

MICROFILMED

ANNUAL REPORT

(1988-89)

E.L. 43/70 Cann Creek

E.L. 24/88 Champion Road

for

Mineral Holdings Australia Pty. Ltd.

89-3030

OPEN FILE

89-3030

MINES	
File Ref.	
11 OCT 1989	
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FIGURES

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Introduction

Exploration Programme at

A. Cann Creek

B. Champion Road

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2. Area A Cann Creek

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Introduction

Fine silica sand of high purity (silica flour) occurs in the vicinity of outcrops of carbonate rock (magnesite and dolomite) at Cann Creek and subsequently was noted in road cuttings on Champion Road.

This latter occurrence is not associated with carbonate but both occurrences are most probably the result of redistribution of original silica flour after carbonate. The deposits mostly occur on interfluves and could be remnants of an earlier more widely spread surficial deposit laid down by drainage in a southerly direction.

The two areas were prospected using a 20t excavator with encouraging results.

Future Exploration

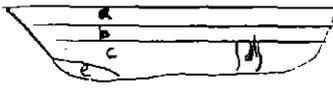
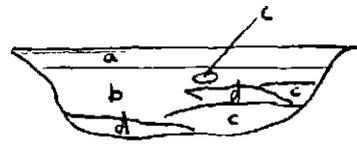
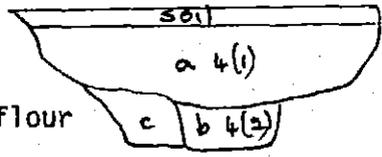
It is proposed to continue the investigation to delineate the resource and to determine its economic viability.

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577005

LOGS OF EXCAVATOR PITS

CANN CREEK SILICA FLOUR DEPOSIT
Excavator Pit Logs and Sampling Record

<u>Pit no.</u>	<u>Depth</u> (mm)	<u>Thickness</u> (mm)	<u>Log</u>	<u>Sample</u> <u>no.</u>	<u>Remarks</u>
1	0-250	250	Disturbed ground	1	 <p>Orange clay near bottom of pit (e) and a near vertical 200mm band of pebbly sand (d)</p>
	250-500	250	Soil		
	500-2200	1700	Silica flour		
2	0-250	250	Soil	NS	
	250-550	300	Silica flour		
	550-900	350	Orange clay		
3	0-300	300	Soil	NS	
	300-650	350	Silica flour		
	650-1100	450	Orange clay		
4	0-300	300	Soil	2(1)	
	300-800	500	Silica flour		
	800-1600	800	brown, streaky clayey sand		
	1600-1900	300	brown and yellow sandy clay		
5	0-300	300	Disturbed soil (a)	3	
	300-1200	900	silica flour (b)		
	1200-1700	500	pebbly clayey sand (c)		
			brown sandy clay (d)		
6	0-5000	5000	Existing pit (The Chinaman's) (a)	4(1)	 <p>Much of the existing pit consists of lithified silica flour which was too hard for excavating</p>
	5000-11000	6000	Silica flour (b) Still in silica flour at bottom of pit	4(2)	
	(5000-11000)	6000	Yellow and black clay (c)		
7	0-250	250	Soil	5	<p>Sample contains <10mm particle 40% of material from pit was >10mm and up to 300mm</p>
	250-6150	5900	Silica flour, in part lithified		

2.15m

<u>Pit no.</u>	<u>Depth</u> (mm)	<u>Thickness</u> (mm)	<u>Log</u>	<u>Sample</u> <u>No.</u>	<u>Remarks</u>
					Sub-angular fragments of blue-grey magnesite scattered on surface between pits 7 & 10
8	0-250 250-1250 1250-1500	250 1000 250	Soil Silica flour orange clay	NS	
9	0-600 600-1500	600 900+	Soil Silica flour	6	Stopped in silica flour - too hard to excavate
10	0-300 300-1300	300 1000	Soil Yellow clay		
11	0-300 300-1300	300 1000	Soil Yellow clay		
12	0-250 250-600 600-2100 2100-2400	250 350 1500 300	Soil Brown sandy clay pebbly sand clay	7	pebbles up to 150mm
13	0-300 300-600 600-900	300 300 300	Soil pebbly sand brown sandy clay		no sand on opposite side of pitd
14	0-300 300-1550 1550-2050	300 1250 500	Soil pebbly sand yellow and brown clay	8	pebbles up to 100mm
15	0-300 300-750 750-1200	300 450 450	Soil pebbly sand grey schist		
16	0-200 200-400 400-1500	200 200 1100	Soil pebbly sandy clay brown and yellow clay		
17	0-300 300-1100 1100-1500	300 800 400	Soil pebbly sand brown and grey sandy clay	9	Sand is lithified. Particle size of removed material is 20% > 50mm
18	0-300 300-1000	300 700	Soil Schist brown at top grading to grey at bottom of pit		
19	0-200 200-300 300-1500	200 100 1200	Soil Wet sand brown sandy clay		

