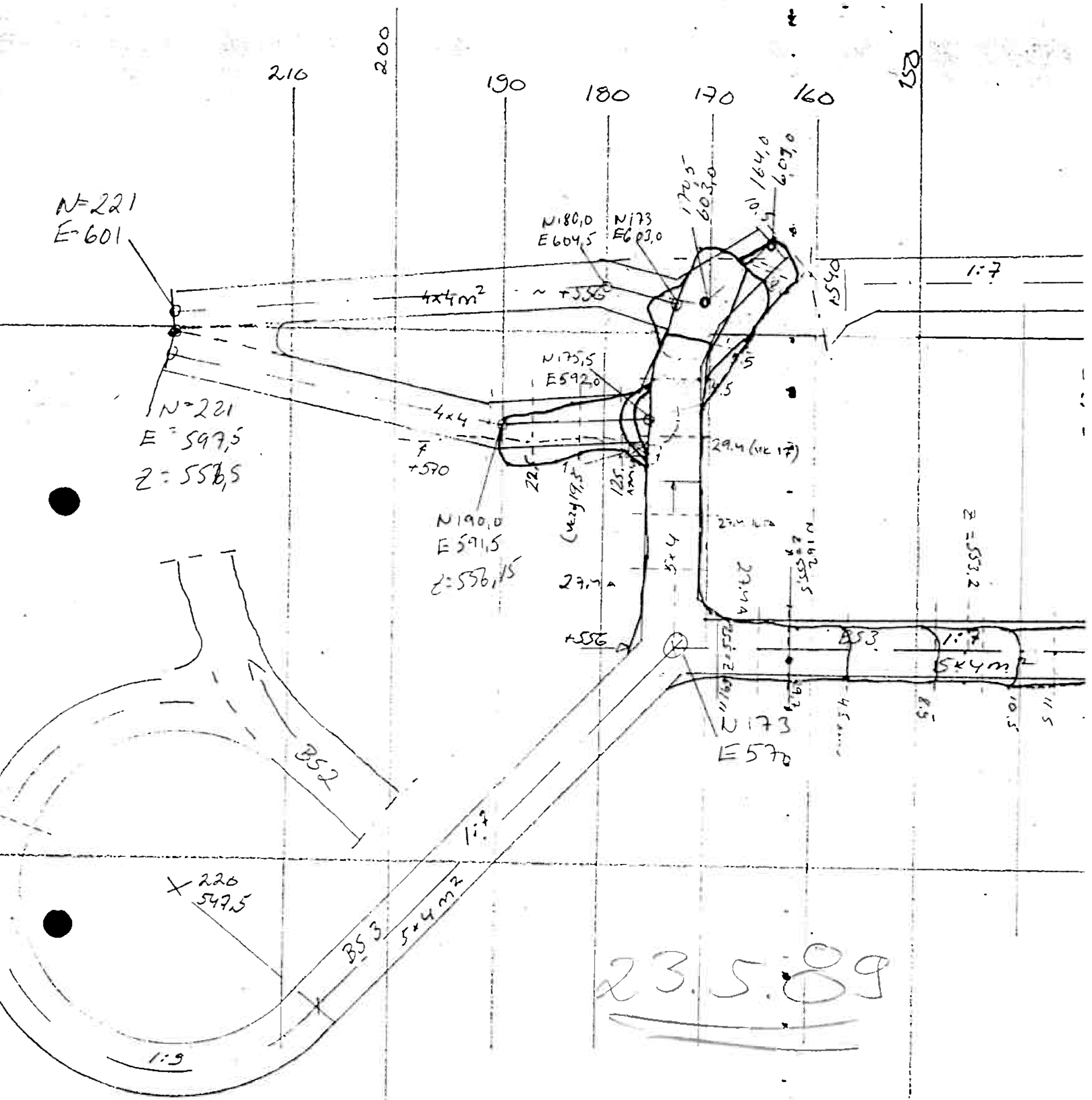
1. = VENTILASJON STIGORT
1,5m × 1,5m
FRA NIVÅ 570 TIL 556

