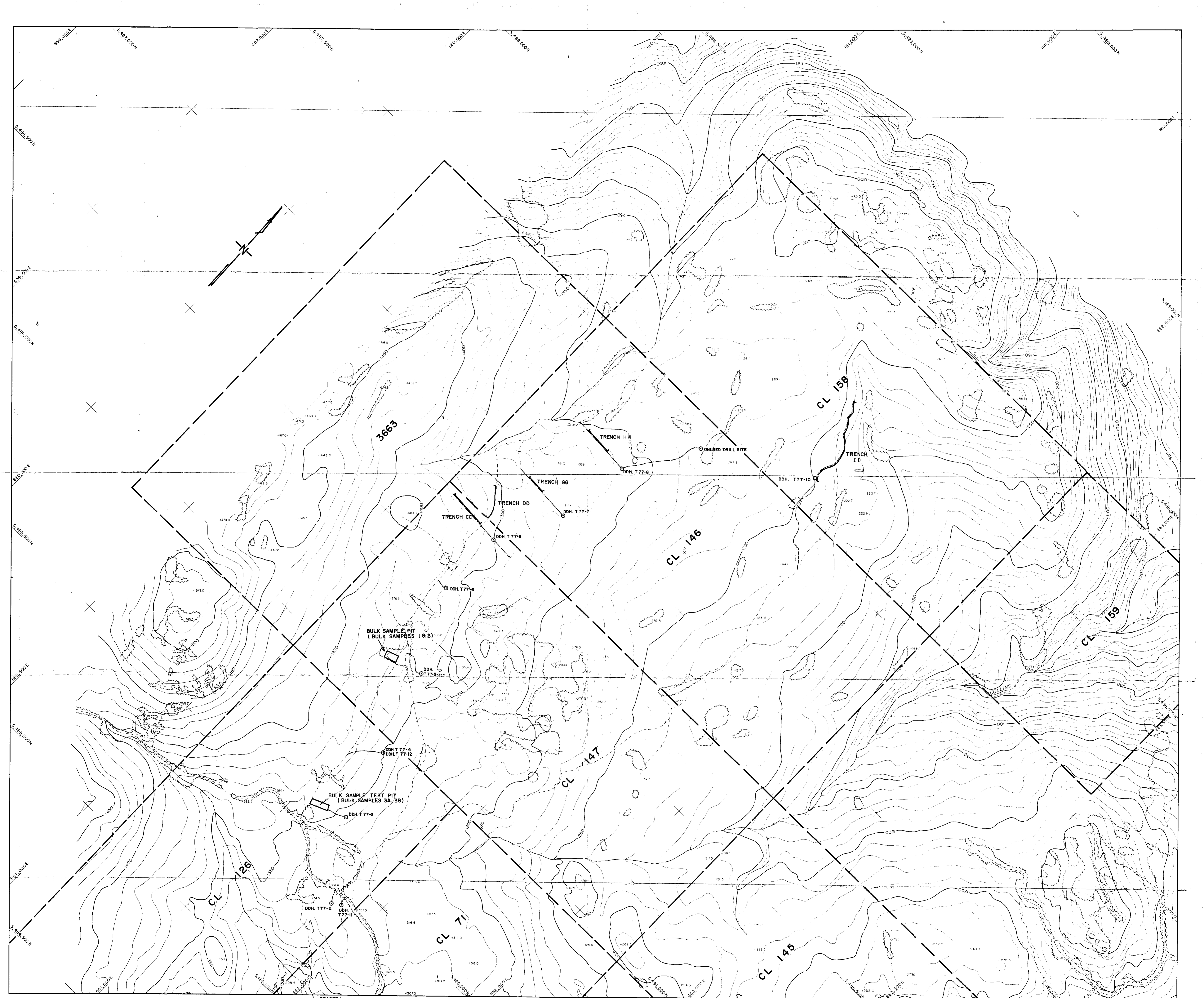


SM-TULAMEEN 77(2)A

MAPS, CROSS-SECTIONS
POLARIZATION SURVEY,
RESISTIVITY SURVEY
1977-1978

200 (5)



LEGEND

- | | | | |
|----------------------|----------|----------|---|
| CONTROL POINTS | △ HV 993 | RIVERS | — |
| SPOT ELEVATIONS | 1301.5 | TRAILS | — |
| OLD IRON PINS | ○ OIP | ROADS | — |
| PHOTO CENTRE | + 10 | TREES | — |
| INTERMITTENT STREAMS | — | CONTOURS | — |

LEGEND

- Pre-existing roads
- New roads (1977 field season)
- Diamond drill site
- New backhoe trenches (some since backfilled)
- Coal license boundary

SCALE 1:5000



bennett resource surveying, ltd.

LOCATIONS OF 1977 PHYSICAL WORK SITES

SH-TULAMEEN 77(2)A.
 Cyprus Anvil Mining Corporation
200 (MI) TULAMEEN COAL PROJECT
 PHYSICAL WORK SITES
 Date of Photography: June 17, 1977
 Contour Interval: 10 meters
 COMPILED BY T.J.A. DATE: MARCH 21, 1978
 SHEET 1 OF 2

LEGEND

TERTIARY

4 UPPER VOLCANICS
Brown to black, fine grained basalt

Unconformity

3 COAL - BEARING TERTIARY SEDIMENTS

3c UPPER SANDSTONES

3c2 Granule conglomerate, coarse sandstone, minor shale, mudstone.
3c1 Transitional unit; interbedded sandstone, mudstone, minor thin coal

3b COAL MEMBER; Shales, mudstone, tuffs, coal

3b10 Blocky breaking mudstone and shales
3b9 Finely laminated, fissile shales
3b8 Interbedded thin dirty coal, bentonite, shales, mudstones.
3b7 Main coal seam (including interbedded volcanic horizons)
3b6 Light grey, med grained sandstone, white muddy matrix.
3b5 Dark grey, massive, blocky breaking mudstone
3b4 Distinctive color banded, light to dark grey, interbedded shales, mudstones, muddy sandstone
3b3 Mudstone, medium brownish grey to dark grey, massive to medium laminated
3b2 Lower coal seam
3b1 Interbedded fragmental bentonitic tuff, thin coal seams, coaly bentonitic mudstone.

3a LOWER SANDSTONE; Coarse to fine sandstone, interbedded with mudstone and shale

2 LOWER VOLCANIC; Massive to porphyritic or fragmental, aegestic to felsitic.

Unconformity

UPPER TRIASSIC

1 NICOLA GROUP; Highly metamorphosed volcanic and sediments



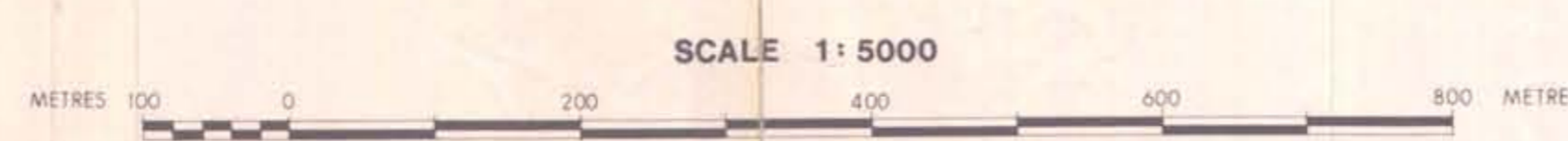
LEGEND

CONTROL POINTS
SPOT ELEVATIONS
OLD IRON PINS
PHOTO CENTRE
INTERMITTENT STREAMS

△ HV 993
○ OIP
+ IO

RIVERS
TRAILS
ROADS
TREES
CONTOURS

CL 126 COAL LICENSE NUMBER



burnett resources survey/ ltd.

LEGEND

GEOLOGICAL CONTACT (defined, assumed)

BEDDING ATTITUDE

FAULT

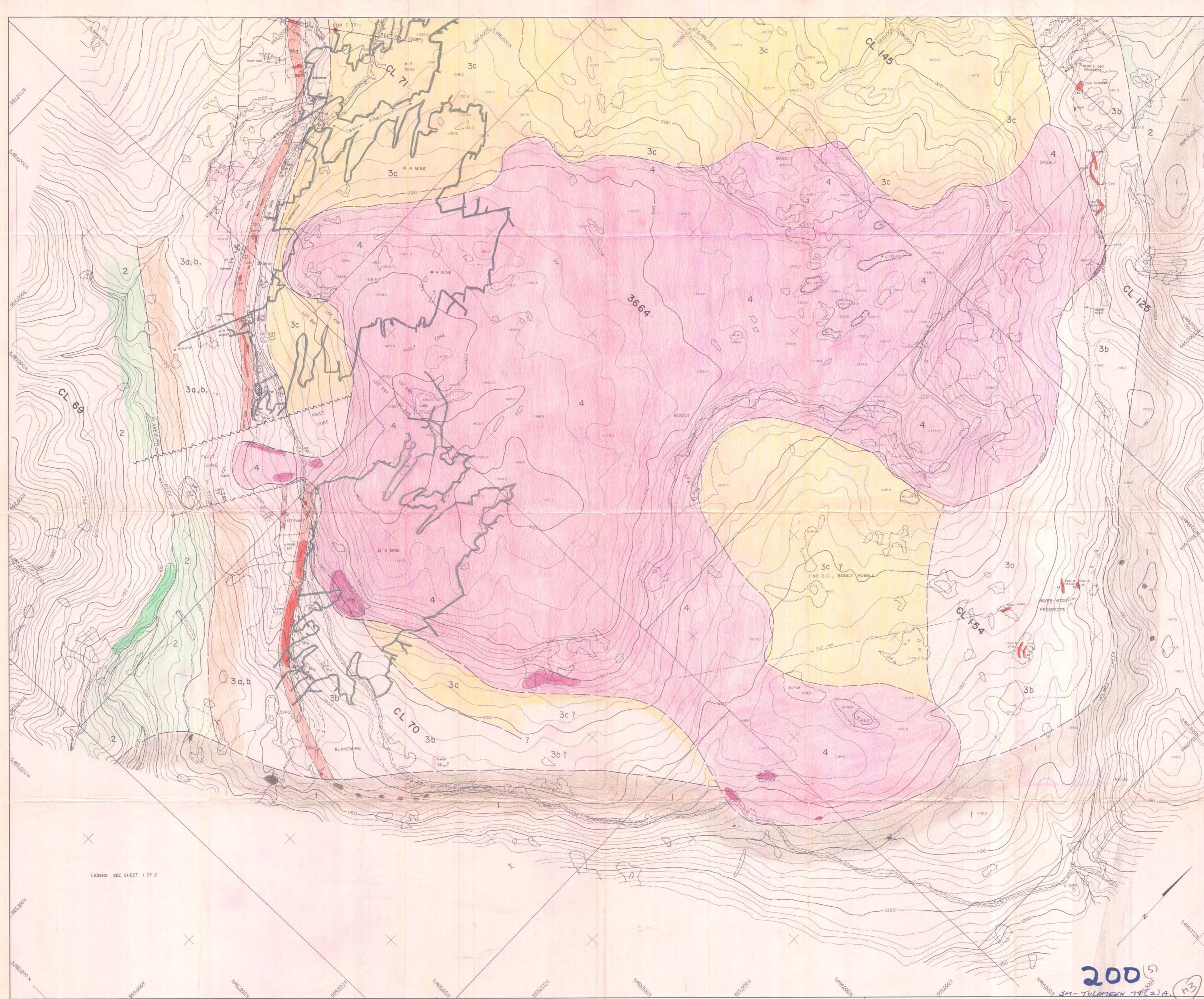
OUTCROP

TRENCH

DIAMOND DRILL HOLE

84-TULAMEEN 77(C)A
Cyprus Anvil Mining Corporation
TULAMEEN COAL PROJECT
GEOLOGY MAP
Date of Photography: June 17, 1977
Contour Interval: 10 meters
COMPILED BY T.J.A. DATE: MARCH 23, 1978
SHEET 1 OF 2

200



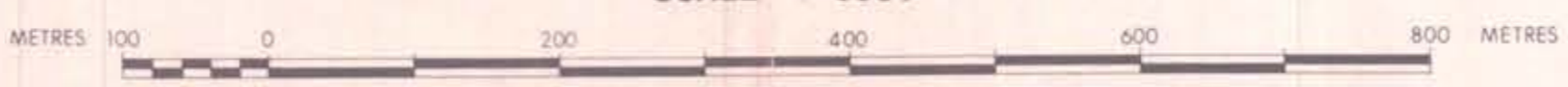
LEGEND SEE SHEET 1 OF 2

LEGEND

- | | | | |
|----------------------|----------|----------|---|
| CONTROL POINTS | △ HV 993 | RIVERS | — |
| SPOT ELEVATIONS | ○ 130.5 | TRAILS | — |
| OLD IRON PINS | ○ DIP | ROADS | — |
| PHOTO CENTRE | + 10 | TREES | — |
| INTERMITTENT STREAMS | — | CONTOURS | — |