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-3-

<u>Pit no.</u>	<u>Depth</u> (mm)	<u>Thickness</u> (mm)	<u>Log</u>	<u>Sample</u> <u>No</u>	<u>Remarks</u>
20	0-300	300	Soil		
	300-1900	1600	pebbly sand	10	
	1900-2400	500	chocolate sandy clay		
21	0-300	300	Soil		
	300-3300	3000	silica flour ●	11	
	3300-3800	500	brown sandy clay		
22	0-400	400	soil		
	400-5400	5000	silica flour ●	12	
	5400-5700	300	orange sandy clay		
23	0-300	300	soil		
	300-600	300	pebbly sand		
	600-1000	400	Yellow and orange clay		
24	0-300	300	soil		
	300-700	400	pebbly sand		
	700-1700	1000	brown sandy clay		
	1700-2000	300	orange schist		
25	0-300	300	soil		
	300-3200	2900	silica flour ●	14	
	3200-3400	200	brown schist		
26	0-300	300	soil		
	300-600	300	pebbly sand (discoloured)		
	600-900	300	pebbly sand (white)	13	Too hard to continue
27	0-600	600	soil		
	600-1500	900	silica flour ●	NS	Mostly lithified and too hard to dig

Estimated Reserve $18000\text{m}^2 \times 2.5 = 45000\text{m}^3$

Notes on the distribution of silica flour at Cann Creek

1. It overlies Precambrian schists.
2. It occurs mainly above 230m elevation.
3. Mean thickness of SiF = 2.5m[✓] but reaches 6m in pit 22 and a total of 11m in pit 6.
4. Previous exploration (see map and attachment) indicates an extensive cover of SiF of 1 - 2.5m north of the excavator pit area.
5. The central portion of the excavator pit area (covering pits numbered 5, 12, 13, 14, 15, 16, 17, 20, 23, 24, 25 and 26) contained rounded quartz pebbles, indicating deposition in a stream channel and with a quieter depositional environment in the vicinity of the existing pit where 11m thickness is recorded.
6. Further testing is warranted in all localities above the 230m contour including the percussion drilled area to the north (south of Cann Creek - see high-lighted areas on the attached map).

CHAMPION ROAD SILICA FLOUR DEPOSITExcavator Pit Logs and Sampling Record

<u>Pit No.</u>	<u>Depth</u> (mm)	<u>Thickness</u> (mm)	<u>Log</u>	<u>Sample</u> <u>No.</u>	<u>Remarks</u>
1	0-300 300-500	300 200	Soil Yellow clay		
2	0-300 300-800	300 500	Soil Sand		
3	0-300	300	Soil	1	
	300-6000 6000-7000	5700 1000	Silica flour " " (discoloured)		
4	0-400	400	Soil	2(1) 2(2)	Stopped in SiF at limit of machine
	400-6300	5900	Silica flour		
	6300-7300	1000	" " (discoloured)		
5	0-300	300	Soil	3	- do -
	300-6100	5800	Silica flour		
6	0-300	300	Soil	4	Slight pink colouration. Stopped in SiF due to hardness of ground
	300-3700	3400	Silica flour		
7	0-300	300	Soil	5	Contains quartz pebbles near top
	300-2000	1700	Silica flour		
	2000-2500	500	Black clay		
8	0-300	300	Soil	6	Stopped in SiF, too hard to dig
	300-3200	2900	Silica flour		
9	0-300	300	Soil	7	In road cutting Dug in drain i.e. below road level. (Still in SiF too hard to continue)
	300-800	500	Silica flour		
	800-2300	1500	" "		

The 2 areas of Champion Road are estimated to contain around 10000m³, based on the following data:

	<u>Area</u>	<u>Mean thickness</u>	<u>Volume</u> (m ³)
Northern deposit 3 1/2	12000m ²	3.5m	42000
Southern deposit 3 1/4	8000m ²	6.5m	52000
			94000

Notes on the distribution of silica flour at Champion Road

1. It overlies Precambrian schists.
2. It occurs between the 150-190m contours.
3. It occurs in 2 deposits with mean thicknesses of 3.5 and 6.5m.
4. There is a notable absence of quartz pebbles in the silica flour but a presence generally of a thin cover of rounded quartz pebbles on the surface.
5. The ridge which trends roughly north-south and lying to the west of the prospected area is prospective for silica flour.

