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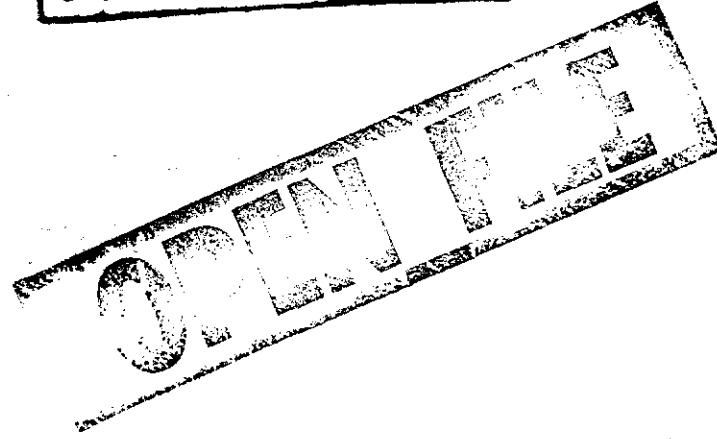
E.L. 1/71 75-1083

Proposals and "Indicated"  
Quartzite Ore (NOT Reserves)  
- Cape Sorell, Western  
Tasmania.

I. D. Picken

24.4.75

**MICROFILMED**



75-1083

**CONFIDENTIAL**

Ref Date 24th April 1975  
 To A. H. Bartlett From I. D. Picken  
 At 45 Exhibition Street At 45 Exhibition Street  
 Copies Subject Proposals and "Indicated"  
                   M. R. Rayner Quartzite Ore (NOT Reserves)  
                   A. H. White - Cape Sorell, Western  
                   G. Cranby Tasmania.  
                   K. L. S. Ford

Summary and Recommendations**CONFIDENTIAL**

1. Detailed plane table geological mapping and surface costean sample results have enabled the calculation of tonnage and grade of "Indicated" quartzite ore (NOT reserves) at Cape Sorell.
2. Two, one (1) tonne quartzite samples of different grades have been selected for experimental smelting.
3. Ten diamond drill holes totalling 755 metres are recommended to test surface outcrop information.

"Indicated" Quartzite Ore

It is necessary to remember that the grades and tonnages stated are based on limited surface information only. It will be necessary to test this somewhat limited surface information at depth with an extensive diamond drilling programme. Only after drilling can "Ore Reserves" be determined.

TONNAGE AND GRADETotal "Indicated" Quartzite Ore

2.78 million tonnes (by combining and weighing the average grades in the Mount Antill, Mount Obvious and North Escarpment Areas).

<u>Average Grade</u>	-	Al <sub>2</sub> O <sub>3</sub>	0.34
		Fe <sub>2</sub> O <sub>3</sub>	0.05
		CaO	<.01
		MgO	0.10
		Na <sub>2</sub> O	0.09
		TiO <sub>2</sub>	0.02
		K <sub>2</sub> O	0.08
		L.O.I.	0.18
		P <sub>2</sub> O <sub>5</sub>	28 PPM.
		SiO <sub>2</sub>	99.13%
		(by difference)	

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535003Areas considered for Inferred Quartzite Ore:

- (1) Mount Antill Area - 1.72 million tonnes (based on five ore blocks, each to a maximum of 30 metres below sea level)  
Drawing Number TAS/CS/75/12.

Average Grade	-	$\text{Al}_2\text{O}_3$	0.46%
		$\text{Fe}_2\text{O}_3$	0.07
		CaO	<.01
		MgO	0.14
		$\text{Na}_2\text{O}$	0.12
		$\text{TiO}_2$	0.02
		$\text{K}_2\text{O}$	0.09
		L.O.I.	0.17
		$\text{P}_2\text{O}_5$	30 PPM.
		$\text{SiO}_2$	98.92%
		(by difference)	

- (2) North Escarpment Area - 0.80 million tonnes (based on three ore blocks - to a maximum of 30 metres below sea level where applicable).  
Drawing Number TAS/CS/75/14

Average Grade	-	$\text{Al}_2\text{O}_3$	0.07
		$\text{Fe}_2\text{O}_3$	0.01
		CaO	<.01
		MgO	0.02
		$\text{Na}_2\text{O}$	0.06
		$\text{TiO}_2$	0.01
		$\text{K}_2\text{O}$	0.02
		L.O.I.	0.20
		$\text{P}_2\text{O}_5$	23 PPM.
		$\text{SiO}_2$	99.60%
		(by difference)	

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(3) Mount Obvious Area - 0.26 million tonnes (based on one ore block, to a maximum of 30 metres below sea level).  
 Drawing Number TAS/CS/75/13

Average Grade	-	$\text{Al}_2\text{O}_3$	0.52
		$\text{Fe}_2\text{O}_3$	0.05
		CaO	<.01
		MgO	0.13
		$\text{Na}_2\text{O}$	<.01
		$\text{TiO}_2$	0.02
		$\text{K}_2\text{O}$	0.16
		L.O.I.	0.18
		$\text{P}_2\text{O}_5$	33 PPM.
		$\text{SiO}_2$	98.92%
		(by difference)	

Analysis of surface costean samples in the Grandfathers Area shows that the grade of the "indicated" quartzite ore is not well suited for smelting into silicon metal - This quartzite may be suitable for the manufacture of Ferro-Silicon.

West Grandfathers: Average 85 samples

$\text{Al}_2\text{O}_3$	1.13%
$\text{Fe}_2\text{O}_3$	0.12%

East Grandfathers: Average 66 samples

$\text{Al}_2\text{O}_3$	1.63%
$\text{Fe}_2\text{O}_3$	0.23%

Total tonnage Indicated: 2.71 million tonnes in Grandfathers Area only.

TRIAL SMELTING SAMPLES

Two one (1) tonne quartzite samples have been collected and will be despatched to Comalco Japan KK, where arrangements for trial smelting into silicon metal have been made.

535005

Sample No. 1

Derived from the North Escarpment Area near costean Bl (Formal testing of what we believe to be suitable silicon grade quartzite ore).

## Average Analysis:-

$\text{Al}_2\text{O}_3$	0.22%
$\text{Fe}_2\text{O}_3$	0.04
CaO	<.01
MgO	0.04
$\text{Na}_2\text{O}$	<.01
$\text{TiO}_2$	0.02
$\text{K}_2\text{O}$	0.01
L.O.I.	0.17
$\text{P}_2\text{O}_5$	36 PPM.
$\text{SiO}_2$	99.44%
(by difference)	

Sample No. 2

Derived from the Grandfathers Area - near costean C3.

(Testing of high alumina quartzite - for possible high aluminium-silicon metal alloy or ferro-silicon.)

## Average Analysis:-

$\text{Al}_2\text{O}_3$	1.67%
$\text{Fe}_2\text{O}_3$	0.15
CaO	<.01
MgO	0.16
$\text{Na}_2\text{O}$	0.01
$\text{TiO}_2$	0.11
$\text{K}_2\text{O}$	0.24
L.O.I.	0.30
$\text{P}_2\text{O}_5$	42 PPM.
$\text{SiO}_2$	97.34%
(by difference)	

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Proposed Diamond Drilling

To raise the status of the "indicated" quartzite ore at Cape Sorell it will be necessary to test surface outcrop information at depth by diamond drilling.

It is recommended that a minimum of ten (10) diamond drill holes, estimated to total 755 metres of drilling, be completed in the four principal areas mapped in detail by plane table.

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Maps:

Tas/cs/75/12

, - - 17,  
/ - - 13,  
/ - - 14,  
/ , - 15  
- - - 18

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Inferred Quartzite Ore Calculations

Assume Specific Gravity  
= 2.5 gm/cc

MOUNT ANTILL AREA:-

(contoured hill)

Costean: A1-A7

A. Western Mount Antill - Block No. 1

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available: Average Area X Thickness X S.G
60 - 55m	232.9	782.3	507.6	6,345 tonnes
55 - 50	782.3	1,394.9	1,088.6	13,608 "
50 - 45	1,394.9	1,924.1	1,659.5	20,744 "
45 - 40	1,924.1	2,554.4	2,239.2	27,990 "
40 - 35	2,554.4	3,086.1	2,820.3	35,254 "
35 - SL	( 3,086.1	3,346.8	3,216.5	281,444 "
SL - -30m	( (Average 35m contour & outcrop area)			241,238 "
			<b>TOTAL:</b>	<b>626,623 tonnes</b>

B. Central Mount Antill - Block No. 2

(contoured hill)

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available Average Area X Thickness X S.G
58 - 55m	55.7	438.0	246.8	1,851 tonnes
55 - 50	438.0	1,334.2	886.1	11,076 "
50 - 45	1,334.2	1,840.5	1,587.3	19,842 "
45 - 40	1,840.5	2,397.5	2,119.0	26,487 "
40 - 35	2,397.5	3,225.3	2,811.4	35,142 "
35 - SL	( 3,225.3	3,460.8	3,343.1	292,521 "
SL - -30m	( (average 35m contour & outcrop area)			250,733 "
			<b>TOTAL:</b>	<b>637,651 tonnes</b>

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C. Eastern Mount Antill - Block No. 3

(contoured hill)

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available Average Area X Thickness X S.G
50 - 45m	513.9	761.3	637.7	7,970 tonnes
45 - 40	761.3	1,275.2	1,018.2	12,728 "
40 - SL	( 1,275.2	1,355.9	1,315.6	131,560 "
SL - -30m	( (average 40m contour & outcrop area)			98,670 "
			<u>TOTAL:</u>	<u>250,928 tonnes</u>

D. Mount Antill - Block No. 4

(contoured hill)

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available Average Area X Thickness X S.G
25 - 20m	524.1	891.1	707.6	8,845 tonnes
20 - SL	( 891.1	926.6	908.9	45,445 "
SL - -30m	( (average 20m contour & outcrop area)			68,167 "
			<u>TOTAL:</u>	<u>122,457 tonnes</u>

E. Mount Antill - Block No. 5

(contoured hill)

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available Average Area X Thickness X S.G
25 - 20m	37.5	546.1	291.6	3,645 tonnes
20 - SL	( 546.1	705.6	625.8	31,290 "
SL - -30m	( (average 20m contour & outcrop area)			46,935 "
			<u>TOTAL:</u>	<u>81,870 tonnes</u>

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F. Mount Obvious Area - Block No. 1

Costean: D1-D3

(contoured hill)

Contour Interval	Area 1 m <sup>2</sup>	Area 2 m <sup>2</sup>	Average Area m <sup>2</sup>	Tonnage Available Average Area X Thickness X S.G
35 - 30m	382.3	893.7	638.5	7,981 tonnes
30 - 25m	893.7	1,321.5	1,107.3	13,842 "
25 - 20m	1,321.5	1,668.4	1,494.4	18,680 "
20 - SL	( 1,668.4	1,769.6	1,719.0	85,949 "
SL - -30m	( (average 20m contour & outcrop area)			128,924 "
			<u>TOTAL</u>	<u>255,376 tonnes</u>

G. North Escarpment Area - Block No. 1

Costean: B1-B5

Body: Pitching Syncline:-

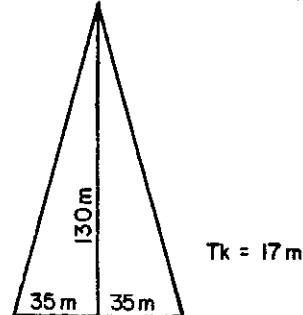
Strike length: 130m

Thickness: 17m

Limb length: 35m each

Thus tonnage of ore:-

$$130 \times (35 + 35) \times 17 \times 2.5 \div 2 \\ = \underline{193,375 tonnes}$$

H. North Escarpment Area - Block No. 2

Body: Pitching block

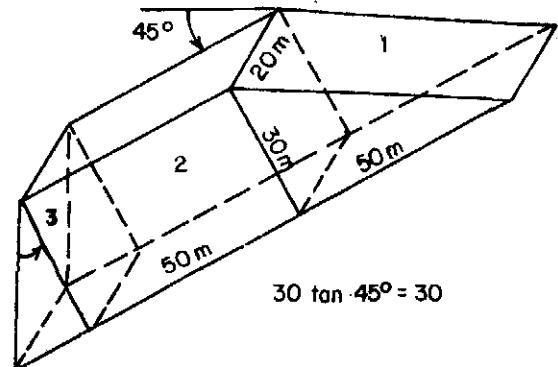
Strike length: 20m

Thickness: 30m

Dip length: 100m

Part (1)

$$\text{Tonnage} = 50 \times 30 \times 20 \times 2.5 \div 2 \\ = 37,500 \text{ tonnes}$$



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Part (2)

$$\begin{aligned} \text{Tonnage} &= 50 \times 30 \times 20 \times 2.5 \\ &= 75,000 \text{ tonnes} \end{aligned}$$

Part (3)

$$\begin{aligned} \text{Tonnage} &= 30 \times 30 \times 20 \times 2.5 \div 2 \\ &= 22,500 \text{ tonnes} \end{aligned}$$

TOTAL ORE: 135,000 tonnesI. North Escarpment Area - Block No. 3

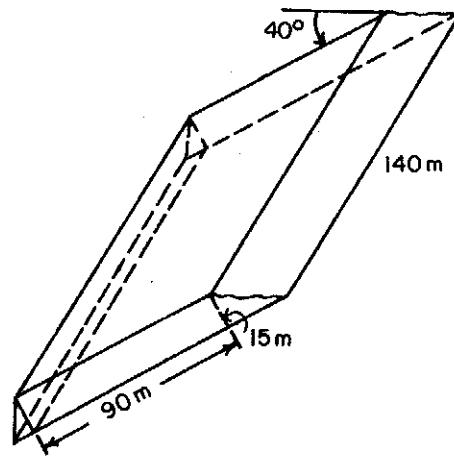
Body: Pitching block

Strike length: 140m

Thickness: 15m

Dip length: 90m (say)

$$\begin{aligned} \text{Tonnage of Ore} &= 140 \times 90 \times 15 \times 2.5 \\ &= \underline{\underline{472,500 \text{ tonnes}}} \end{aligned}$$

J. Grandfathers Area - Block No. 1

Drawing No. TAS/CS/75/15

Western Grandfathers:-

Costean: C1 - C5

Body: Inclined block

Width: 40 metres

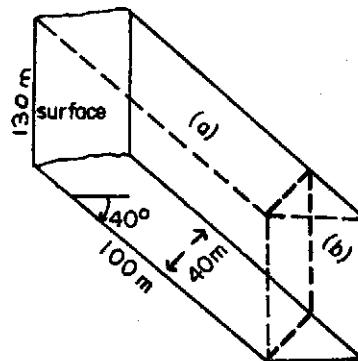
Dip length: 100m (to say - 30 metres)

Strike: 130 metres

$$\text{Tonnage} = (a) 100 \times 130 \times 40 \times 2.5 = 1,300,000 \text{ tonnes}$$

$$(b) 47.67 \times 130 \times 40 \times 2.5 \div 2 = \underline{\underline{309,855 \text{ tonnes}}}$$

TOTAL: 1,609,855 tonnes



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K. Grandfathers Area - Block No. 2- Eastern Grandfathers -

Body: Inclined block

Costean: C6-C7

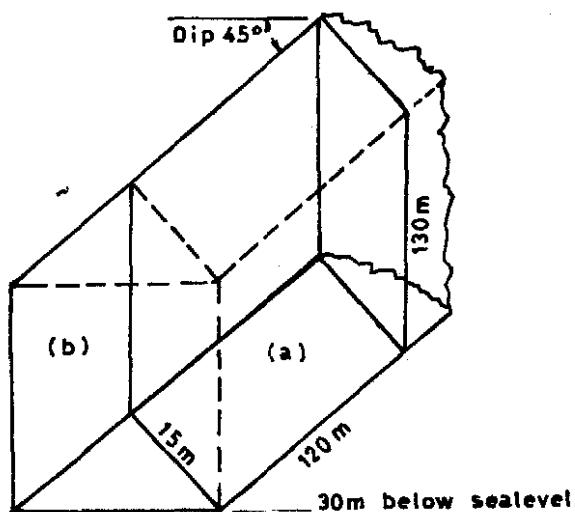
Width: 15 metres

Dip Length: 120 metres (to say -30 metres)

Strike: 130 metres

Tonnage:- (a)  $130 \times 120 \times 15 \times 2.5 = 585,000$  tonnes(b)  $15 \times 130 \times 15 \times 2.5 \div 2 = 36,562$  tonnes

TOTAL: 621,562 tonnes

L. Grandfathers Area - Block No. 3- West Grandfathers - south

Body: Inclined block

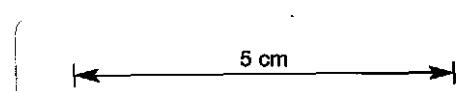
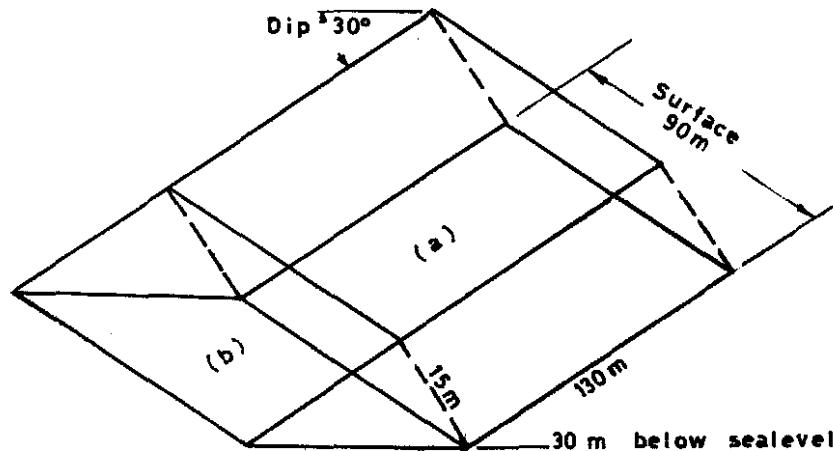
Width: 15m

Dip length: 130 metres (say to -30m)

Strike: - 90 metres

Tonnage:- (a)  $130 \times 90 \times 15 \times 2.5 = 438,750$  tonnes(b)  $90 \times 15 \times (15 \div \tan 30) \times 2.5 \div 2 = 43,842$  tonnes

TOTAL: 482,592 tonnes



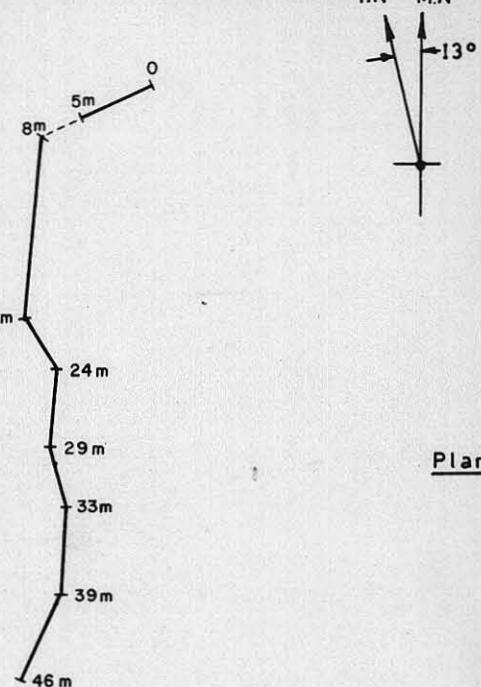
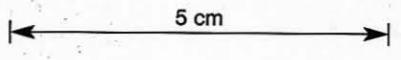
CAPE SORELL—SILICA . TASMANIA.