CL 126 COAL LICENSE NUMBER

SCALE 1:5000



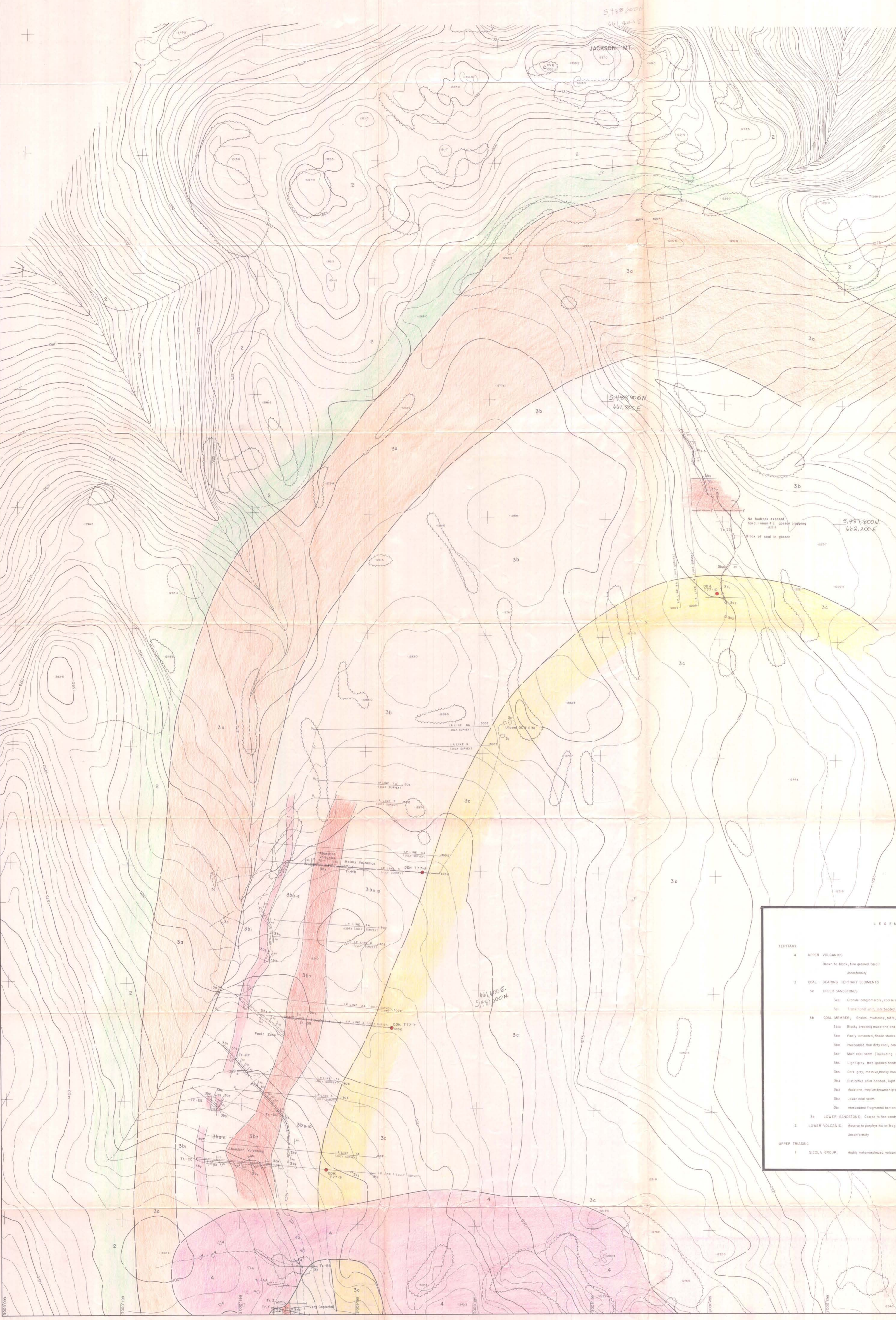
burnett reynolds surveyors Ltd.

LEGEND

- | | |
|---------------------------------------|---|
| GEOLOGICAL CONTACT (defined, assumed) | — |
| BEDDING ATTITUDE | — |
| FAULT | — |
| OUTCROP | — |
| TRENCH | — |
| DIAMOND DRILL HOLE | ○ |

200⁽⁵⁾

Cyprus Anvil Mining Corporation
TALAMEEN COAL PROJECT
 GEOLOGY MAP
 Date of Photography: June 17, 1977
 Contour Interval: 10 meters
 COMPILED BY T.J.A. DATE MARCH 21, 1978
SHEET 2 OF 2



JACKSON, MT.

5488 600N
661 800E

5488 600N
661 800E

5487 800N
662 200E

LEGEND

TERTIARY	
4	UPPER VOLCANICS Brown to black, fine grained basalt Unconformity
3 COAL-BEARING TERTIARY SEDIMENTS	
3c UPPER SANDSTONES	
3c1	Granule conglomerate, coarse sandstone
3c2	Transitional unit, interbedded sandstone
3b COAL MEMBER: Shales, mudstone, luffs, coal	
3b1	Blocky breaking mudstone and shales
3b2	Fine laminated, fissile shales
3b3	Interbedded thin dirty coal, bentonite, sh
3b4	Main coal seam (including interbed
3b5	Light grey, med grained sandstone, w
3b6	Dark grey, massive, blocky breaking m
3b7	Dishective color banded, light to dark
3b8	Mudstone, medium brownish grey to dar
3b9	Lower coal seam
3b10	Interbedded fragmental bentonitic tuff,
3b11	LOWER SANDSTONE, Coarse to fine sandstone, int
2 LOWER VOLCANIC, Massive to porphyritic or fragmental, unconformity	
UPPER TRIASSIC	
1	NICOLA GROUP, Highly metamorphosed volcanic and se

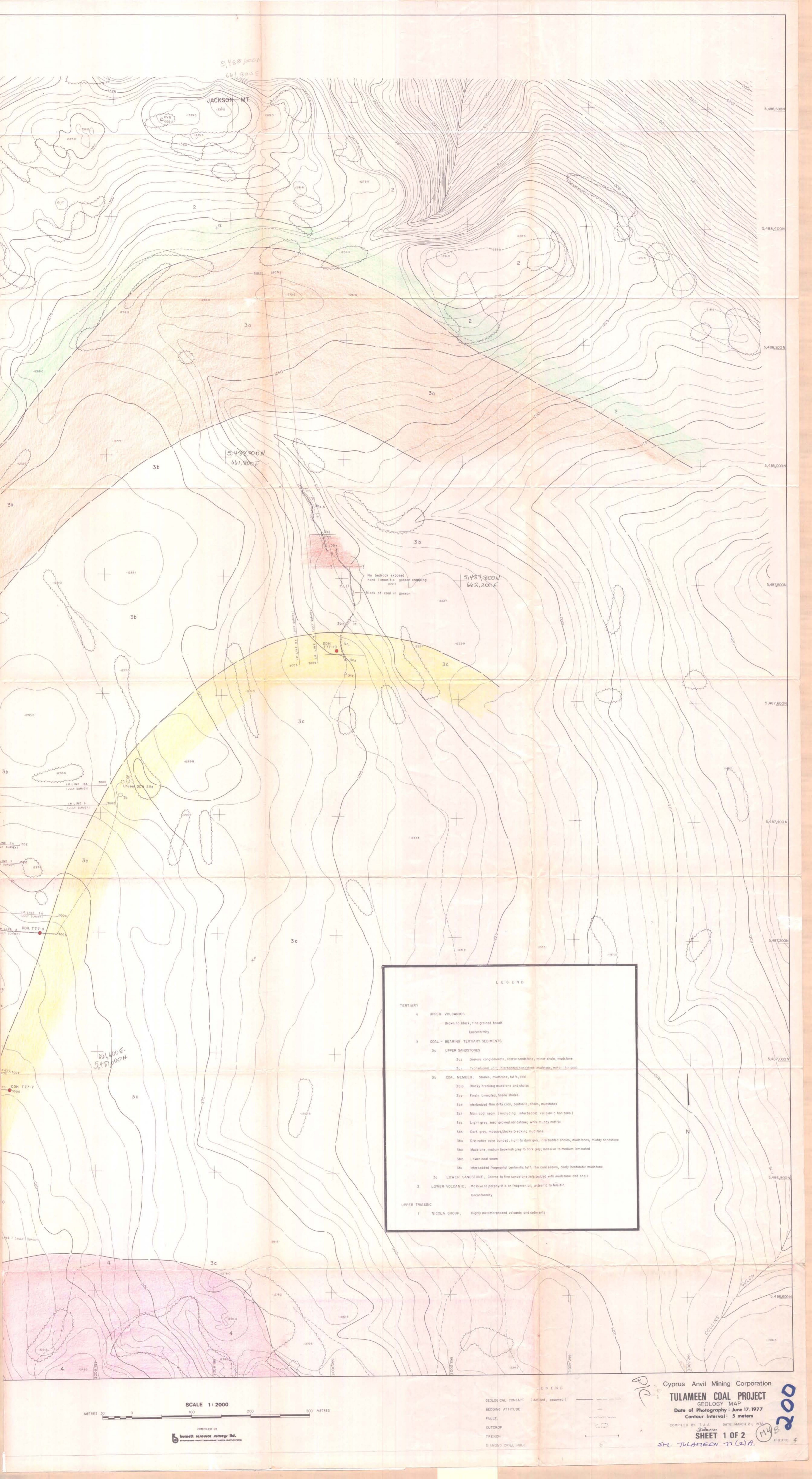
LEGEND

CONTROL POINTS	○ HV 993	RIVERS	—
SPOT ELEVATIONS	○ 100.5	TRAILS	—
PHOTO CENTRE	○ 10	ROADS	—
INTERMITTENT STREAMS	—	FENCES	—
		CONTOURS	—



COMPILED BY
Bennett resource surveying Ltd.

GEOLOGICAL CONTACT
BEDDING ATTITUDE
FAULT
OUTCROP
TRENCH
DIAMOND DRILL HOLE



5,488,000N
661,800E

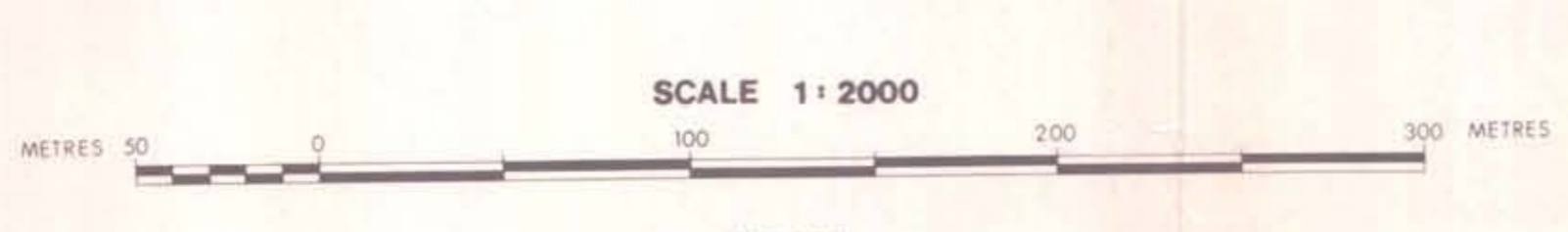
JACKSON - MT.