A/S BIDJOVAGGE G
E2 - STROSS
BORINGSNIVÅ + 556
1:500

26.4.89/HA

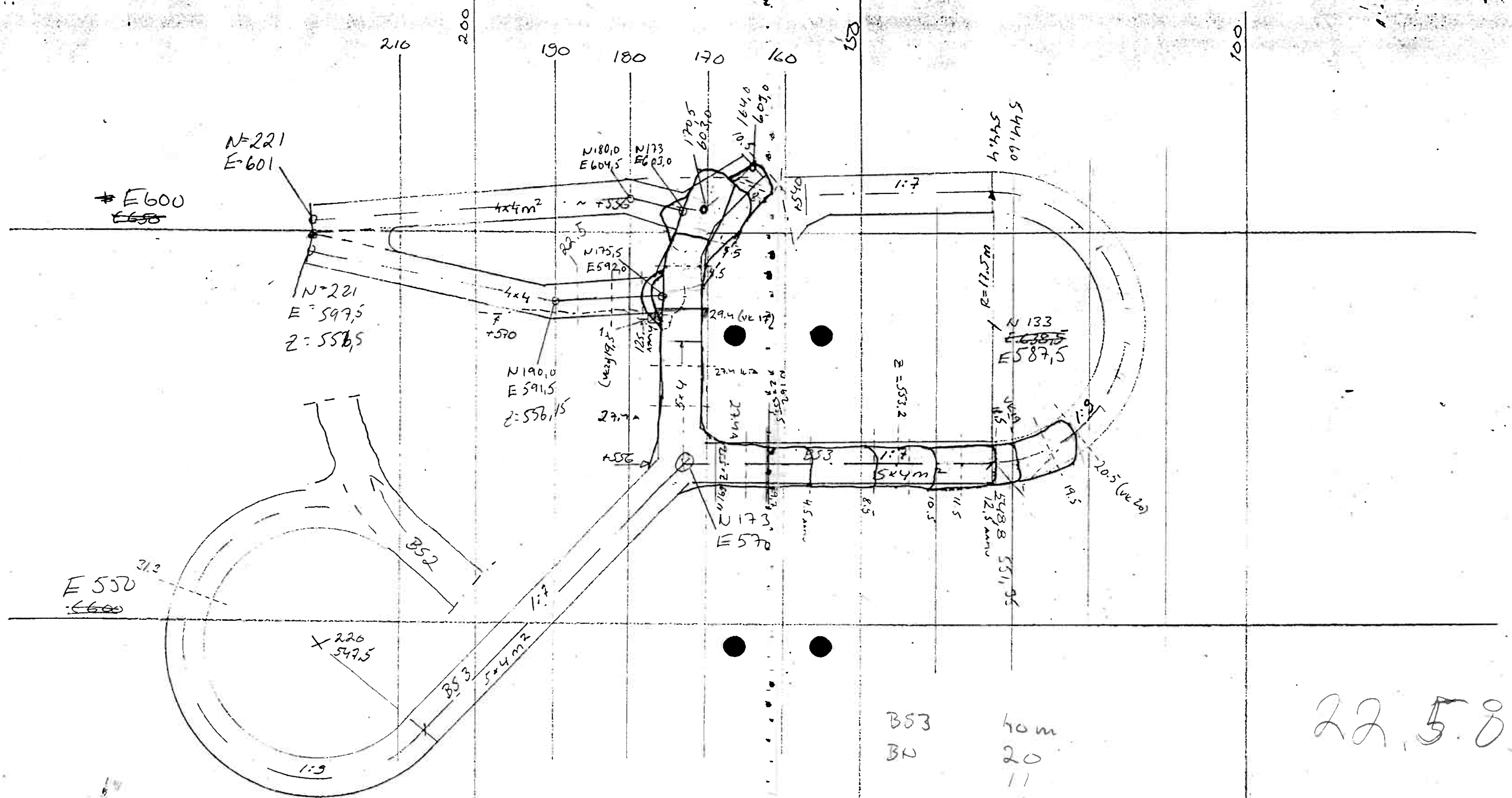


1. = VENTILASJON STIGORT
1,5m×1,5m
FRA NIVÅ 570 TIL 556



23.5.89

1. = VENTILASJON STIGORT
1,5m × 1,5m
FRA NIVÅ 570 TIL 556

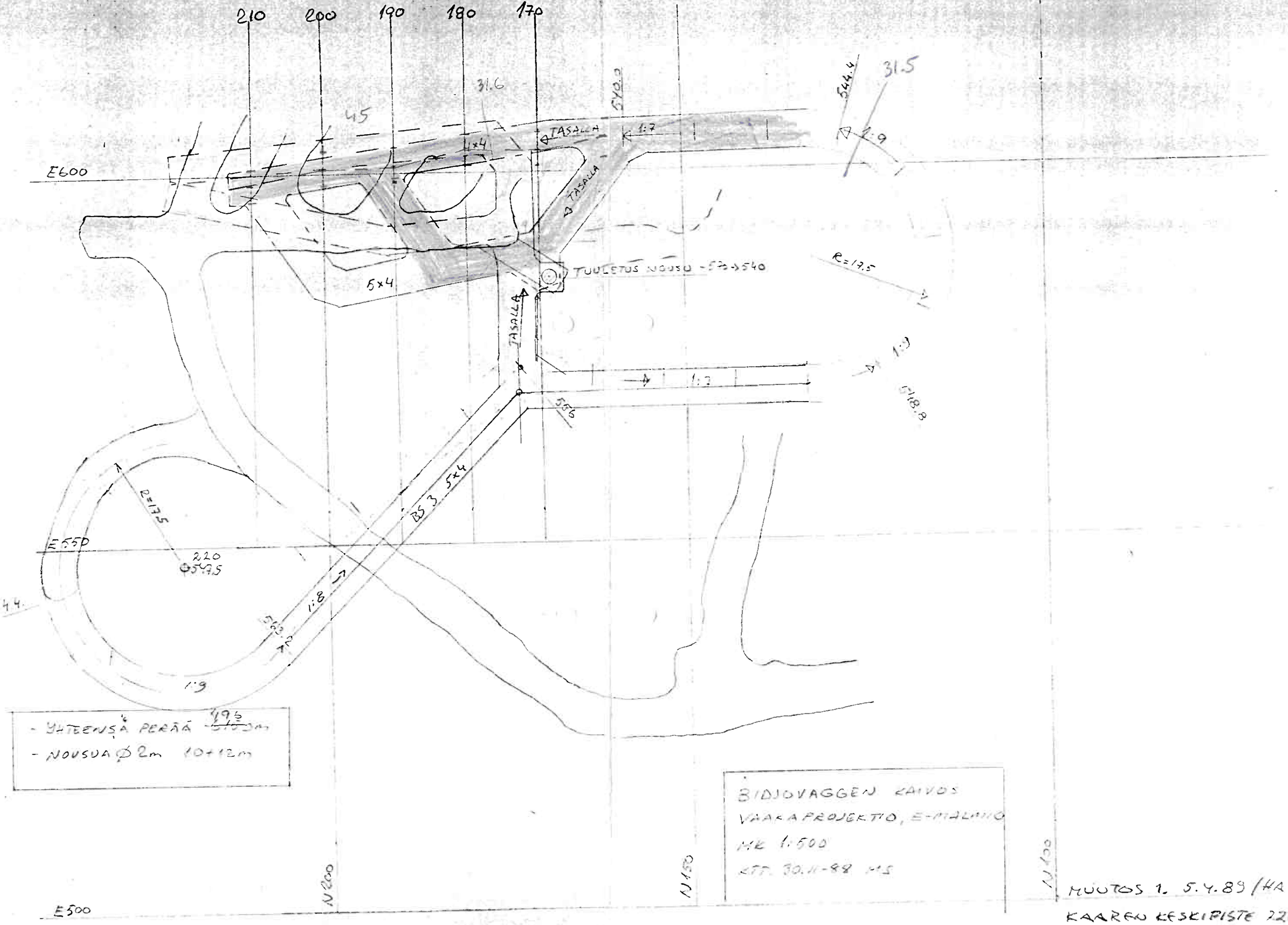


BS3 40m
BN 20
11
5
7 C

22.5.89

1. = VENTILASJON STIGORT
1,5m x 1,5m
FRA NIVÅ 570 TIL 556

A/S BIDJOVAGGE
E2-STROSS
BORINGSNIVÅ +556
1:500

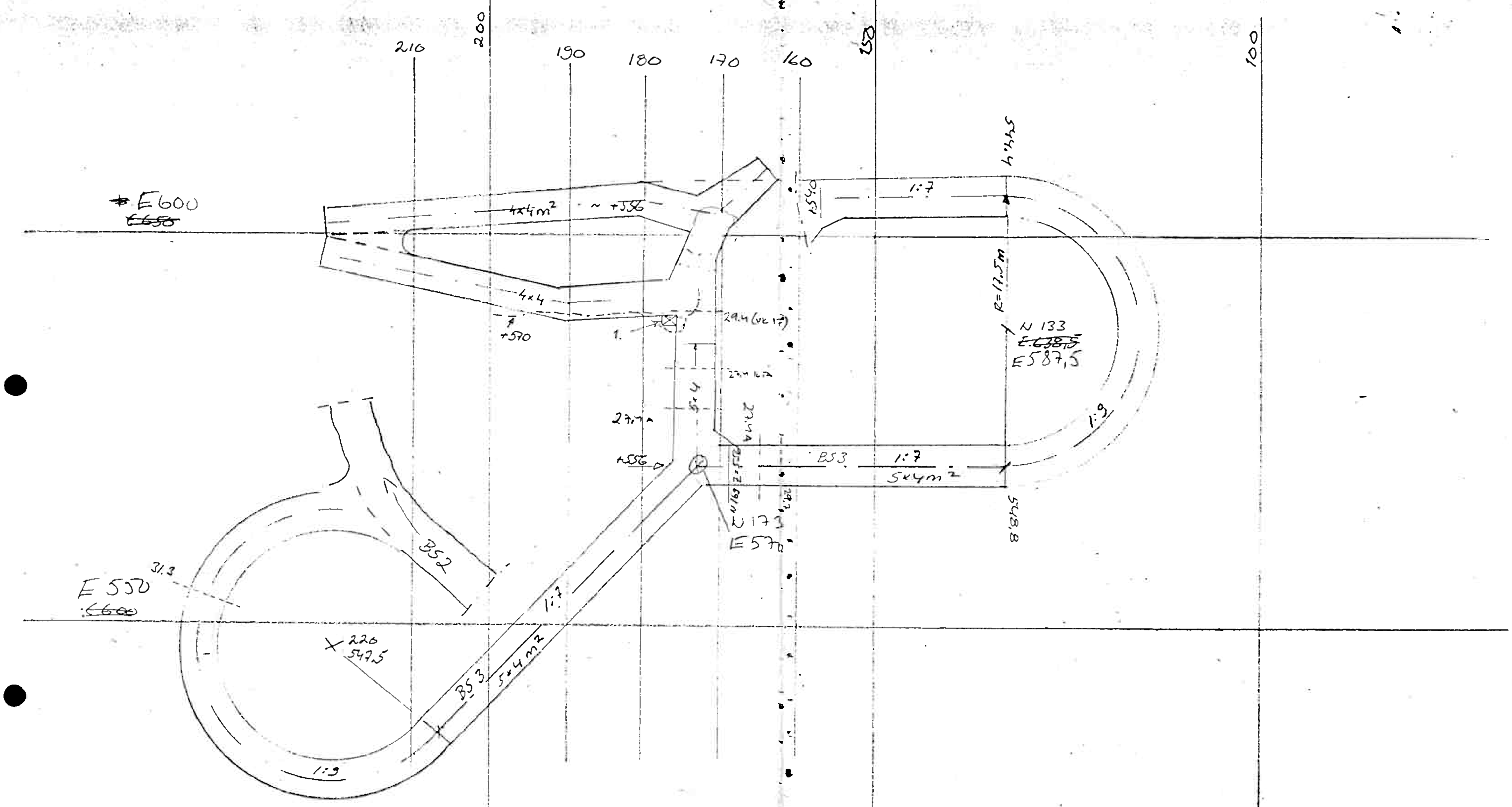


- YHTEENSÄ PERÄÄ 495 ~~[illegible]~~m
- NOUSUA Ø 2m 10+12m

BIDJOVAGGEN KAIVOS
VAAKAPROJEKTIO, E-MALMIO
MK 1:500
KTT. 30.11-88 MS

MUUTOS 1. 5.4.89 /HA

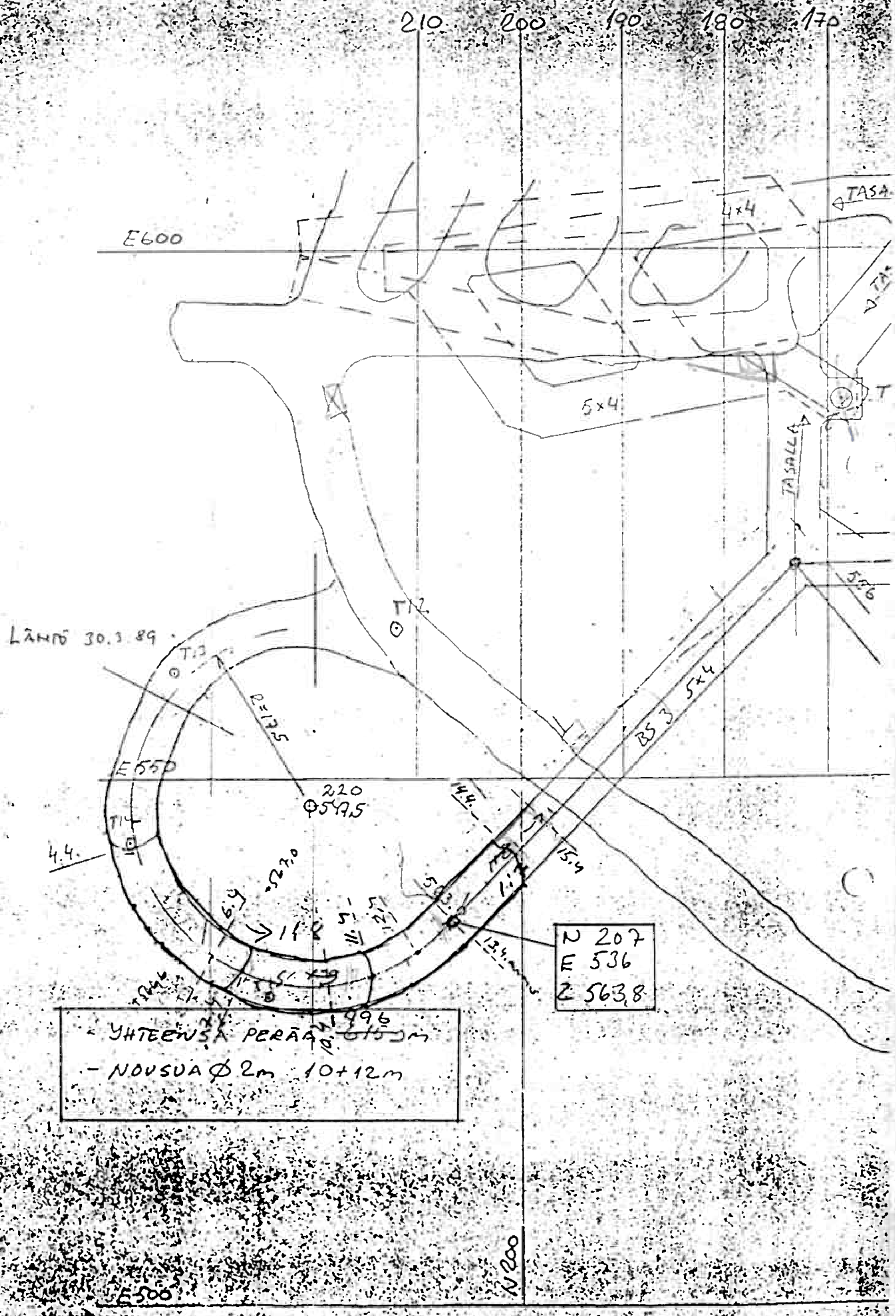
KAAREN KESKIPISTE 220/547,5
〃 SÄDE 17,5m



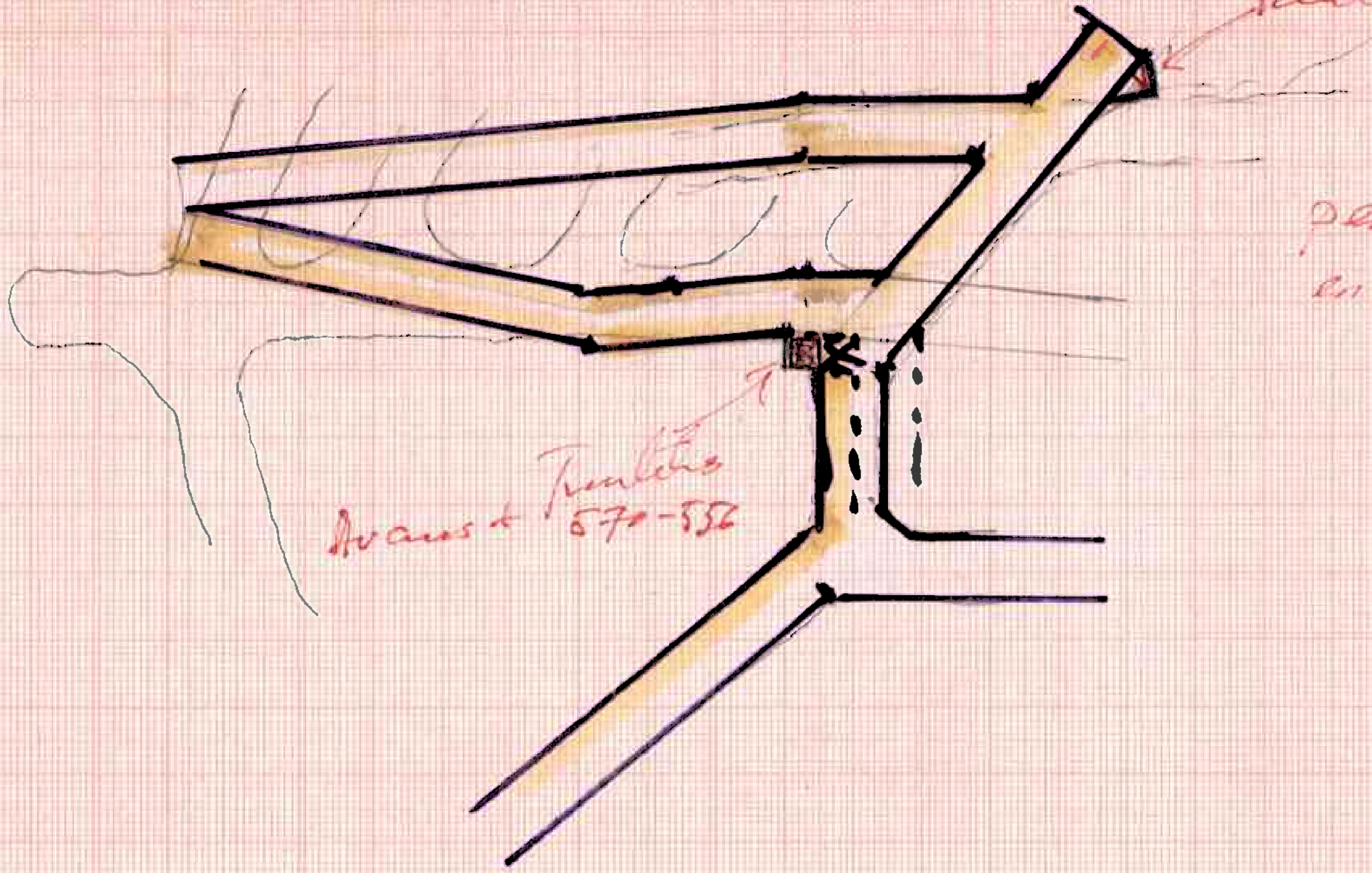
MUHTKW -89 125 m

1. = VENTILASJON STIGORT
1,5m x 1,5m
FRA NIVÅ 570 TIL 556

A/S BIDJOVAGGE
E2 - STROSS
BORINGSNIVÅ + 556
1:500

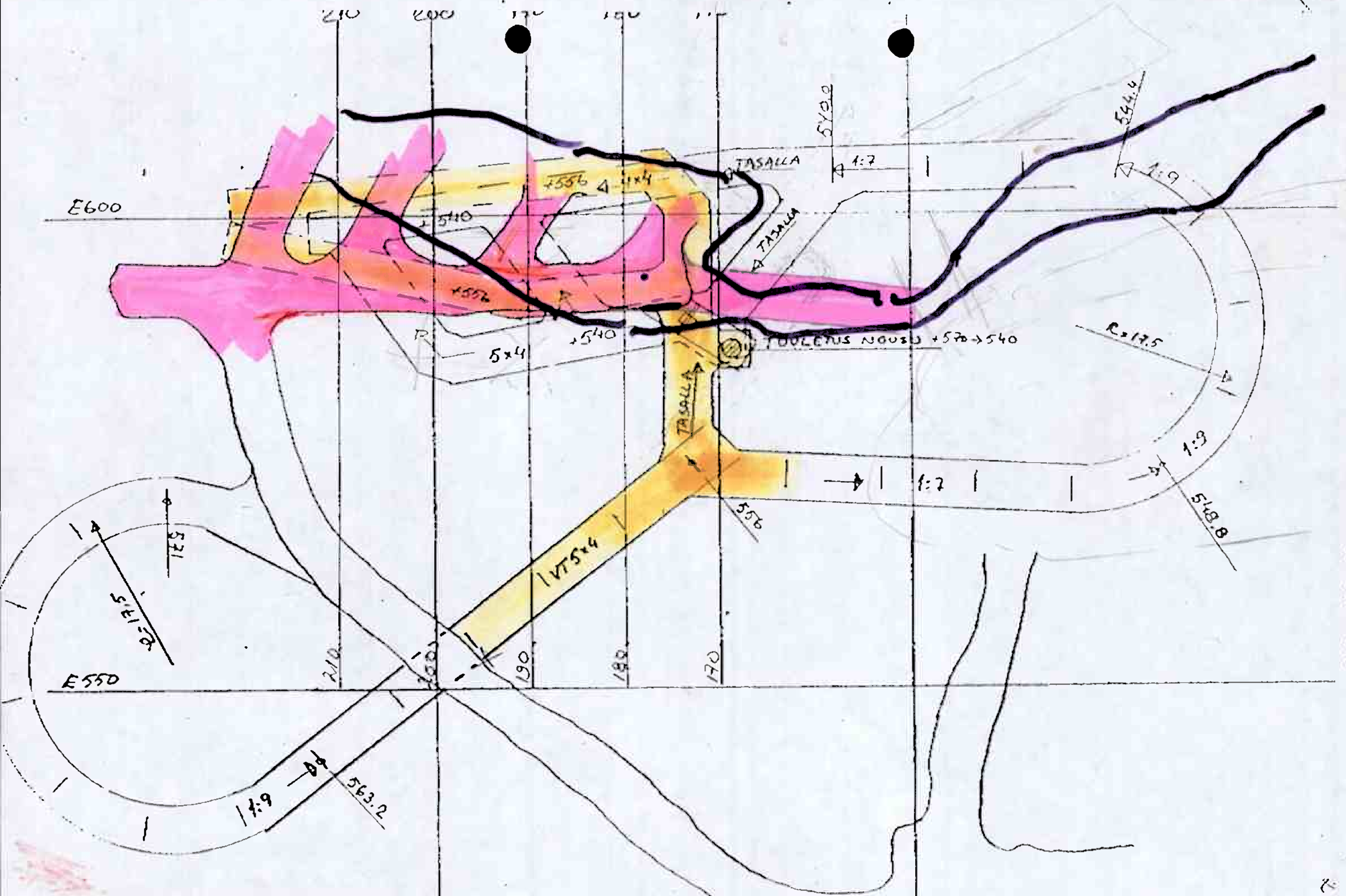


- YHTEENSÄ PERÄÄ ~~615~~ 1996 m
- NOUSUA Ø 2m 10+12m



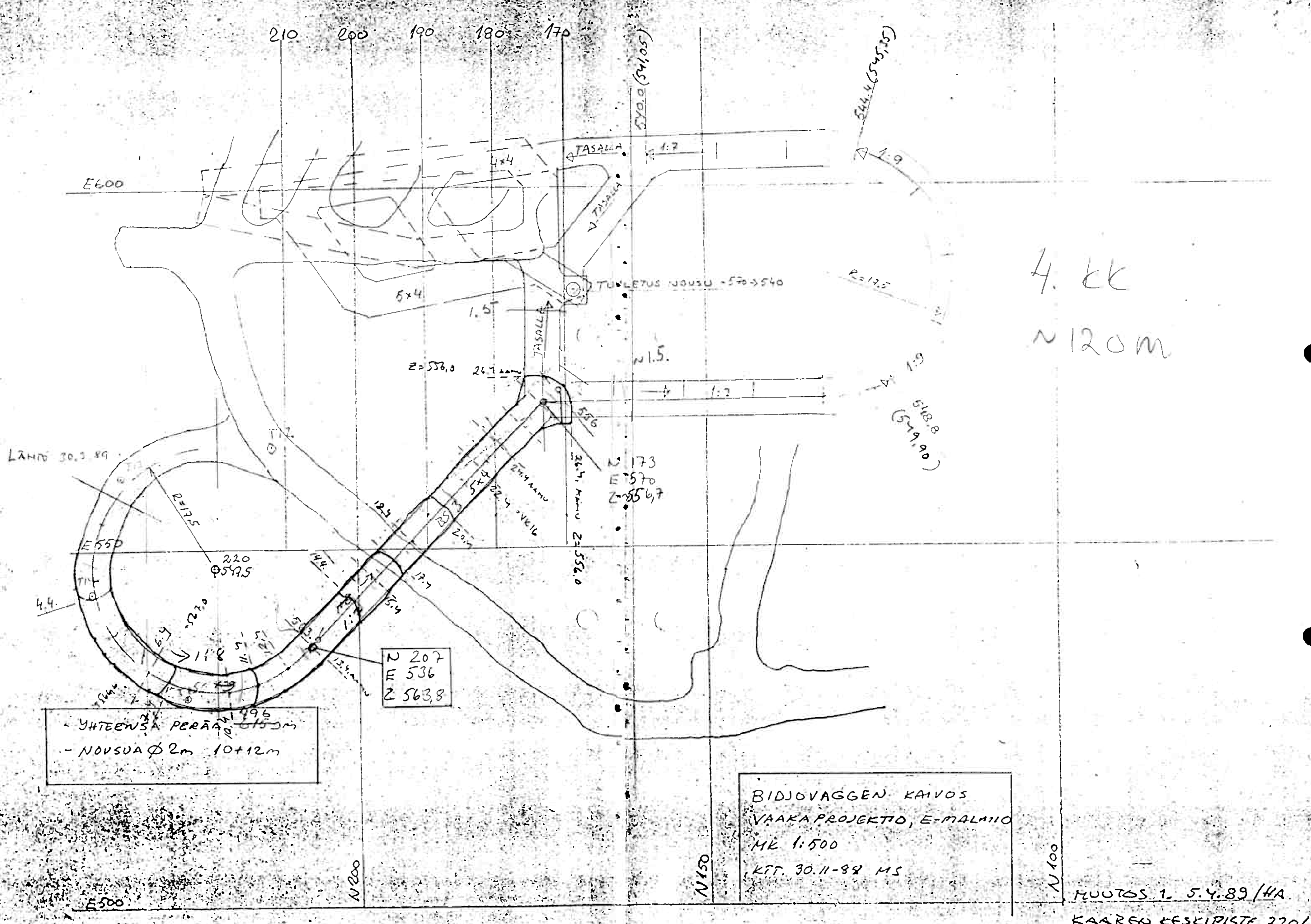
[illegible] [illegible]
[illegible] ~10m