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*00* Costean:- A1  
Area :- Mt. Antill  
Scale :- 1 : 500

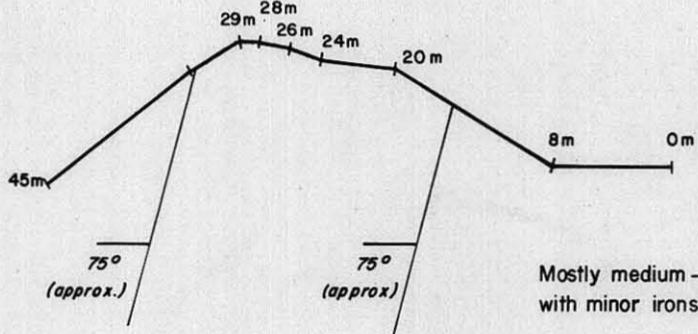
Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



### Plan

Section with apparent dips indicated along C of each Costean



Mostly medium - coarse grained, very light grey (N8) with minor iron staining moderate brown (5YR 5/6)

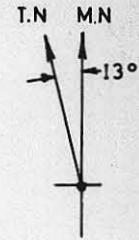
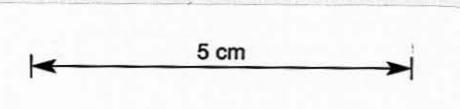
Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL.

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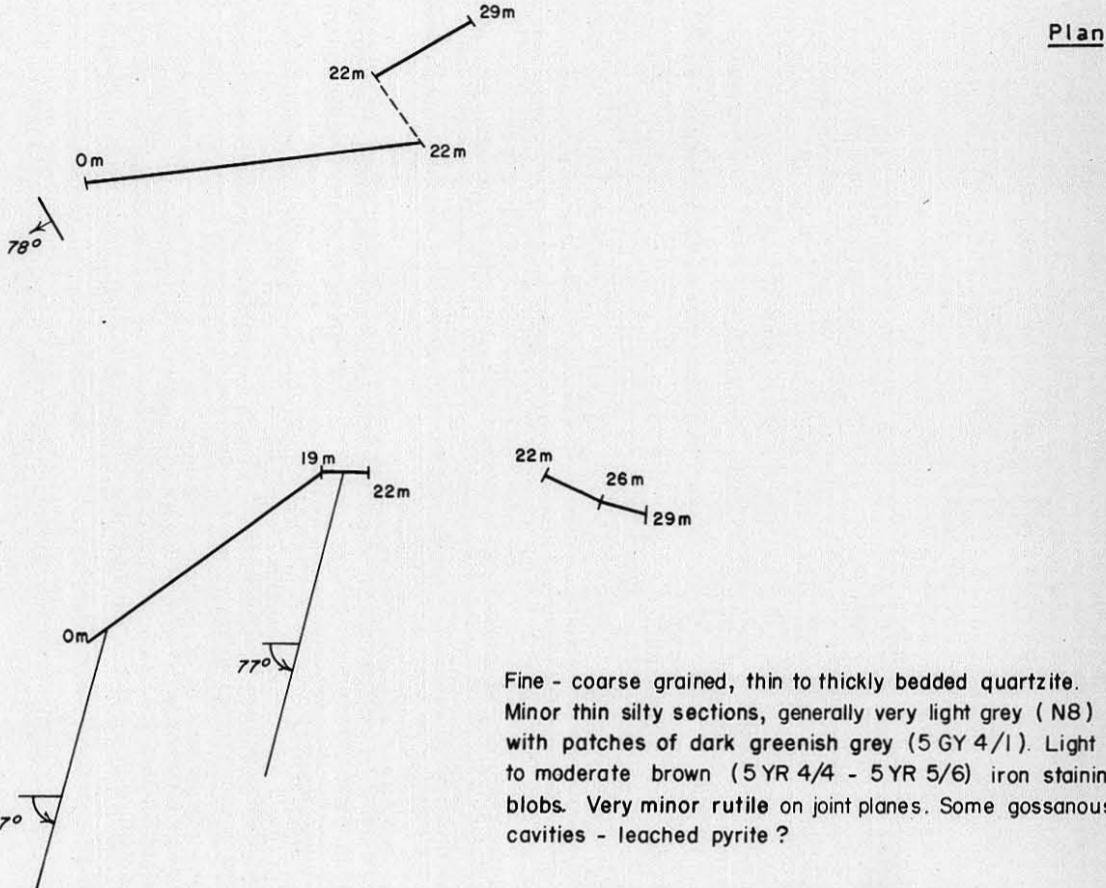
## CAPE SORELL—SILICA . TASMANIA.

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Costean:- A - 2  
 Area :- Mt. Antill  
 Scale :- 1:500



Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
 Colour code ((N8)etc) based on "Rock Colour Chart" distributed by the Geological Society of America



Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked b were analysed by AMDEL Frewville, S.A.

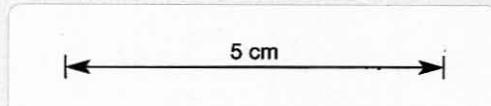
Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>	By difference
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01				
0 - 1	< 0.005	1.214	0.026	0.036	0.0176	0.009	0.004	0.165	.16			
0 - 1 a	< 0.010	0.380	0.022	< 0.010	< 0.010	0.016	0.0034	0.110	.16	99.31	< 0.001	
0 - 1 b		.302	.062									
1 - 2	< 0.005	1.827	0.036	0.063	0.092	0.072		0.426				
2 - 3	< 0.005	0.592	0.019	0.039	0.175	< 0.005		0.127				
3 - 4	< 0.005	0.581	0.030	0.036	0.189	0.009		0.142				
4 - 5	< 0.005	2.226	0.036	0.098	0.186	0.027	0.002	0.491	.22			
4 - 5 a	< 0.010	0.850	0.026	0.030	< 0.010	0.035	0.0030	0.250	.27	98.54	< 0.001	
4 - 5 b		.567	.051									
5 - 6	< 0.005		0.072	0.133	0.190	0.228		0.712				
6 - 7	< 0.005	0.734	0.050	0.031	0.162	< 0.005		0.162				
7 - 8	< 0.005	0.344	0.016	0.043	0.165	< 0.005		0.088				
8 - 9	< 0.005	0.291	0.021	0.040	0.167	< 0.005		0.066				
9 - 10	< 0.005	0.229	0.054	0.023	0.140	< 0.005	0.003	0.075	.15			
9 - 10 a	< 0.010	0.360	0.120	0.010	< 0.010	0.015	0.0041	0.090	.20	99.28	< 0.001	
9 - 10 b		.208	.104									
10 - 11	< 0.005	0.420	0.016	0.026	0.151	< 0.005		0.111				
11 - 12	< 0.005	0.339	0.020	0.033	0.136	< 0.005		0.105				
12 - 13	< 0.005	0.313	0.017	0.045	0.158	< 0.005		0.068				
13 - 14	< 0.005	0.293	0.045	0.035	0.144	< 0.005		0.068				
14 - 15	< 0.005	0.181	0.037	0.026	0.169	0.023	0.002	0.056	.17			
14 - 15 a	< 0.010	0.210	0.022	< 0.010	< 0.010	0.010	0.0024	0.040	.20	99.20	< 0.001	
14 - 15 b		.170	.061									
15 - 16	< 0.005	0.262	0.026	0.056	0.160	< 0.005		0.072				
16 - 17	< 0.005	0.236	0.012	0.040	0.168	< 0.005		0.066				
17 - 18	< 0.005	0.363	0.017	0.045	0.159	< 0.005		0.110				
18 - 19	< 0.005	0.504	0.043	0.031	0.158	< 0.005		0.125				
19 - 20	0.007	0.497	0.433	0.120	0.140	< 0.005	0.003	0.114	.06			
19 - 20 a	< 0.010	0.360	0.150	0.040	< 0.010	0.018	0.0026	0.080	.26	99.09	< 0.001	
19 - 20 b		.302	.204									
20 - 21	< 0.005	0.310	0.022	0.042	0.171	< 0.005		0.089				
21 - 22	< 0.005	0.246	0.016	0.043	0.166	< 0.005		0.059				
22 - 23	0.005	0.315	1.382	0.415	0.176	< 0.005		0.067				
23 - 24	0.005	0.640	0.214	0.092	0.176	0.030		0.141				
24 - 25	< 0.005	0.167	0.204	0.048	0.145	< 0.005	0.003	0.054	.24			
24 - 25 a	< 0.010	0.350	0.740	0.250	< 0.010	0.022	0.0023	0.070	.59	98.00	< 0.001	
24 - 25 b		.283	.436									
25 - 26	< 0.005	0.485	0.429	0.149	0.178	< 0.005		0.120				
26 - 27	< 0.005	0.671	0.043	0.037	0.175	0.011		0.173				
27 - 28	0.009	0.643	0.059	0.027	0.116	0.016		0.186				
28 - 29	< 0.005	0.772	0.299	0.098	0.148	0.013	0.004	0.194	.27			

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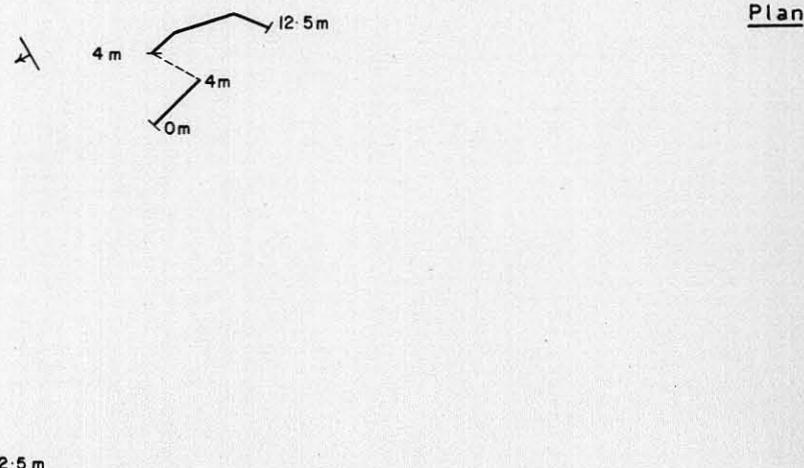
Costean:- A.3  
Area :- Mt. Antil  
Scale :- 1 : 500

CAPE SORELL—SILICA . TASMANIA.



Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8) etc.) based on "Rock Colour chart" distributed by the Geological Society of America



Section with apparent dips indicated along C of each Costean

Fine - medium, very light grey (N8) with moderate brown (5YR 5/6) iron staining in places leaching into quartzite. Minor, fine grained, very dark grey quartzite and secondary quartz veining

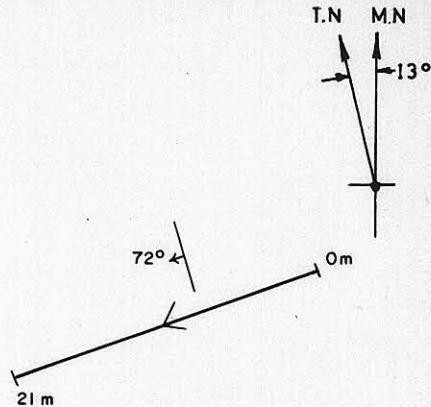
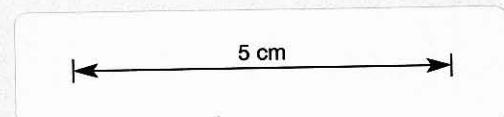
Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked b were analysed by AMDEL, Frewville, S.A. [By difference]

003

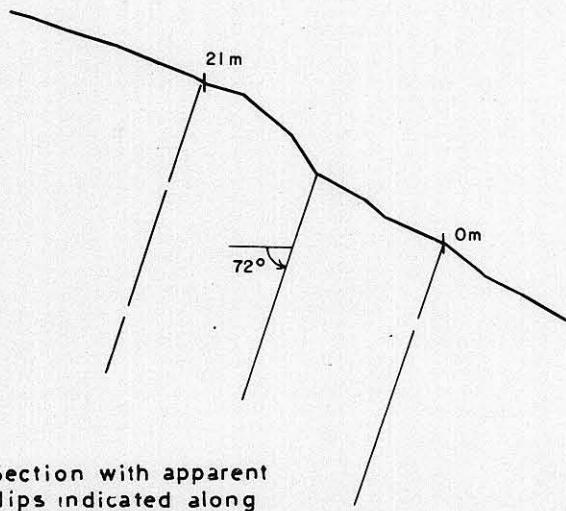
CAPE SORELL—SILICA . TASMANIA.

535015

Costean:- A4  
Area :- Mt. Antill  
Scale :- 1:500



### Plan



Section with apparent dips indicated along C of each Costean

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL

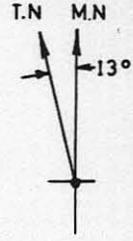
004

Costean:- A5  
Area :- Mt. Antill  
Scale :- 1: 500

CAPE SORELL—SILICA . TASMANIA.

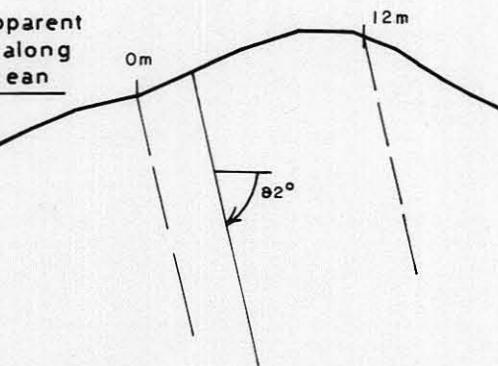
535016

5 cm



### Plan

Section with apparent  
dips indicated along  
E of each Costean



Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analyzed by AMDEL.

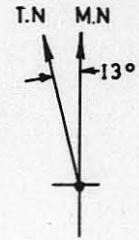
Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg.O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	L.O.I	S <sub>1</sub> O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>	By difference	
												Limit of Detection	0.005
0 - 1	< .001	0.639	0.079	0.016	< .001	0.016	0.007	0.02	0.01				
0 - 1a	< .01	0.35	0.019	< .01	< .01	0.015	0.0027	0.07	0.13	99.41	< .001		
0 - 1b		0.18	0.06										
1 - 2	< .001	0.163	0.058	0.004	< .001	0.004	0.004	0.057					
2 - 3	< .001	3.328	0.084	0.018	0.015	0.011	< .001	0.103					
3 - 4	< .001	0.182	0.043	0.003	< .001	0.009	< .001	0.049					
4 - 5	< .001	0.121	0.071	0.006	< .001	0.002	0.004	0.044					
4 - 5 a	< .01	0.20	0.015	< .01	< .01	0.014	0.0030	0.04	0.10	99.63	< .001		
4 - 5 b		0.13	0.35										
5 - 6	< .001	0.316	0.086	0.020	< .001	0.009	0.002	0.102					
6 - 7	< .001	0.693	0.048	0.016	< .001	0.011	0.011	0.119					
7 - 8	< .001	0.450	0.072	0.035	< .001	0.023	0.010	0.129					
8 - 9	< .001	0.115	0.043	0.022	< .001	0.006	0.009	0.038					
9 - 10	< .001	0.399	0.047	0.014	< .001	0.027	0.006	0.115					
9 - 10 a	< .01	0.29	0.023	0.01	< .01	0.027	0.0038	0.08	0.088	99.48	< .001		
9 - 10 b		0.10	0.045										
10 - 11	< .001	0.265	0.043	0.003	< .001	0.023	< .001	0.101					
11 - 12	< .001	0.332	0.030	0.015	< .001	0.011	0.006	0.113					

005

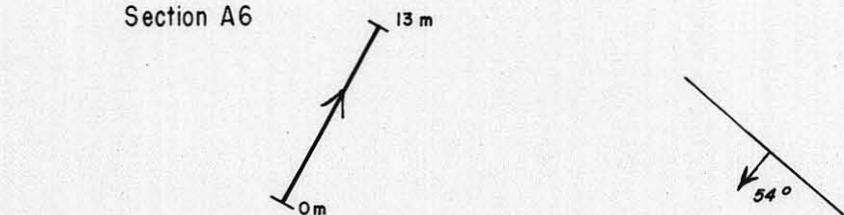
Costean:- A6 & A7  
 Area :- Mt. Antill  
 Scale :- 1:500

## CAPE SORELL—SILICA . TASMANIA.

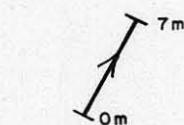
5 cm



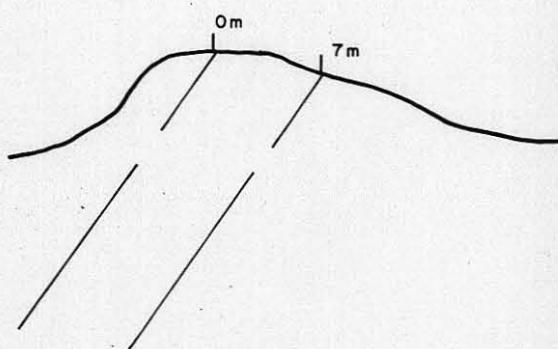
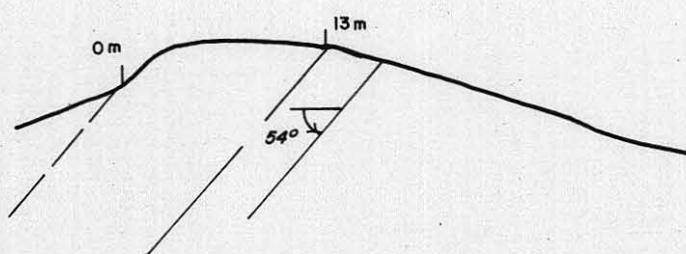
Section A6



Section A7



Plan



Section with apparent dips indicated along 1/2 of each Costean

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked 'b' were analysed by AMDEL

By difference

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	L.O	S <sub>1</sub> O <sub>2</sub>		
Limit of Detection	0.005	0.013	0.005	0.011		0.007	0.02	0.01				
A6												
0 - 1	< .001	0.457	0.052	0.028	0.010	0.009	0.010	0.143				
0 - 1 a	< .01	0.31	0.023	< .01	< .01	0.020	0.0033	0.09	0.16	99.39	< .001	
0 - 1 b		0.35	0.08									
1 - 2	< .001	0.370	0.041	0.040	0.012	0.013	0.001	0.110				
2 - 3	< .001	0.409	0.145	0.034	0.010	0.004	< .001	0.109				
3 - 4	< .001	0.211	0.041	0.014	< .001	0.004	0.002	0.057				
4 - 5	< .001	0.536	0.042	0.016	0.039	0.002	< .001	0.084				
4 - 5 a	< .01	0.18	0.018	< .01	< .01	0.012	0.0020	0.03	0.08	99.68	< .001	
4 - 5 b		0.16	0.09									
5 - 6	< .001	0.303	0.044	0.020	< .001	0.011	< .001	0.110				
6 - 7	< .001	0.239	0.084	0.021	< .001	0.009	< .001	0.069				
7 - 8	0.021	0.469	0.038	0.035	0.220	0.009	0.004	0.103				
8 - 9	0.009	0.441	0.064	0.025	0.112	0.013	< .001	0.135				
9 - 10	0.014	0.345	0.042	0.015	0.136	0.009	< .001	0.113				
9 - 10 a	< .01	0.30	0.028	< .01	< .01	0.016	0.0032	0.06	0.11	99.48	< .001	
9 - 10 b		0.24	0.05									
10 - 11	0.001	0.329	0.059	0.044	0.086	0.006	< .001	0.094				
11 - 12	< .001	0.281	0.049	0.023	< .001	0.013	< .001	0.083				
12 - 13	< .001	0.204	0.049	0.021	< .001	0.009	0.013	0.067				
A7												
0 - 1	0.095	0.425	0.232	0.147	0.487	0.016	0.001	0.043				
0 - 1 a	< .01	0.09	0.033	0.01	< .01	0.011	0.0020	< .01	0.16	99.67	< .001	
0 - 1 b		0.11	0.08									
1 - 2	0.008	0.316	0.241	0.120	0.121	0.013	< .001	0.015				
2 - 3	< .001	0.175	0.211	0.082	0.021	0.009	0.002	0.027				
3 - 4	< .001	0.284	0.325	0.211	< .001	0.009	< .001	0.023				
4 - 5	< .001	0.428	0.112	0.040	< .001	0.004	< .001	0.097				
4 - 5 a	< .01	0.11	0.035	< .01	< .01	0.024	0.0009	0.01	0.02	99.70	< .001	
4 - 5 b		0.22	0.105									
5 - 6	< .001	0.508	0.275	0.163	< .001	0.006	0.002	0.066				
6 - 7	< .001	0.306	0.168	0.134	0.028	0.009	0.005	0.030				
6 - 7 a	< .01	0.15	0.140	0.08	< .01	0.011	0.0020	< .01	0.20	99.42	< .001	

006

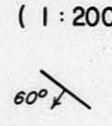
CAPE SORELL—SILICA . TASMANIA.