5,488,000N
661,800E

5,487,800N
662,200E

1061,400E
5497,000N

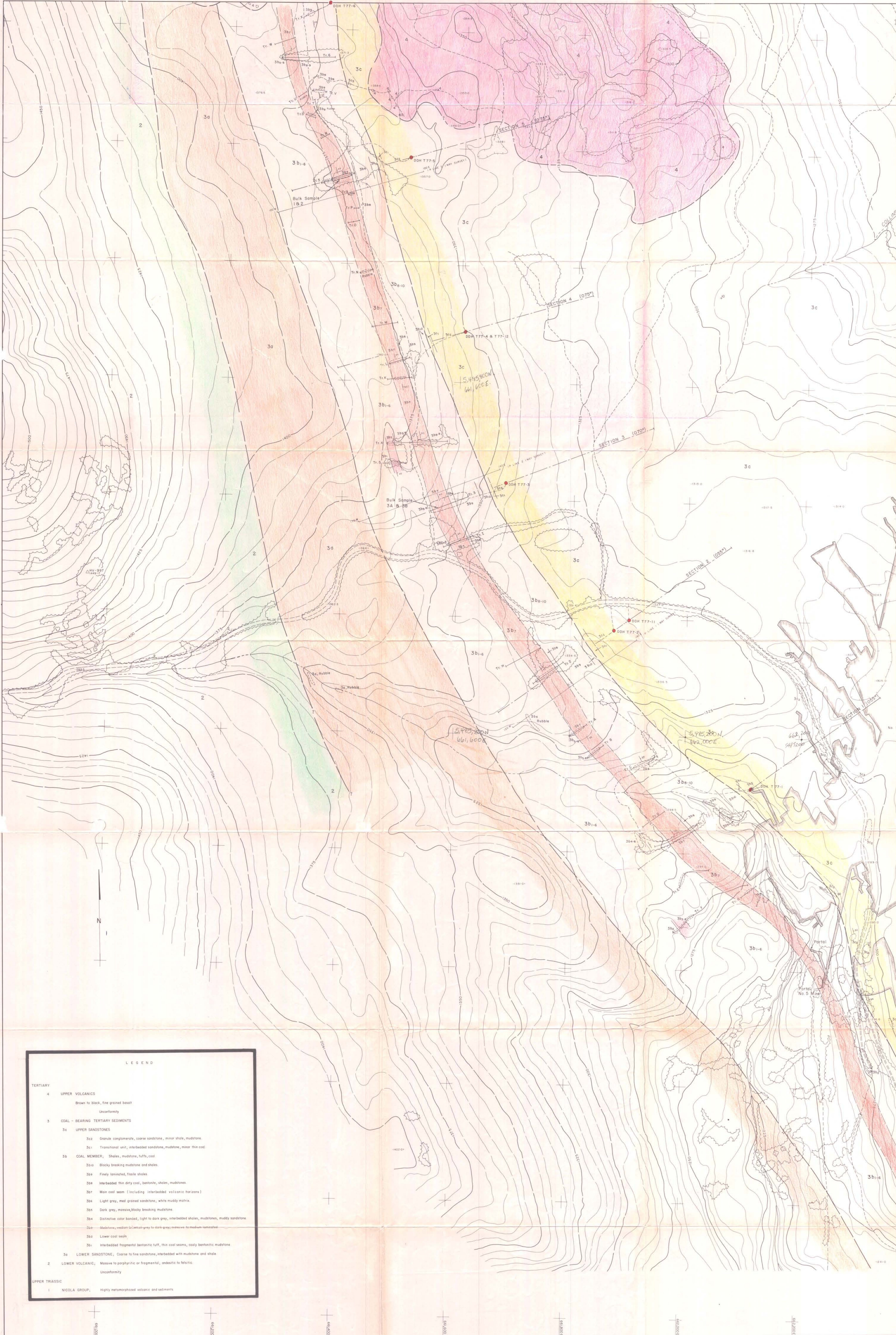
LEGEND	
TERTIARY	
4	UPPER VOLCANICS Brown to black, fine grained basalt Unconformity
3	COAL-BEARING TERTIARY SEDIMENTS
3c	UPPER SANDSTONES 3c1 Granule conglomerate, coarse sandstone, minor shale, mudstone 3c2 Transitional unit, interbedded sandstone mudstone, minor thin coal
3b	COAL MEMBER; Shales, mudstone, tuffs, coal 3b10 Blocky breaking mudstone and shales 3b9 Finely laminated, fissile shales 3b8 Interbedded thin dry coal, bentonite, shales, mudstones 3b7 Main coal seam (including interbedded volcanic horizons) 3b6 Light grey, med grained sandstone, with muddy matrix 3b5 Dark grey, massive, blocky breaking mudstone 3b4 Distinctive color banded, light to dark grey, interbedded shales, mudstones, muddy sandstone 3b3 Mudstone, medium brownish grey to dark grey, massive to medium laminated 3b2 Lower coal seam 3b1 Interbedded fragmental bentonitic tuff, thin coal seams, caddy bentonitic mudstone
3a	LOWER SANDSTONE, Coarse to fine sandstone, interbedded with mudstone and shale
2	LOWER VOLCANIC, Massive to porphyritic or fragmental, aegitic to felsitic Unconformity
UPPER TRIASSIC	
1	NICOLA GROUP, Highly metamorphosed volcanic and sediments



COMPILED BY
benett resource survey Ltd.
MEMBERS OF THE ASSOCIATION OF SURVEYORS

LEGEND	
GEOLOGICAL CONTACT (defined, assumed)	---
BEDDING ATTITUDE	— —
FAULT	- - - - -
OUTCROP	○
TRENCH	— — — —
TRENCH	— — — —
DIAMOND DRILL HOLE	○

Cyprus Anvil Mining Corporation
TULAMEEN COAL PROJECT
GEOLOGY MAP
Date of Photography: June 17, 1977
Contour Interval: 5 meters
COMPILED BY: S. G. S. DATE: MARCH 21, 1978
SHEET 1 OF 2
SM-TULAMEEN 77 (2) A. FIGURE 4

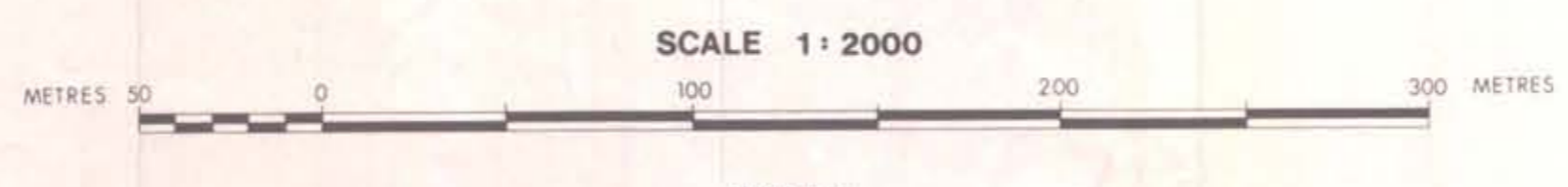


LEGEND

TERTIARY	
4	UPPER VOLCANICS Brown to black, fine grained basalt Unconformity
3	COAL-BEARING TERTIARY SEDIMENTS
3c	UPPER SANDSTONES 3c2 Granule conglomerate, coarse sandstone, minor shale, mudstone. 3c1 Transitional unit, interbedded sandstone, mudstone, minor thin coal
3b	COAL MEMBER; Shales, mudstone, tuffs, coal 3b10 Blocky breaking mudstone and shales. 3b9 Finely laminated, friable shales. 3b8 Interbedded thin dirty coal, bentonite, shales, mudstones. 3b7 Main coal seam (including interbedded volcanic horizons) 3b6 Light grey, med grained sandstone, white muddy matrix. 3b5 Dark grey, massive, blocky breaking mudstone. 3b4 Distinctive color banded, light to dark grey, interbedded shales, mudstones, muddy sandstone. 3b3 Mudstone, medium to dark grey, massive to medium laminated. 3b2 Lower coal seam 3b1 Interbedded fragmental bentonitic tuff, thin coal seams, coaly bentonitic mudstone
3a	LOWER SANDSTONE; Coarse to fine sandstone, interbedded with mudstone and shale
2	LOWER VOLCANIC; Massive to porphyritic or fragmental, andesitic to felsitic. Unconformity
UPPER TRIASSIC	
1	NICOLA GROUP; Highly metamorphosed volcanic and sediments

LEGEND

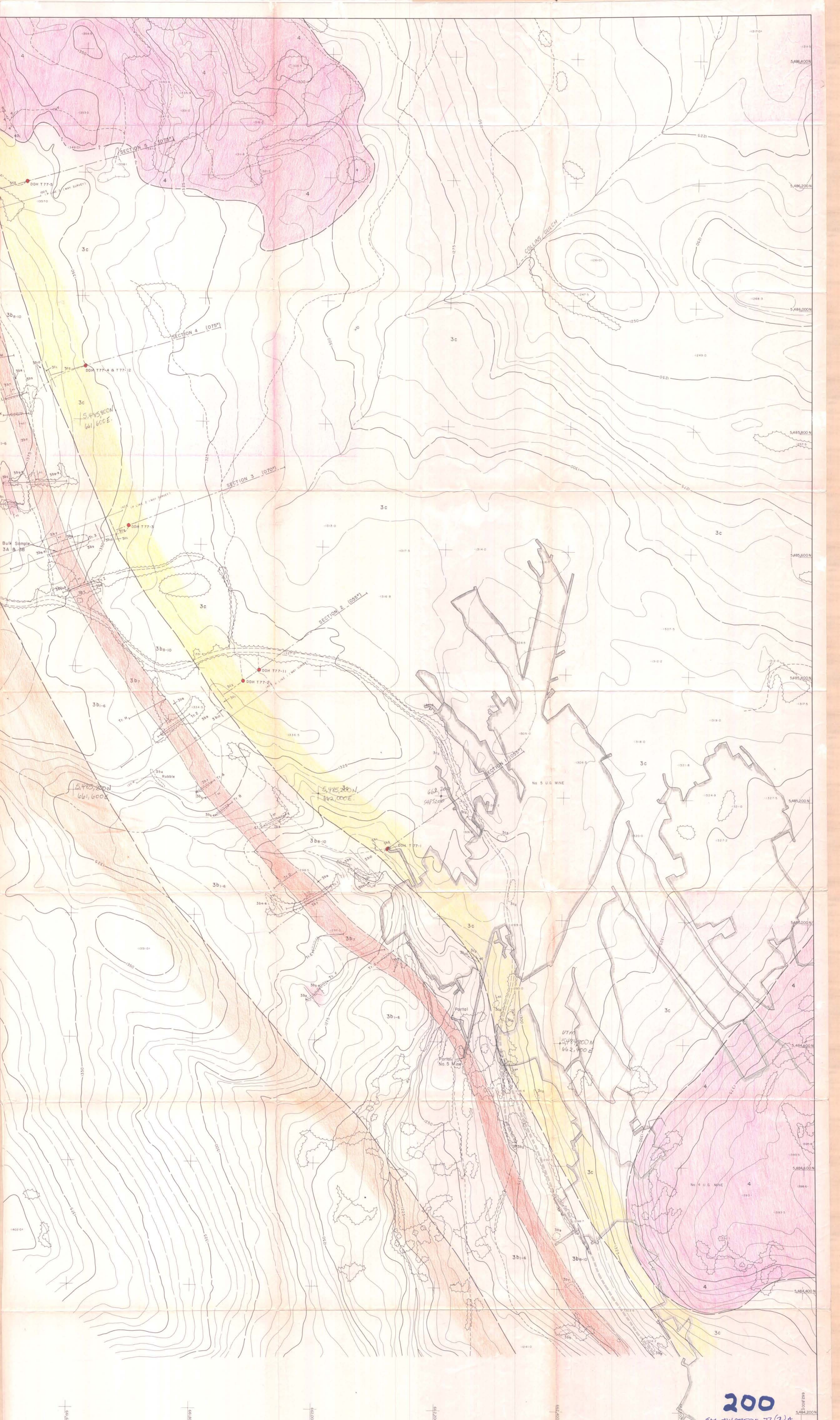
CONTROL POINTS	△ HV 993	RIVERS	—————
SPOT ELEVATIONS	○ 4	TRAILS	-----
OLD IRON PINS	○ DIP	ROADS	=====
PHOTO CENTRE	+ 10	TREES	
INTERMITTENT STREAMS	---	CONTOURS	1000



COMPILED BY
bennett resource surveying ltd.