2(3)



- YHTEENSÄ PERÄÄ 496 m
- NOUSUA Ø 2m 10+12m

30.11.88 /HA

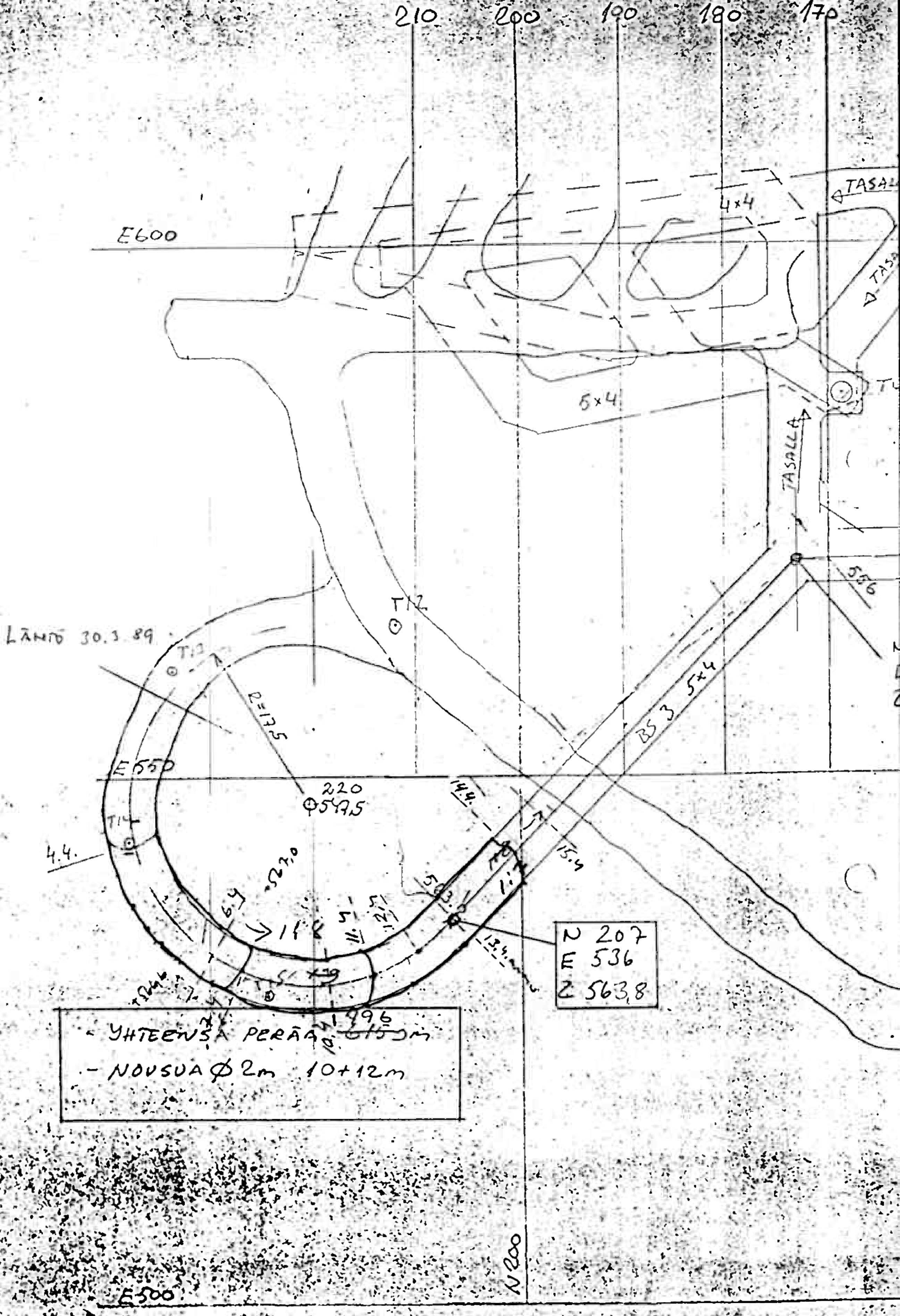


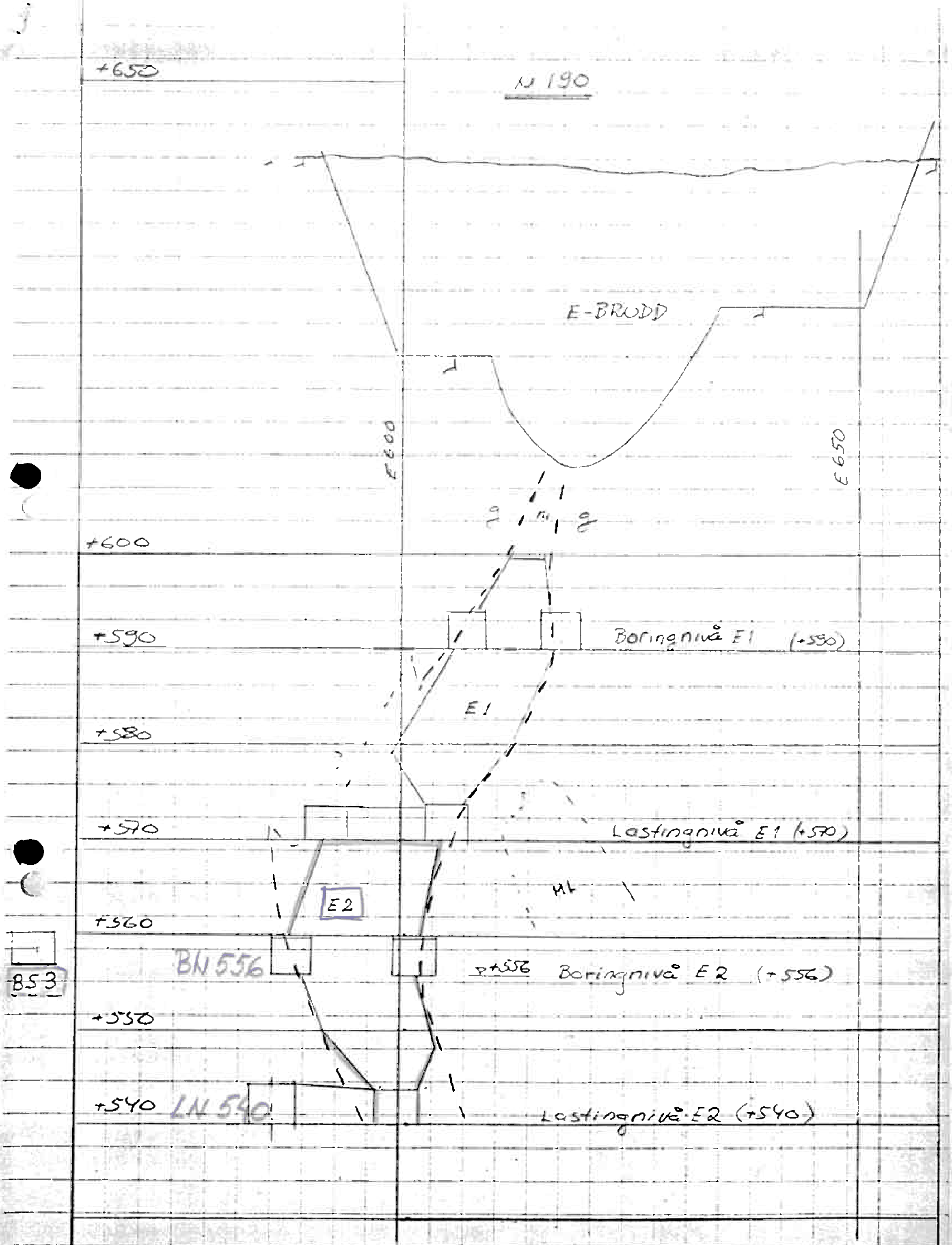
4. kk
~120m

- YHTEENSÄ PERÄÄ ~~615~~ 996 m
- NOUSUA Ø 2m 10+12m

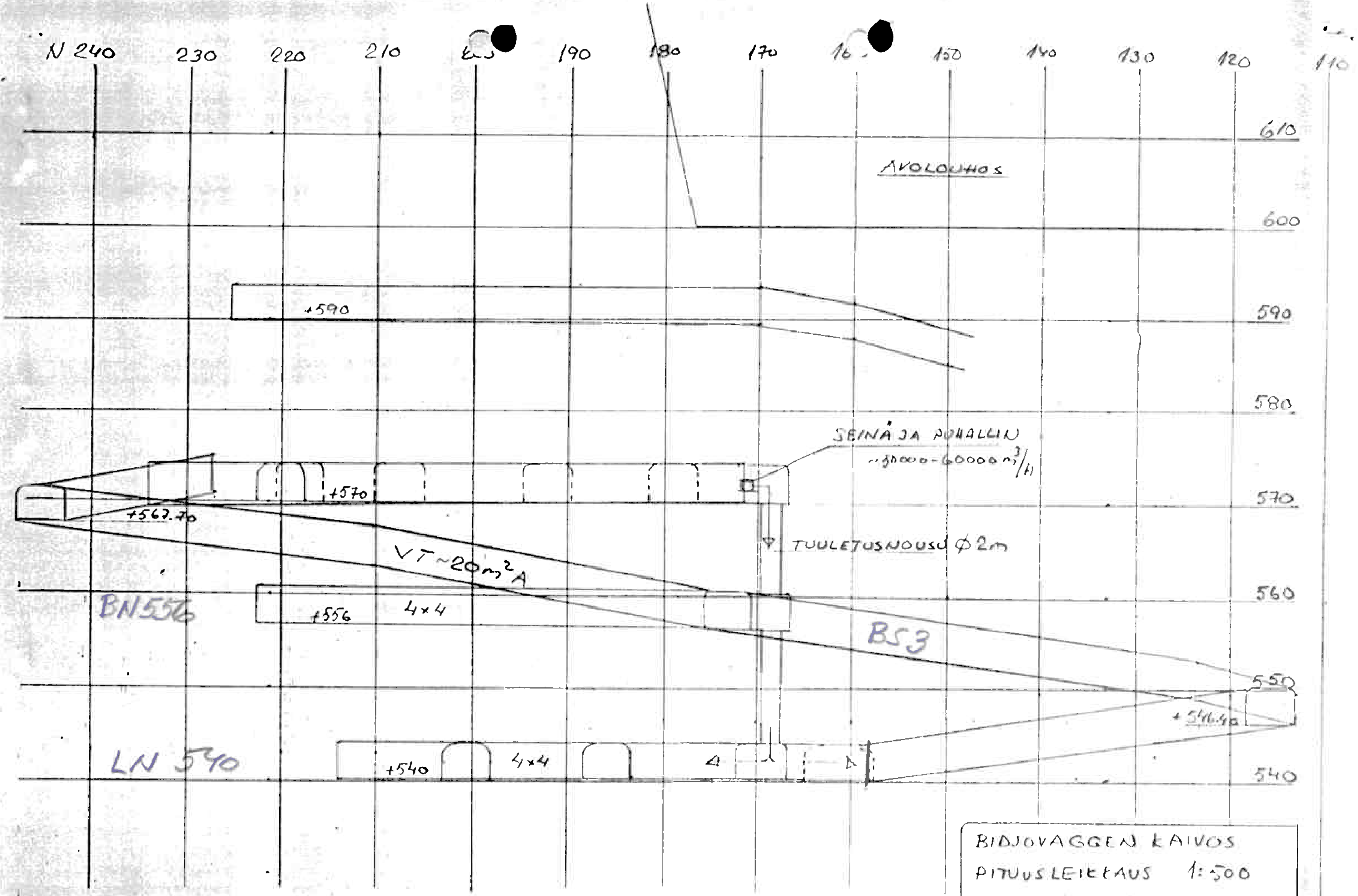
BIDJOVAGGEN KAIVOS
VAAKAPROJEKTIO, E-MALMIO
MK 1:500
KTT. 30.11-88 MS

MUUTOS 1. 5.4.89 / HA
KAAREN KESKIPISTE 220/547,5
" SÄDE 17,5m


210
200
190
180
170
E600
TASALLA
4×4
5×4
TASALLA
TASALLA
T12
LÄHTÖ 30.3.89
T13
R=17,5
E550
220
Ø547,5
T14
4.4.
14.4.
15.4
BS 3
5×4
5.6
6.4
527,0
11.4
5.4
12.4
13.4
4.4
1996
N 207
E 536
Z 563,8
- YHTEENSÄ PERÄÄ ~~615m~~
- NOUSUA Ø 2m 10+12m
N200
E500