CHEMICAL ANALYSES

011

ANALABS

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577012

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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1 OF 3

TUBE No.	SAMPLE No.	Al2O3	Na2O	Al2O3	CaO	Fe2O3	K2O	MgO	MnO	Na2O
1	CR01	-	-	0.019	0.008	0.0292	0.0016	0.0099	0.0002	0.0020
2	CR02	-	-	0.023	0.010	0.0093	0.0016	0.0140	0.0002	0.0034
3	CR03	-	-	0.026	0.016	0.0107	0.0016	0.0198	0.0002	0.0040
4	CR04	-	-	0.017	0.021	0.0057	0.0016	0.0215	0.0002	0.0026
5	CR05	-	-	0.066	0.022	0.0143	0.0022	0.0348	0.0002	0.0074
6	CR06	-	-	0.030	0.020	0.0050	0.0016	0.0265	0.0002	0.0040
7	CR07	-	-	0.025	0.035	0.0064	0.0030	0.0348	0.0002	0.0040
8	CC01	-	-	0.045	0.006	0.0372	0.0024	0.0140	0.0008	0.0048
9	CC02	1.32	-	-	0.006	0.2000	0.3840	0.3600	0.0004	0.0162
10	CC03	-	-	0.144	0.006	0.0458	0.0204	0.0364	0.0004	0.0122
11	CC04	-	-	0.051	0.006	0.0243	0.0030	0.0108	0.0004	0.0026
12	CC05	-	-	0.021	0.005	0.0072	0.0016	0.0074	0.0002	0.0020
13	CC06	-	-	0.061	0.010	0.0157	0.0046	0.0166	0.0004	0.0054
14	CC07	-	-	0.042	0.005	0.0215	0.0030	0.0108	0.0004	0.0060
15	CC08	-	-	0.378	0.006	0.0600	0.1340	0.0812	0.0004	0.0094
16	CC09	-	-	0.040	0.004	0.0157	0.0054	0.0100	0.0002	0.0060
17	CC10	-	-	0.115	0.005	0.0272	0.0328	0.0248	0.0004	0.0060
18	CC11	-	-	0.074	0.007	0.0300	0.0086	0.0232	0.0004	0.0054
19	CC12	-	-	0.019	0.008	0.0072	0.0024	0.0090	0.0002	0.0021
20	CC13	-	-	0.049	0.005	0.0358	0.0032	0.0208	0.0004	0.0054
21	CC14	-	-	0.094	0.006	0.0315	0.0040	0.0282	0.0002	0.0088
22										
23	DETECTION	0.01	0.01	0.001	0.002	0.0002	0.0002	0.0002	0.0002	0.0002
24	UNITS	%	%	%	%	%	%	%	%	%
25	METHOD	103	104	144	144	144	144	144	144	144

Results in ppm unless otherwise specified
 T = element present but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