GEOLOGICAL CONTACT
BEDDING ATTITUDE
FAULT
OUTCROP
TRENCH
DIAMOND DRILL HOLE

M5A



200

SM-TULAMEEN 77 (2) A

Cyprus Anvil Mining Corporation

TULAMEEN COAL PROJECT

GEOLOGY MAP

Date of Photography: June 17, 1977

Contour Interval: 5 meters

COMPILED BY T. J. B. DATE: MARCH 21, 1978

SHEET 2 OF 2

FIGURE 5

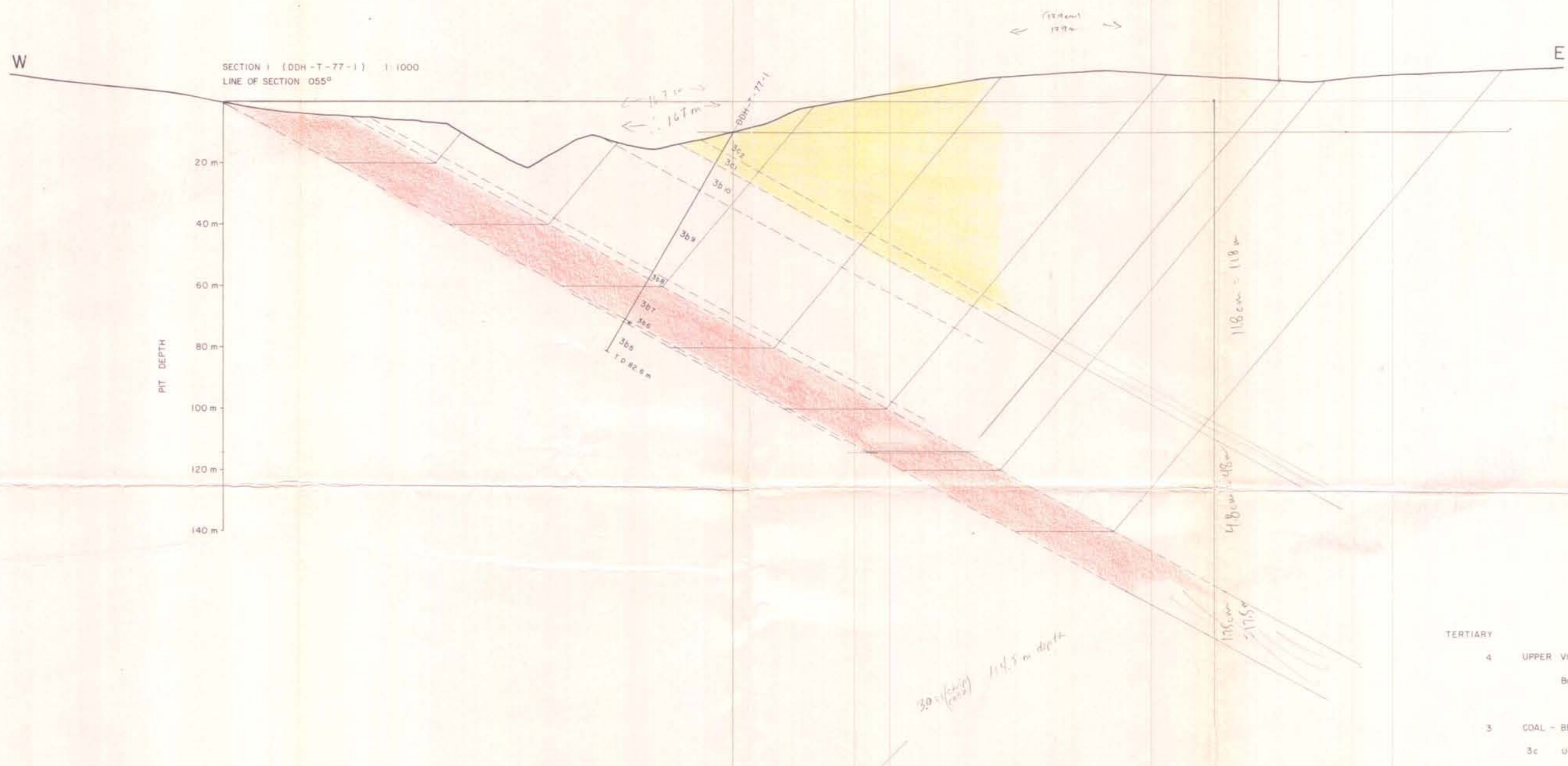


SCALE 1:2000

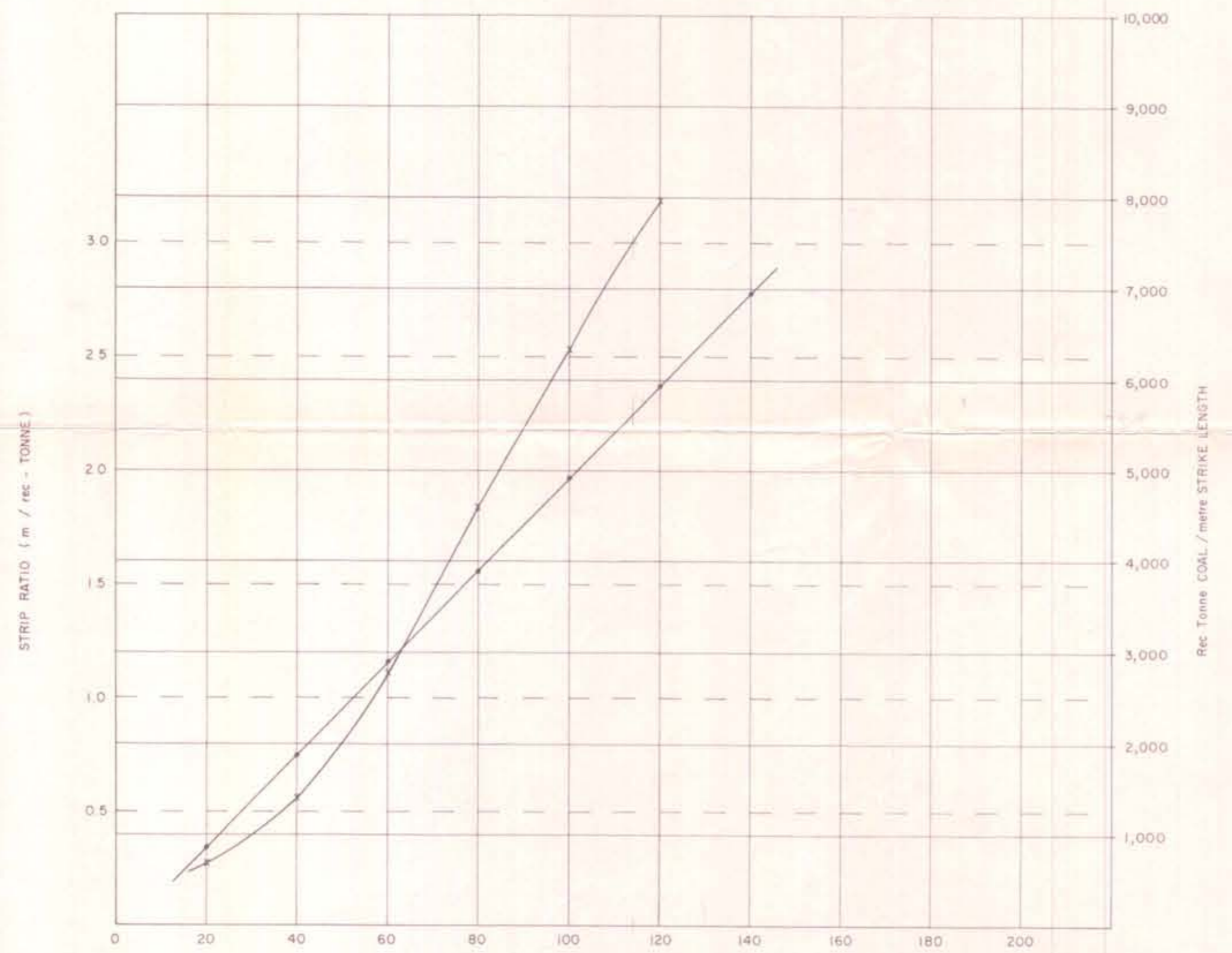
COMPILED BY
bennett resource surveys ltd.

LEGEND

GEOLOGICAL CONTACT (defined, assumed)	---
BEDDING ATTITUDE	— —
FAULT	- - - - -
OUTCROP	⊖
TRENCH	⊕
DIAMOND DRILL HOLE	○



SECTION I - Reserve - Strip Ratio Graph



PIT DEPTH (m)
• Coal
X Strip Ratio

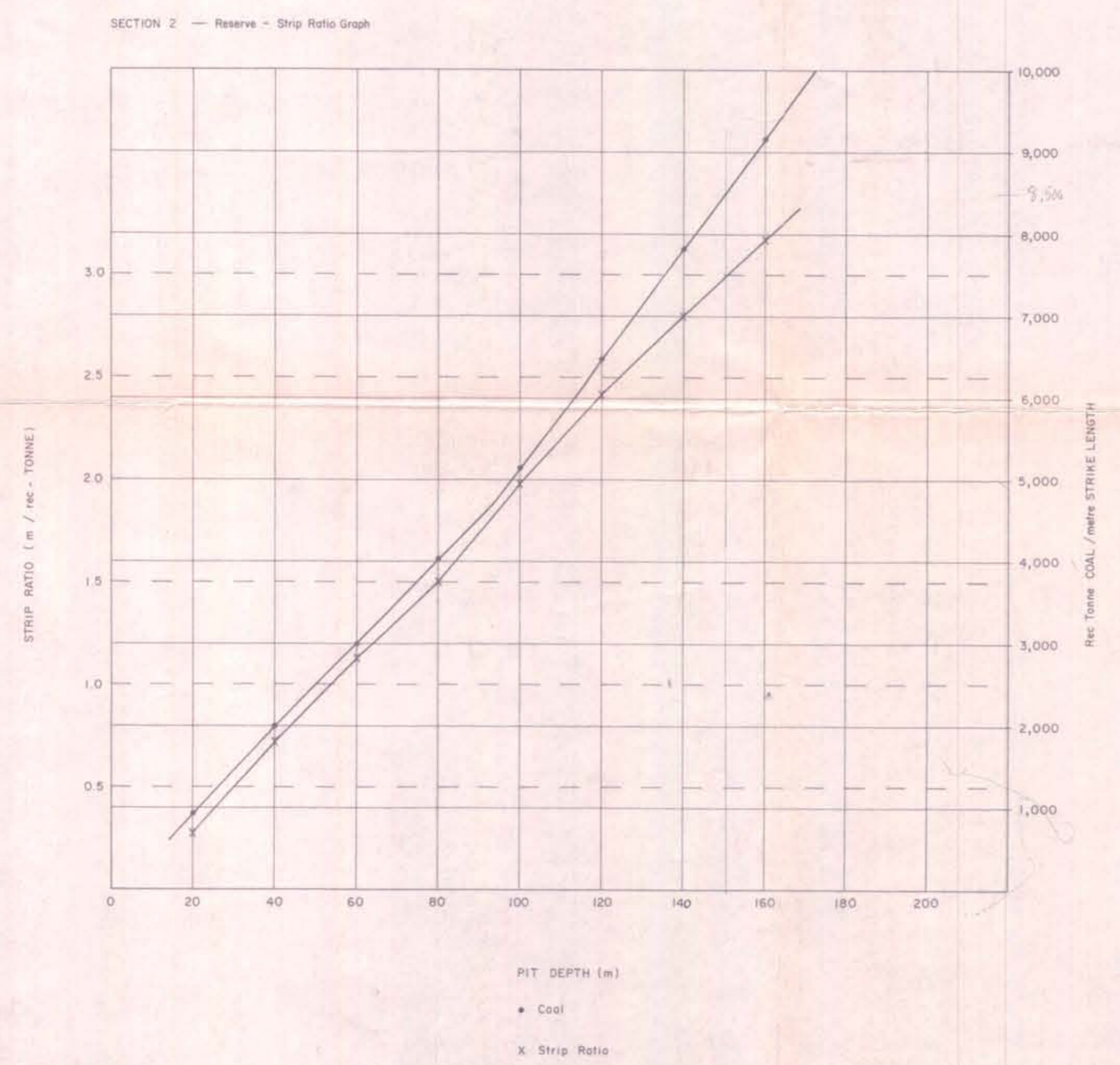
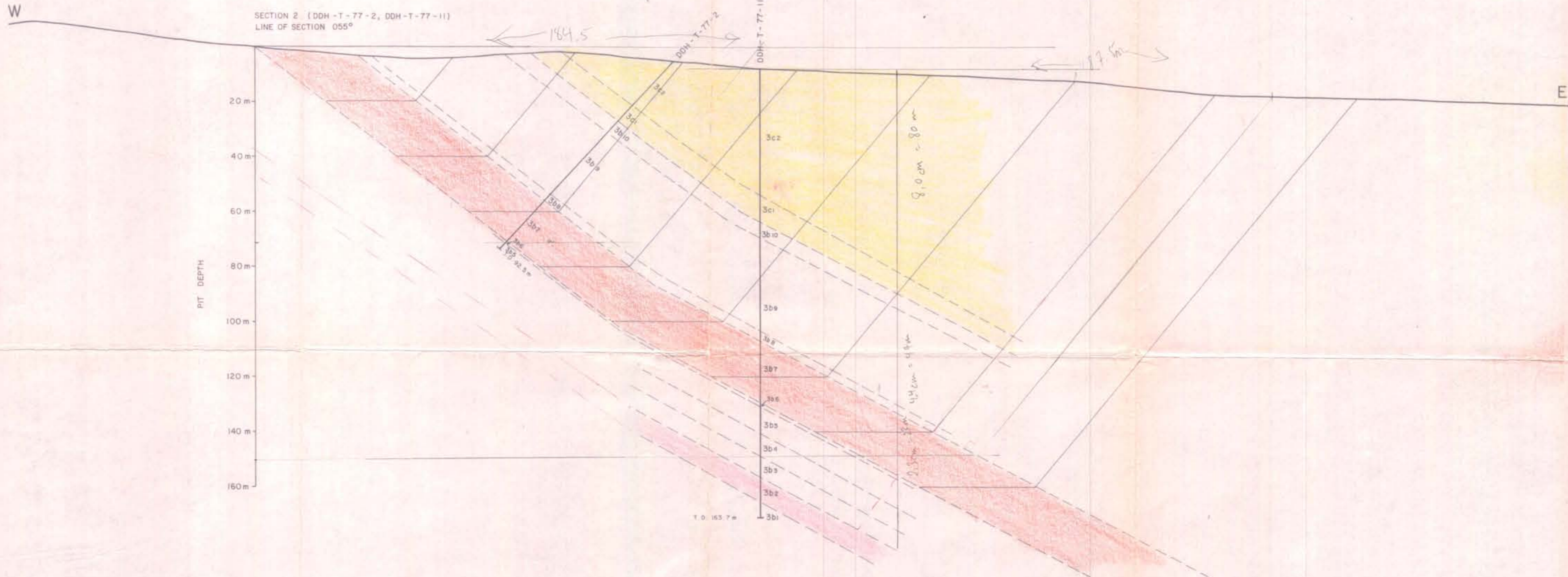
LEGEND