A/S BIDJOVAGGE GRUBER
E MALM 88/HA
TVERRSNITT N190 1:500



BIDJOVAGGEN KAIVOS

PITUUSLEIKKAUS 1:500

E - MALMIO

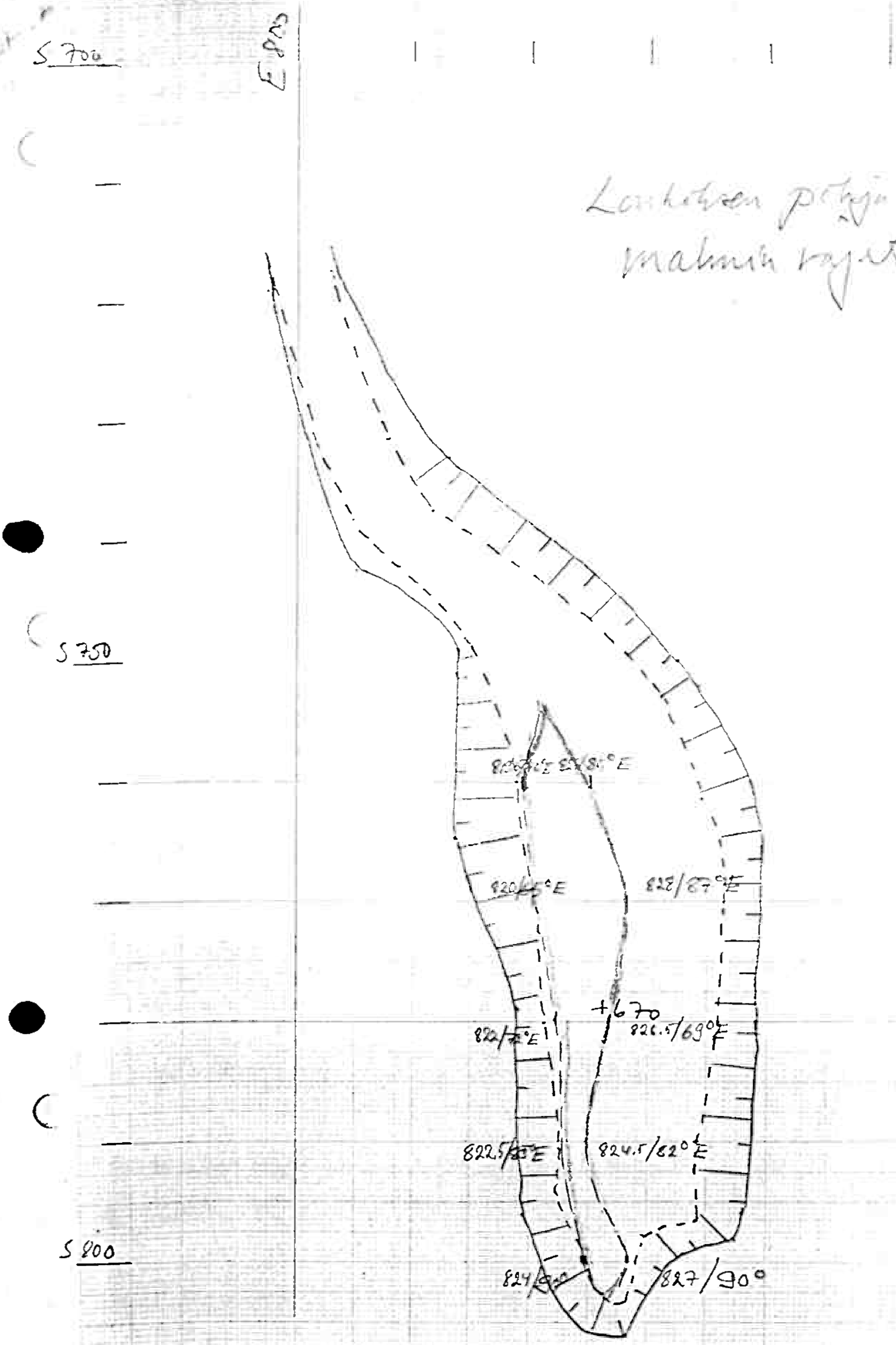
30.11-88 MS/KTT

30.11.88/HA

H
[illegible]