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2 OF 3

TUBE No.	SAMPLE No.	P205	SiO2	TiO2	Al2O3	CaO	Fe2O3	K2O	MgO	MnO
1	CR01	0.0002	99.67	0.025	-	-	-	-	-	-
2	CR02	0.0002	99.65	0.050	-	-	-	-	-	-
3	CR03	0.0008	99.64	0.045	-	-	-	-	-	-
4	CR04	0.0004	99.61	0.015	-	-	-	-	-	-
5	CR05	0.0004	99.50	0.135	-	-	-	-	-	-
6	CR06	0.0002	99.62	0.035	-	-	-	-	-	-
7	CR07	0.0004	99.68	0.035	-	-	-	-	-	-
8	CC01	0.0008	99.30	0.335	-	-	-	-	-	-
9	CC02	0.0046	96.60	0.295	-	-	-	-	-	-
10	CC03	0.0026	98.92	0.365	-	-	-	-	-	-
11	CC04	0.0064	99.14	0.250	-	-	-	-	-	-
12	CC05	0.0018	99.46	0.050	-	-	-	-	-	-
13	CC06	0.0028	99.24	0.215	-	-	-	-	-	-
14	CC07	0.0014	99.44	0.180	-	-	-	-	-	-
15	CC08	0.0008	98.61	0.145	-	-	-	-	-	-
16	CC09	0.0004	99.54	0.135	-	-	-	-	-	-
17	CC10	0.0004	99.39	0.160	-	-	-	-	-	-
18	CC11	0.0040	99.17	0.285	-	-	-	-	-	-
19	CC12	0.0008	99.45	0.095	-	-	-	-	-	-
20	CC13	0.0008	99.40	0.185	-	-	-	-	-	-
21	CC14	0.0040	99.13	0.365	-	-	-	-	-	-
22										
23	DETECTION	0.0002	0.01	0.005	0.05	0.01	0.01	0.01	0.05	0.01
24	UNITS	%	%	%	%	%	%	%	%	%
25	METHOD	144	144	144	408	408	408	408	408	408

Results are given in the units specified.