535018

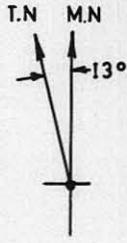
Costean:- BI  
Area :- North Escarpment  
Scale :- 1 cm = 2 m ( 1 : 200 )

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

"Colour code (IN8) etc.) based on  
"Rock Colour Chart" distributed by  
the Geological Society of America

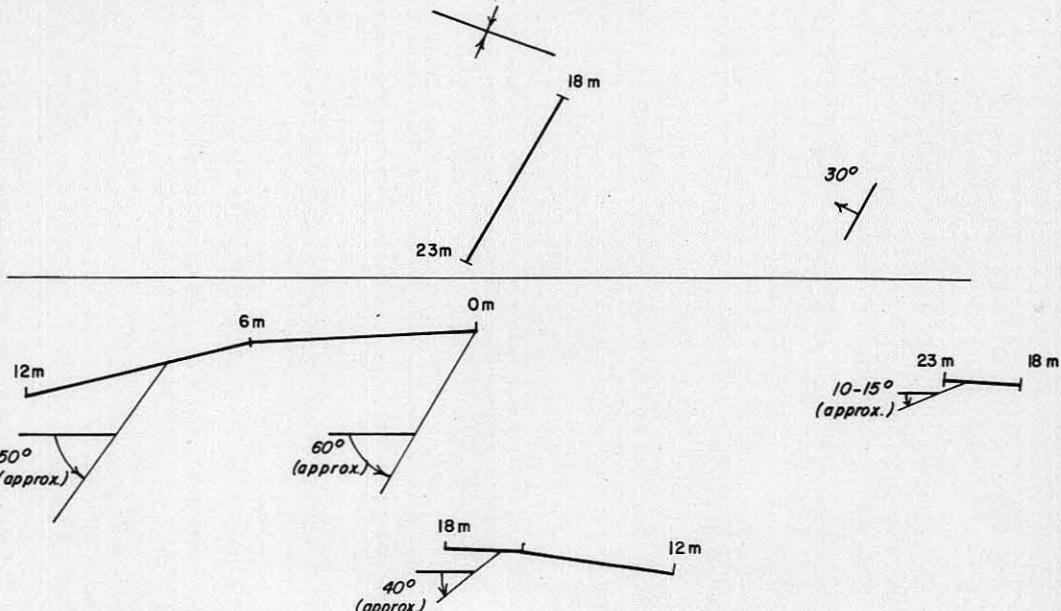


0 m



Plan

Medium to fine grained, very light grey (N8) quartzite - blocky, smooth surface appearance. Limb of synclinal structure.



Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL, Frewville S.A.

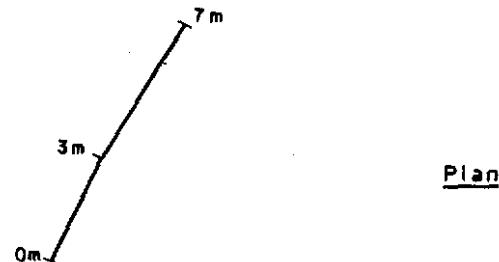
CAPE SORELL—SILICA . TASMANIA.

535019

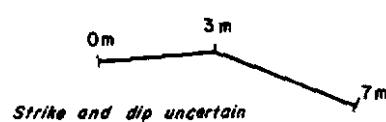
Costean:- B2  
Area :- North Escarpment  
Scale :- 1cm = 2m (1:200)

**5 cm**

Note: LOI and P<sub>2</sub>O<sub>5</sub> values were determined by normal chemical methods  
Colour code based on "Rock Colour Chart" distributed by the Geological Society of America



Section with apparent  
dips indicated along  
E of each Costean



Fine to medium grained very light grey (NB) quartzite. Fractured - bedding not clear.  
Suspect faulted axes of anticlinal structure

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL, Frewville S.A. By difference

							Frewville	S.A.	By difference		
Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg.O	Na <sub>2</sub> O	Ti.O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si.O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01			
0 - 1	< .005	.005	< .005	0.007	< .008	0.013		0.013			
0 - 1 a	< .010	0.010	0.010	< .010	< .010	0.022	0.0011	< .010	.7	99.79	< .001
0 - 1 b	-	.019	.042	.033							
1 - 2			NO	SAMPLE							
2 - 3	< .005	0.151	0.031	0.073	< .006	0.019		0.061			
3 - 4	< .005	0.269	0.012	0.090	< .008	0.010		0.062			
4 - 5	< .005	0.153	0.012	0.047	< .005	< .005		0.038			
4 - 5 a	< .010	0.230	0.016	0.040	< .010	0.013	0.0003	0.010	.23	99.46	< .001
4 - 5 b	.039	.151	.042	.049							
5 - 6	< .005	0.017	< .005	0.027	< .005	0.028		0.020			
6 - 7	< .005	0.033	0.008	0.027	< .005	0.028		0.009			

25-35020

008

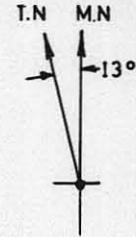
**CAPE SORELL—SILICA . TASMANIA.**

Costean:- B3  
Area :- Nth. Escarpment  
Scale :- 1 : 500

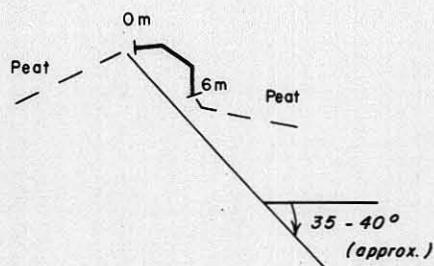
5 cm

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8)etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



Section with apparent dips indicated along C of each Costean



Generally very light grey, (N8), fine grained with dark yellowish orange (10YR 6/6) iron staining

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL, Frewville, S.A. By difference

009

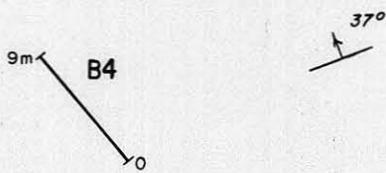
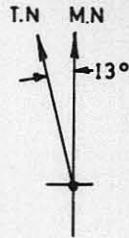
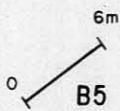
CAPE SORELL—SILICA . TASMANIA.

535021

Costean:- B4 - B5  
Area :- Nth. Escarpment  
Scale :- 1 : 500

5 cm

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



## Plan



Section with apparent  
dips indicated along  
C of each Costean

B4: Medium - coarse grained, very light grey (N8) quartzite. In some places - friable. Minor yellowish grey (5Y 7/2) joint staining.

B5: Fine - medium grained, very light grey (N8) quartzite with moderate yellowish brown (IOYR 5/4) staining on joints

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed AMDEL Frewville, S.A. By difference

010  
A  
S

CAPE SORELL—SILICA . TASMANIA.

535022

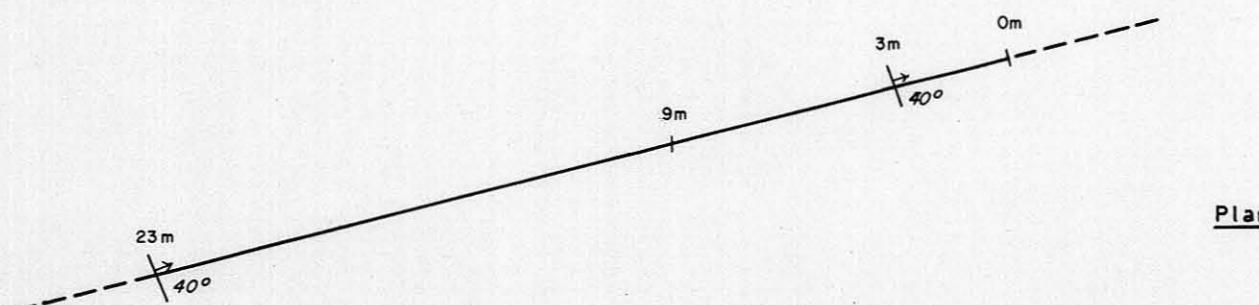
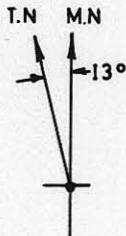
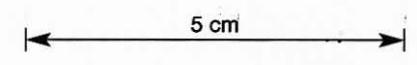
**Costean:- CI**

Area :- West Grandfathers

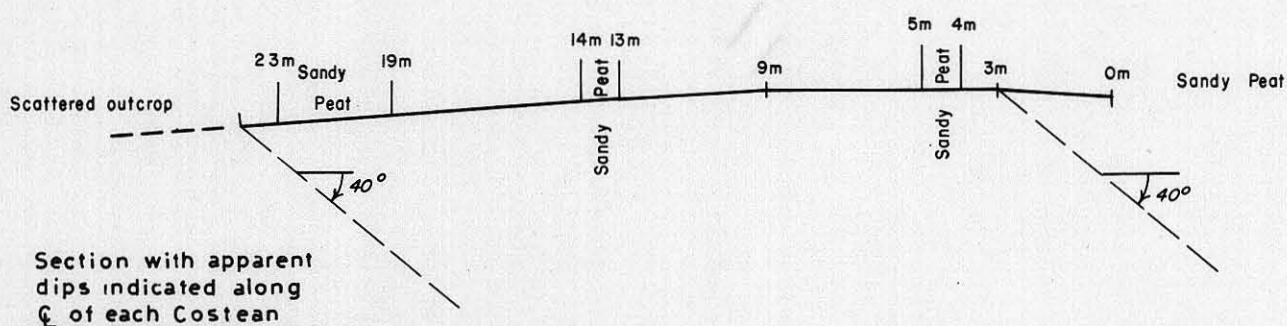
Scale :- 1 cm = 2 m (1:200)

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8)etc.) based on "Rock Colour Chart distributed by the Geological Society of America



Plan



Section with apparent dips indicated along C of each Costean

Medium grained, light grey (N7) to pinkish grey (5YR8/1) quartzite with the rock being friable from 7-9 metres. Minor crossbedding.

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF.

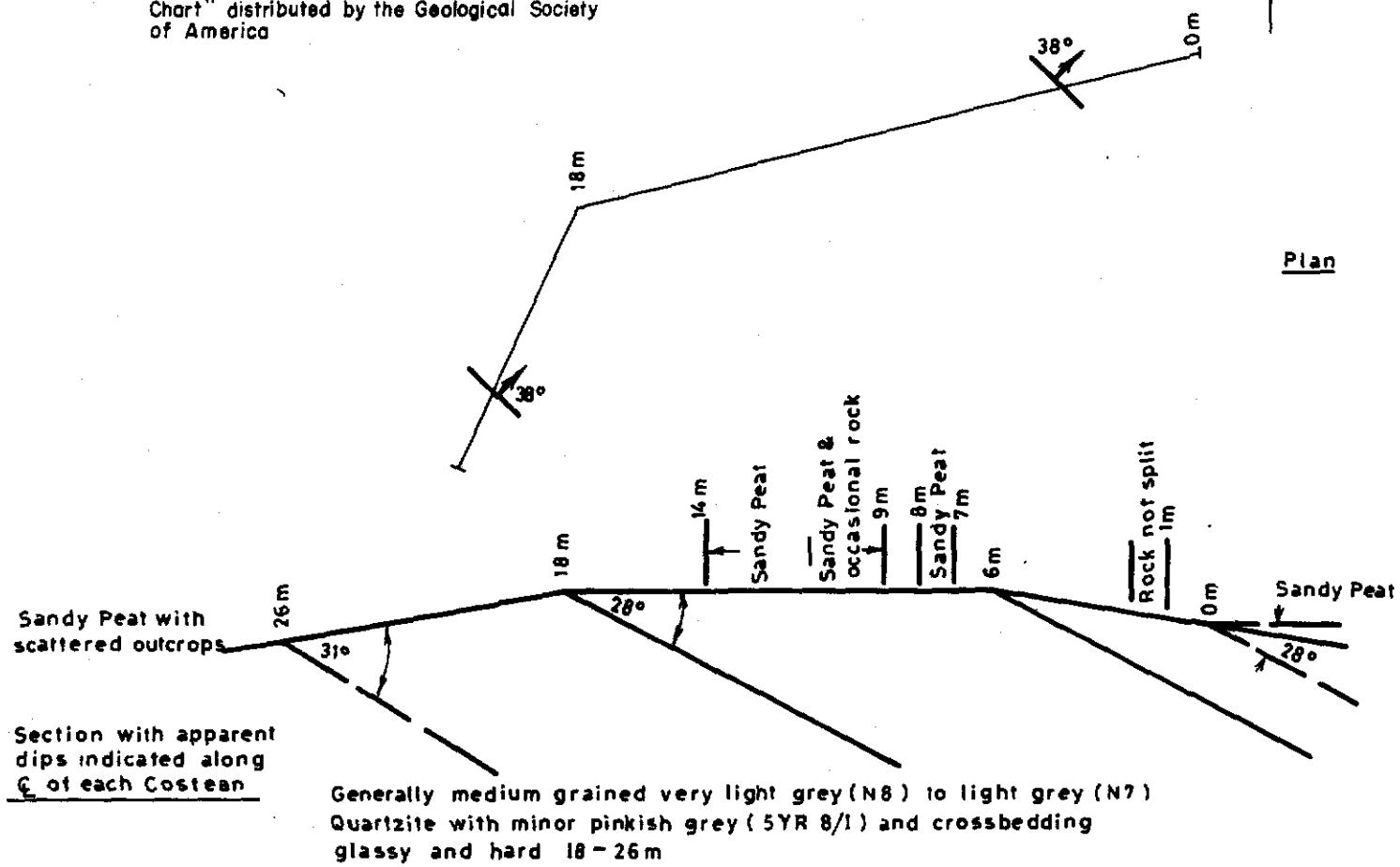
## CAPE SORELL—SILICA . TASMANIA.

01) Costean:- C.2.

Area :- West Grandfathers  
Scale :- 1cm = 2 m (1: 200.)

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
 Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America

5 cm

T.N. MN  
13°

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF.

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si O <sub>2</sub>	By difference
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01			
0-1	0.002	0.816	0.113	0.131		0.070		0.201			
0-1 'a'	<0.01	0.78	0.077	0.14	<0.01	0.032		0.14			
1-2			NOT SAMPLLED								
2-3	0.001	0.459	0.041	0.089		0.057		0.114			
3-4	<0.001	0.275	0.021	0.060		0.029		0.056			
4-5	0.002	0.769	0.203	0.184		0.083	0.003	0.112	0.11		
4-5 'a'	<0.01	1.120	0.047	0.13	<0.01	0.05		0.18			
5-6	0.001	1.129	0.060	0.123		0.168		0.305			
6-7	<0.001	0.430	0.041	0.068		0.043		0.140			
7-8			NOT SAMPLLED								
8-9	<0.001	0.144	0.021	0.038		0.063		0.035			
9-10											
10-11											
11-12			NOT SAMPLLED								
12-13											
13-14											
14-15	<0.001	0.561	0.013	0.038		0.046	0.003	0.142	0.10		
14-15 'a'	<0.01	0.550	0.038	0.06	<0.01	0.039		0.04			
15-16	<0.001	0.494	0.026	0.035		0.072		0.176			
16-17	<0.001	0.935	0.039	0.134		0.060		0.162			
17-18	0.008	1.805	0.188	0.491		0.098		0.350			
18-19	<0.001	0.601	0.028	0.105		0.107		0.136			
19-20	<0.001	0.662	0.024	0.090		0.060	0.003	0.195	0.18		
19-20 'a'	<0.01	1.300	0.029	0.21	<0.01	0.088		0.29			
20-21	<0.001	0.932	0.074	0.072		0.044		0.278			
21-22	<0.001	0.813	0.019	0.061		0.027		0.253			
22-23	0.001	0.899	0.162	0.158		0.109		0.178			
23-24	0.002	1.634	0.041	0.278		0.064		0.444			
24-25	<0.001	3.106	0.050	0.172		0.051	0.0038	0.916	0.37		
25-26	<0.001	0.852	0.052	0.117		0.031		0.216			
25-26 'a'	<0.01	1.24	0.059	0.19	<0.01	0.075		0.25			

535024

012

**CAPE SORELL—SILICA . TASMANIA.**

**Costean:- C 3.**

**Area :- West Grandfathers.**

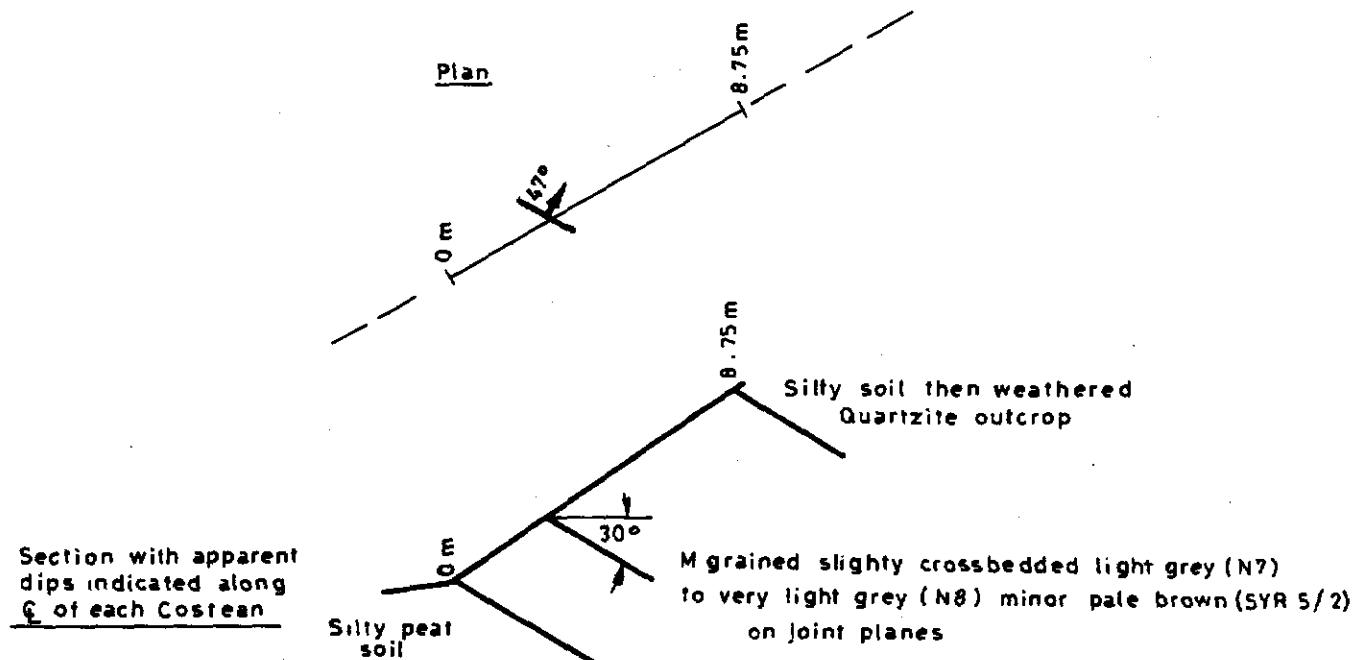
**Scale** :- 1 cm = 2 m ( 1 : 200 )

A horizontal line segment with arrows at both ends, representing an interval. The length of the segment is labeled "5 cm" above it.

T.N M.N  
-13°

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



Section with apparent  
steps indicated along  
E of each Costean

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF.