Louhoksen pohja — +660
malmin rajat

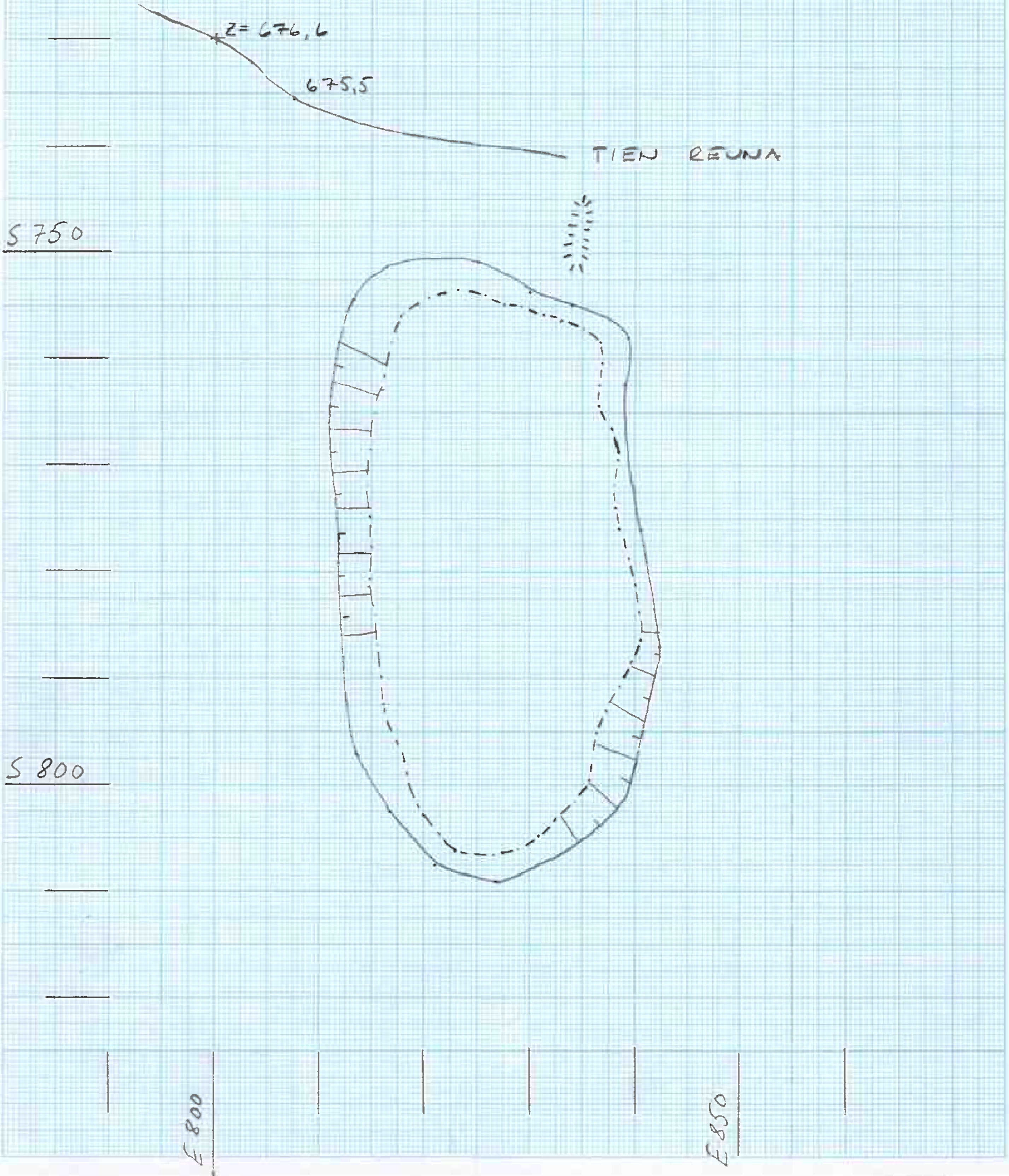
90° = pysty

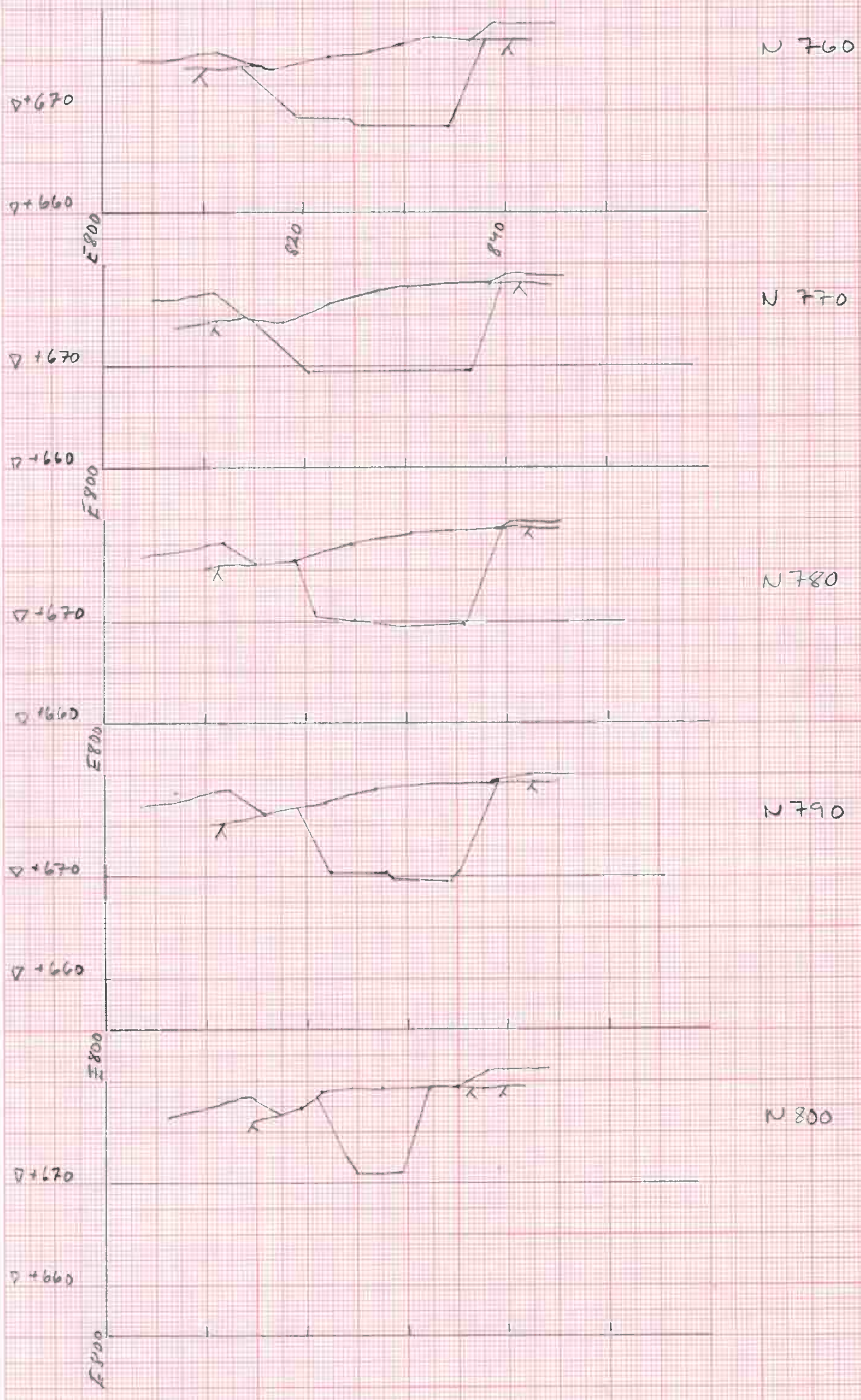


29.6. ME

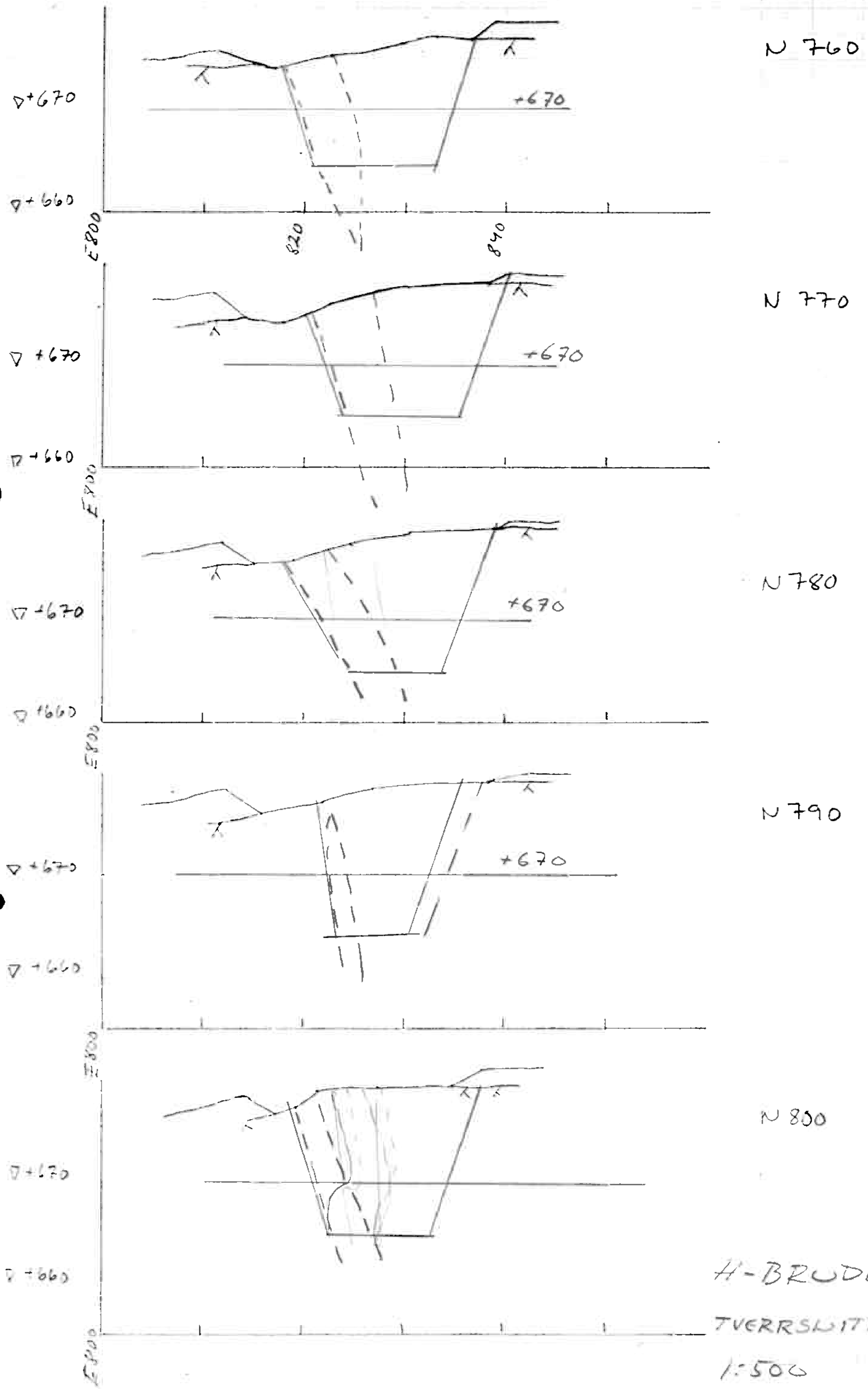
"HILDE" LOUHINNAN I VAIHE

"HILDE" MAANPOISTO
MK 1:500





H-LOUHOS KALLIOPINTA MK 1:500

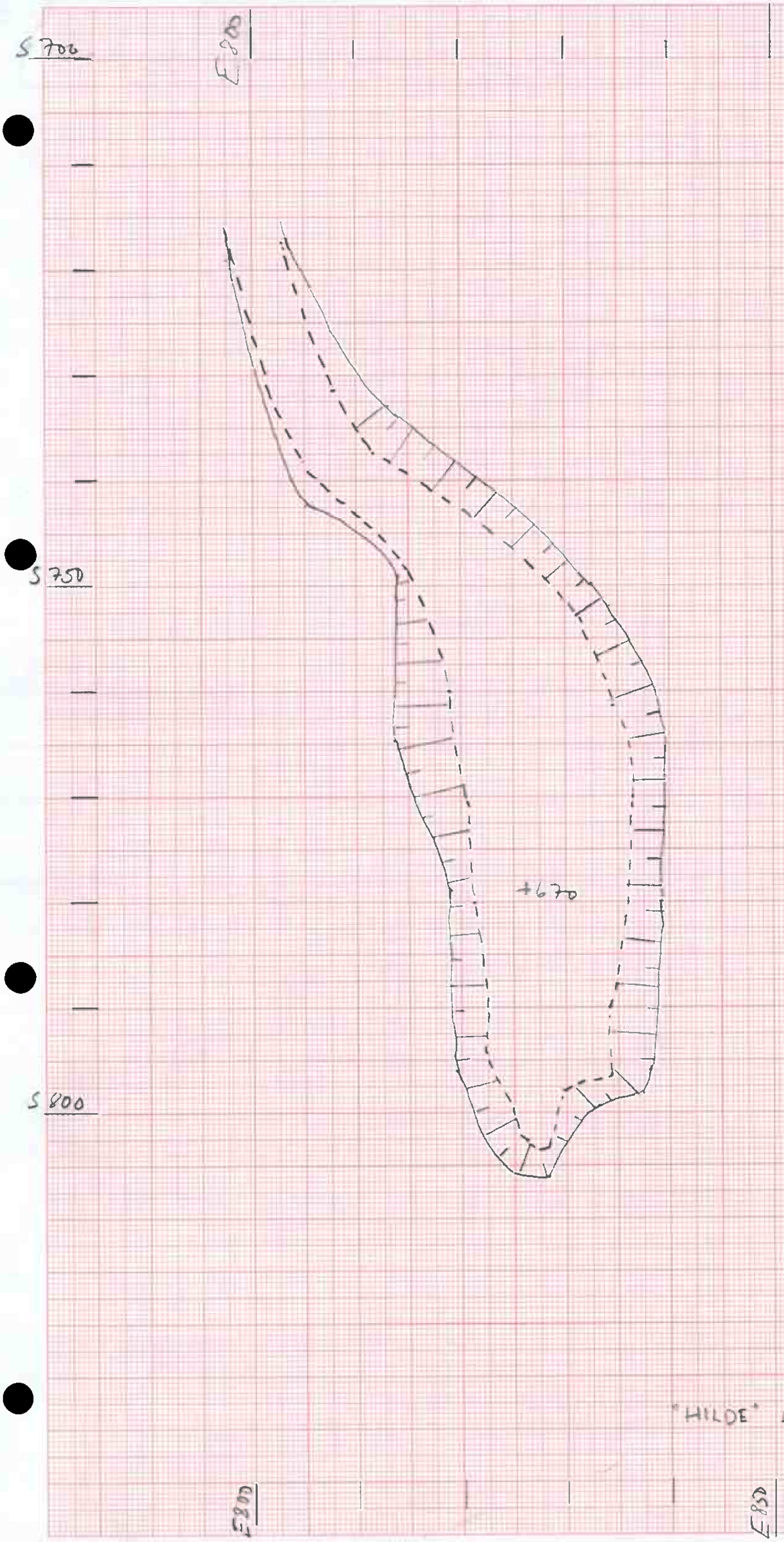


H-BRUDD

TVERRSNITTER

1:500

26.5.89/HA

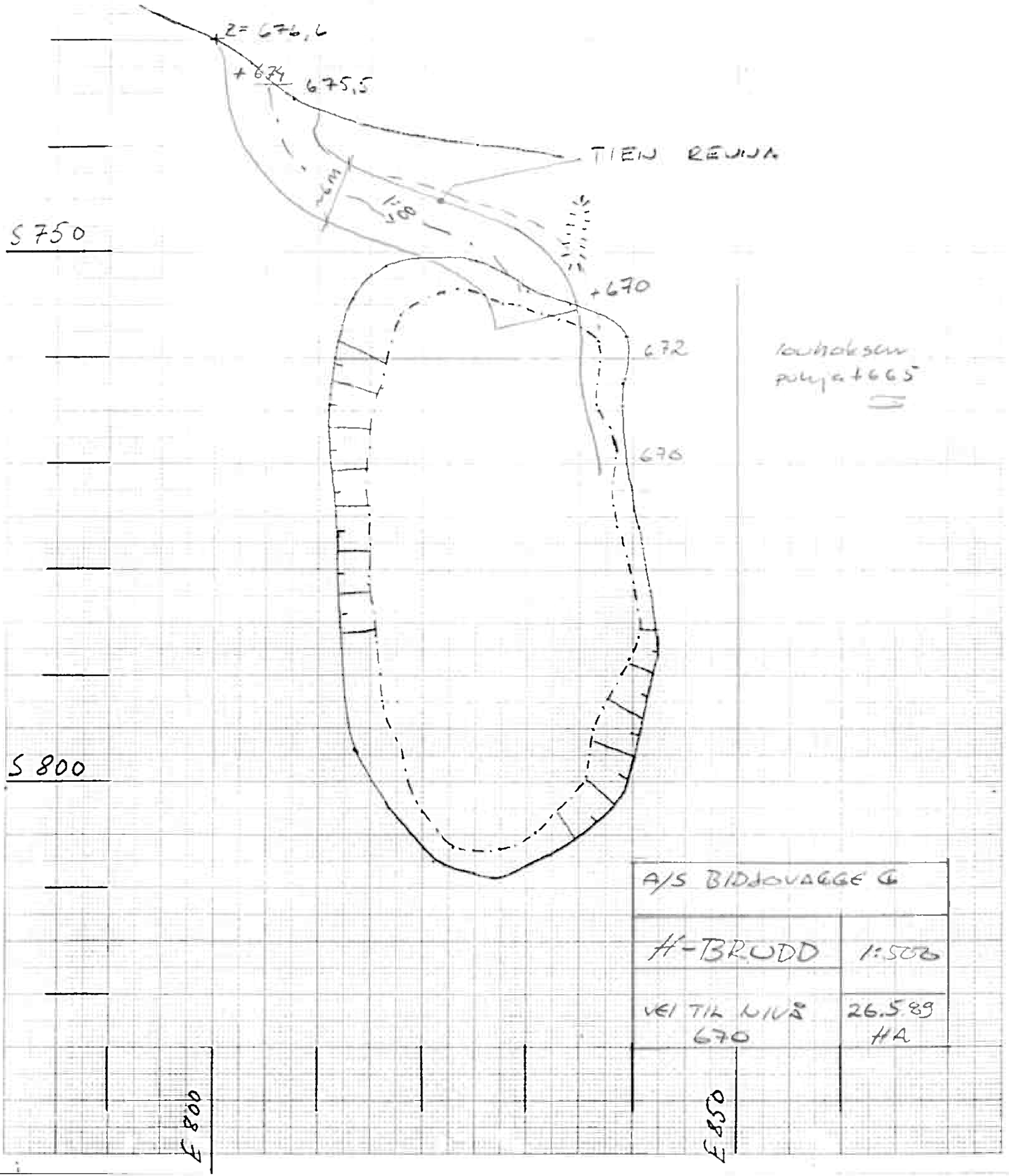


"HILDE" LOUHINNAN I VAIHE

"HILDE"
MK 1:500

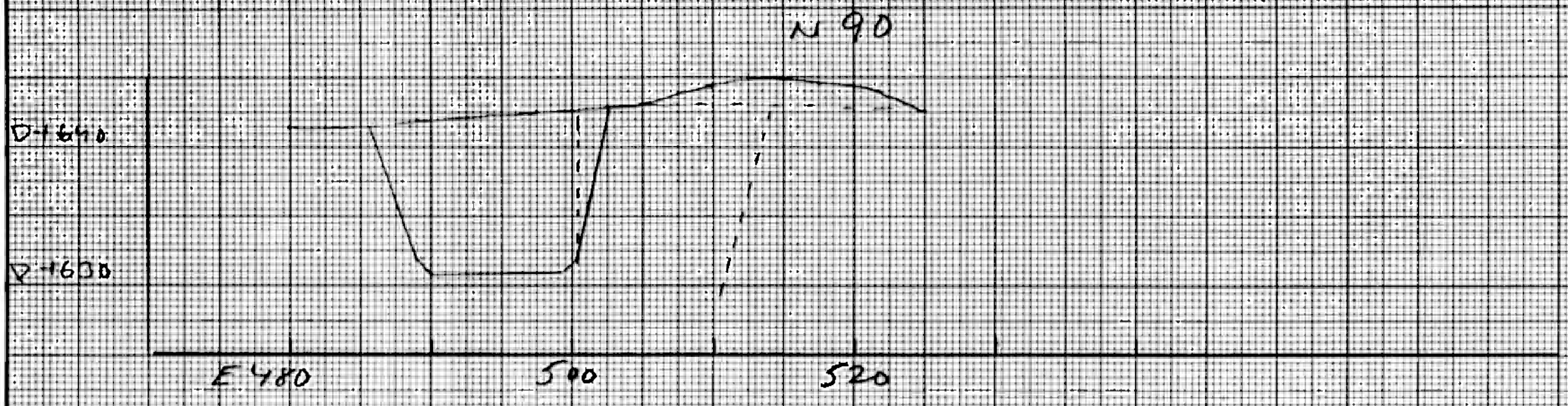
TYÖN KULKU:

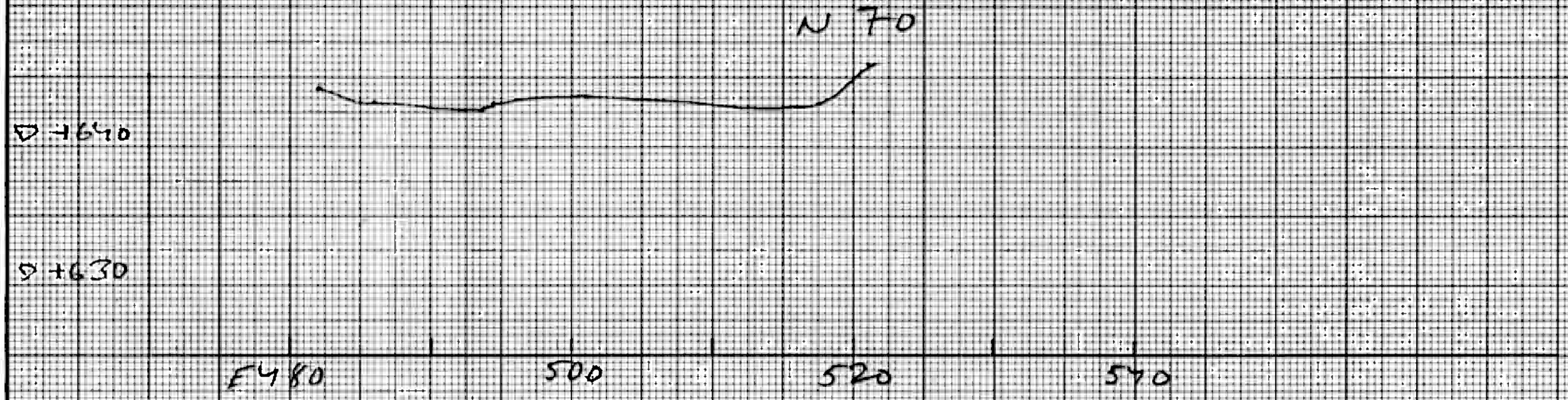
1. TIE TASOLLE +670
2. SIVUKIVI POIS MALMIN KATTOPUOLELTA +670:llE
3. MALMIN LOUHINTA PINNASTA +670 TASOLLE
4.