 All concentrations are in mg/kg unless otherwise stated.
 All concentrations are on a dry weight basis.

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577014

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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3 OF 3

TUBE No.	SAMPLE No.	P205	SiO2	TiO2	LOI				
1	CR01	-	-	-	0.24				
2	CR02	-	-	-	0.24				
3	CR03	-	-	-	0.24				
4	CR04	-	-	-	0.31				
5	CR05	-	-	-	0.17				
6	CR06	-	-	-	0.26				
7	CR07	-	-	-	0.18				
8	CC01	-	-	-	0.25				
9	CC02	-	-	-	0.81				
10	CC03	-	-	-	0.45				
11	CC04	-	-	-	0.51				
12	CC05	-	-	-	0.44				
13	CC06	-	-	-	0.43				
14	CC07	-	-	-	0.29				
15	CC08	-	-	-	0.58				
16	CC09	-	-	-	0.24				
17	CC10	-	-	-	0.24				
18	CC11	-	-	-	0.39				
19	CC12	-	-	-	0.41				
20	CC13	-	-	-	0.30				
21	CC14	-	-	-	0.33				
22									
23	DETECTION	0.05	0.1	0.01	0.01				
24	UNITS	%	%	%	%				
25	METHOD	408	408	408	615				

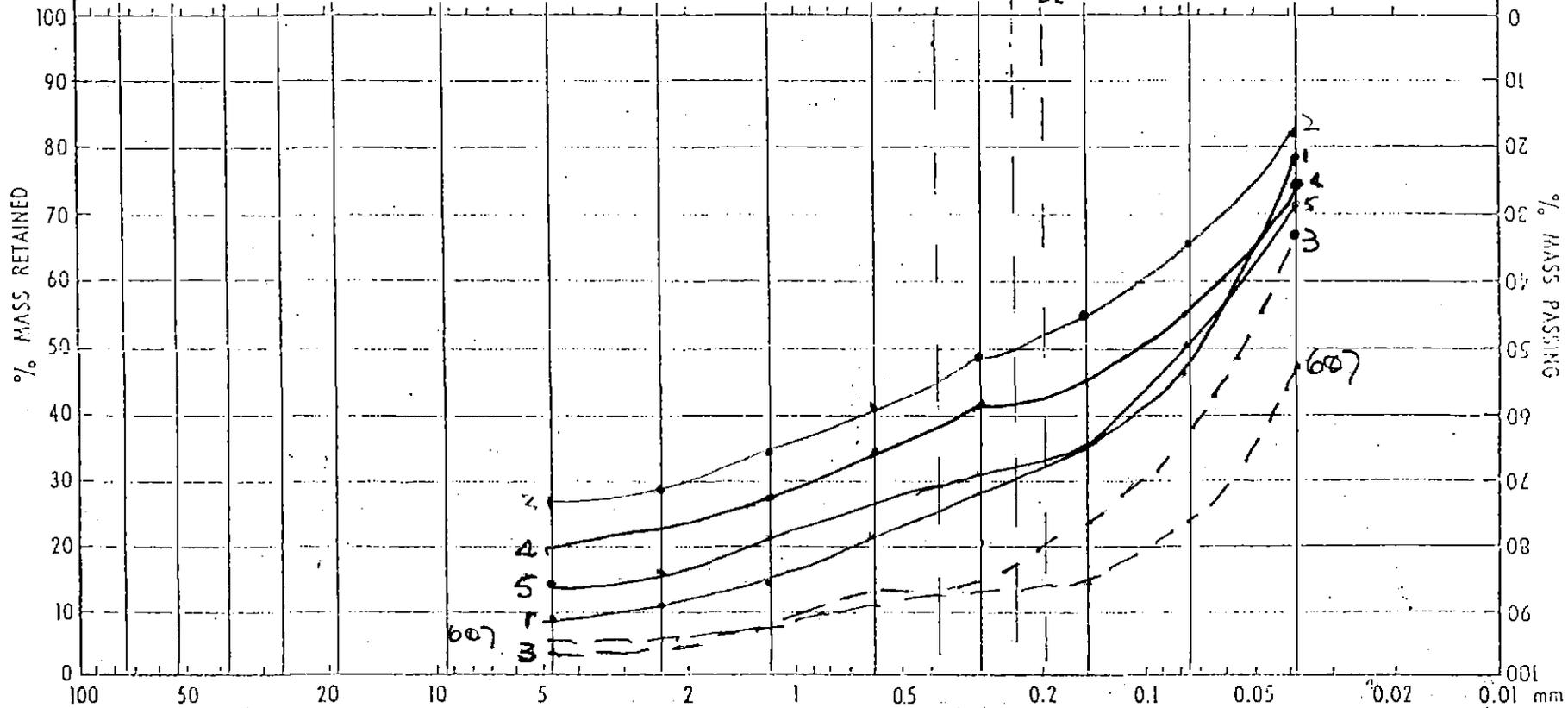
Results in ppm unless otherwise specified
 - element present but concentration too low to measure
 X - element concentration is below detection limit
 - element not determined