- TERTIARY
 - 4 UPPER VOLCANICS
 - Brown to black, fine grained basalt
 - Unconformity
 - 3 COAL - BEARING TERTIARY SEDIMENTS
 - 3c UPPER SANDSTONES
 - 3c2 Granule conglomerate, coarse sandstone, minor shale, mudstone.
 - 3c1 Transitional unit, interbedded sandstone, mudstone, minor thin coal.
 - 3b COAL MEMBER; Shales, mudstone, tuffs, coal
 - 3b1c Blocky breaking mudstone and shales
 - 3b9 Finely laminated, fissile shales
 - 3b8 Interbedded thin dry coal, bentonite, shales, mudstones.
 - 3b7 Main coal seam (including interbedded volcanic horizons)
 - 3b6 Light grey, med grained sandstone, white muddy matrix.
 - 3b5 Dark grey, massive, blocky breaking mudstone
 - 3b4 Distinctive color banded, light to dark grey, interbedded shales, mudstones, muddy sandstone.
 - 3b3 Mudstone, medium brownish grey to dark grey, massive to medium laminated
 - 3b2 Lower coal seam
 - 3b1 Interbedded fragmental bentonitic tuff, thin coal seams, coaly bentonitic mudstone
 - 3a LOWER SANDSTONE, Coarse to fine sandstone, interbedded with mudstone and shale
 - 2 LOWER VOLCANIC; Massive to porphyritic or fragmental, andesitic to felsitic. Unconformity
- UPPER TRIASSIC
 - 1 NICOLA GROUP; Highly metamorphosed volcanic and sediments

200

SM - TULAMEEN 77(2)A.
CYPRUS ANVIL MINING CORPORATION
TULAMEEN COAL PROJECT (M10)
Cross - Section & Reserve - Strip Ratio Graph
Section I (Through DDH - T - 77 - 1)

SCALE 1 1000
N.T.S - 92H - 10
DATE - NOVEMBER 9, 1977
SCALE 1 1000
FIGURE No 20
COMPILED BY
DRAWN BY C.L.C.



LEGEND - See Section 1

SM-TULAMEEN 77(2)A

CYPRUS ANVIL MINING CORPORATION

TULAMEEN COAL PROJECT (M7)

Cross - Section & Reserve - Strip Ratio Graph

Section 2 (Through DDH-T-77-2, -11)

SCALE 1:1000

N.T.S. - 92H-10

DATE - NOVEMBER 9, 1977

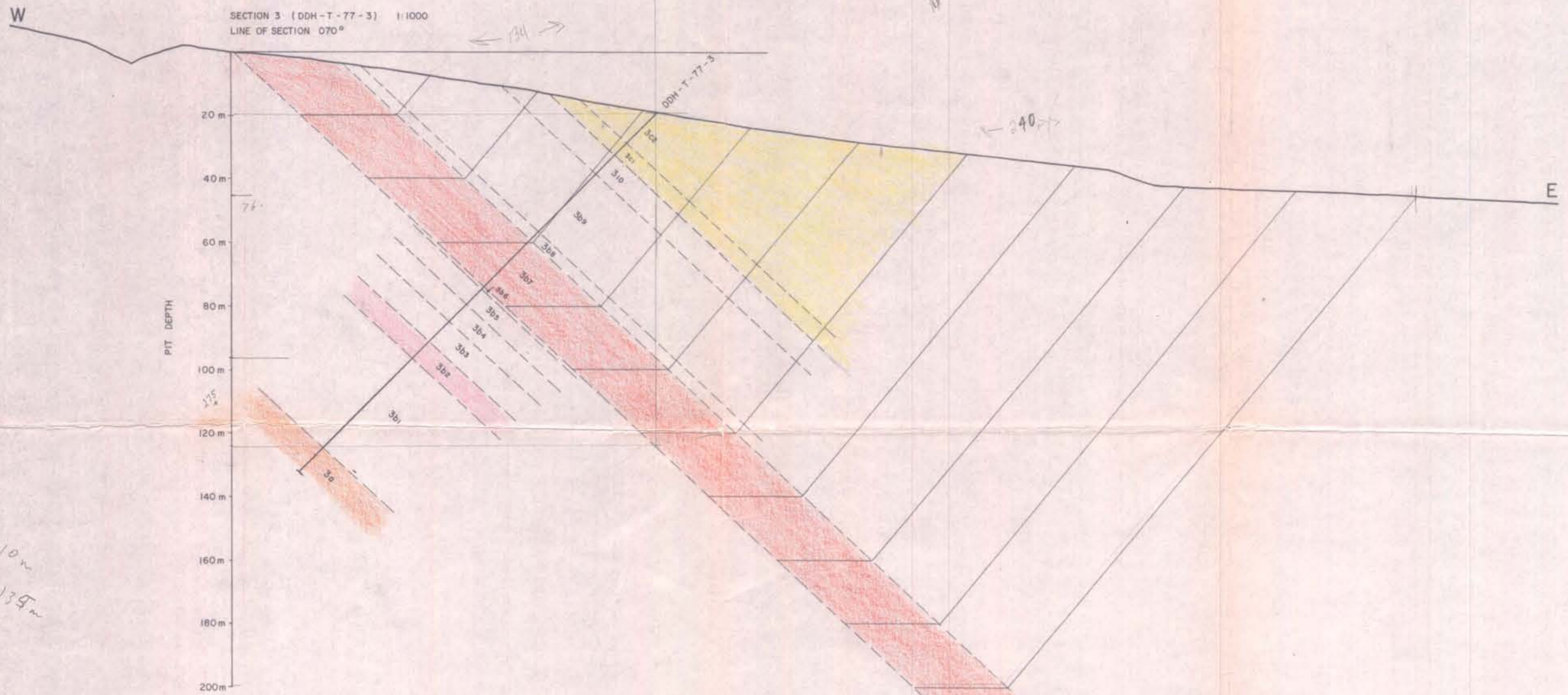
SCALE 1:1000

FIGURE No 2.1

COMPILED BY [Signature]

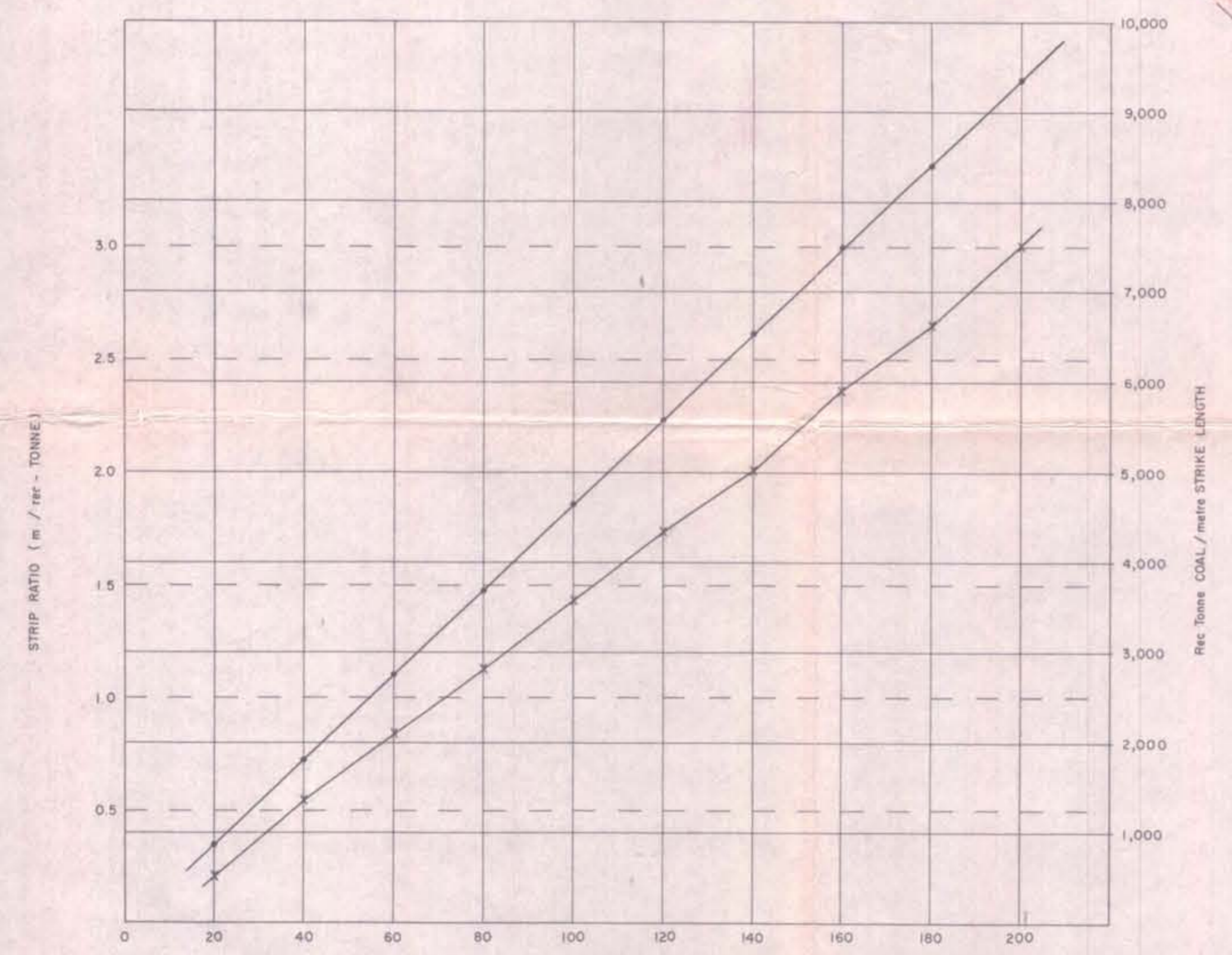
DRAWN BY C.L.G.