A/S BIDJOVAGGE G	
H-BRUDD	1:500
VEI TIL NIVÅ 670	26.5.89 HA

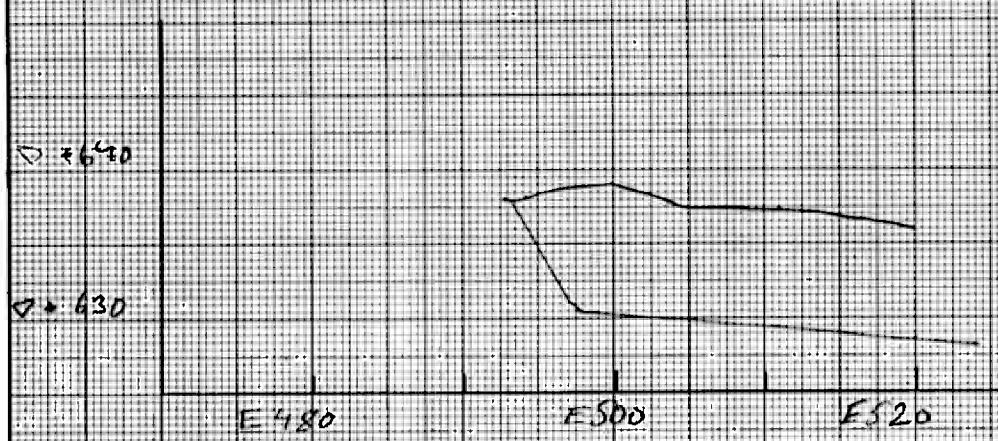
L - 0U405 KALLIOPINTA



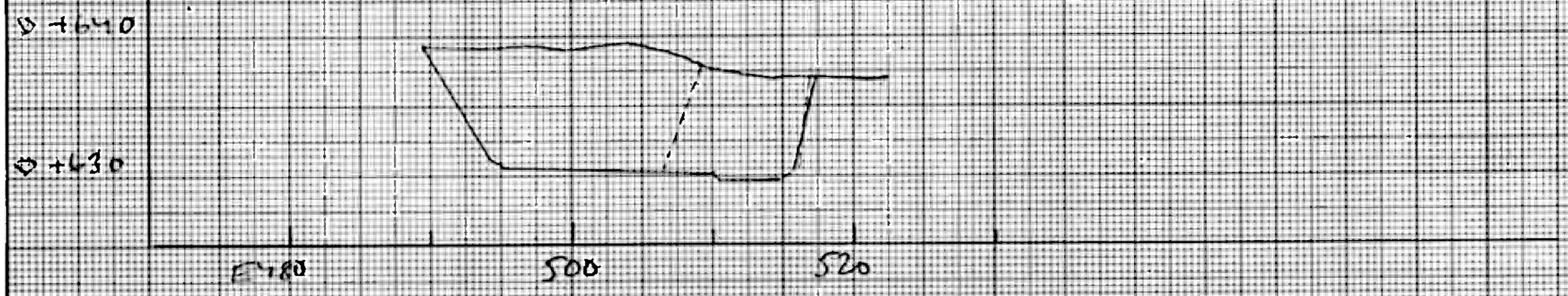


I-LOUH. KALLIOPINTA MK 1:500

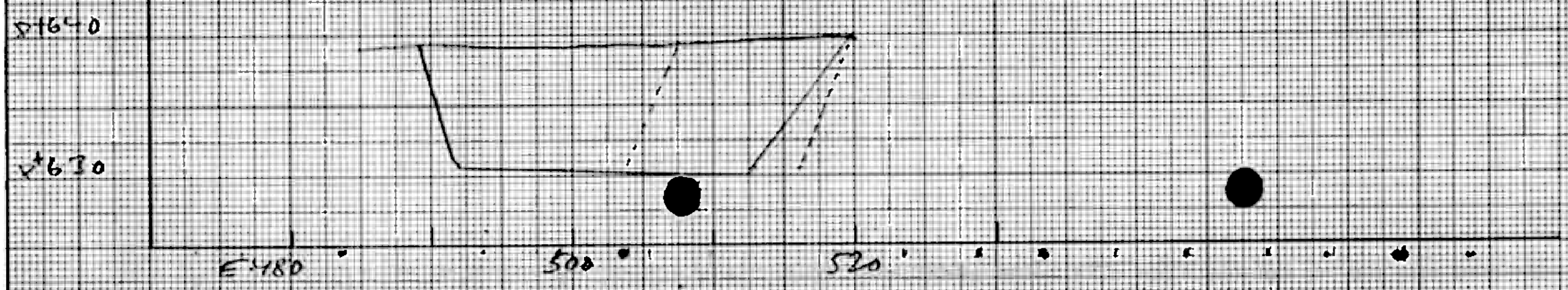
N 140



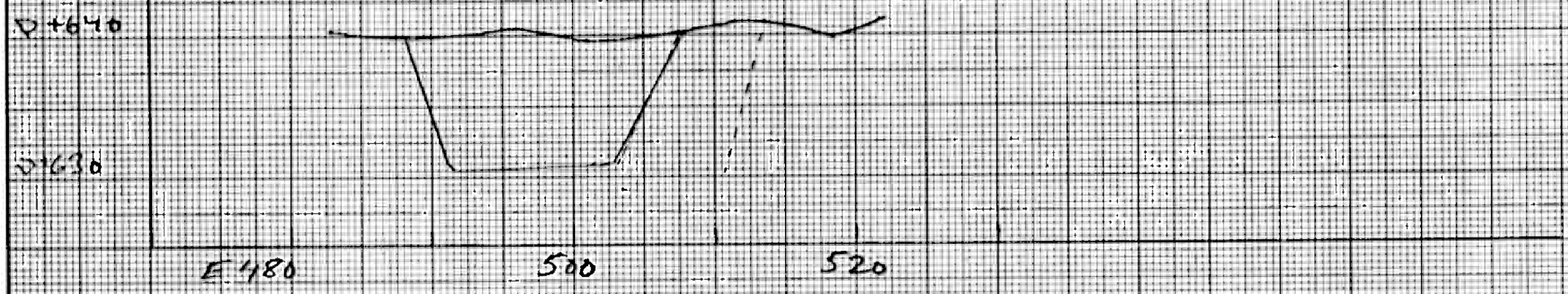
N 130



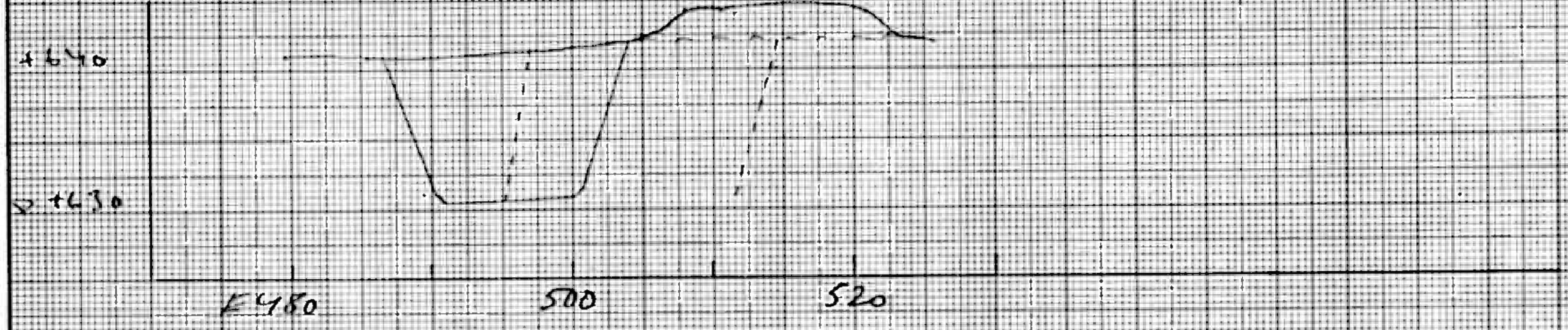
N 120

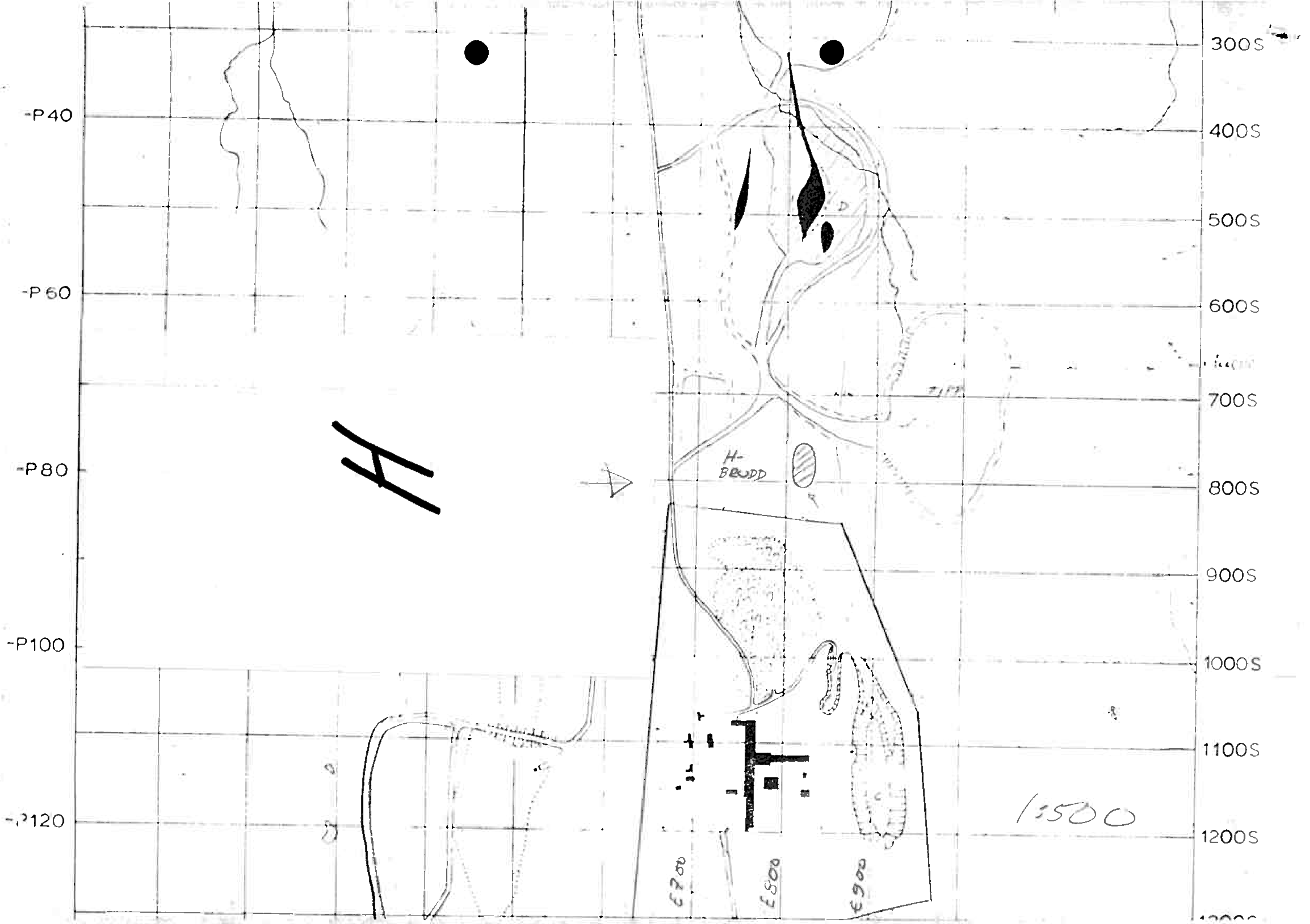


N 110

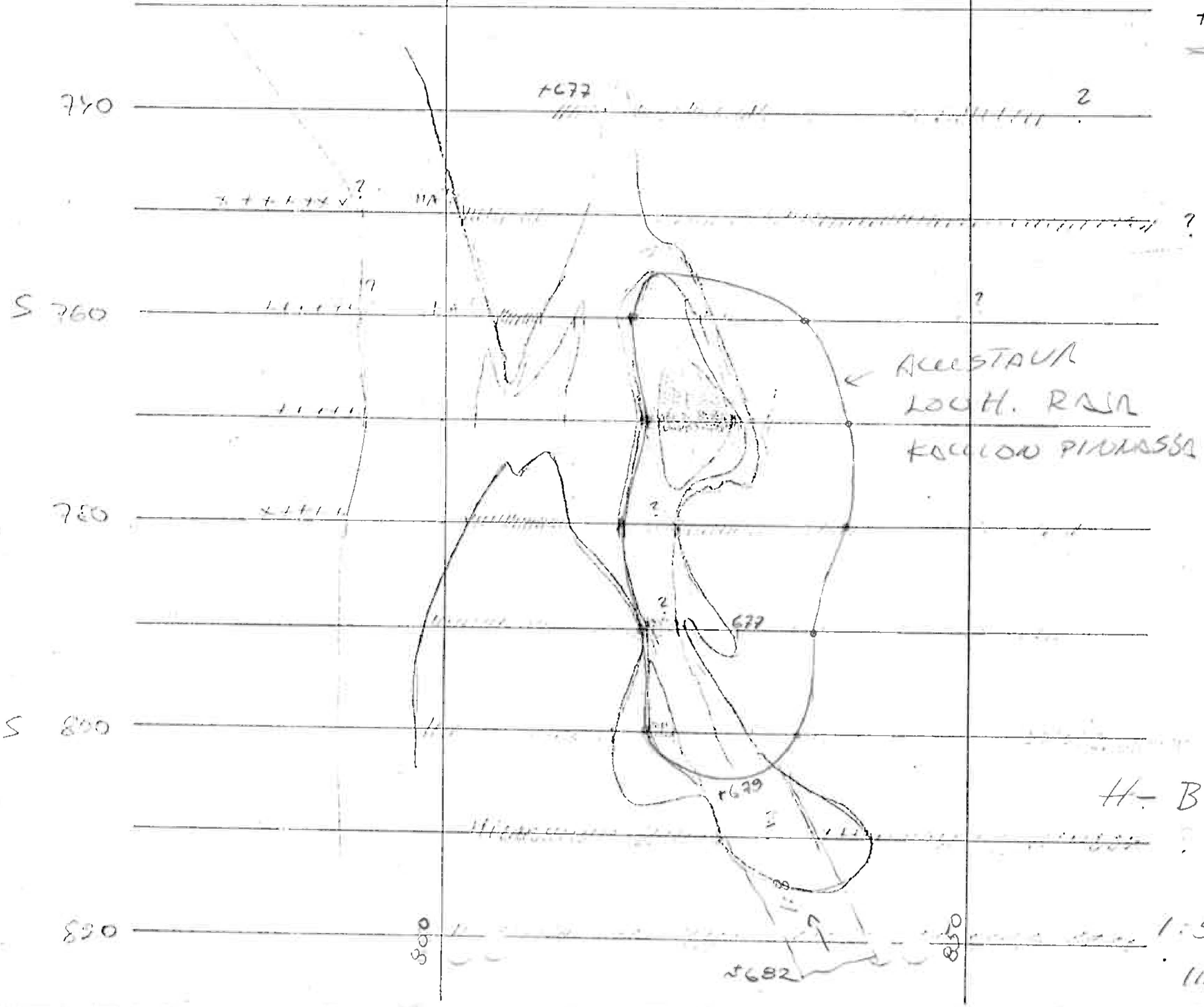


N 100




-P40
-P60
-P80
-P100
-P120
300S
400S
500S
600S
700S
800S
900S
1000S
1100S
1200S
H
H-BRUDD
D
TIPP
E700
E800
E900
1:500

FJELLYTAN H



H- BRUDD

1:500

11.5.89 / HA

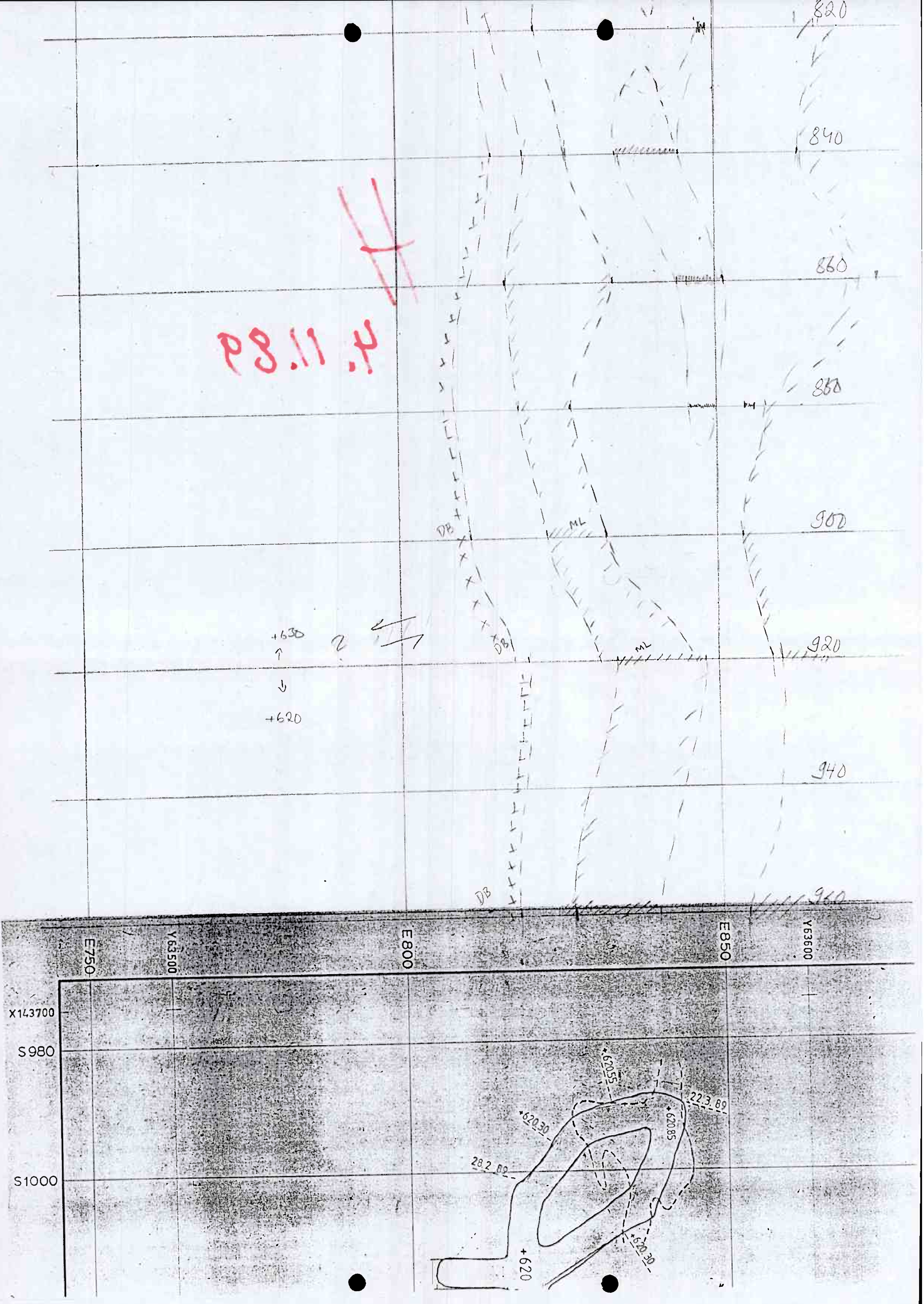
```
562:                                                                                READY


         A         B         C         D         E         F         G         H
543 L¥NSOMHETSKALKYLE
544
545 MALM:      h
546
547 PRIS: CU        19 KR/KG
548       AU        83 KR/G
549
550
551
552
553 PRODUKSJON                 TONN      %CU    G/T AU      CU-UTV     AU-UTV
554
555 MALM                        5600       1.4       1.5
556 KONS                         324      23.0      20.8          95         80
557
558
559 VERDI AV KONS,KR/T                                                     4863
560
561 SALG                                                                   1575
562 [illegible]/.KOST                                                       115
01-Jan-80   01:20 AM
```

```
D16: (F1) U 15                                                                  READY

         A        B          C          D         E           F          G         H
13  PRODUKSJON              TONN       %CU    G/T AU      CU-UTV      AU-UTV
14
15  MALM                   10500        2.4      2.76
16  KONS                    1583       15.0      14.3          95          78
17
18
19  VERDI AV KONS,KR/T                                                   2736
20
21  SALG                                                                 4330
22  LEV.KOST                                                              564
23  OMSETTN                                                              3766
24
25  DRIFTSKOSTNADER
26
27           GRUVE                    mengde kost/enhet  tot kost
28                      tunnel            150     10500      1575
29                      jordavd             0        21         0
30                      gråbergb            0        24         0
31                      malmb           10500        75     787.5
32                      grovknusi       10500        22       226
01-Jan-80  02:22 AM
```