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SIZING ANALYSES

016
M 1374

REFERENCE No.	LAB. SERIAL No.	LOCALITY				SEDIMENT ANALYSIS PARAMETERS								
	PL 24188	CHAMPION ROAD SILICA FLOUR M =				V =	Sk =	K =						
COARSE AGGREGATE			FINE AGGREGATE			A77-1957 (concrete)								
COARSE AGGREGATE		FINE AGGREGATE		BINDER		N.A.A.S.R.A. (road materials)								
COBBLE	PEBBLE		GRANULE	SAND			SILT							
				V. COARSE	COARSE	MEDIUM	FINE	V. FINE						
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6 φ		
75	53	37.5	26.5	19	9.5	4.75	2.36	1.18	0.6	0.3	0.15	0.075	0.038	Aust. Stand. Sieve



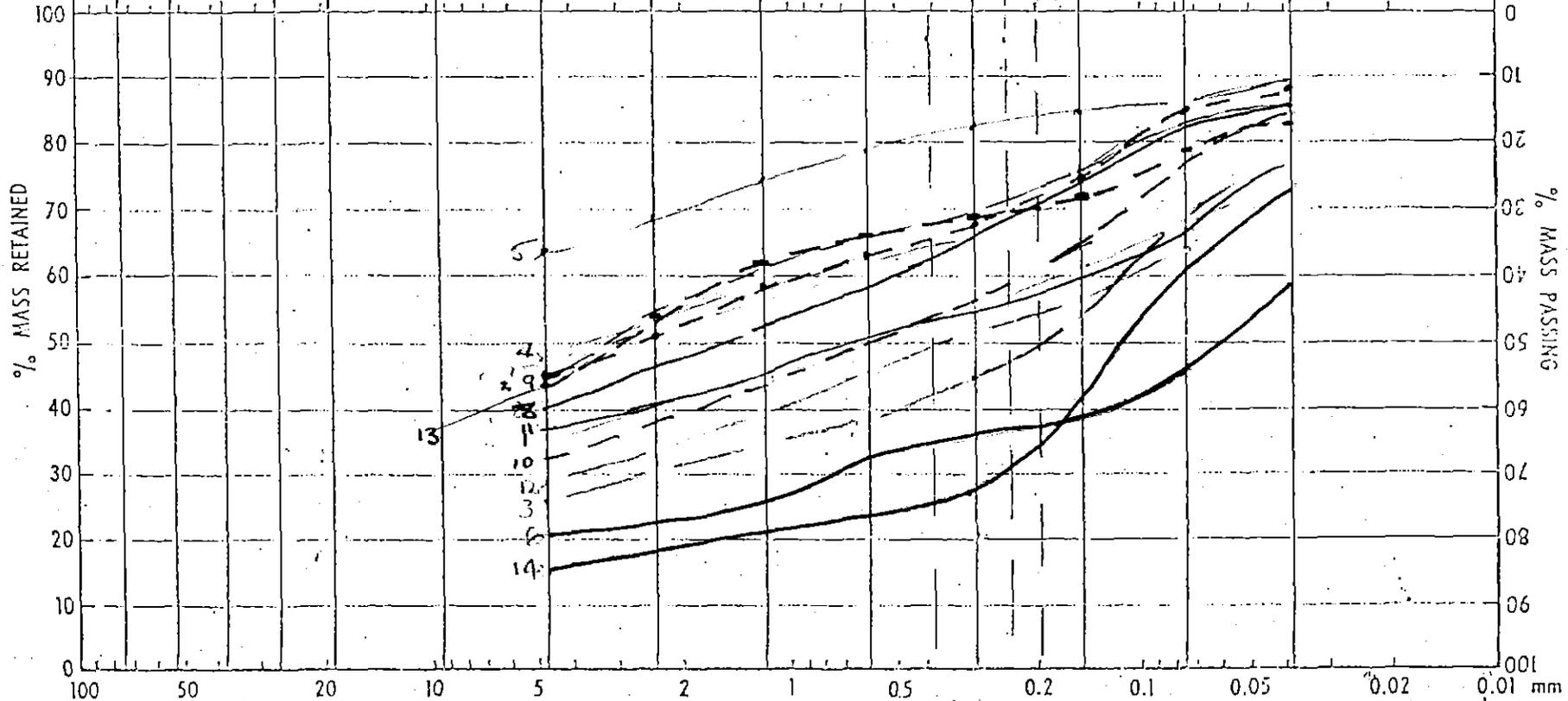
CS3 CS4 CS5
(0.12) (0.06) (0.12)