013

## CAPE SORELL—SILICA . TASMANIA.

535025

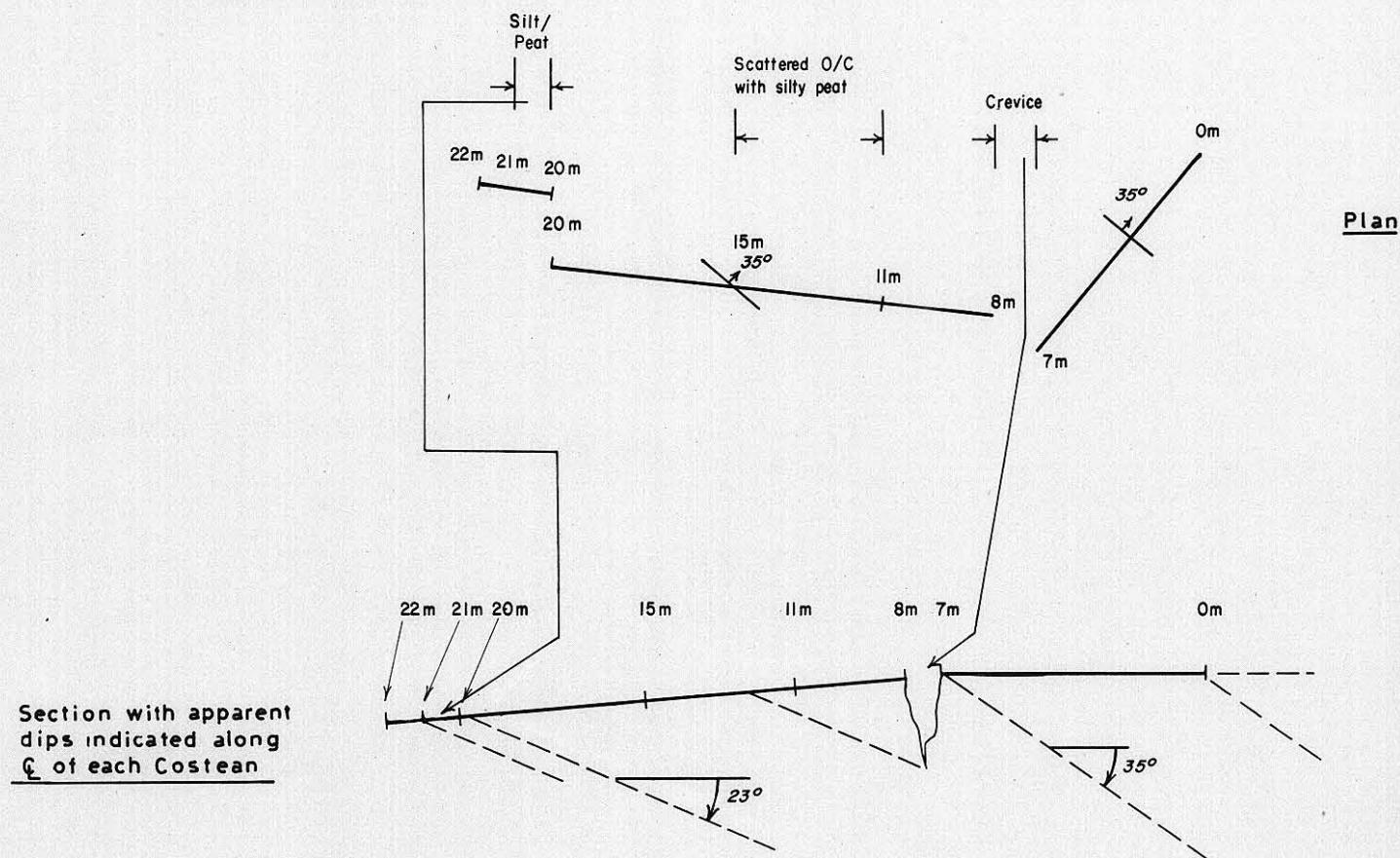
Costean:- C 4

### **Area :- West Grandfathers**

**Scale :-** 1 cm = 2 m (1 : 200)

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



Light grey (N7) and pinkish grey (5yr 8/1) medium grained quartzite with crossbedding and minor rutile on cross beds

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF.

535026

014

## CAPE SORELL—SILICA . TASMANIA.

Costean:- C5-1,283

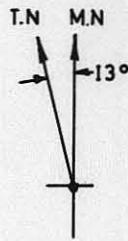
Area :- W.Grandfathers

Scale :- 1cm=2m (or 1:200)

40°

0m

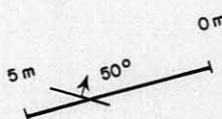
5 cm



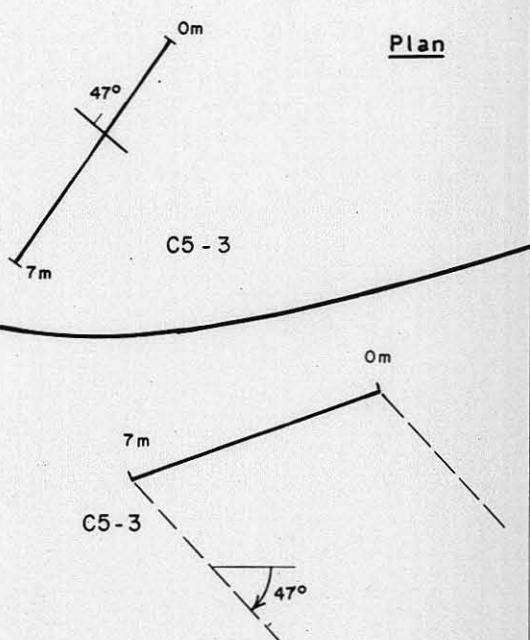
C5 - 1

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

Colour code ((N8) etc.) based on "Rock Colour Chart distributed by the Geological Society of America



C5 - 2

Plan

Section with apparent dips indicated along

£ of each Costean

C5 - 1 Medium grained, very light grey (N8) to light grey (N7) quartzite with minor rutile on some crossbeds

C5 - 2 & 3 Medium to coarse grained, light grey (N7) with some pinkish grey (5 yr 8/1) quartzite. Crossbedded

## Analysis of Quartzite samples by XRF at Comalco Bell Bay.

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	S <sub>1</sub> O <sub>2</sub>	By difference
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01			
C5-1											
0 - 1	0.015	0.974	0.326	0.373	0.088	0.090		0.069			
1 - 2	0.006	0.948	0.193	0.281	0.020	0.026		0.219			
2 - 3	0.011	0.923	0.275	0.334	0.105	0.160	0.004	0.478	.20		
3 - 4	0.012	0.875	0.077	0.146	0.052	0.041		0.261			
4 - 5	0.013	0.717	0.061	0.150	0.034	0.037		0.209			
5 - 6	0.012	1.723	0.132	0.238	0.071	0.070		0.574			
6 - 7	0.007	0.706	0.204	0.214	0.028	0.030		0.110			
7 - 8	0.012	1.217	0.266	0.150	0.029	0.068		0.105			
8 - 9	0.005	1.228	0.279	0.253	0.080	0.072		0.153	.12		
C5-2											
0 - 1	0.009	1.884	0.163	0.241	0.021	0.092		0.684			
1 - 2	0.003	1.701	0.131	0.228	0.014	0.068		0.620			
2 - 3	0.009	0.871	0.161	0.141	< 0.001	0.074		0.221			
3 - 4	0.008	3.410	0.302	0.422	0.072	0.094		1.104			
4 - 5	0.004	1.318	0.108	0.162	0.038	0.039	0.0045	0.333	.13		
C5-3											
0 - 1	0.011	2.082	0.799	0.497	0.092	0.101		0.337			
1 - 2	0.001	3.245	0.198	0.541	0.034	0.273		1.152			
2 - 3	0.004	2.331	0.176	0.589	0.029	0.085		0.782			
3 - 4	0.005	2.639	0.303	1.399	0.083	0.118		0.775			
4 - 5	0.002	2.355	0.237	1.011	0.066	0.094	0.0055	0.740	.34		
5 - 6	0.007	2.448	0.426	0.550	0.130	0.138		0.276			
6 - 7	0.006	1.765	0.219	0.260	0.051	0.081		0.186			

535027

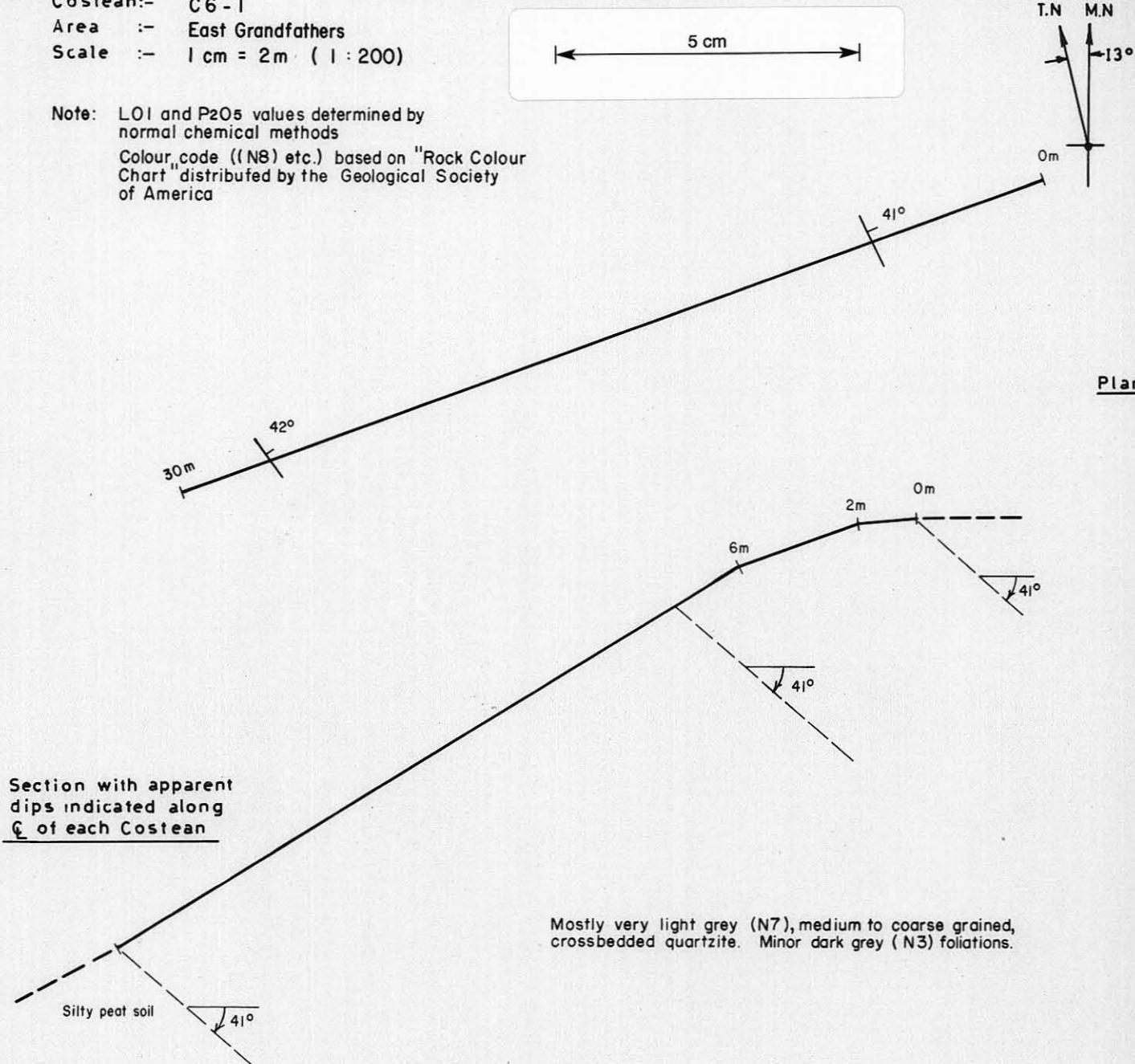
015

CAPE SORELL—SILICA . TASMANIA.

Costean:- C6 - I  
Area :- East Grandfathers  
Scale :- 1 cm = 2 m. ( 1 : 200)

**5 cm**

**Note:** LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
 Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



Analysis of Quartzite samples by XRF at Comalco Bell Bay.

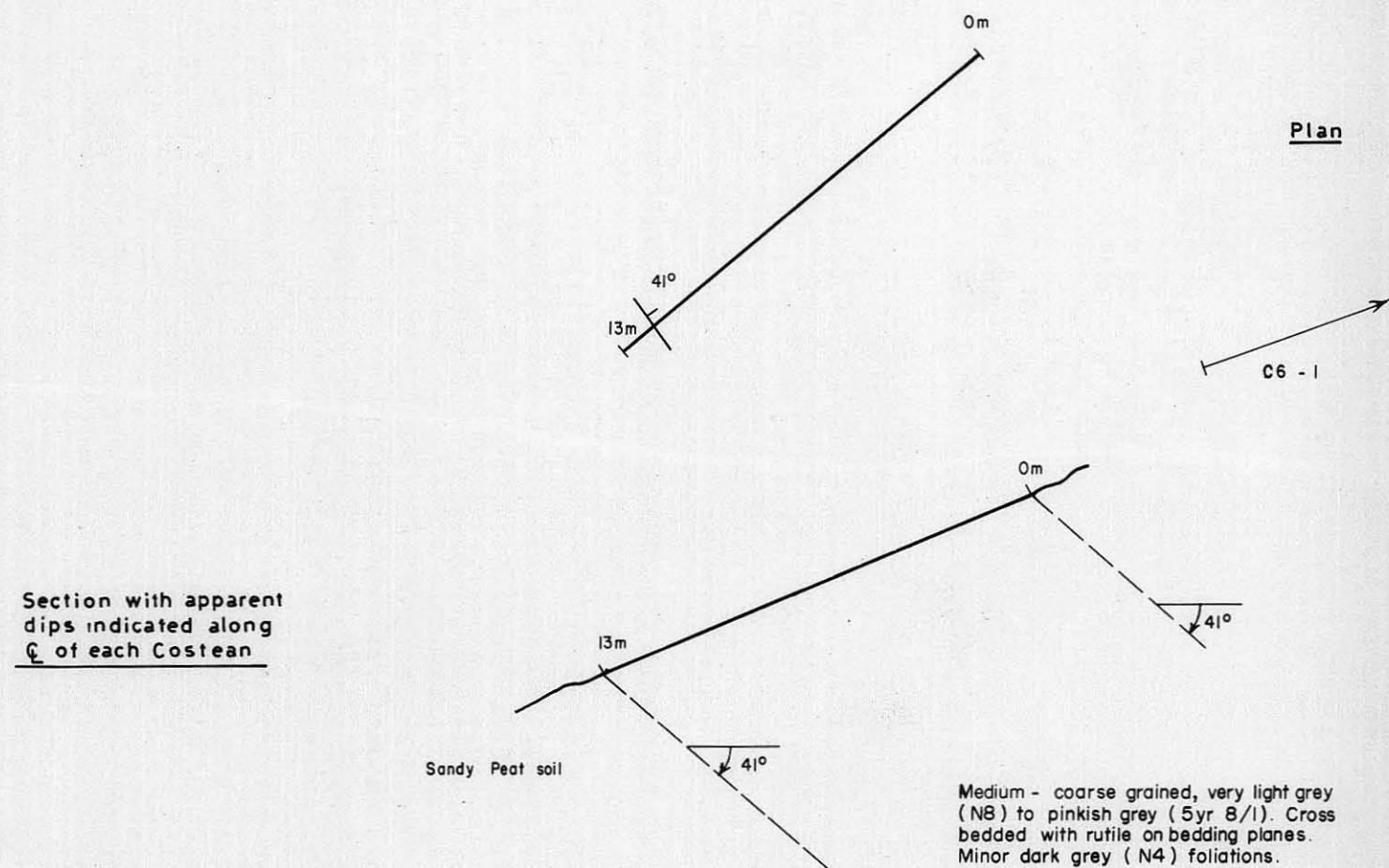
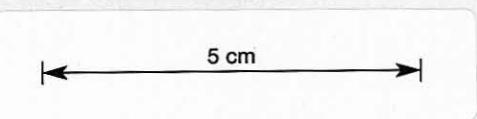
535028

CAPE SORELL—SILICA . TASMANIA.

016 Postean:- C6-2  
Area :- East Grandfathers  
Scale :- 1 cm = 2 m (1: 200)

**5 cm**

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
Colour code (NB) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America



Section with apparent dips indicated along Q of each Costean

## Analysis of Quartzite samples by XRF at Comalco Bell Bay.

017

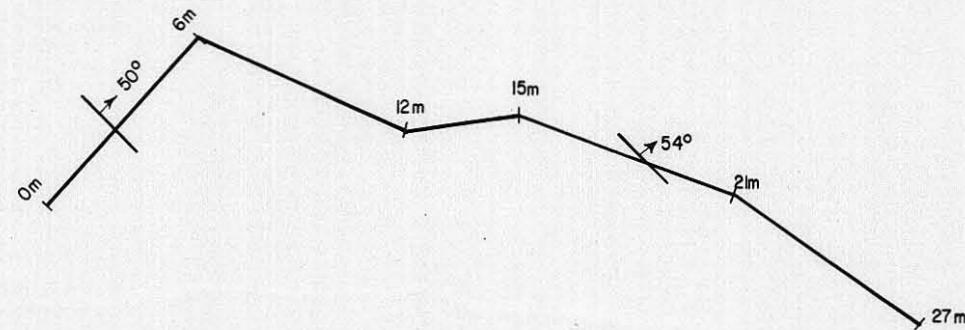
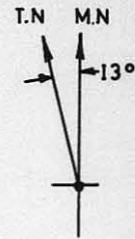
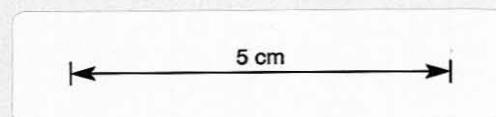
Costean:- C7  
Area :- East Grandfathers  
Scale :- 1 cm = 2 m (1: 200)

CAPE SORELL—SILICA . TASMANIA.

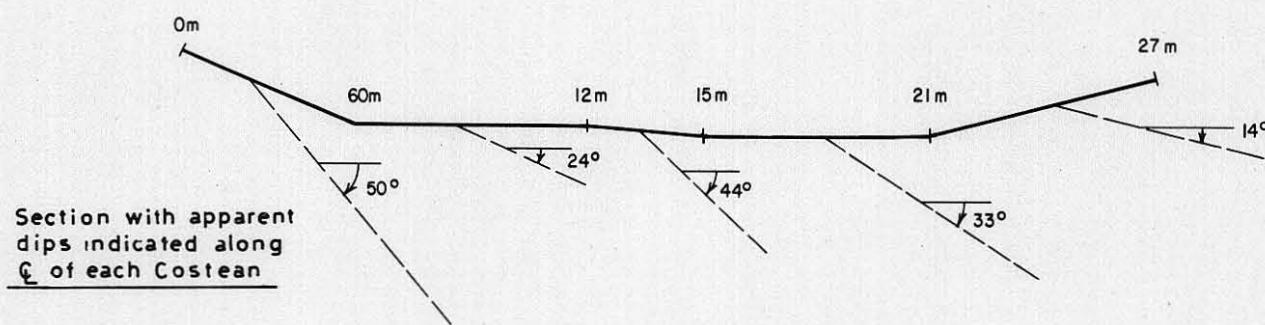
535029

Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods

"Colour code ((N8) etc.) based on  
"Rock Colour Chart" distributed by  
the Geological Society of America.