12.5/11
200



1cm = 10m
125 = 135m

SECTION 3 - Reserve - Strip Ratio Graph



PIT DEPTH (m)
• Coal
x Strip Ratio

LEGEND - See Section 1

1cm = 10m

124
135
775

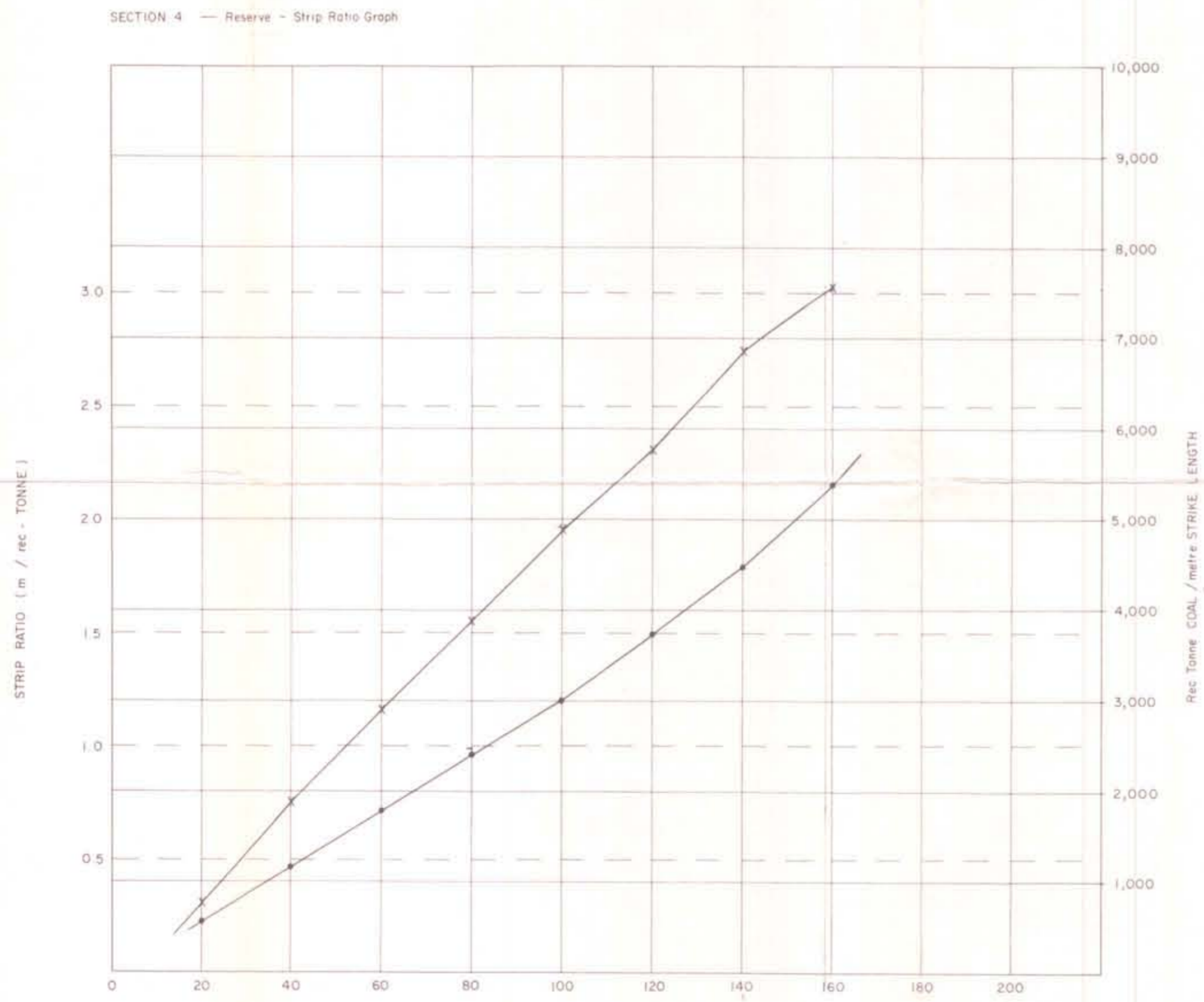
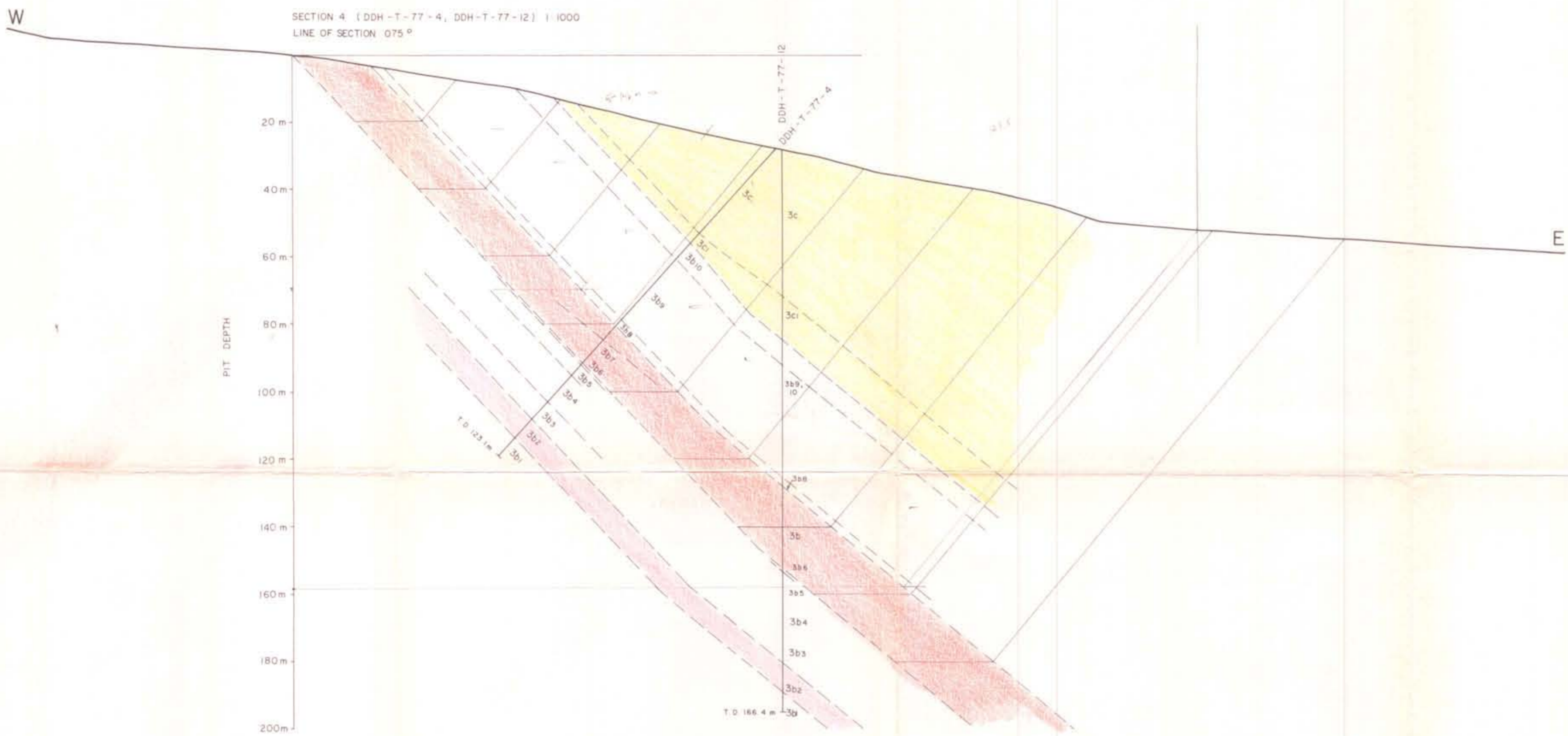
200

SM-TULAMEEN 77(2)A
CYPRUS ANVIL MINING CORPORATION

TULAMEEN COAL PROJECT (MB)

Cross - Section & Reserve - Strip Ratio Graph
Section 3 (Through DDH-T-77-3)

SCALE - 1:1000
N.T.S. - 92H-10
DATE - NOVEMBER 9, 1977
SCALE 1:1000
FIGURE No. 22
COMPILED BY [Signature]
DRAWN BY: C.L.C.



PIT DEPTH (m)

- Coal
- X Strip Ratio

Handwritten note: 1:1000 scale at 166.4m length

LEGEND - See Section 1

200

211-KTULAMEEN 77(2)4

CYPRUS ANVIL MINING CORPORATION

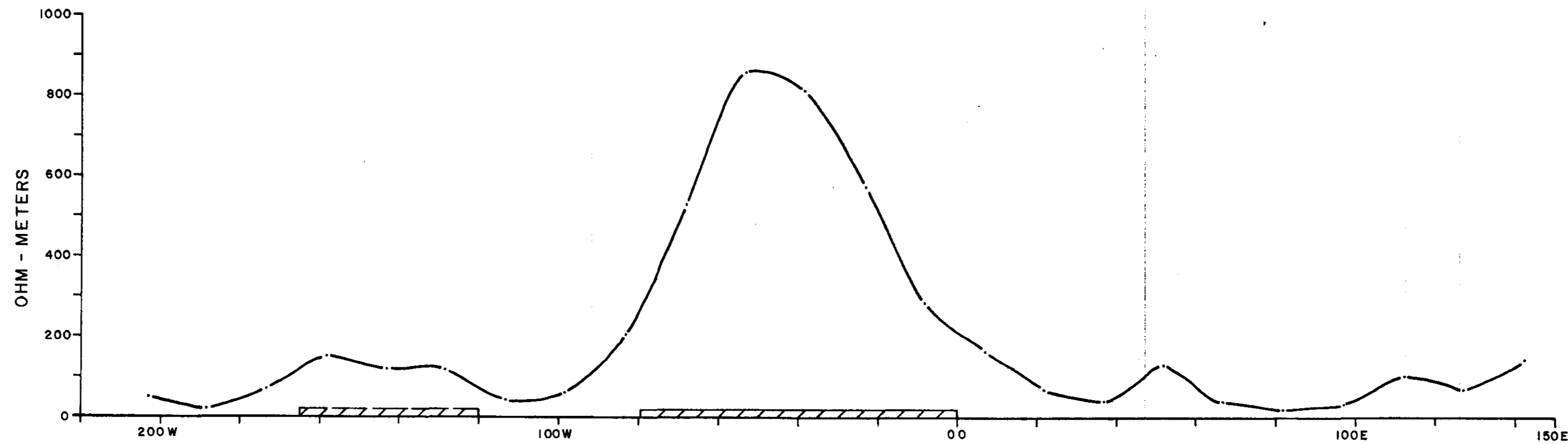
TULAMEEN COAL PROJECT MA

Cross - Section & Reserve - Strip Ratio Graph
Section 4 (Through DDH-T-77-4, 12)

SCALE - 1:1000
N.T.S. - 92H-10
DATE - NOVEMBER 10, 1977
DRAWN BY: C.L.C.

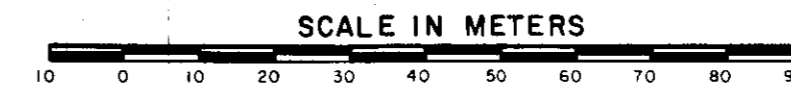
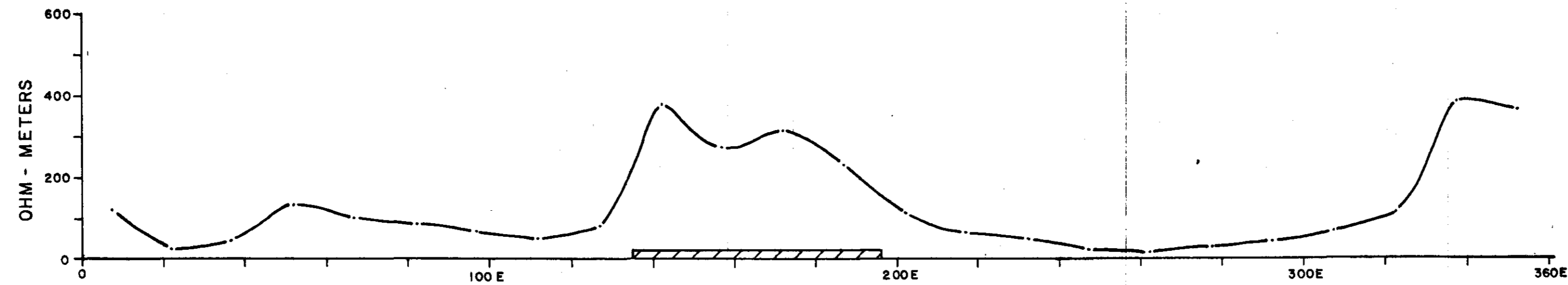
FIGURE No 23
COMPILED BY: *[Signature]*
DRAWN BY: C.L.C.