577017

017

M 1324

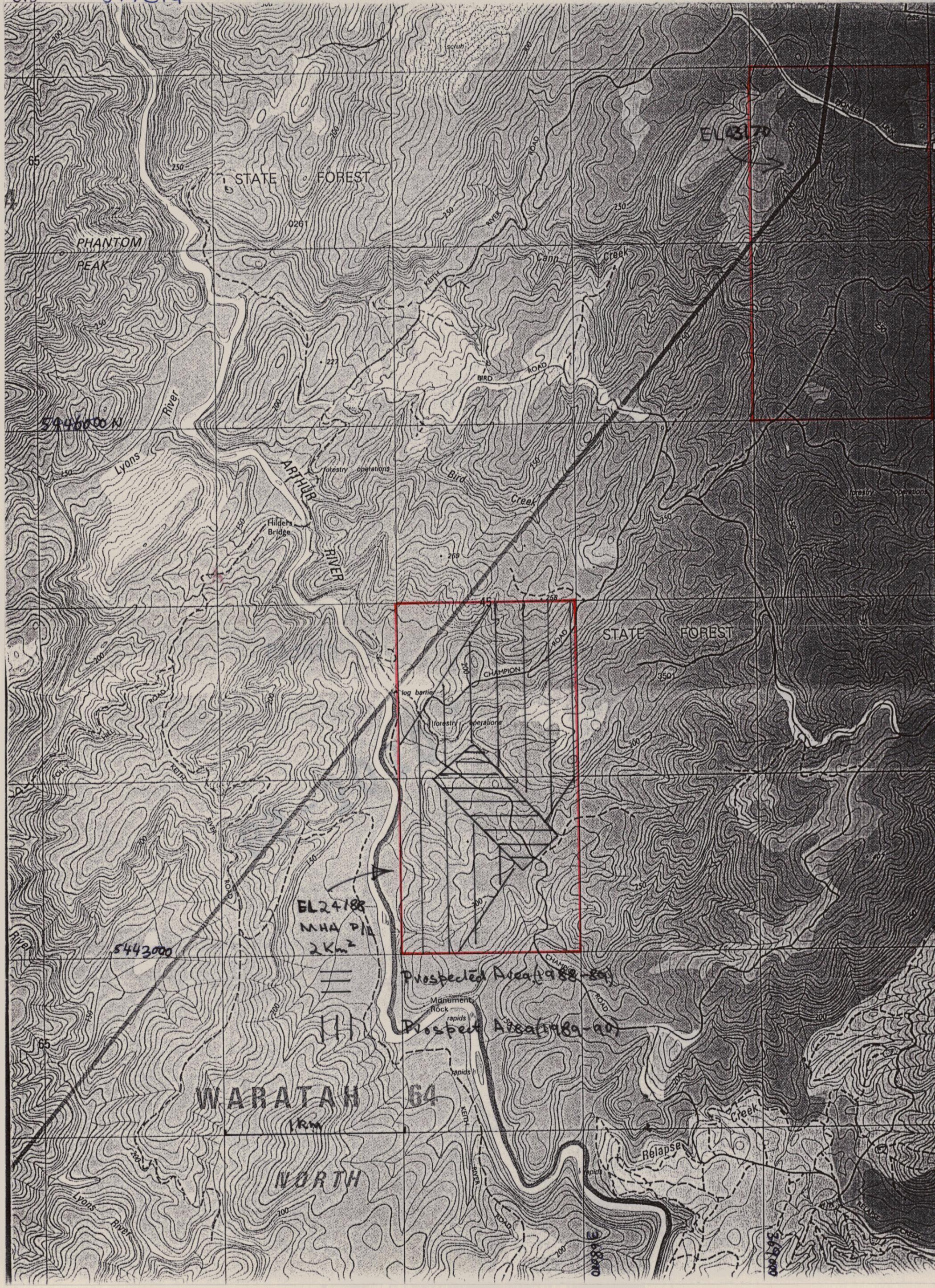
REFERENCE No.	LAB. SERIAL No.	LOCALITY				SEDIMENT ANALYSIS PARAMETERS								
	EL 43670	CANN CREEK SILICA FLOOR				M =	V =	Sk =	K =					
COARSE AGGREGATE			FINE AGGREGATE						A77-1957 (concrete)					
COARSE AGGREGATE		FINE AGGREGATE			BINDER		N.A.A.S.R.A. (road materials)							
COBBLE	PEBBLE		GRANULE	SAND				SILT						
				V. COARSE	COARSE	MEDIUM	FINE	V. FINE						
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6 φ		
75	53	37.5	26.5	19	9.5	4.75	2.36	1.18	0.6	0.3	0.15	0.075	0.038	Aust. Stand. Sieve



CS3 CS4 CS5
(.020) (.016) (.012)

577018

018 577019



EL 4370

STATE FOREST

PHANTOM PEAK

544600 N

Lyons River

ARTHUR RIVER

Hilders Bridge

Bird Creek

STATE FOREST

CHAMPION ROAD

5443000

EL24188
MHA P/A
2km²

Prospected Area (1988-89)

Prospect Area (1989-90)