Plan



Section with apparent dips indicated along E of each Costean

Medium to coarse grained light grey (N7) to pinkish grey (5yr 8/1) quartzite with crossbedding. Light brown (5yr 5/6) on some joint planes

## Analysis of Quartzite samples by XRF at Comalco Bell Bay.

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	L O <sub>1</sub>	S <sub>1</sub> O <sub>2</sub>	By difference
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01			
0 - 1	0.003	1.987	0.258	0.237	< 0.001	0.079	0.011	0.615	.24		
1 - 2	0.002	2.172	0.228	0.390	0.006	0.072		0.668			
2 - 3	0.002	0.921	0.384	0.163	< 0.001	0.035		0.155			
3 - 4	< 0.001	1.415	0.285	0.134	< 0.001	0.081		0.341			
4 - 5	0.001	2.047	0.351	0.276	0.015	0.090		0.706			
5 - 6	< 0.001	2.137	0.222	0.309	< 0.001	0.114		0.668			
6 - 7	0.003	6.960	0.498	0.321	0.049	0.306	0.014	2.435	.71		
7 - 8	0.001	2.646	0.228	0.162	0.042	0.176		0.853			
8 - 9	0.002	1.584	0.145	0.125	< 0.001	0.090		0.483			
9 - 10	< 0.001	3.273	0.143	0.206	< 0.001	0.092		1.237			
10 - 11	0.004	2.758	0.132	0.299	0.100	0.070	0.0032	0.747	.22		
11 - 12	0.007	1.758	0.162	0.119	0.069	0.085		0.384			
12 - 13	0.001	3.668	0.321	0.563	0.065	0.187		0.720			
13 - 14	0.004	1.457	0.309	0.221	0.026	0.092	0.0075	0.661	.35		
14 - 15	0.002	2.104	0.148	0.331	0.032	0.132		0.565			
15 - 16	0.009	1.087	0.425	0.240	< 0.001	0.136		0.189			
16 - 17	0.002	1.642	0.206	0.204	0.005	0.125		0.472			
17 - 18	0.006	1.172	0.438	0.177	0.025	0.061		0.234			
18 - 19	0.004	0.888	0.243	0.159	< 0.001	0.057		0.109			
19 - 20	0.001	1.168	0.351	0.227	< 0.001	0.125		0.156			
20 - 21	< 0.001	0.739	0.340	0.145	< 0.001	0.019	0.0074	0.071	.13		
21 - 22	< 0.001	0.695	0.373	0.092	< 0.001	0.046		0.084			
22 - 23	0.002	0.904	0.452	0.180	0.009	0.059		0.112			
23 - 24	0.004	1.047	0.354	0.173	< 0.001	0.079		0.113			
24 - 25	< 0.001	1.175	0.336	0.144	< 0.001	0.037		0.263			
25 - 26	0.001	1.545	0.389	0.190	< 0.001	0.110		0.168			
26 - 27	0.004	1.135	0.478	0.160	< 0.001	0.061	0.007	0.102	.16		

018

## CAPE SORELL—SILICA . TASMANIA.

Costean:- DI (Sheet 1 of 2)  
 Area :- Mt. Obvious  
 Scale :- 1 cm = 2 m  
 (1:200)

0m

5 cm

T.N. M.N.  
 ↑ 13°

- Note: i) LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
 ii) Colour code ((N8) etc.) based on "ROCK COLOUR CHART" distributed by the Geological Society of America

Generally fine - medium grained, very light grey (N8) to light grey (N7). Outcrop is mostly smooth and blocky.

Section with apparent dips indicated along C of each Costean

0m

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked b were analysed by AMDEL Frewville, S.A.

By difference

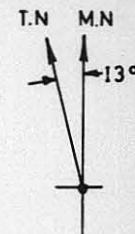
Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>	
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01				
0 - 1	< 0.005	0.128	0.029	0.127	< 0.005	0.008		0.011				
0 - 1a	< 0.010	0.080	0.014	< 0.010	< 0.010	0.027	0.0021	< 0.010	.12	99.76	< 0.001	
0 - 1b	-	.151	.042	.082								
1 - 2	< 0.005	0.260	0.059	0.214	< 0.005	0.006		0.008				
2 - 3	< 0.005	0.300	0.042	0.141	< 0.005	0.017		0.030				
3 - 4	< 0.005	0.202	0.040	0.154	< 0.005	0.015	0.002	0.021	.11			
4 - 5	< 0.005	0.195	0.035	0.245	< 0.005	0.015		0.096				
4 - 5a	< 0.010	0.210	0.023	0.110	< 0.010	0.027	0.0026	0.010	.16	99.46	< 0.001	
4 - 5b	-	.189	.071	.132								
5 - 6	< 0.005	0.146	0.049	0.245	< 0.005	< 0.005		0.113				
6 - 7	< 0.005	0.249	0.007	0.037	< 0.005	0.010		0.099				
7 - 8	< 0.005	0.331	0.066	0.407	< 0.005	0.010	0.0025	0.099	.14			
8 - 9	< 0.005	0.329	0.052	0.248	< 0.005	0.015		0.081				
9 - 10	< 0.005	0.202	0.057	0.239	< 0.005	0.005		0.043				
9 - 10a	< 0.010	0.290	0.060	0.310	< 0.010	0.022	0.0026	0.010	.14	99.16	< 0.001	
9 - 10b	-	.113	.042	.082								
10 - 11	< 0.005	0.222	0.022	0.041	< 0.005	< 0.005		0.020				
11 - 12	< 0.005	0.208	0.026	0.089	< 0.005	0.017	0.0027	0.063	.07			
12 - 13	< 0.005	0.113	0.009	0.026	< 0.005	0.013		0.037				
13 - 14	< 0.005	0.235	0.034	0.124	< 0.005	< 0.005		0.058				
14 - 15	< 0.005	0.173	0.009	< 0.005	< 0.005	0.013	0.0035	0.053	.29			
14 - 15a	< 0.010	0.130	0.015	0.020	< 0.010	0.024	0.0019	0.020	.16	99.63	< 0.001	
14 - 15b	-	.132	.042	.082								
15 - 16	< 0.005	0.070	0.025	0.057	< 0.005	0.008		0.029				
16 - 17	< 0.005	0.175	0.011	0.025	< 0.005	< 0.005		0.065				
17 - 18	< 0.005	0.057	< 0.005	< 0.005	< 0.005	< 0.005		0.035				
18 - 19	< 0.005	0.026	< 0.005	0.007	< 0.005	< 0.005		0.025				
19 - 20	< 0.005	0.075	< 0.005	< 0.005	< 0.005	< 0.005		0.045				
19 - 20a	< 0.010	0.094	0.012	< 0.010	< 0.010	0.014	0.0023	0.020	.11	99.75	< 0.001	
19 - 20b	-	.056	.042	.033								
20 - 21	< 0.005	0.302	0.063	0.183	< 0.005	< 0.005		0.082				
21 - 22	< 0.005	0.277	0.012	0.016	< 0.005	0.006	0.005	0.092	.09			
22 - 23	< 0.005	0.772	0.019	0.038	< 0.005	0.026		0.262				
23 - 24	< 0.005	0.605	0.021	0.029	< 0.005	0.019		0.221				
24 - 25	< 0.005	1.026	0.028	0.046	< 0.005	0.026		0.383				
24 - 25a	< 0.010	0.950	0.068	0.270	< 0.010	0.038	0.0037	0.240	.21	98.20	< 0.001	
24 - 25b	-	.566	.071	.165								
25 - 26	< 0.005	0.988	0.027	0.041	< 0.005	0.035		0.342				
26 - 27	< 0.005	0.854	0.019	0.018	< 0.005	0.013		0.212				
27 - 28	< 0.005	0.997	0.033	0.053	< 0.005	0.028		0.323				
28 - 29	< 0.005	0.647	0.026	0.021	< 0.005	< 0.005		0.230				

019

Costean:- D I (Sheet 2 of 2)  
 Area :- Mt. Obvious  
 Scale :- 1 cm = 2m (1:200)

## CAPE SORELL—SILICA . TASMANIA.

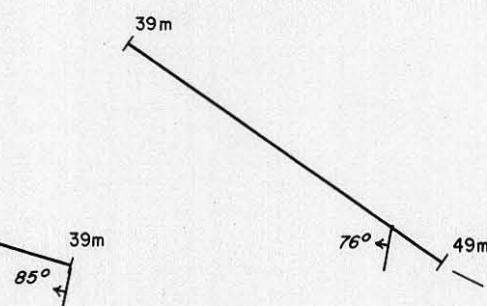
5 cm



Continued Sheet no. 1

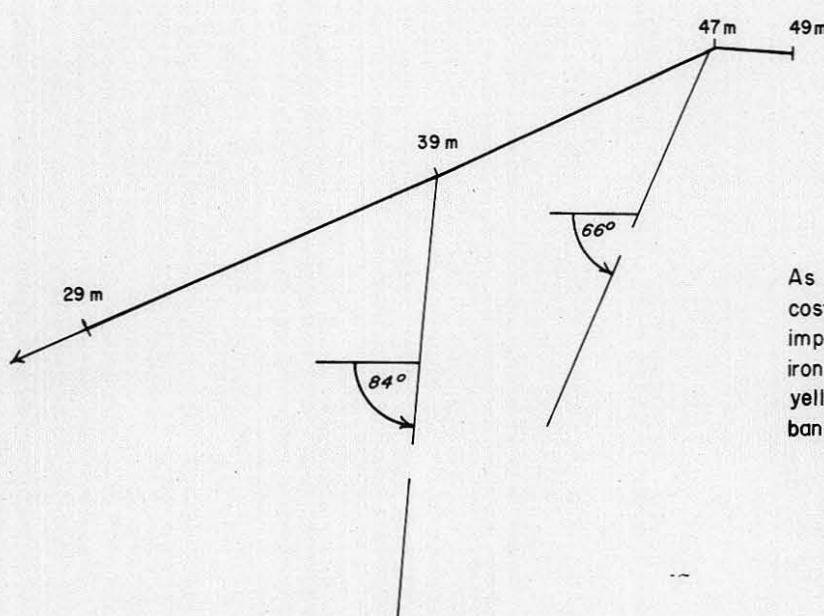
Note: LOI and P<sub>2</sub>O<sub>5</sub> values  
 determined by normal  
 chemical methods

Colour code ((N8) etc.) based on  
 "ROCK COLOUR CHART" distributed  
 by the Geological Society of America

Plan

To D2-1  
 17 m at 117°  
 mag.

Section with apparent  
 dips indicated along  
 Q of each Costean



As with the lower part of  
 costean, (sheet 1), but becoming  
 impure from 35 metres. Minor  
 iron staining and pale greenish  
 yellow (IO YR 8/2) chloritic  
 bands.

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked b were analysed by AMDEL Frewville, S.A.

By difference

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si <sub>1</sub> O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>	
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01				
29 - 30	<0.005	1.188	0.037	0.046	<0.005	0.030	0.005	0.418	.13			
29 - 30a	<0.010	0.940	0.033	0.030	<0.010	0.038	0.0036	0.260	.21	98.50	<0.001	
29 - 30b	.078	.566	.071	.049								
30 - 31	<0.005	0.856	0.023	0.024	<0.005	0.010		0.315				
31 - 32	<0.005	1.079	0.030	0.047	<0.005	0.015		0.378				
32 - 33	<0.005	0.972	0.041	0.106	<0.005	0.008		0.314				
33 - 34	<0.005	1.464	0.018	0.055	<0.005	0.008		0.451				
34 - 35	<0.005	1.108	0.023	0.057	<0.005	0.026	0.004	<0.005	.18			
34 - 35a	<0.010	0.840	0.020	0.040	0.010	0.033	0.0036	0.230	.19	98.60	0.001	
34 - 35b	.039	.566	.042	.049								
35 - 36	<0.005	0.963	0.067	0.218	<0.005	0.021		0.305				
36 - 37	<0.005	1.248	0.199	1.019	<0.005	0.026		0.273				
37 - 38	<0.005	1.117	0.148	0.636	0.037	0.017		0.264				
38 - 39	<0.005	2.513	0.320	1.283	0.039	0.070		0.739				
39 - 40	<0.005	1.037	0.239	1.033	0.024	0.028	0.002	0.191	.35			
39 - 40a	<0.010	0.890	0.190	0.870	0.010	0.010	0.0027	0.150	.21	97.60	0.001	
39 - 40b	.039	.566	.142	.331								
40 - 41	<0.005	1.159	0.257	1.130	0.032	0.028	<0.001	0.231				
41 - 42	<0.005	1.702	0.215	0.777	0.012	0.035		0.411				
42 - 43	<0.005	1.584	0.311	1.311	0.015	0.063		0.326				
43 - 44	<0.0	2.116	0.277	1.052	<0.005	0.057		0.502				
44 - 45	<0.005	1.395	0.265	0.827	0.026	0.039	0.002	0.363	.33			
44 - 45a	<0.010	1.000	0.170	0.620	0.010	0.036	0.0048	0.210	.35	97.60	<0.001	
44 - 45b	-	.566	.114	.165								
45 - 46	<0.005	1.424	0.152	0.444	0.044	0.024		0.437				
46 - 47	<0.005	0.843	0.232	0.793	0.034	0.006		0.177				
47 - 48	<0.005	2.455	0.488	1.475	0.021	0.074		0.544				
48 - 49	<0.005	2.007	0.439	1.377	0.026	0.043	0.002	0.437	.90			

020 Costean:- D2  
Area :- Mt. C

Costean:- D2  
Area :- Mt. Obvious  
Scale :- 1cm = 2m (1:200)

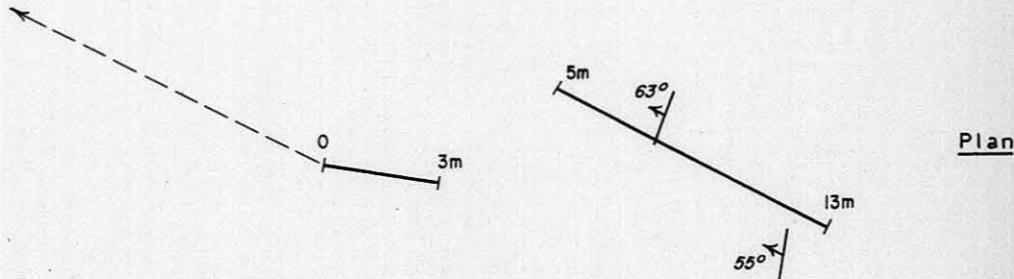
Note: LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
Colour code based on "Rock Colour Chart" distributed by the Geological Society of America

## CAPE SORELL—SILICA . TASMANIA.

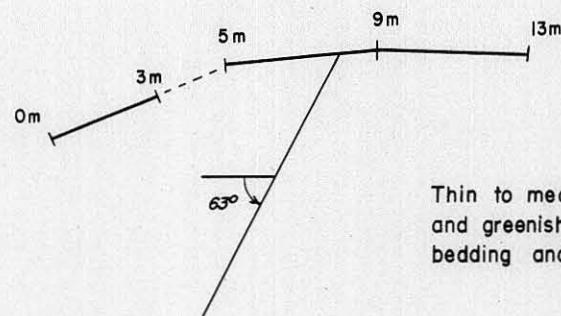
E-35032

5 cm

To: D1 - 49  
17 m at 297° mag.



Section with apparent dips indicated along C of each Costean



Thin to medium bedded, very light grey (5YR 8/1) and greenish grey (5GY 6/1) quartzite cross-bedding and some chloritic bands

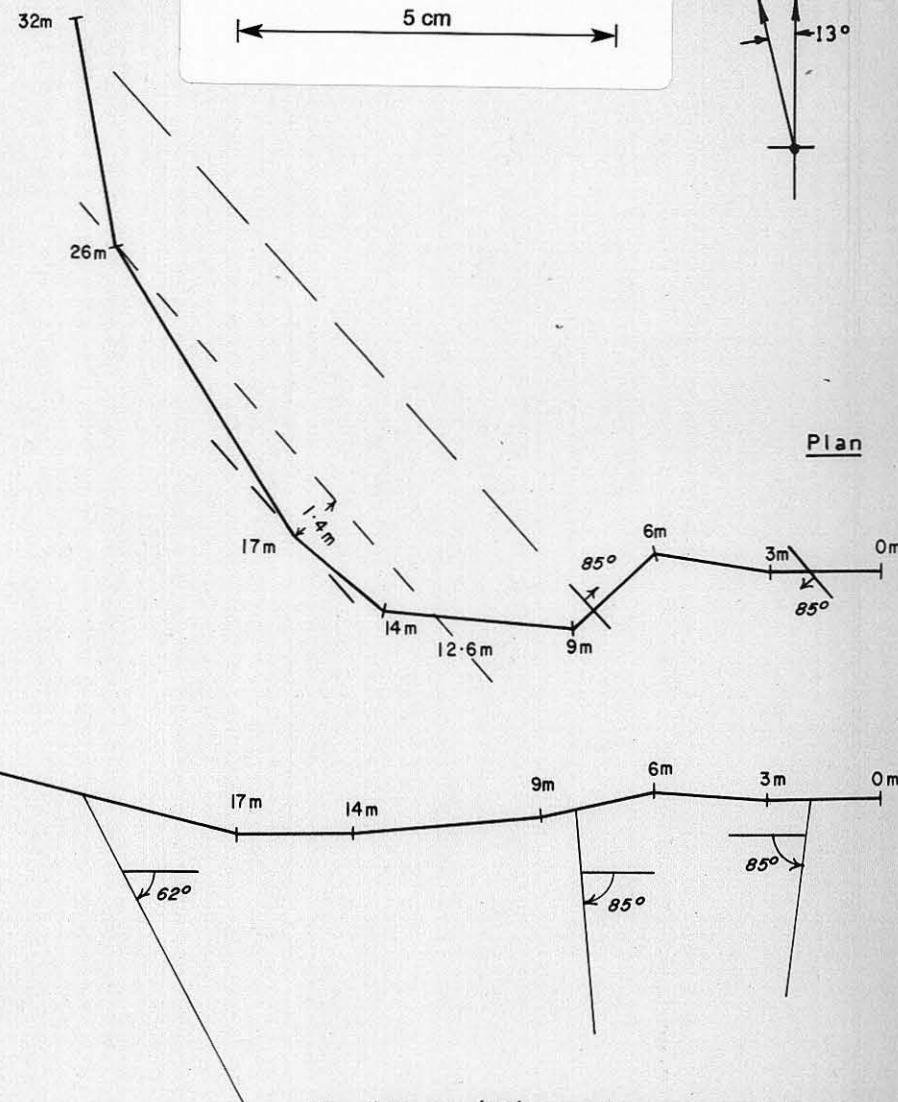
Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney, by XRF. Samples marked b were analysed by AMDEL, Frewville, SA. By difference.