SCALE 1:1000
0 1000m



200 (LI)

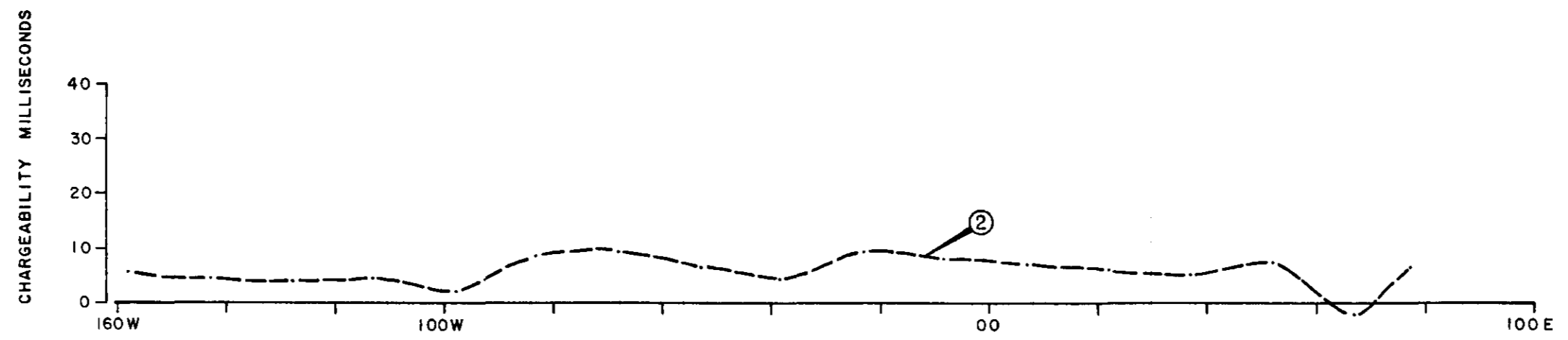
SM-TULAMEEN 77(2)A.
 CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 1
 RESISTIVITY SURVEY
 PROFILES OF APPARENT RESISTIVITY
 JULY GRID
 PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977
 J. Holman
 MAP No. 29



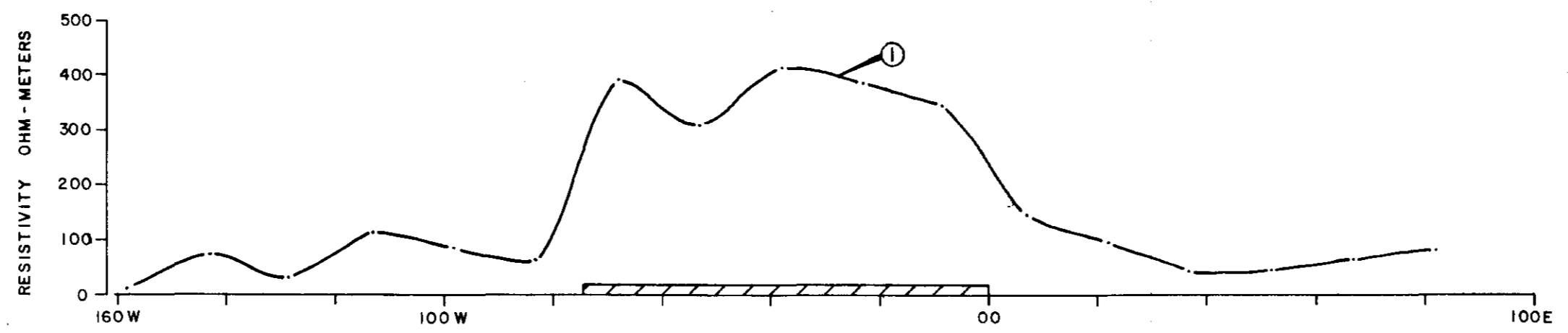
200

L2

SM-TULAMEEN 71(2)A.
 CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 2
 RESISTIVITY SURVEY
 PROFILES OF APPARENT RESISTIVITY
 JULY GRID
 PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977
 J. A. Walcott
 MAP No. 30



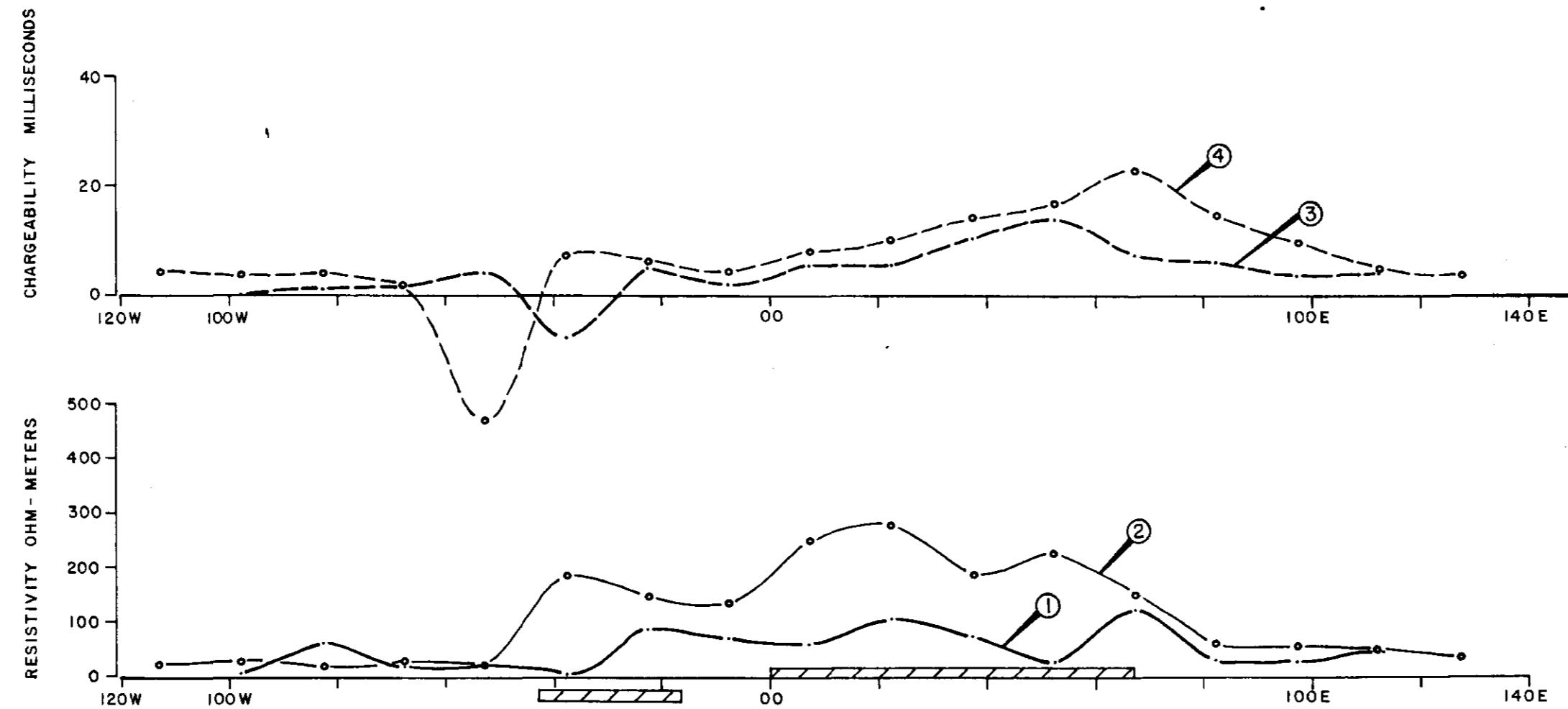
- ① Side Looking Dipole-Dipole $a=15$ meters $n=2$ Resistivity
- ② " " " " " " " Chargeability



200 (L3)

SM-TULAMEEN 77(2)A.
 CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 3-MAY GRID
 INDUCED POLARIZATION SURVEY
 PROFILES OF APPARENT
 CHARGEABILITY & RESISTIVITY
 PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977
 MAP No. 28





- ① Dipole - Dipole $a=15$ meters $n=1$ Resistivity
- ② Side Looking Dipole - Dipole $a=15$ meters $n=1$ Resistivity
- ③ Dipole - Dipole $a=15$ meters $n=1$ Chargeability
- ④ Side Looking Dipole - Dipole $a=15$ meters $n=1$ Chargeability



200

(44)

SM-TULAMEEN 77(2)A.

CYPRUS ANVIL MINING CORPORATION

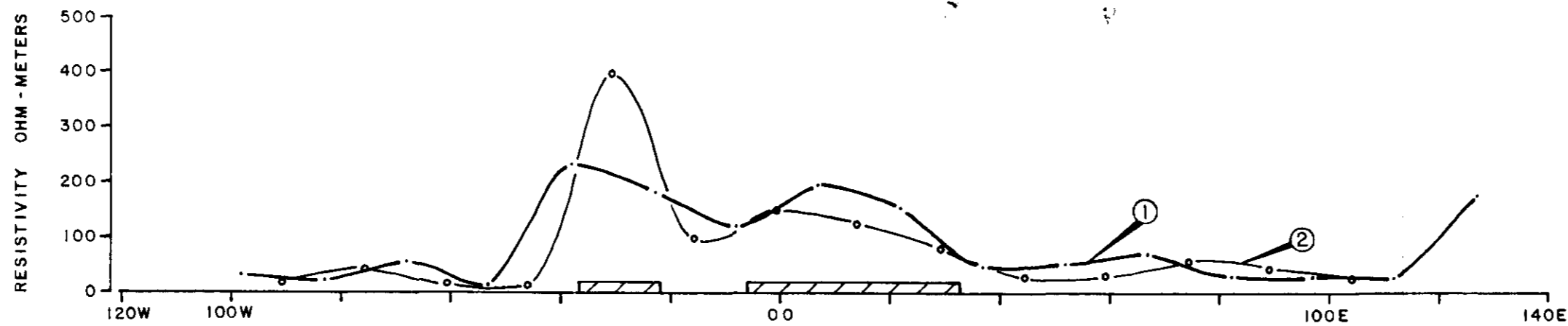
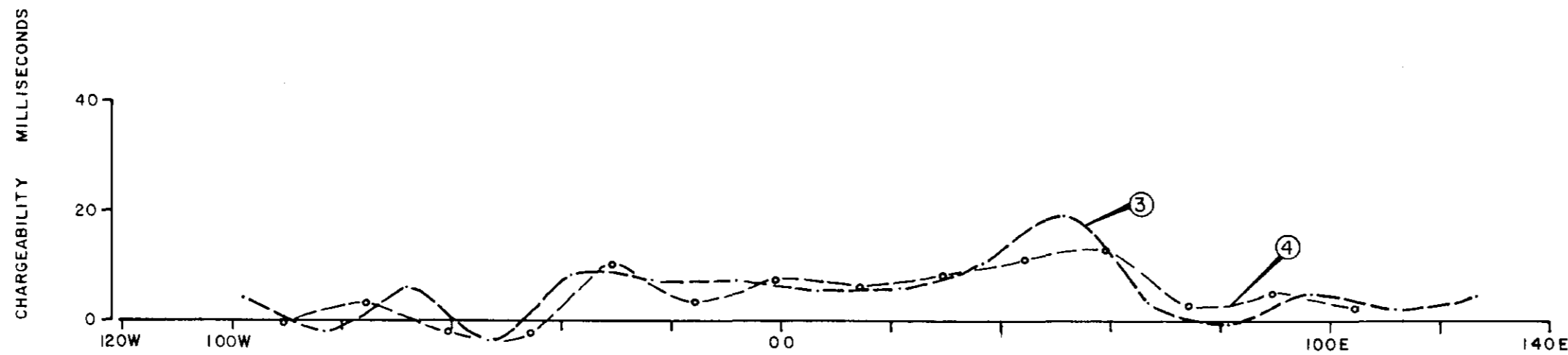
TULAMEEN COAL PROJECT