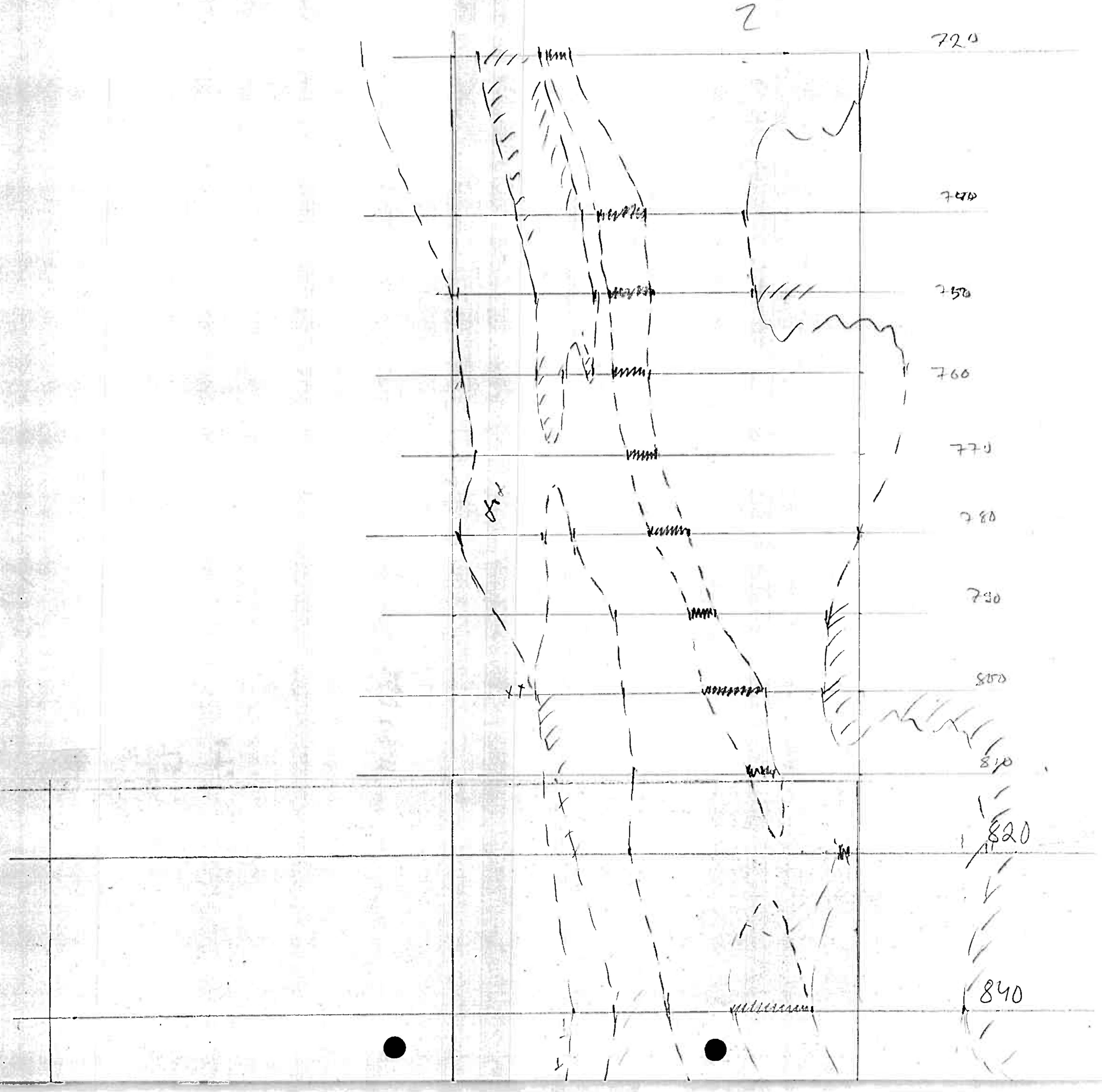
```
D16: (F1) U 15                                                                  READY

         A        B          C          D         E           F          G         H
13  PRODUKSJON              TONN       %CU    G/T AU      CU-UTV      AU-UTV
14
15  MALM                   10500        2.4      2.76
16  KONS                    1583       15.0      14.3          95          78
17
18
19  VERDI AV KONS,KR/T                                                   2736
20
21  SALG                                                                 4330
22  LEV.KOST                                                              564
23  OMSETTN                                                              3766
24
25  DRIFTSKOSTNADER
26
27           GRUVE                    mengde kost/enhet  tot kost
28                      tunnel            150     10500      1575
29                      jordavd             0        21         0
30                      gråbergb            0        24         0
31                      malmb           10500        75     787.5
32                      grovknusi       10500        22       226
01-Jan-80  02:23 AM
```

H

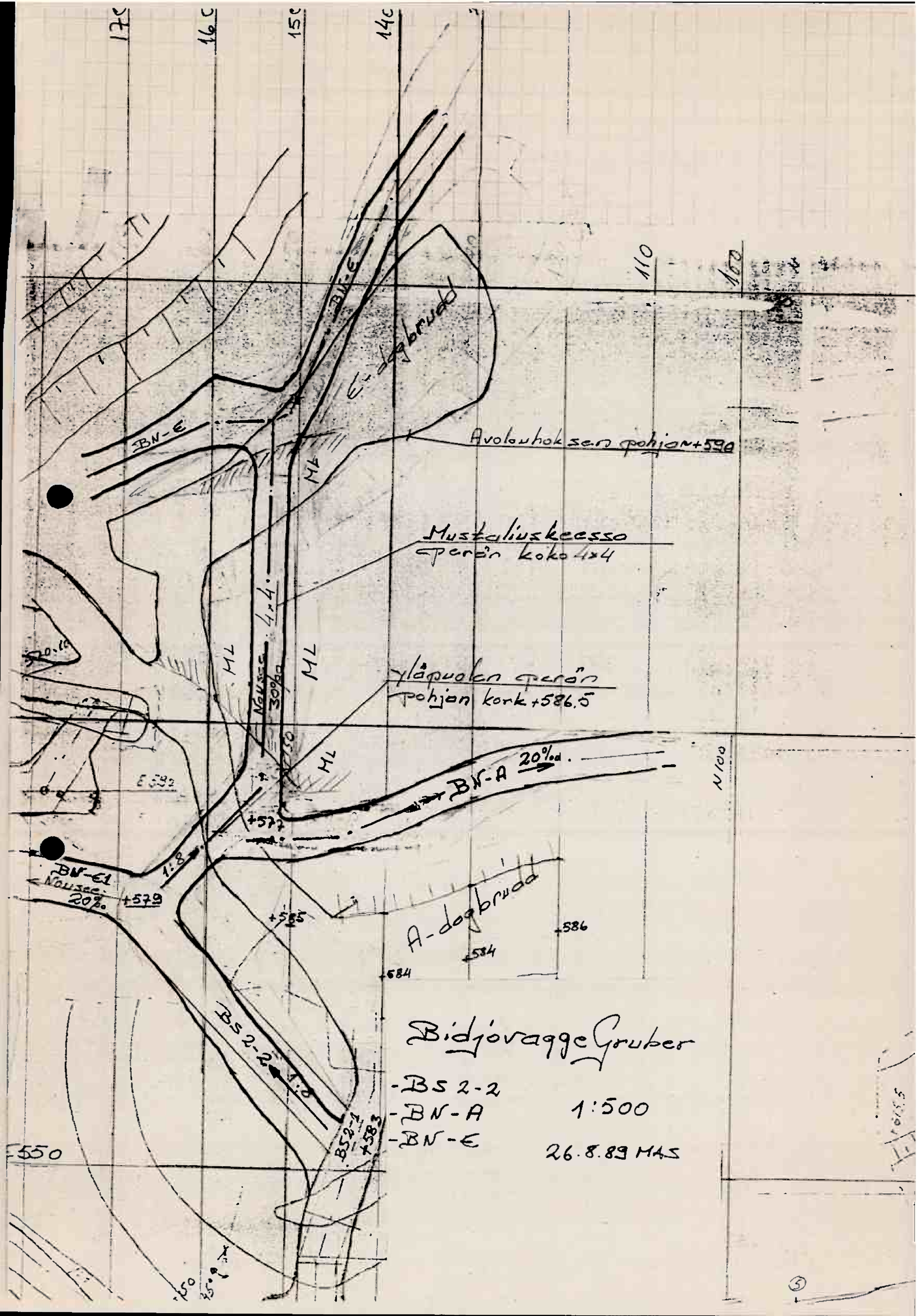
4. 11. 89



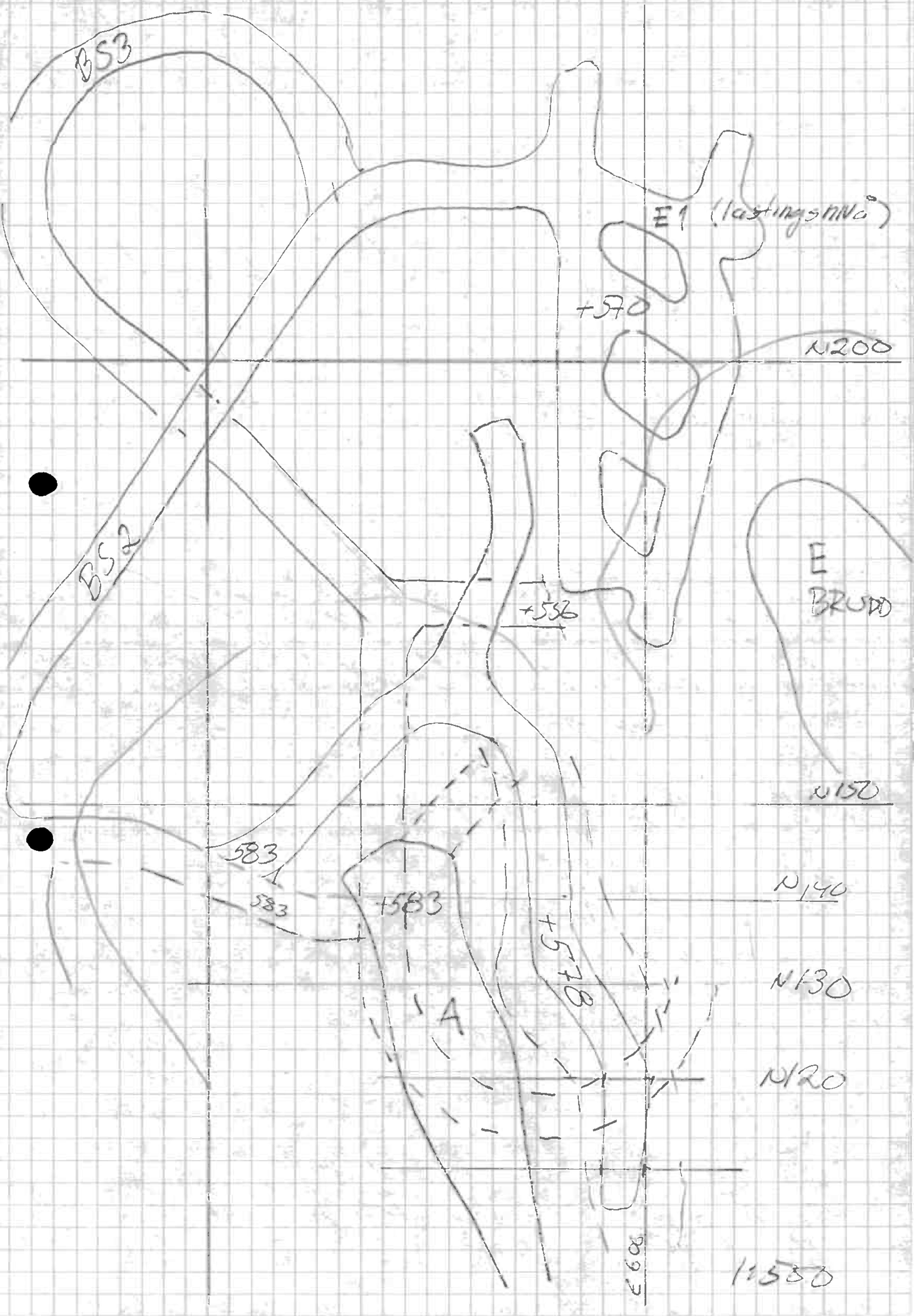
820
840
860
880
900
920
940
960
4.11.89
DB
DB
DB
ML
ML
+630
+620
2
E750
Y63500
E800
E850
Y63600
X143700
S980
S1000
620.55
620.30
620.85
22.3.89
28.2.89
+620
620.30