021

## CAPE SORELL—SILICA . TASMANIA.

Costean:- D 3  
 Area :- Mt. Obvious  
 Scale :- 1 cm = 2m (1:200)

Note : LOI and P<sub>2</sub>O<sub>5</sub> values determined by normal chemical methods  
 Colour code ((N8) etc.) based on "Rock Colour Chart" distributed by the Geological Society of America

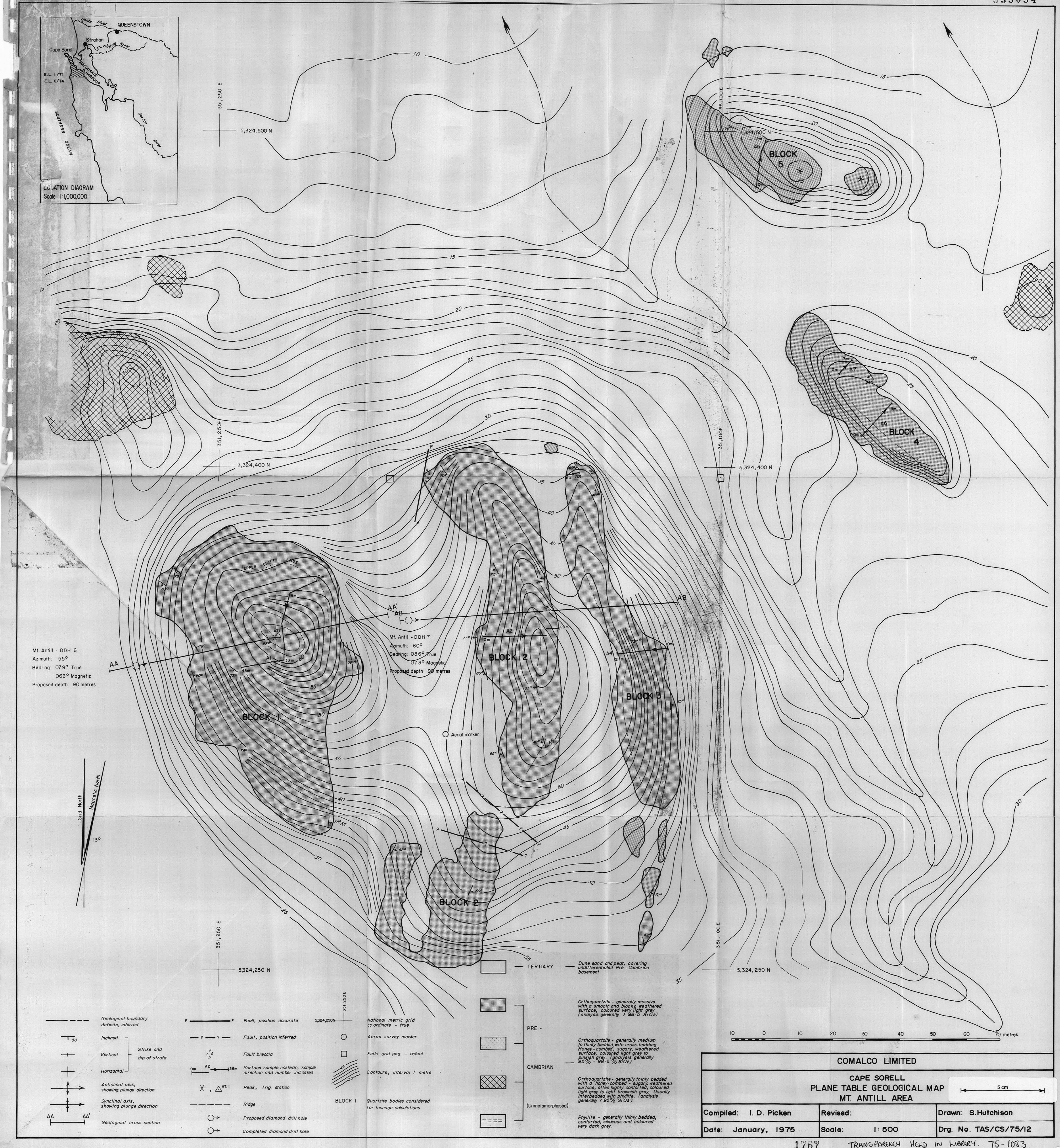


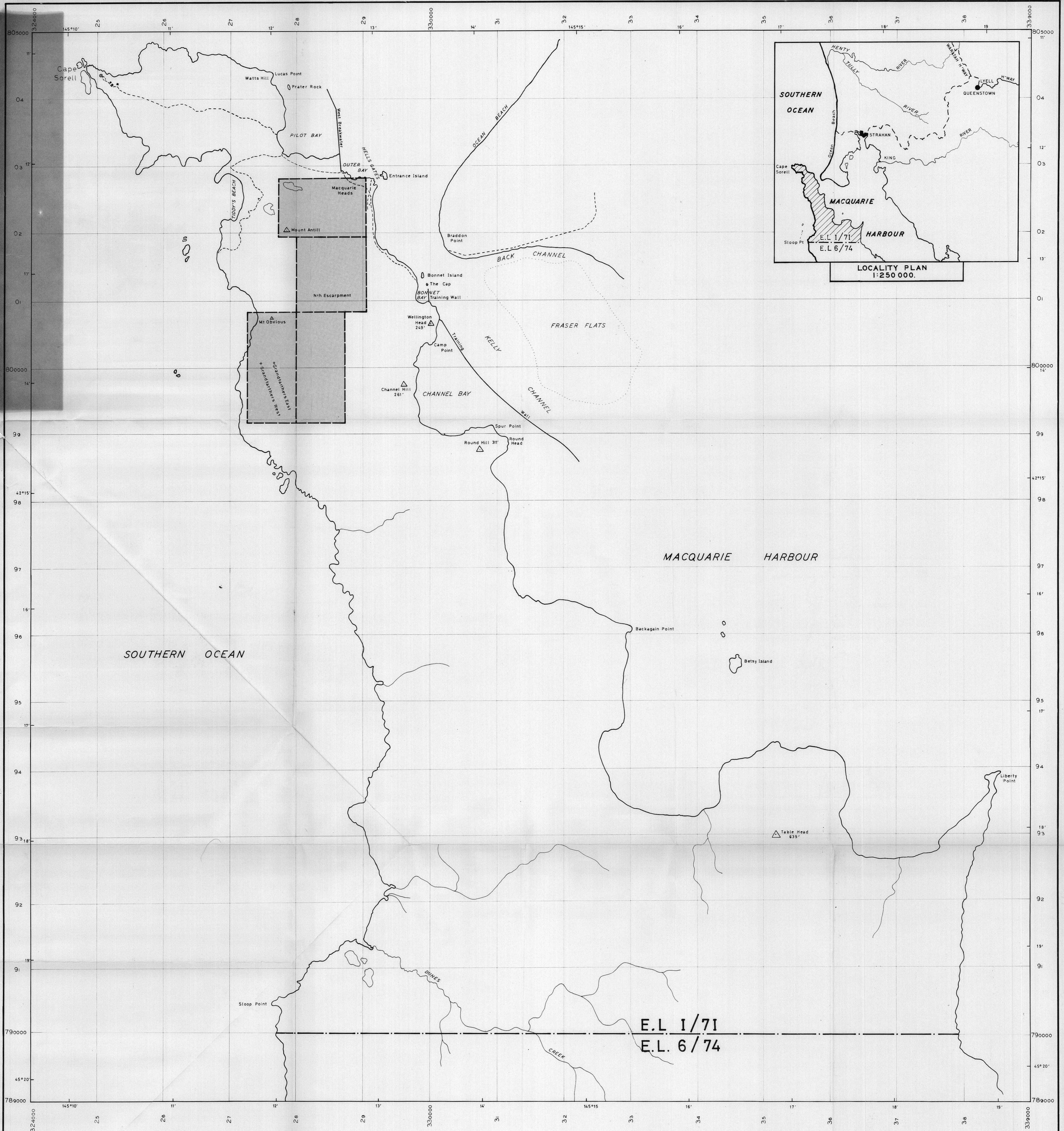
Section with apparent dips indicated along  
of each Costean

Very light grey (N8) to medium grey quartzite. Dark yellowish orange (IO YR 6/6) staining on joints.

Analysis of Quartzite samples by XRF at Comalco Bell Bay. Samples marked 'a' are duplicated samples analysed by A.C.I. Sydney. by XRF. Samples marked b were analysed by AMDEL, Frewville, S.A.

Interval	Ca.O	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mg O	Na <sub>2</sub> O	T <sub>1</sub> O <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	LOI	Si O <sub>2</sub>	Cr <sub>2</sub> O <sub>3</sub>	By difference
Limit of Detection	0.005	0.013	0.005	0.011		0.007		0.01				
0 - 1	< 0.005	1.669	0.110	0.447	< 0.005	0.068		0.498				
0 - 1a	< 0.010	0.770	0.033	0.130	< 0.010	0.040	0.0029	0.170	.28	98.60	< 0.001	
0 - 1b	-	1.511	.071	.165								
1 - 2	< 0.005	1.391	0.501	1.850	< 0.005	0.026		0.232				
2 - 3	< 0.005	2.337	0.168	0.720	< 0.005	0.076	0.002	0.426	.39			
3 - 4	< 0.005	1.711	0.110	0.527	< 0.005	0.017		0.358				
4 - 5	< 0.005	1.386	0.086	0.346	< 0.005	0.059		0.414				
4 - 5a	< 0.010	1.200	0.085	0.320	< 0.010	0.098	0.0029	0.300	.28	97.70	< 0.001	
4 - 5b	-	.86	.071	.165								
5 - 6	< 0.005	2.101	0.091	0.276	< 0.005	0.054		0.718				
6 - 7	< 0.005	1.308	0.024	0.091	< 0.005	0.048	< 0.001	0.454				
7 - 8	< 0.005	1.720	0.026	0.097	< 0.005	0.030		0.526				
8 - 9	< 0.005	2.297	0.030	0.123	< 0.005	0.024		0.732				
9 - 10	< 0.005	0.801	0.040	0.058	< 0.005	0.005		0.283				
9 - 10a	< 0.010	1.100	0.044	0.060	< 0.010	0.033	0.0041	0.280	.23	98.20	< 0.001	
9 - 10b	-	.472	.071	.049								
10 - 11	< 0.005	1.050	0.060	0.082	< 0.005	0.028		0.344				
11 - 12	< 0.005	1.600	0.107	0.088	< 0.005	0.087		0.486				
12 - 13	< 0.005	1.996	0.055	0.128	< 0.005	0.039	0.005	0.607	.23			
13 - 14	< 0.005	1.054	0.021	0.069	< 0.005	0.046		0.401				
14 - 15	< 0.005	0.794	0.074	0.248	< 0.005	0.032		0.216				
14 - 15a	< 0.010	0.810	0.070	0.210	< 0.010	0.090	0.0032	0.200	.26	98.30	0.001	
14 - 15b	-	.566	.042	.132								
15 - 16	< 0.005	0.360	0.122	0.503	< 0.005	0.006		0.056				
16 - 17	< 0.005	0.309	0.163	0.684	< 0.005	< 0.005		0.029				
17 - 18	< 0.005	0.344	0.257	0.825	< 0.005	< 0.005	0.035	0.016	.24			
18 - 19	0.009	0.781	0.222	0.655	< 0.005	< 0.005		0.018				
19 - 20	< 0.005	0.224	0.171	0.541	< 0.005	0.017		0.017				
19 - 20a	< 0.010	0.280	0.120	0.420	< 0.010	0.028	0.0026	0.010	.20	98.90	< 0.001	
19 - 20b	-	.094	.071	.165								
20 - 21	< 0.005	0.048	0.053	0.173	< 0.005	0.006		0.018				
21 - 22	< 0.005	0.358	0.075	0.231	< 0.005	< 0.005	0.003	0.010				
22 - 23	< 0.005	0.113	0.027	0.090	< 0.005	0.006	0.0035	0.027				
23 - 24	< 0.005	0.264	0.009	0.019	< 0.005	< 0.005		0.067				
24 - 25	< 0.005	0.122	0.006	0.010	< 0.005	0.006		0.058				
24 - 25a	< 0.010	0.200	0.012	0.010	< 0.010	0.016	0.0022	0.030	.14	99.60	< 0.001	
24 - 25b	-	.057	.071	.016								
25 - 26	< 0.005	0.151	0.078	0.214	< 0.005	< 0.005		0.036				
26 - 27	< 0.005	0.302	0.019	0.077	< 0.005	< 0.005		0.103				
27 - 28	< 0.005	0.182	0.060	0.270	< 0.005	< 0.005		0.029				
28 - 29	< 0.005	0.155	0.033	0.126	< 0.005	0.006		0.028				
29 - 30	< 0.005	0.010	0.006	0.021	< 0.005	< 0.005		0.017				
29 - 30a	< 0.010	0.050	0.013	< 0.010	< 0.010	0.016	0.0018	0.010	.15	99.76	< 0.001	
29 - 30b	-	.038	.028	.033								
30 - 31	< 0.005	0.135	0.029	0.102	< 0.005	< 0.005		0.024				
31 - 32	< 0.005	0.086	0.006	0.007	< 0.005	< 0.005		0.045				





**535035**

COMALCO LIMITED		
CAPE SORELL PENINSULA WEST TASMANIA		
E.L. 1/71, E.L. 6/74 & M.L. 16M/75.		
COMPILED BY B.F.B.	DRAWN BY B.F.B.	EXPLORATION DEPARTMENT
DATE 31.4.1975	SCALE 1:20,000	N° TAS/CS/75/17

TRANS. HELD IN LIBRARY- 75-1083 1788

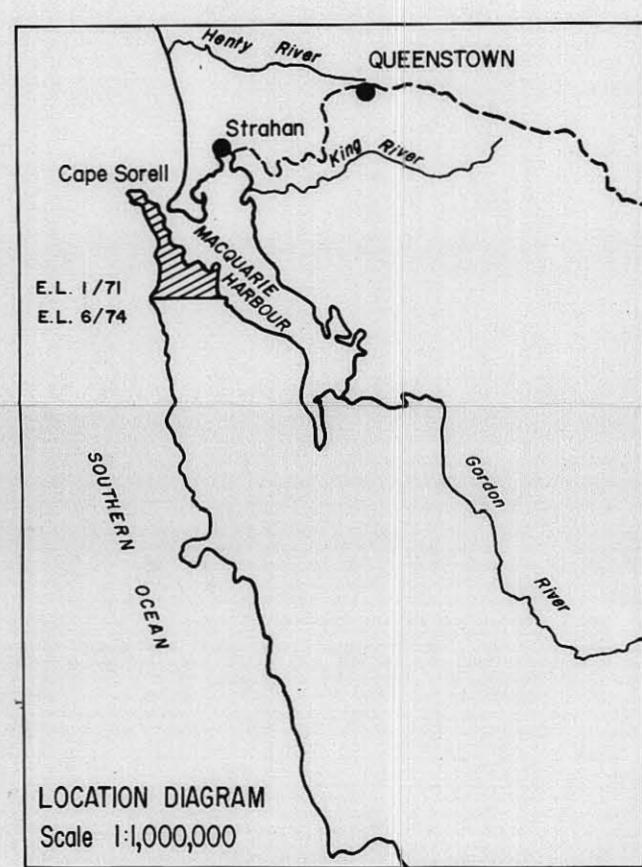


Geological boundary, definite, inferred  
Inclined  
Vertical  
Horizontal  
Anticlinal axis, showing plunge direction  
Synclinal axis, showing plunge direction  
Ridge  
DA DA'

Strike and dip of strata  
Fault, position accurate  
Fault, position inferred  
Fault breccia  
Surface sample location, sample direction and number indicated  
Peak, Trig station  
AT 1  
Ridge  
Proposed diamond drill hole  
Proposed diamond drill hole

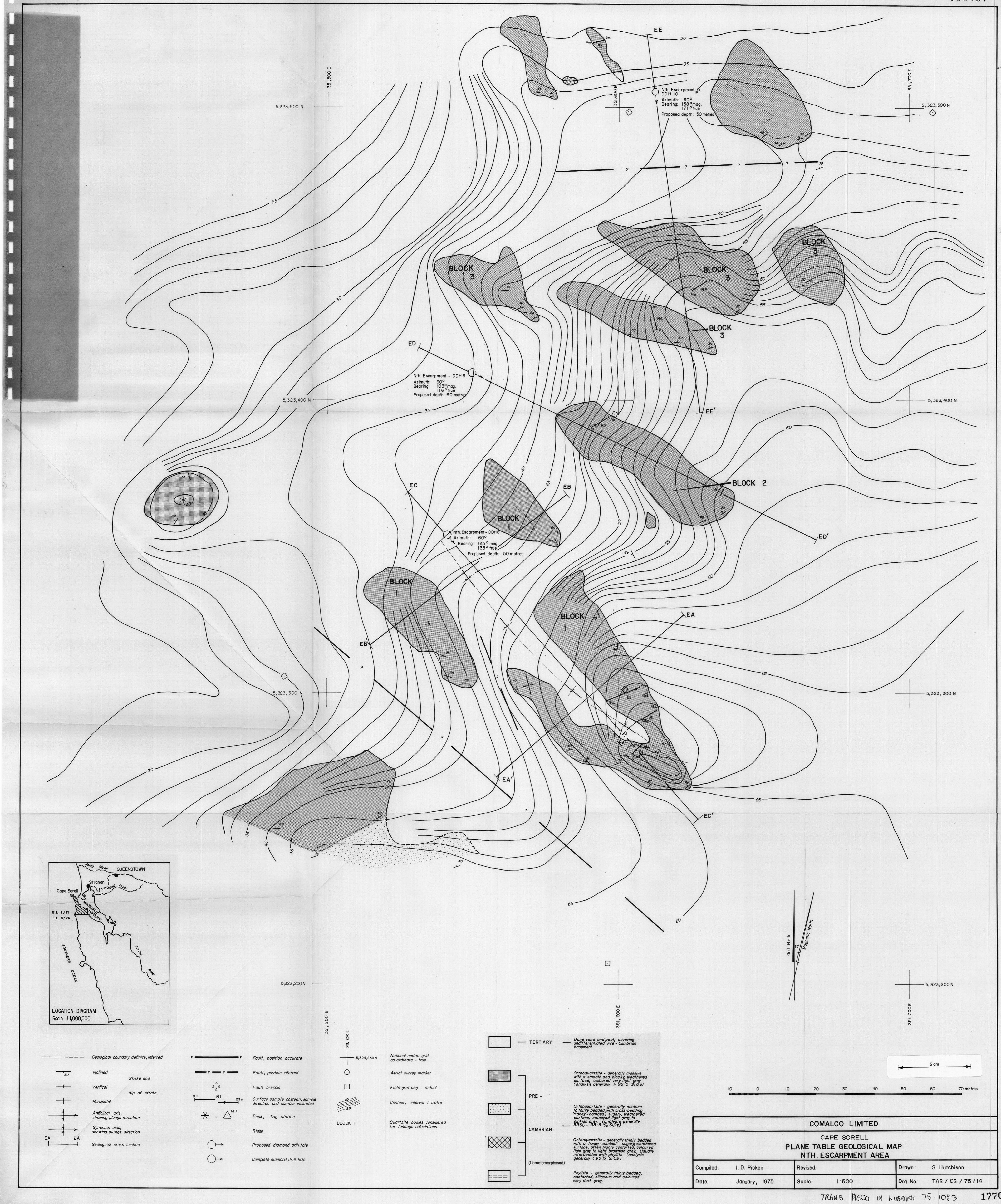
5,324,250N  
351,250E  
? ?  
0m 29m  
A2  
25 50  
BLOCK I  
Quartzite bodies considered for tonnage calculations

National metric grid coordinate - true  
Aerial survey marker  
Field grid peg - actual  
Contour, interval 1 metre  
Orthoquartzite - generally massive with a smooth and blocky, weathered surface, coloured very light grey (analysis generally  $\times 9\% SiO_2$ )  
Orthoquartzite - generally medium to finely bedded with cross-bedding. Honey-combed, sugary, weathered surface, coloured light grey to pinkish grey ( $\times 5\% SiO_2$ )  
Orthoquartzite - generally thinly bedded with a 'honey-combed' - sugary, weathered surface, often highly contorted, coloured light grey to light brownish grey. Usually interbedded with phyllite (analysis generally  $\times 95\% SiO_2$ )  
(Unmetamorphosed)  
Phyllite - generally thinly bedded, contorted, siliceous and coloured very dark grey



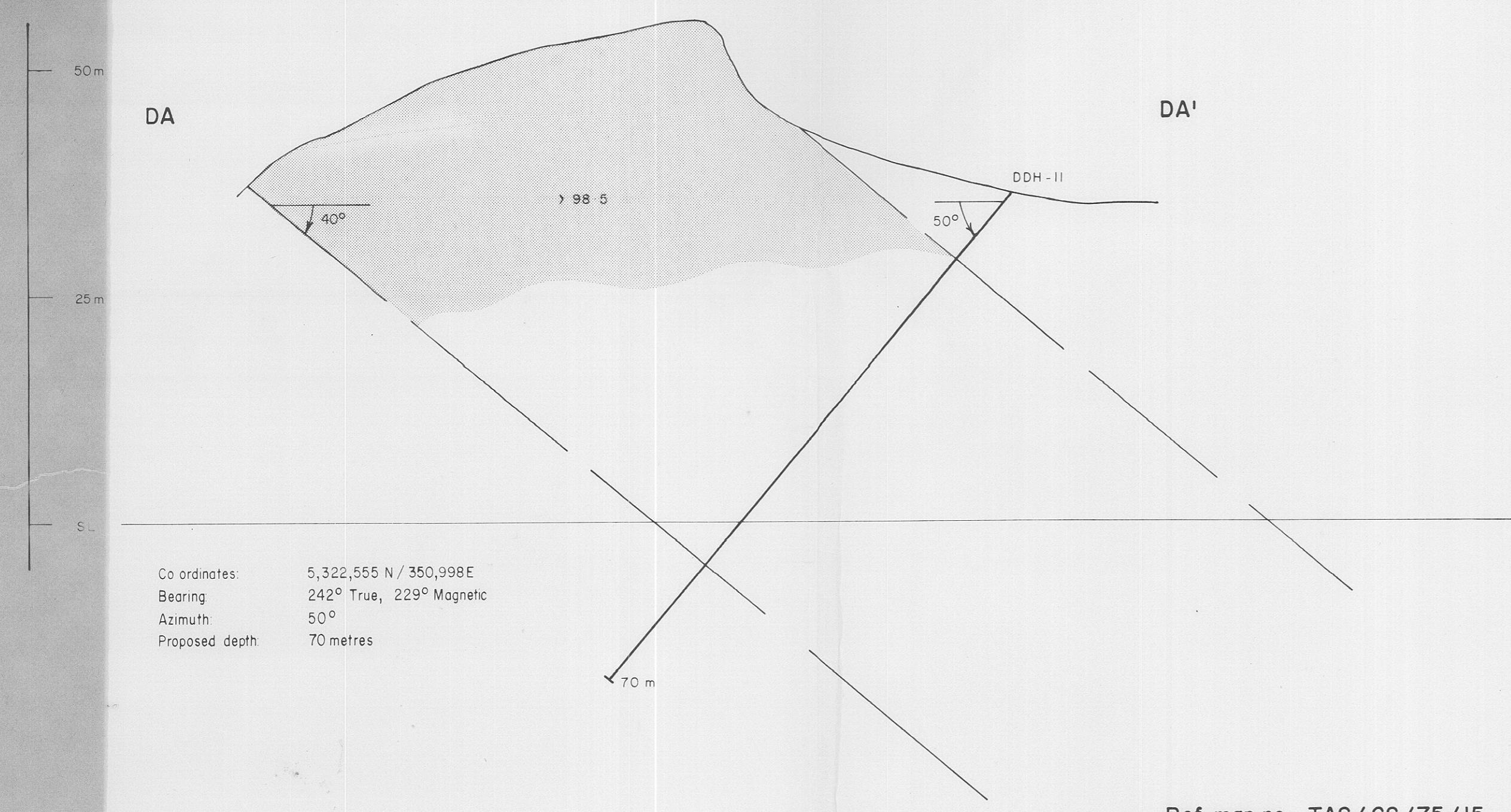
COMALCO LIMITED  
CAPE SORELL  
PLANE TABLE GEOLOGICAL MAP  
MT. OBVIOUS AREA

Compiled: I.D. Picken	Revised:	Drawn: S. Hutchison
Date: January, 1975	Scale: 1:500	Drg. No. TAS / CS / 75 / 13