LINE 2 - MAY GRID

INDUCED POLARIZATION SURVEY
PROFILES OF APPARENT
CHARGEABILITY & RESISTIVITY

PETER E. WALCOTT & ASSOC. LTD.
MAY - JULY 1977

MAP No. 27



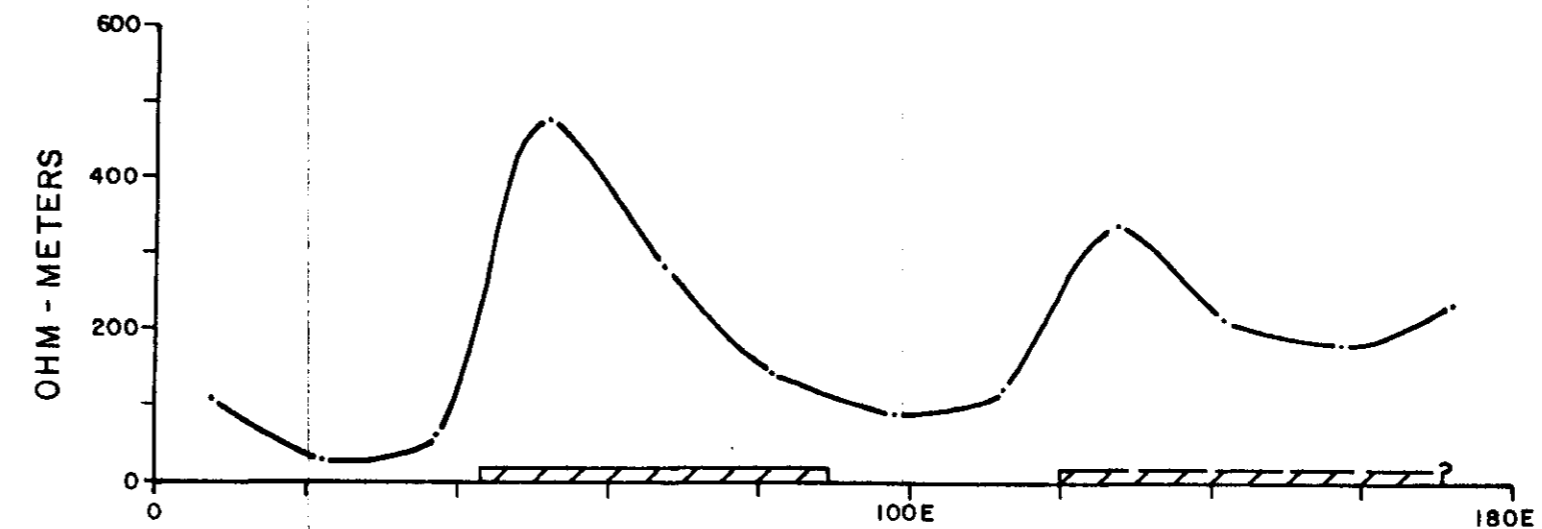
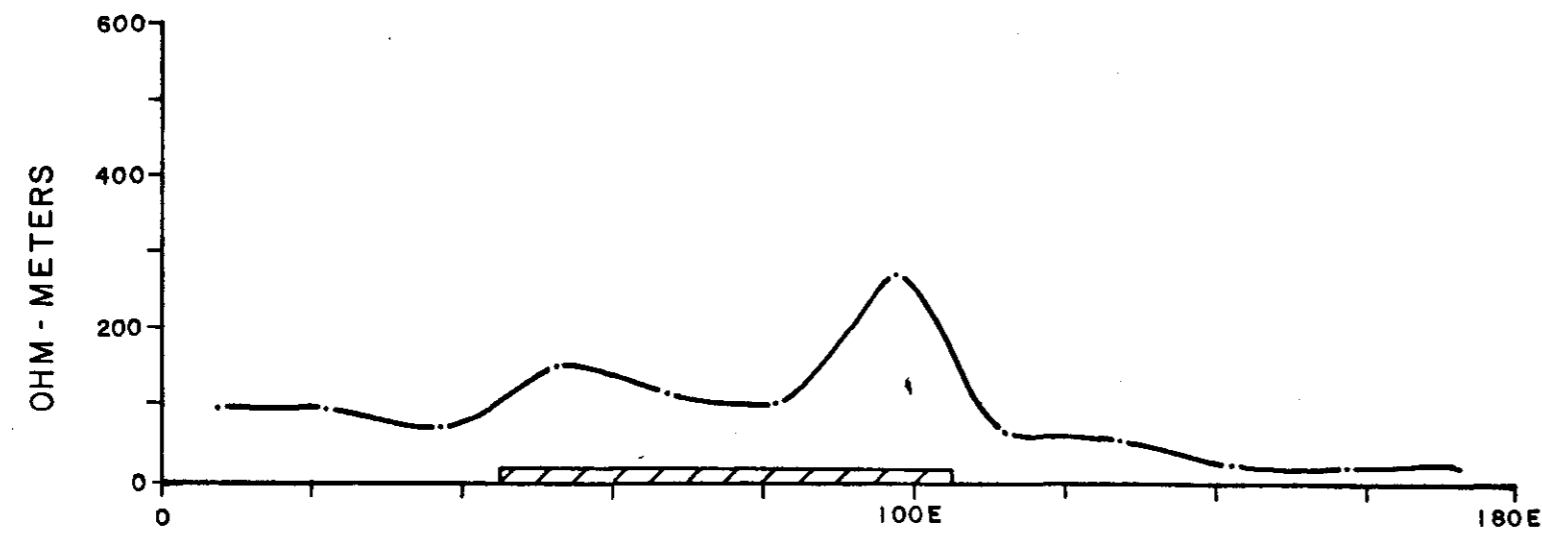
- ① Dipole - Dipole a = 15 meters n = 1 Resistivity
- ② " " " " n = 2 " "
- ③ Dipole Dipole a = 15 meters n = 1 Chargeability
- ④ " " " " n = 2 " "



(L5)
200

SH-TULAMEEN 77(2)A.
 CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 1 - MAY GRID
 INDUCED POLARIZATION SURVEY
 PROFILES OF APPARENT
 CHARGEABILITY & RESISTIVITY
 PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977
 MAP No. 26

J. Walcott



200 ^(Lb)

SM-TULAMEEN 77 (2)A.

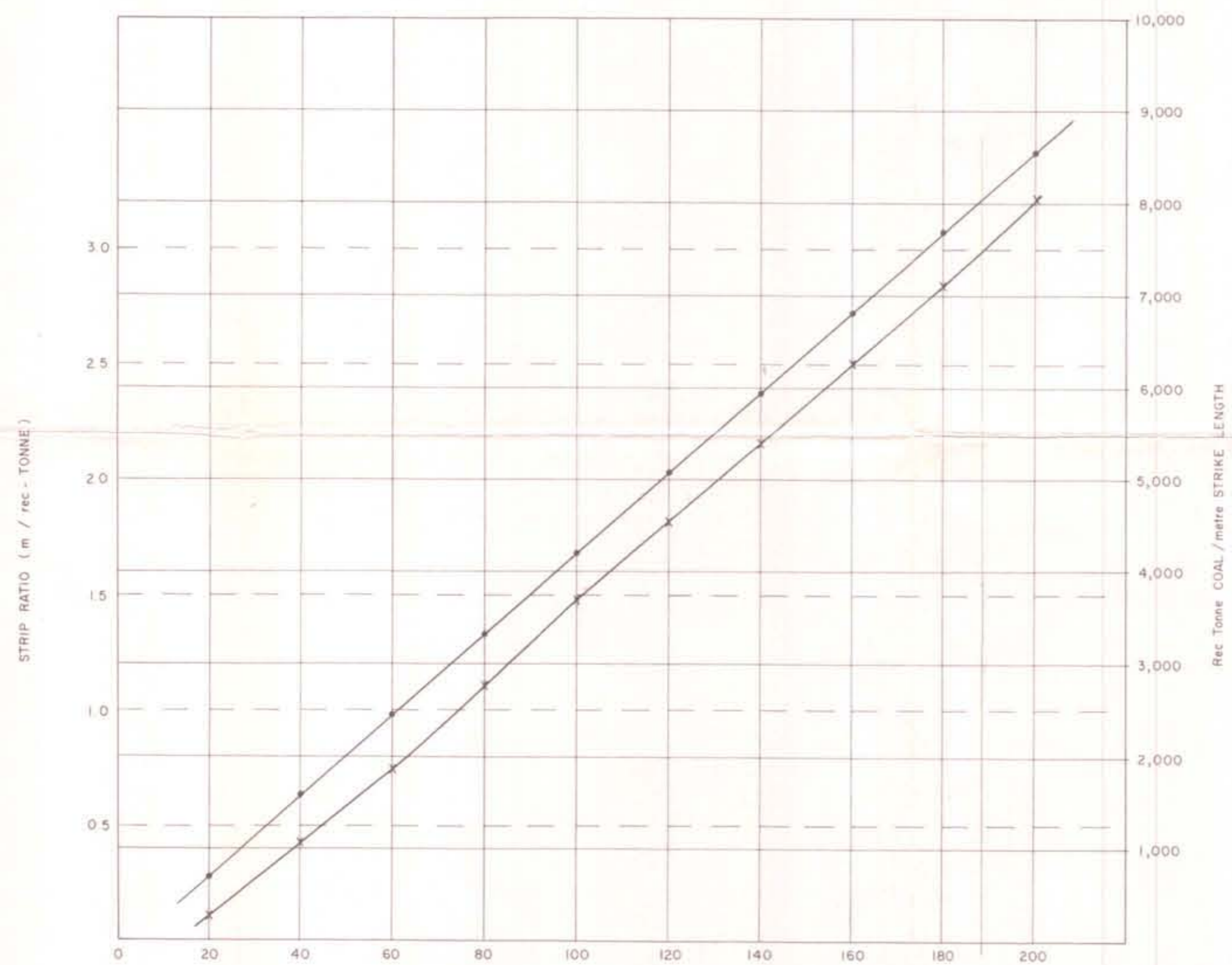
CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 5 & 6
 RESISTIVITY SURVEY
 PROFILES OF APPARENT RESISTIVITY
 JULY GRID

PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977

P. Walcott
 MAP No. 33



SECTION 5 — Reserve - Strip Ratio Graph



PIT DEPTH (m)

- Coal
- X Strip Ratio

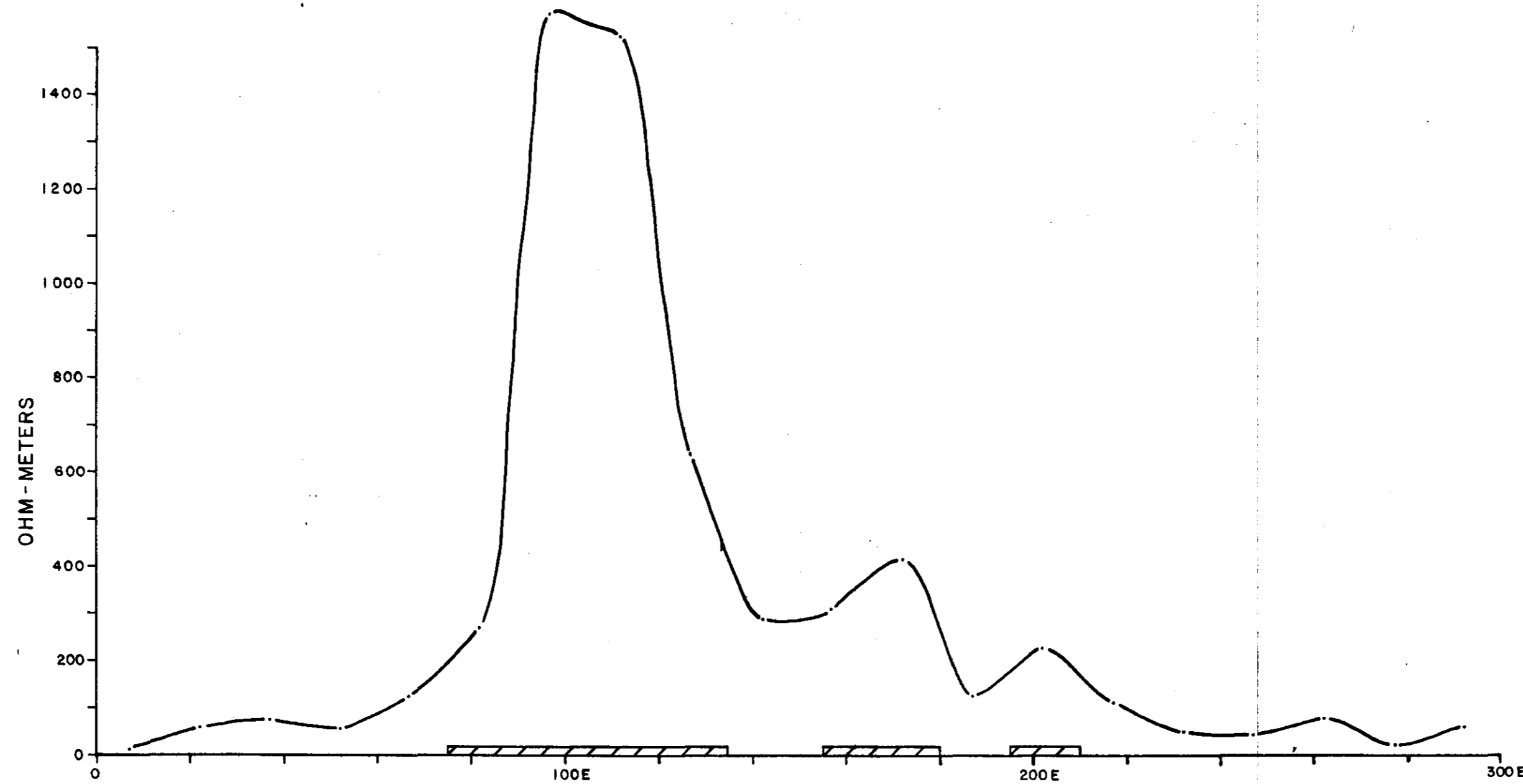
LEGEND — See Section 1

200

CYPRUS ANVIL MINING CORPORATION

TULAMEEN COAL PROJECT M10
 Cross - Section & Reserve - Strip Ratio Graph
 Section 5 (Through DDH-T-77-5)

SCALE — 1:1000
 N.T.S. — 92H-10
 DATE — NOVEMBER 10, 1977
 SCALE 1:1000
 FIGURE No 24
 COMPILED BY
 DRAWN BY C.L.C.



200 ^(L7)

SM-TULAMEEN 77(2)A.
 CYPRUS ANVIL MINING CORPORATION
 TULAMEEN COAL PROJECT
 LINE 3
 RESISTIVITY SURVEY
 PROFILES OF APPARENT RESISTIVITY
 JULY GRID
 PETER E. WALCOTT & ASSOC. LTD.
 MAY - JULY 1977
 MAP No. 31