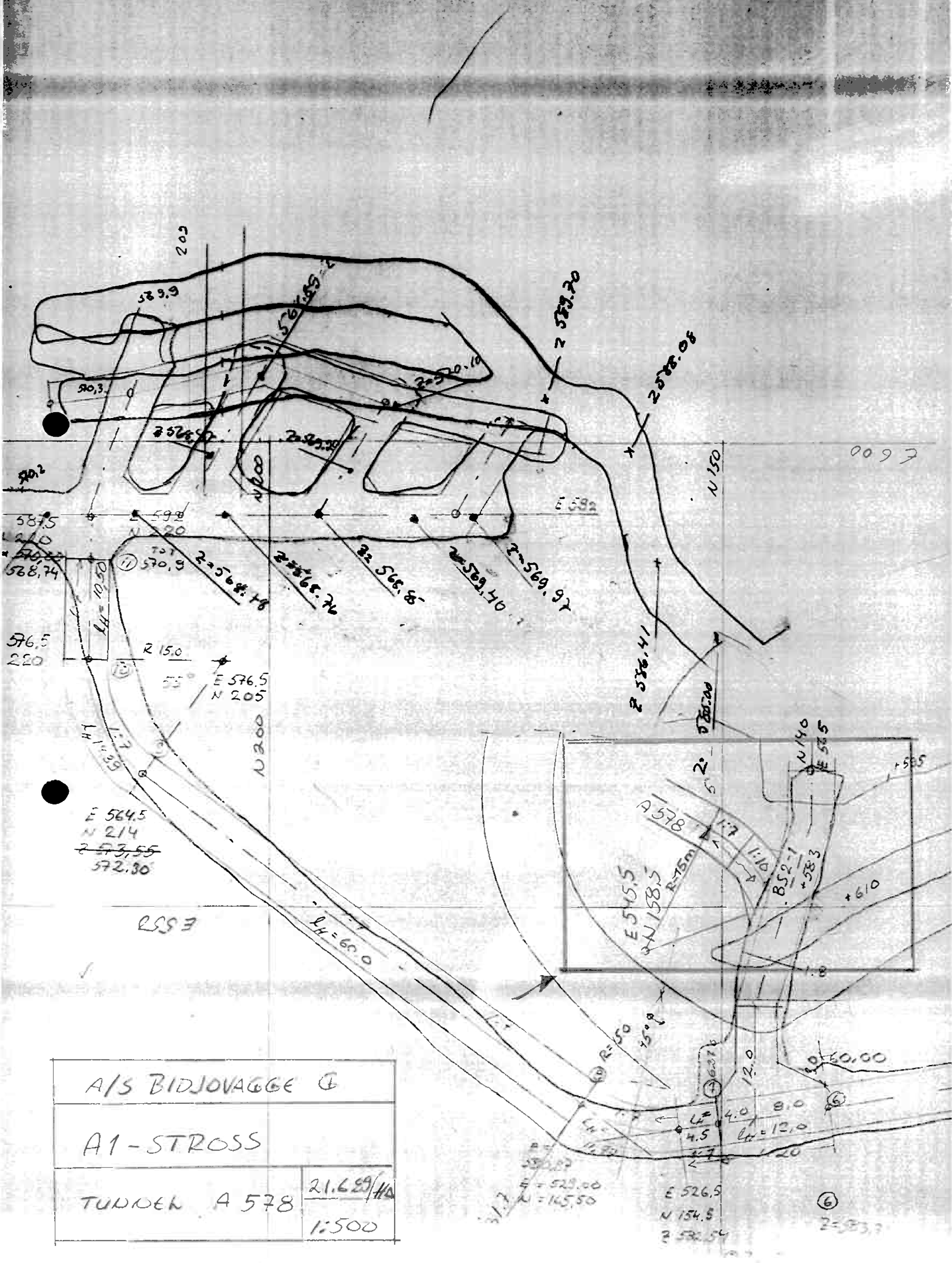

2
720
740
750
760
770
780
790
800
810
820
840

A
4



Bidjovagge Gruber
-BS 2-2
-BN-A
-BN-E
1:500
26.8.89 MAS


BS3
E1 (lastingsnivå)
+570
N200
BS2
E
BRUDD
+556
N150
583
583
+583
N140
+578
N130
A
N120
E68
1:500



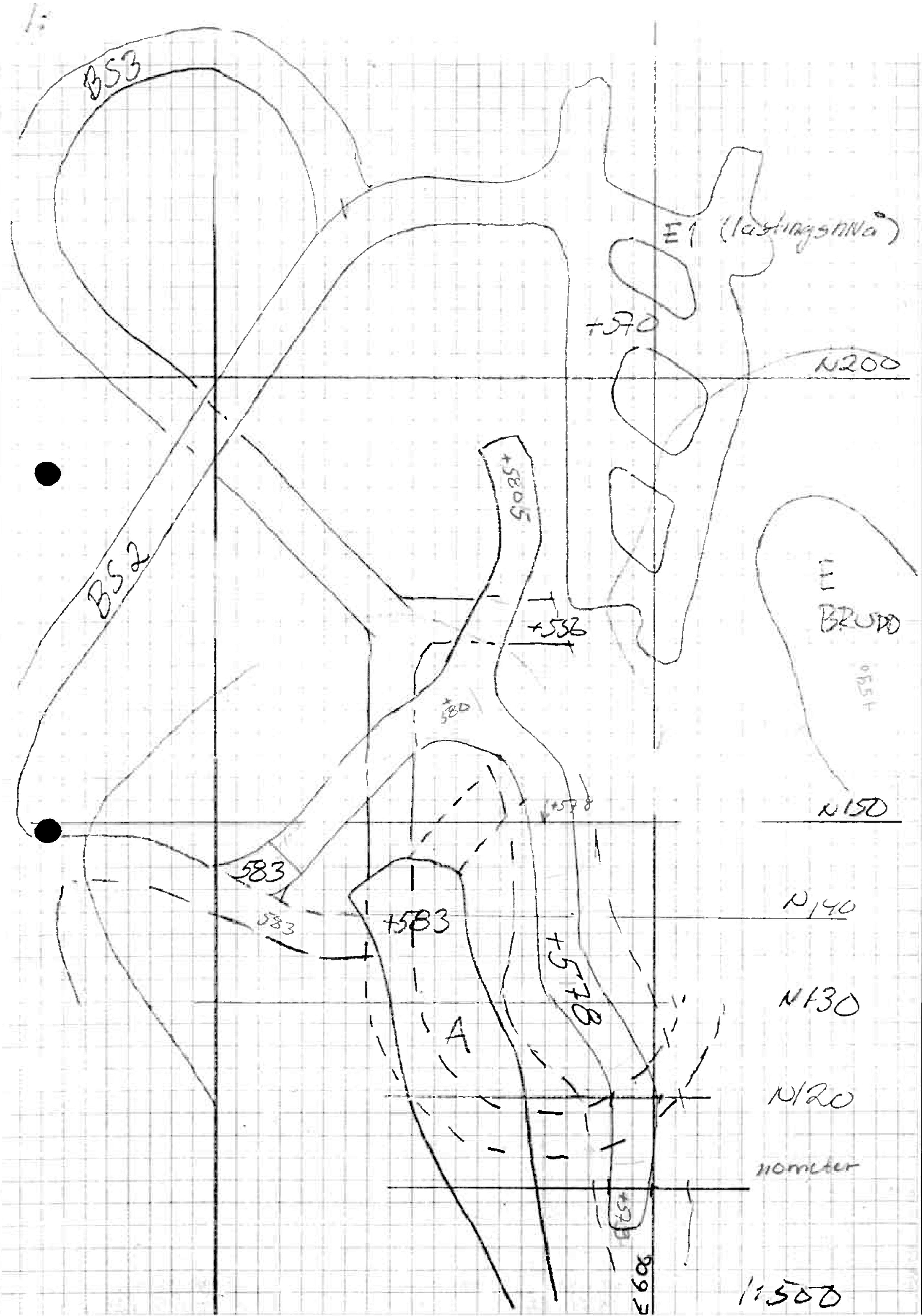
A/S BIDJOVAGGE

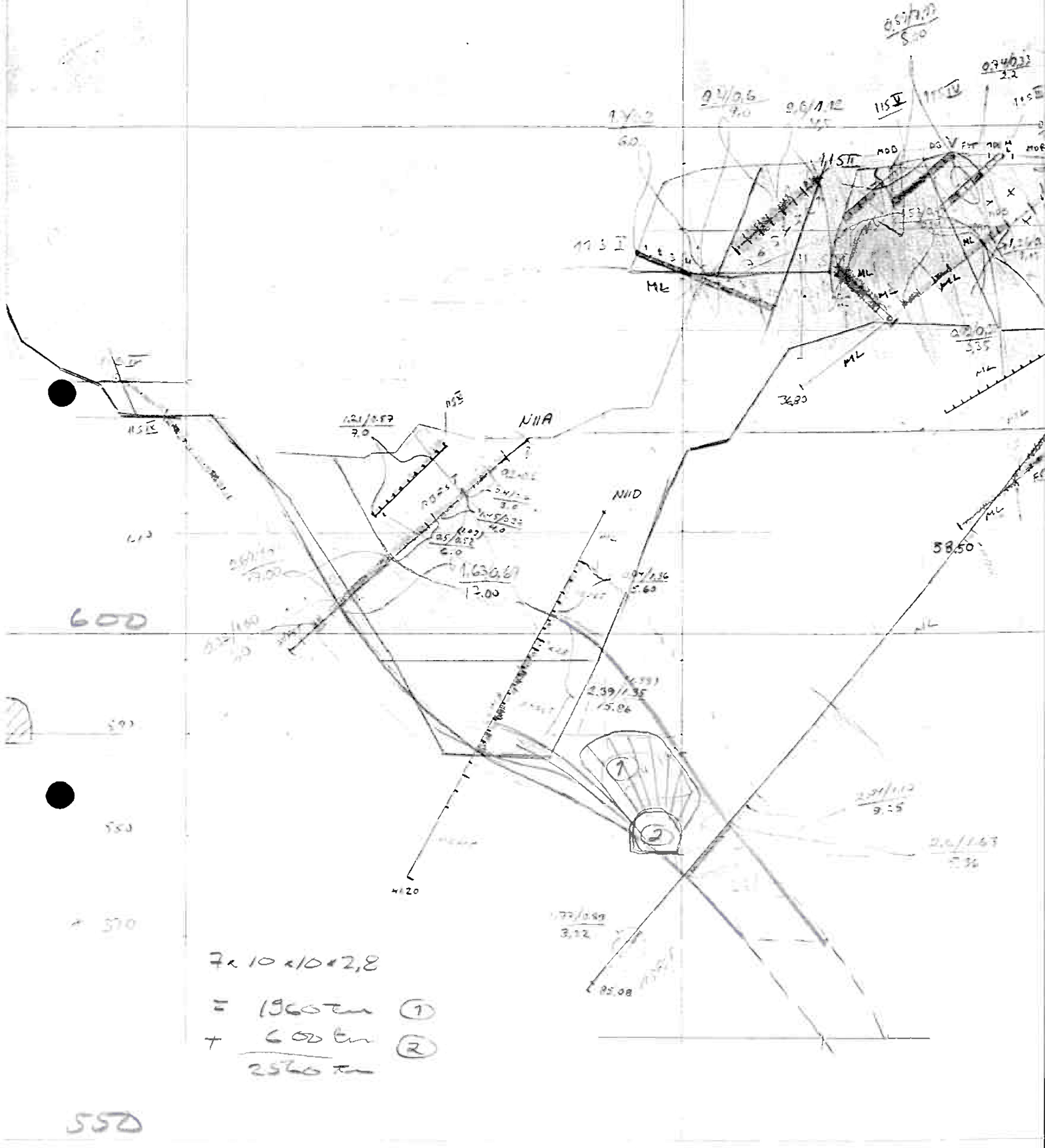
A1-STROSS

TUNNEL A 578

21.6.89/HA

1:500


1:
BS3
E1 (lastingsnivå)
+570
N200
+580S
BS2
+536
E1
BRUDD
+550
+580
+578
N150
583
+583
583
N140
+578
N130
A
N120
10meter
+57
E 606
1:500



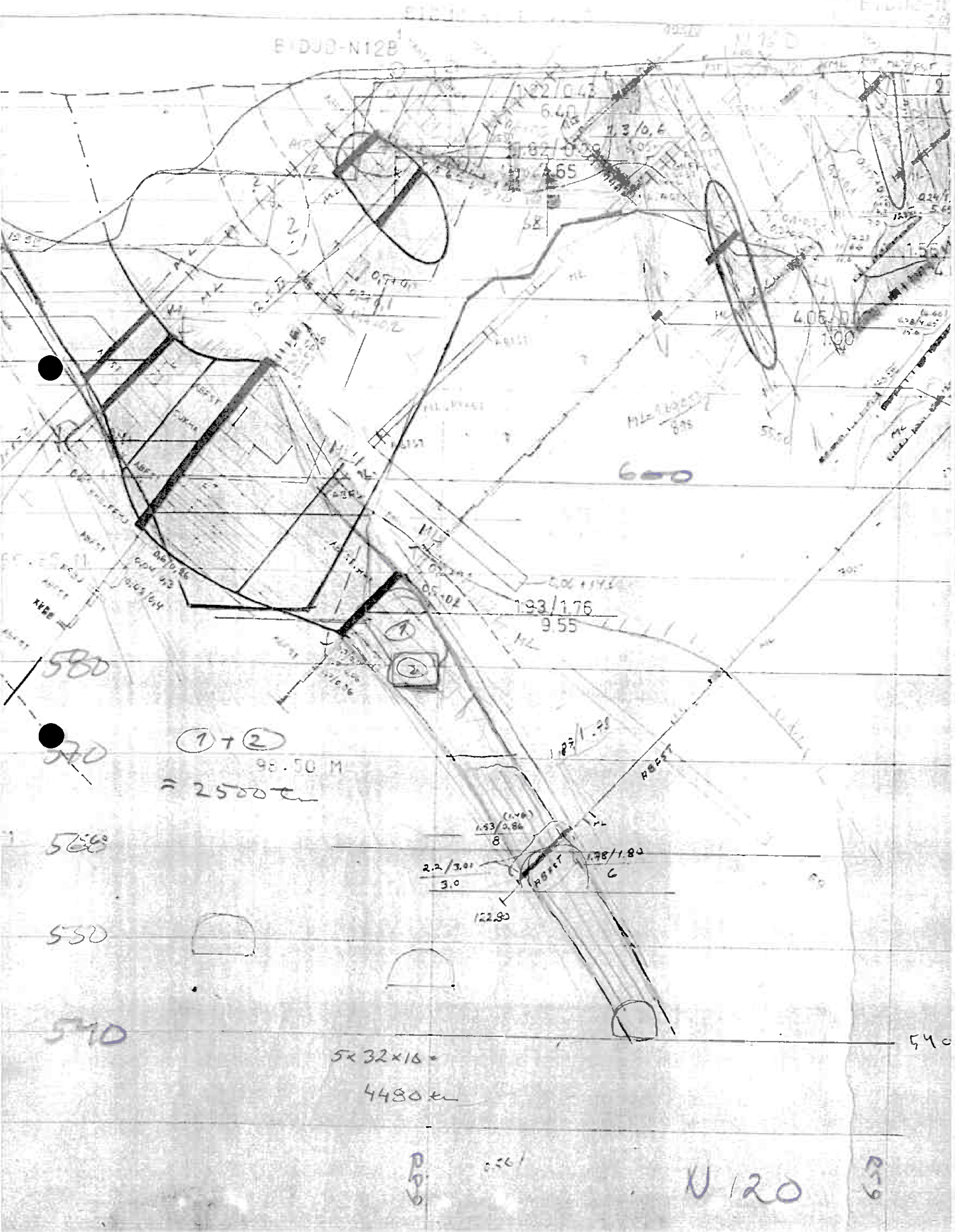
7x 10 x 10 x 2,8

= 1960 tn ①

+ 600 tn ②

2560 tn

N11D



B-DUD-N12B
N 12 D
1.22/0.42
6.40
1.3/0.6
1.62/0.5
4.65
58
ABFST
4.05/0.
1.90
1.56
600
ABFST
CUKM
0.6/0.86
1.93/1.76
9.55
①
②
580
570
① + ②
98.50 M
= 2500 t
1.87/1.78
ABFST
1.53/0.86
8
2.2/3.01
3.0
1.78/1.80
6
122.90
560
550
540
5×32×16 =
4480 t
540
N 120