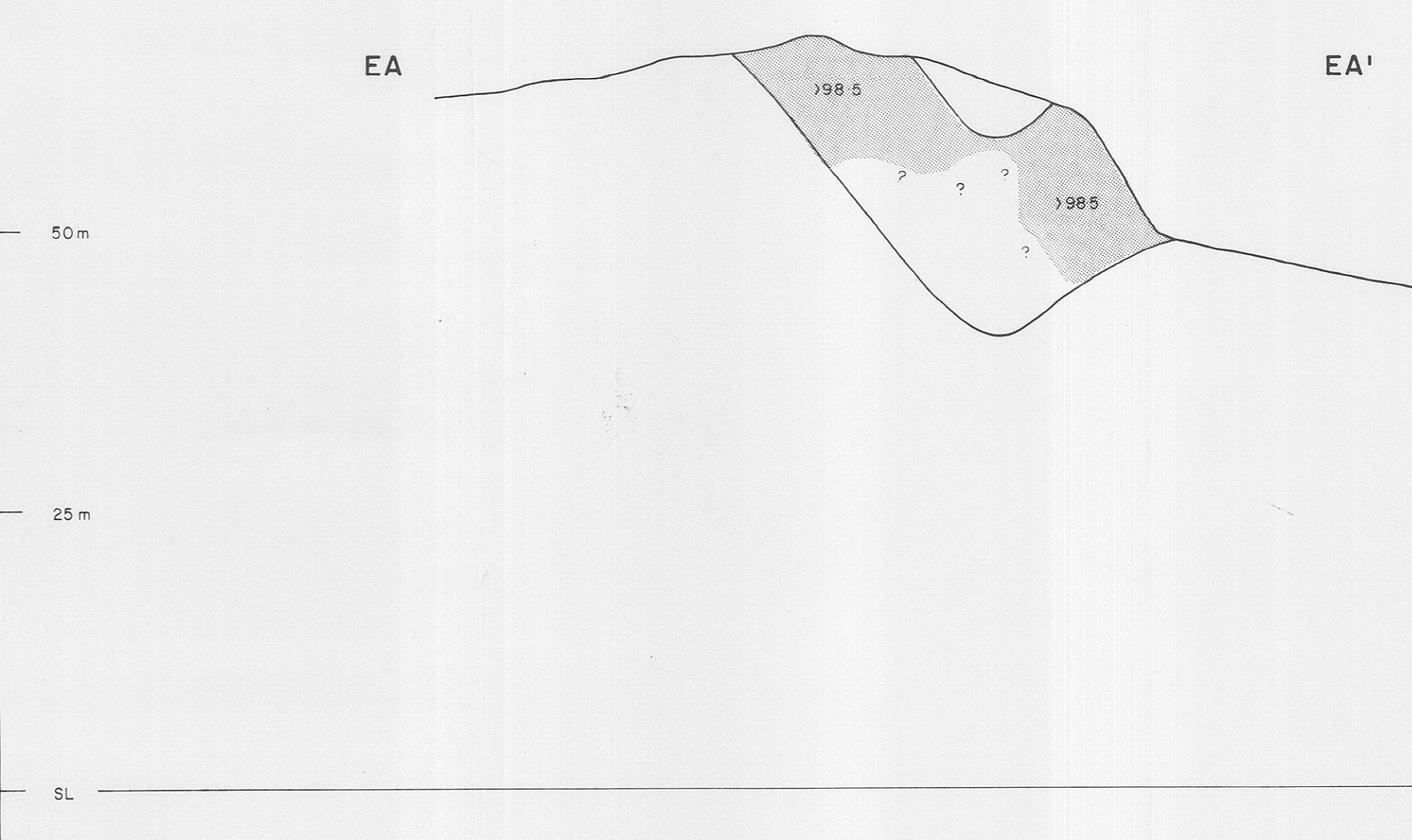




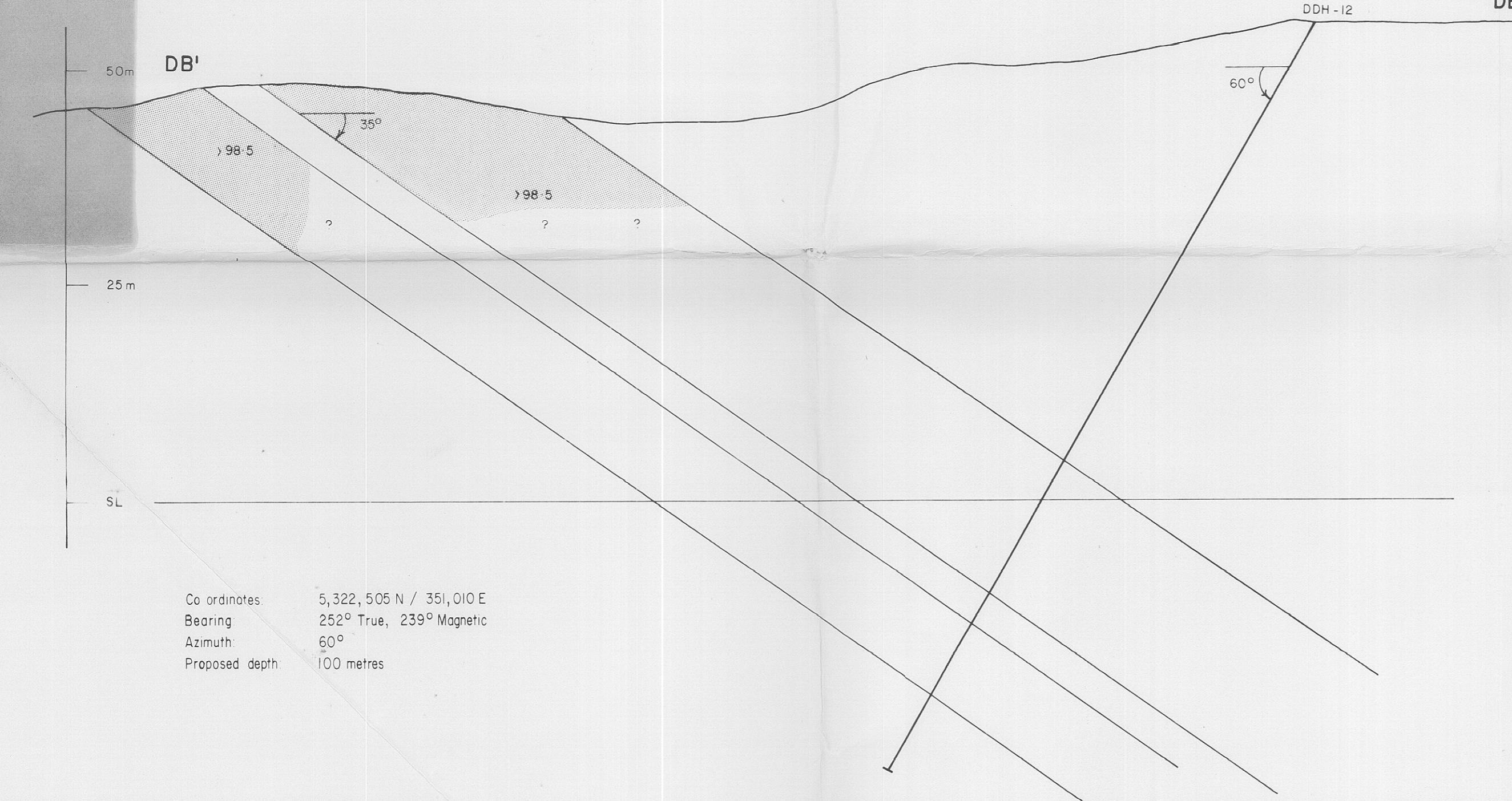
## GRANDFATHERS AREA DDH-II



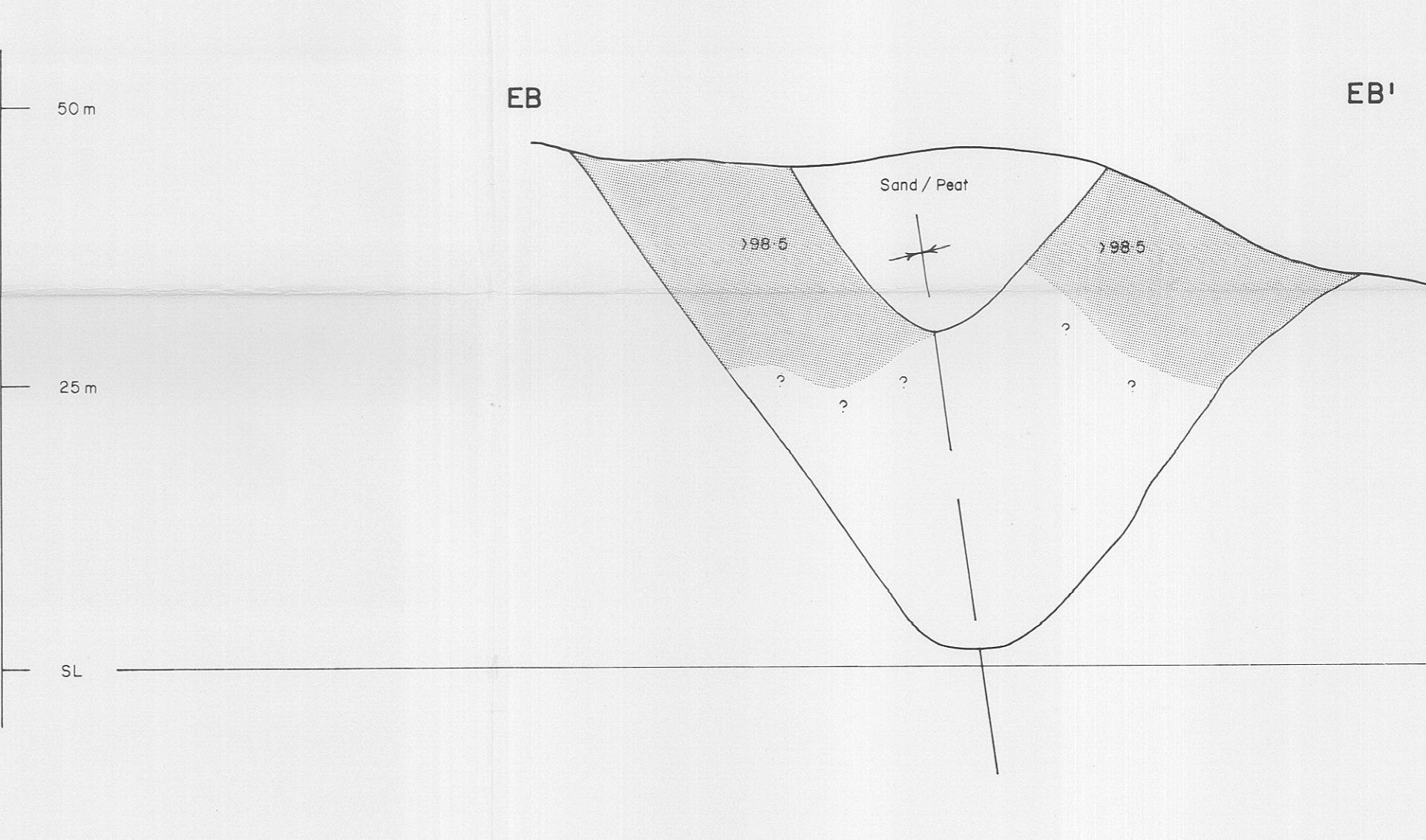
## NTH. ESCARPMENT (Main)



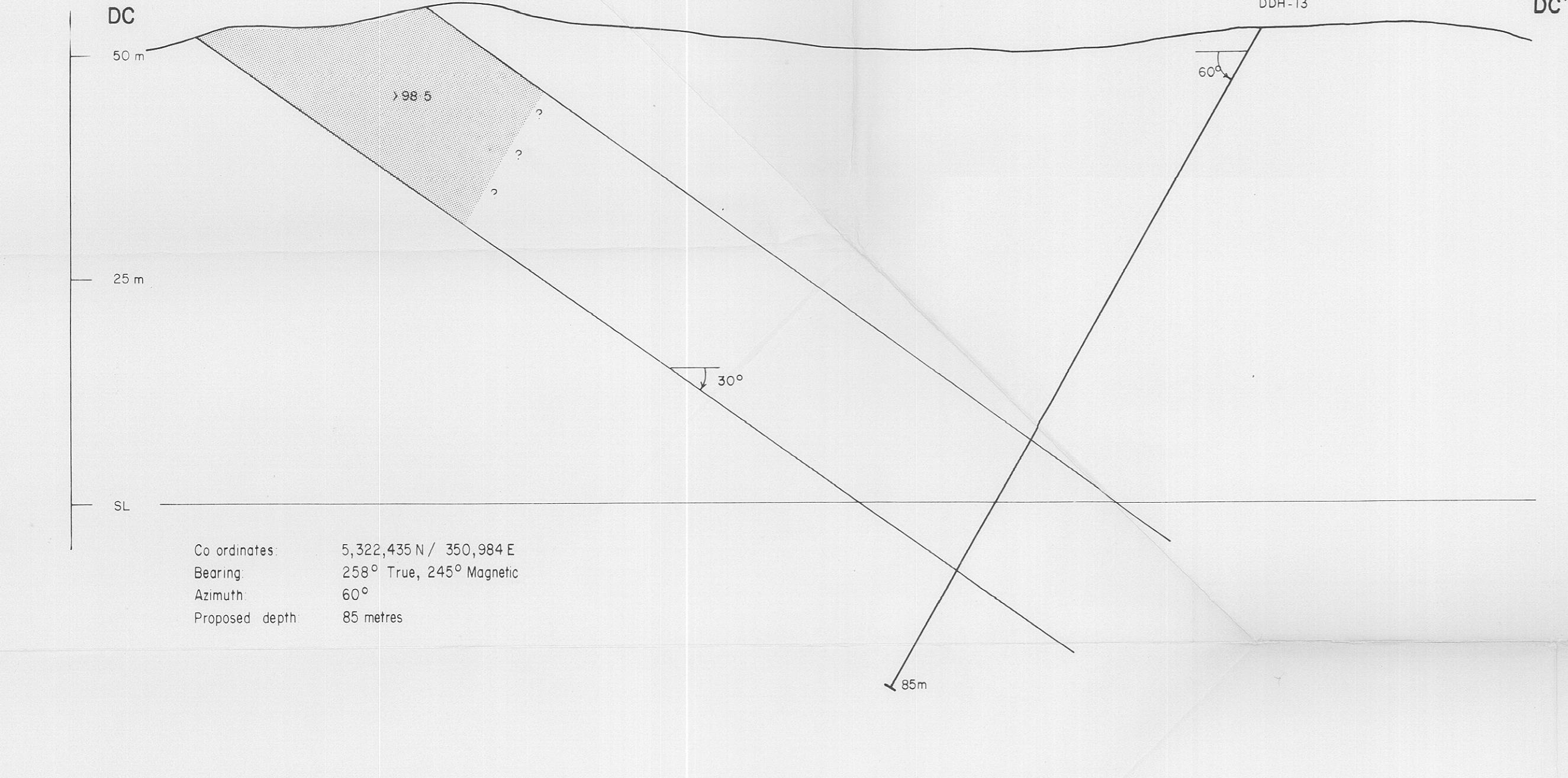
## GRANDFATHERS AREA DDH-I2



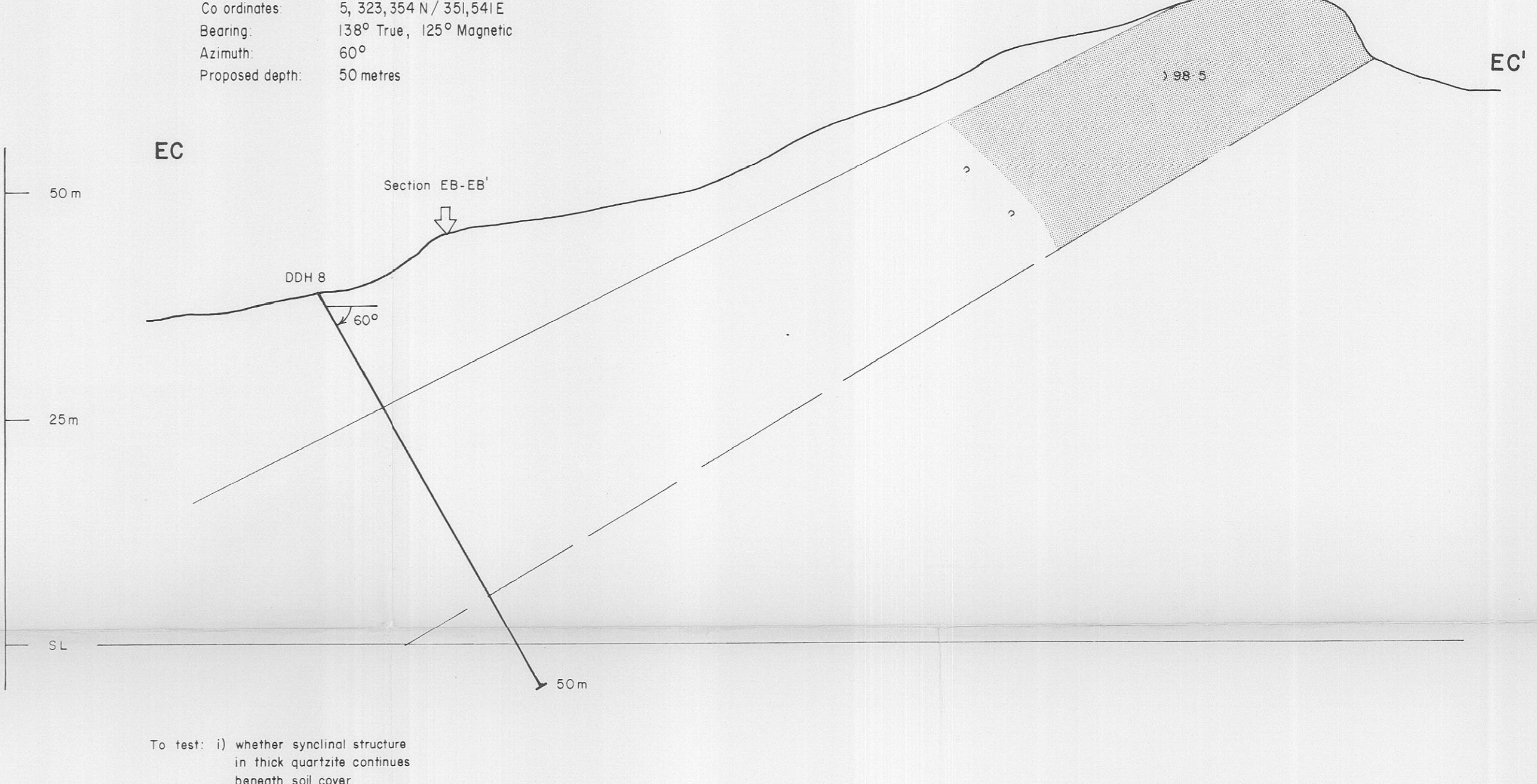
## NTH. ESCARPMENT (Looking SE)



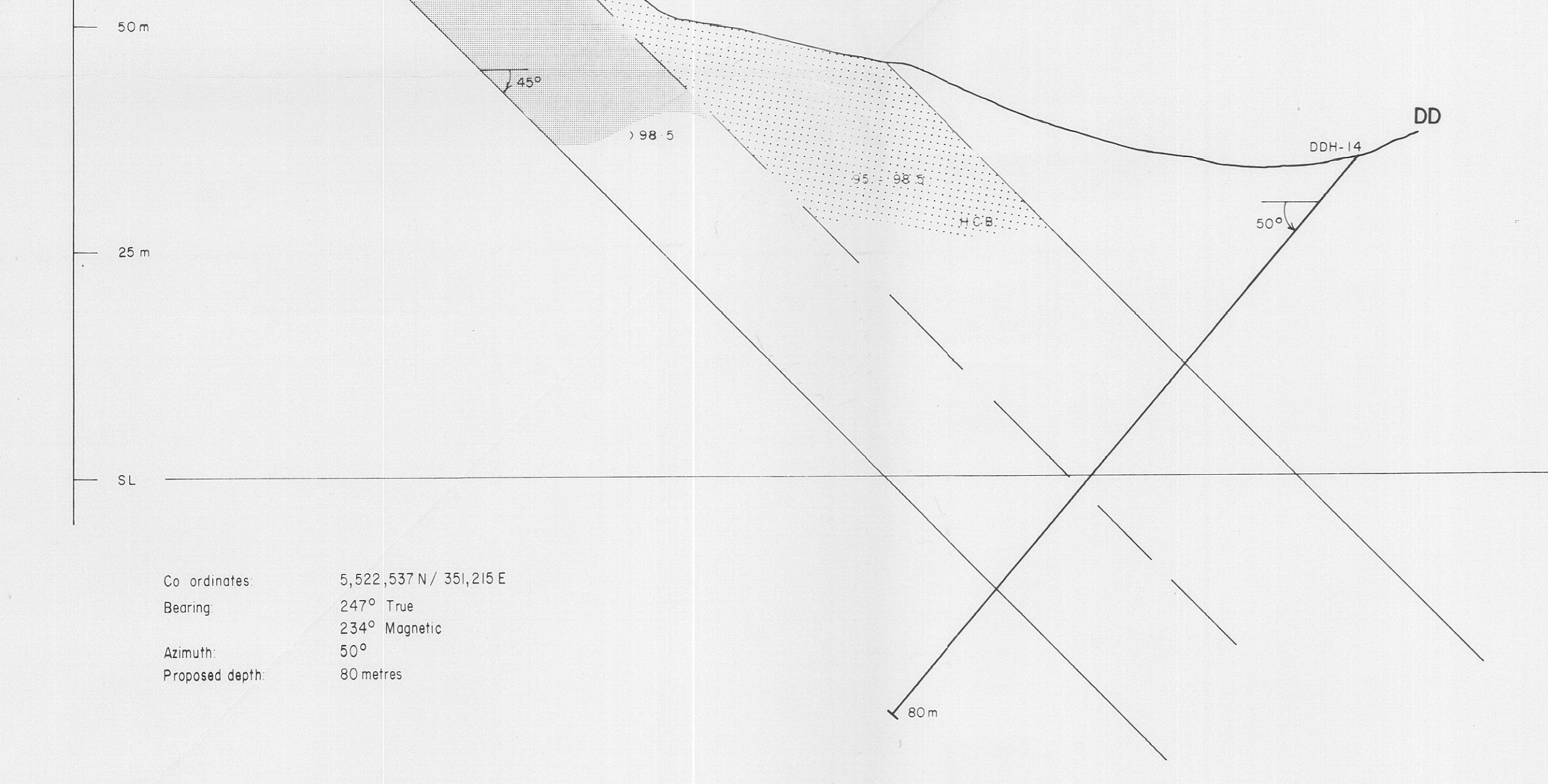
## GRANDFATHERS AREA DDH-I3



## NTH. ESCARPMENT (Looking NE) DDH 8



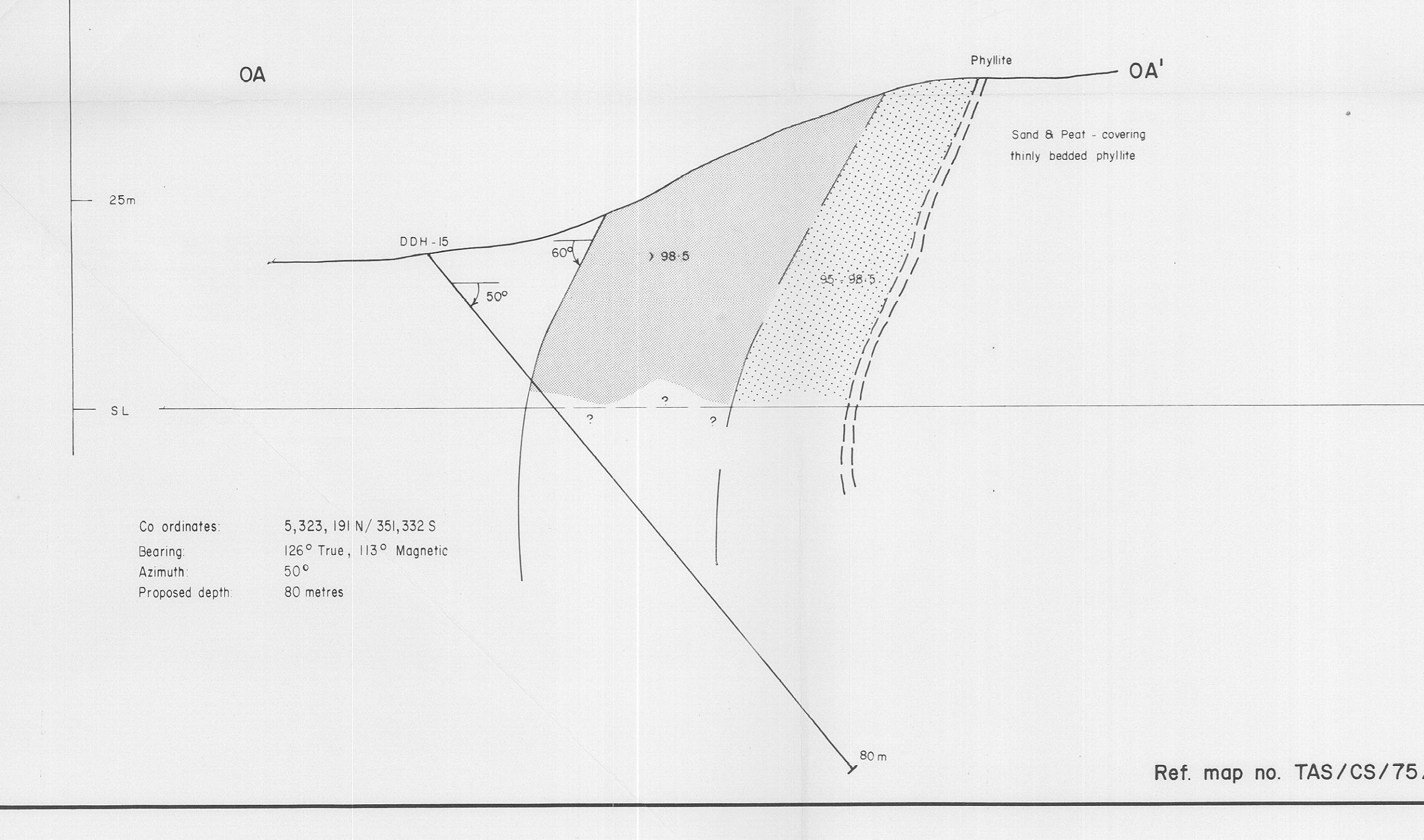
## GRANDFATHERS AREA DDH 14



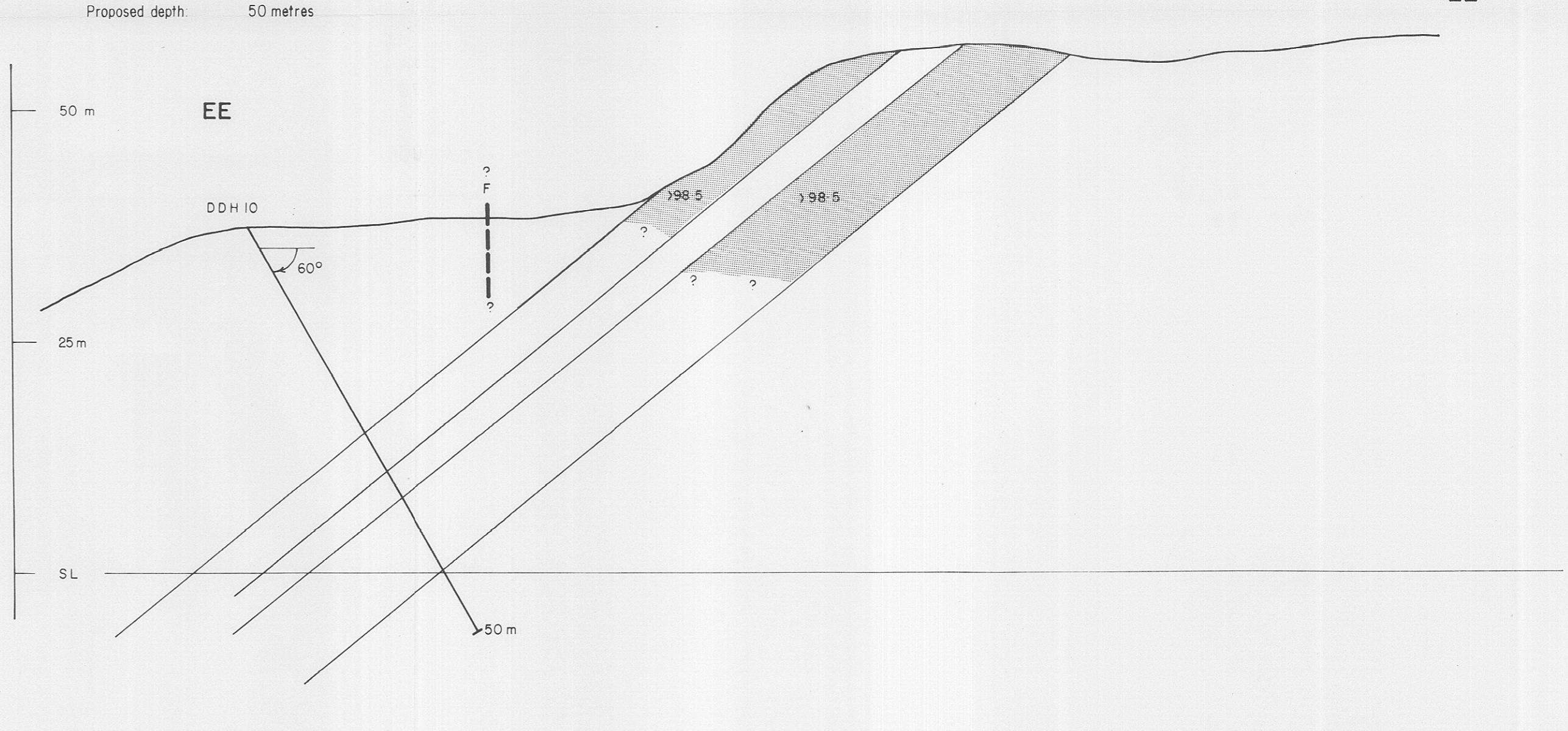
## NTH. ESCARPMENT (Section looking NE) DDH 9



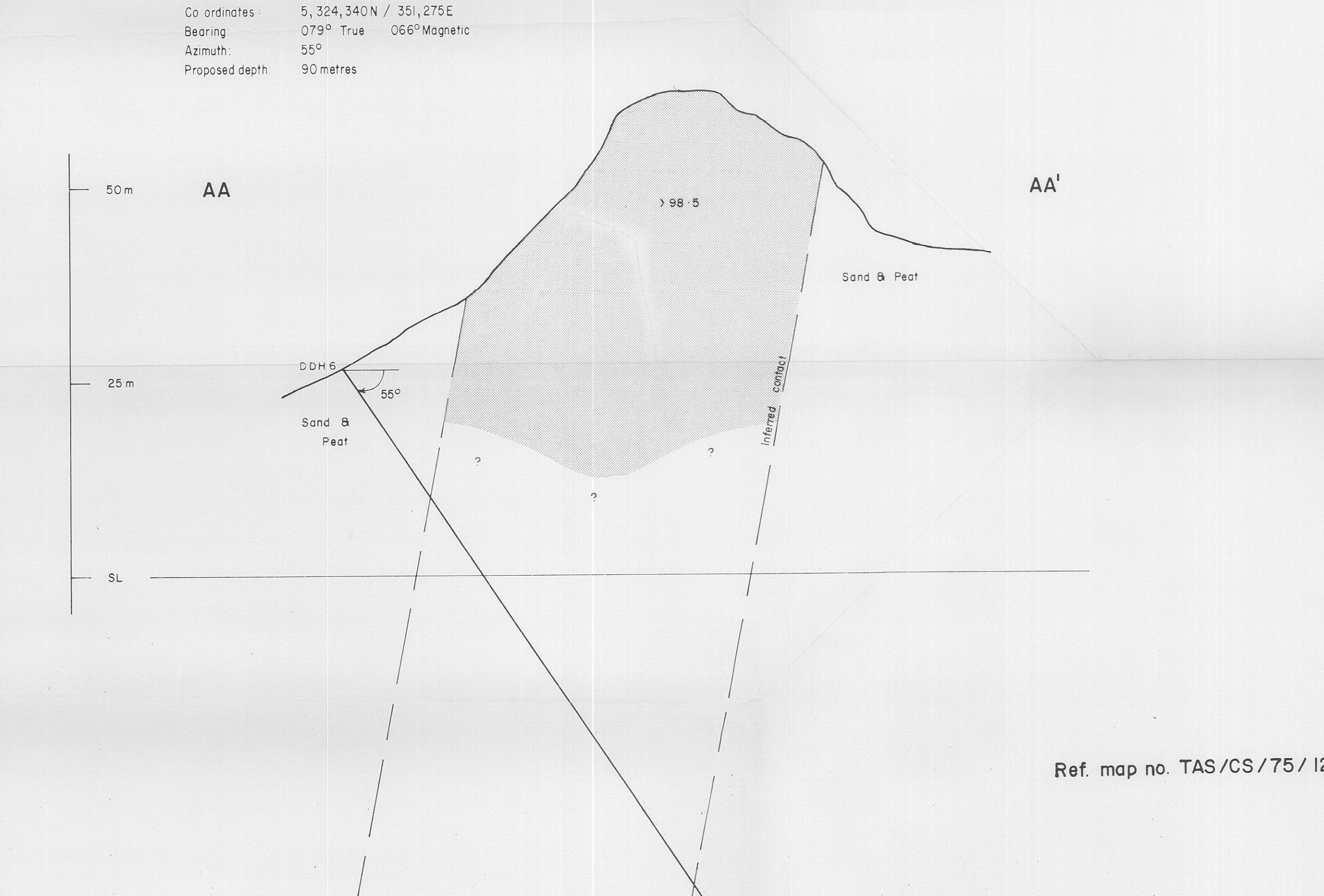
## MT. OBVIOUS DDH 15



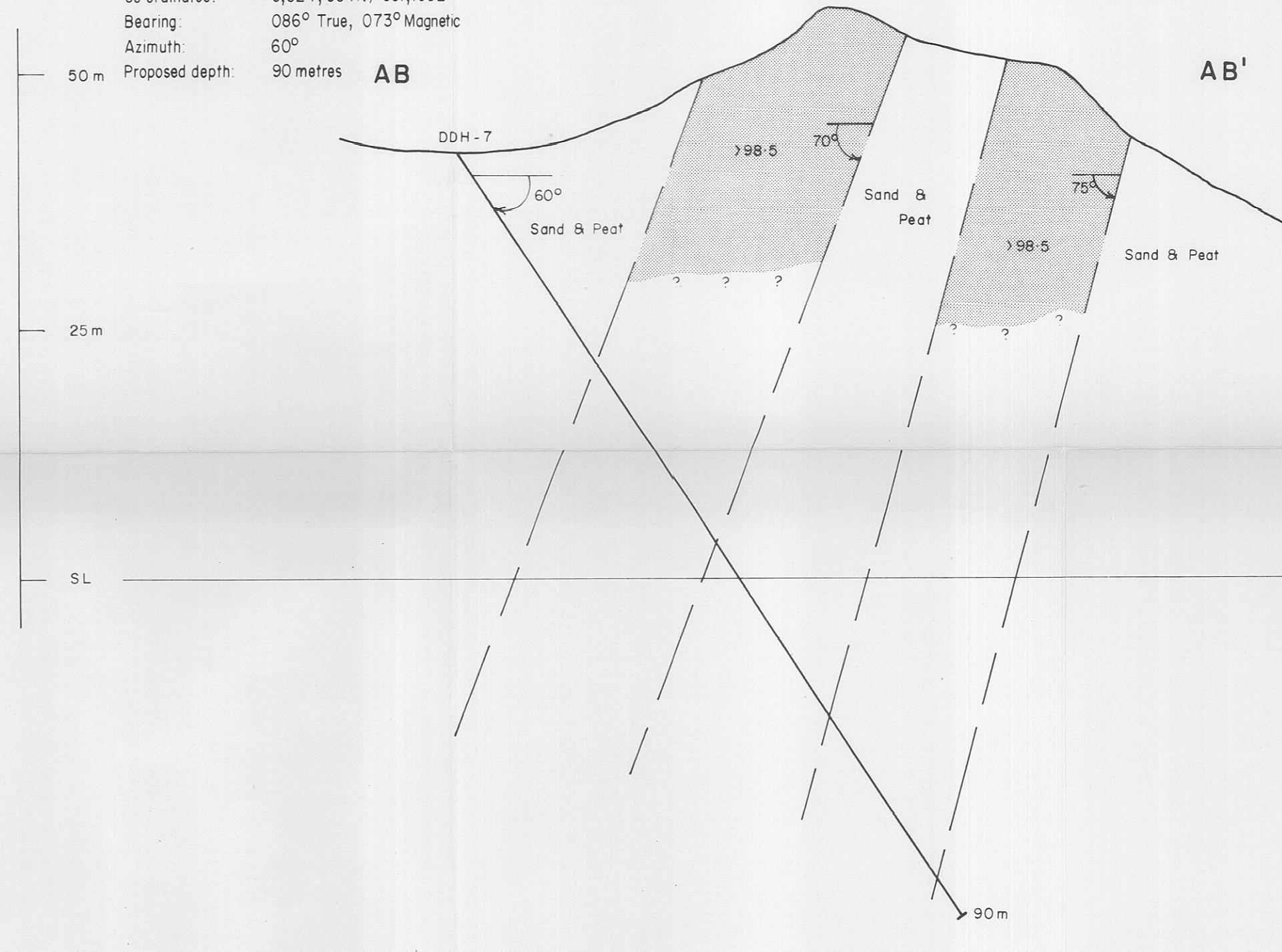
## NTH. ESCARPMENT (Section looking ENE) DDH 10



## MT. ANTILL (West)



## MT. ANTILL (Central &amp; East)



COMALCO LIMITED

CROSS SECTIONS AS MARKED ON GEOLOGICAL PLANE TABLE MAPS TAS/CS/75/12 to 15 INCLUSIVE

Compiled: I.D. Picken Revised: Drawn: S. Hutchison

Date: April, 1975 Scale: 1:500 Drg. No. Tas / CS / 75 / 12

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