WARATAH 64

NORTH

Relapse

544000

019

3⁶⁹ 100

69 250

69 3

69 4

250 69 5

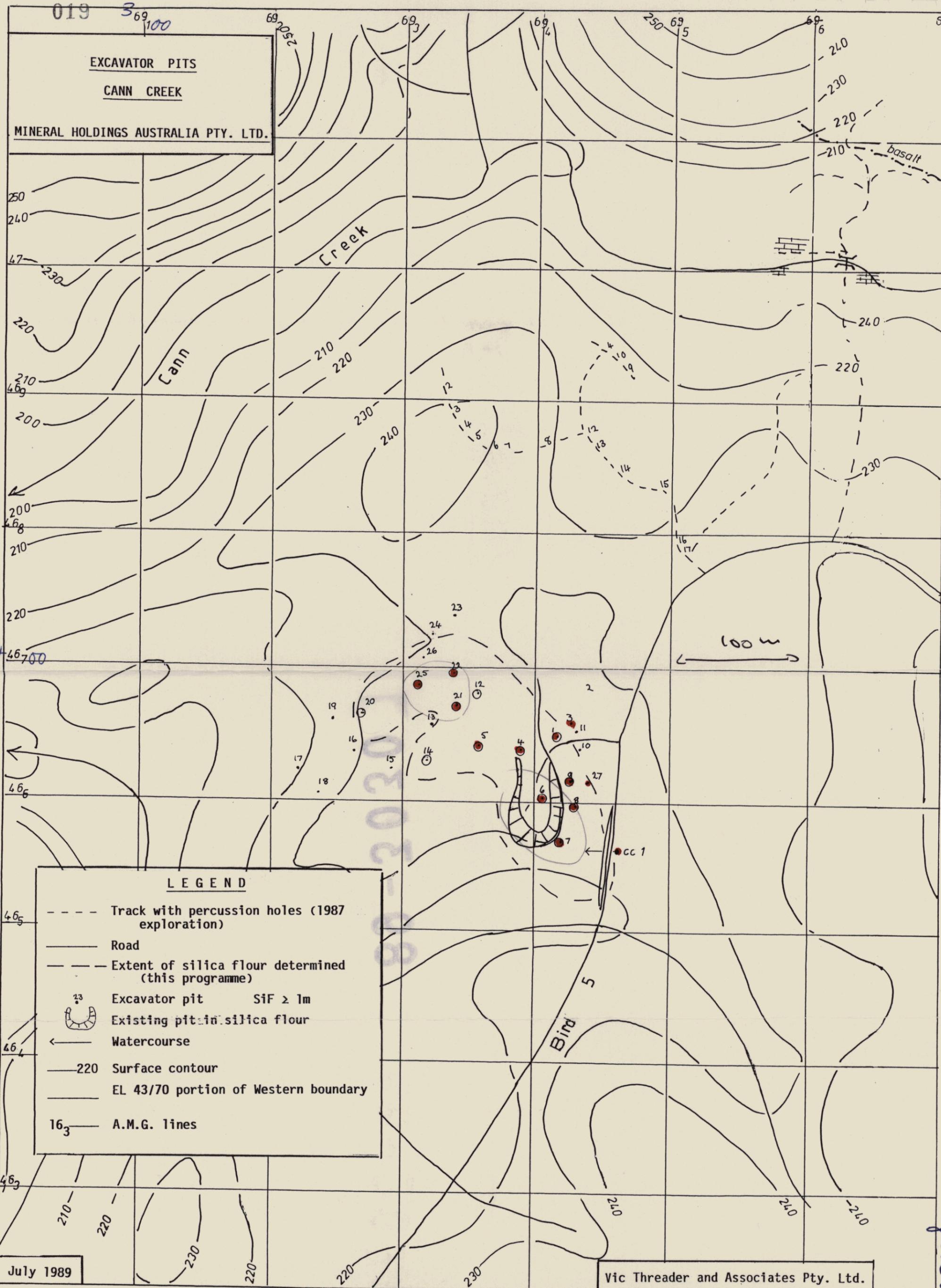
69 6

69 7

EXCAVATOR PITS

CANN CREEK

MINERAL HOLDINGS AUSTRALIA PTY. LTD.



LEGEND

- Track with percussion holes (1987 exploration)
- Road
- - - Extent of silica flour determined (this programme)
- ⊕ Excavator pit SiF ≥ 1m
- ⊕ Existing pit in silica flour
- ← Watercourse
- 220 Surface contour
- EL 43/70 portion of Western boundary
- 16₃ — A.M.G. lines

July 1989

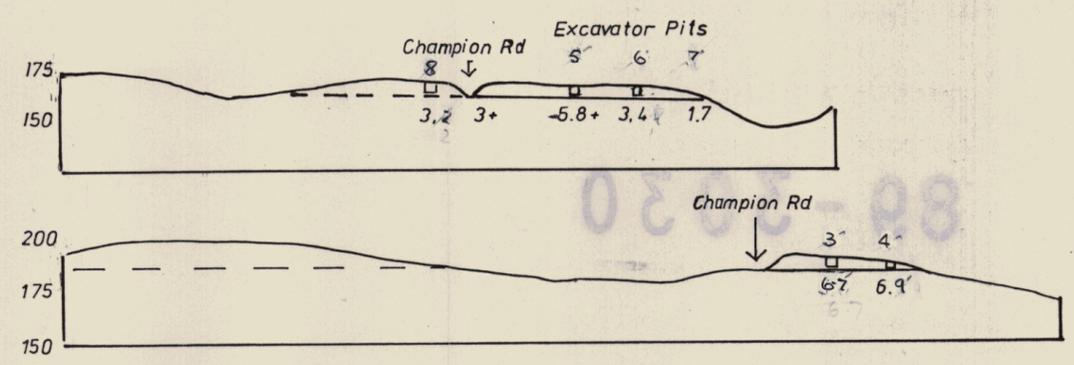
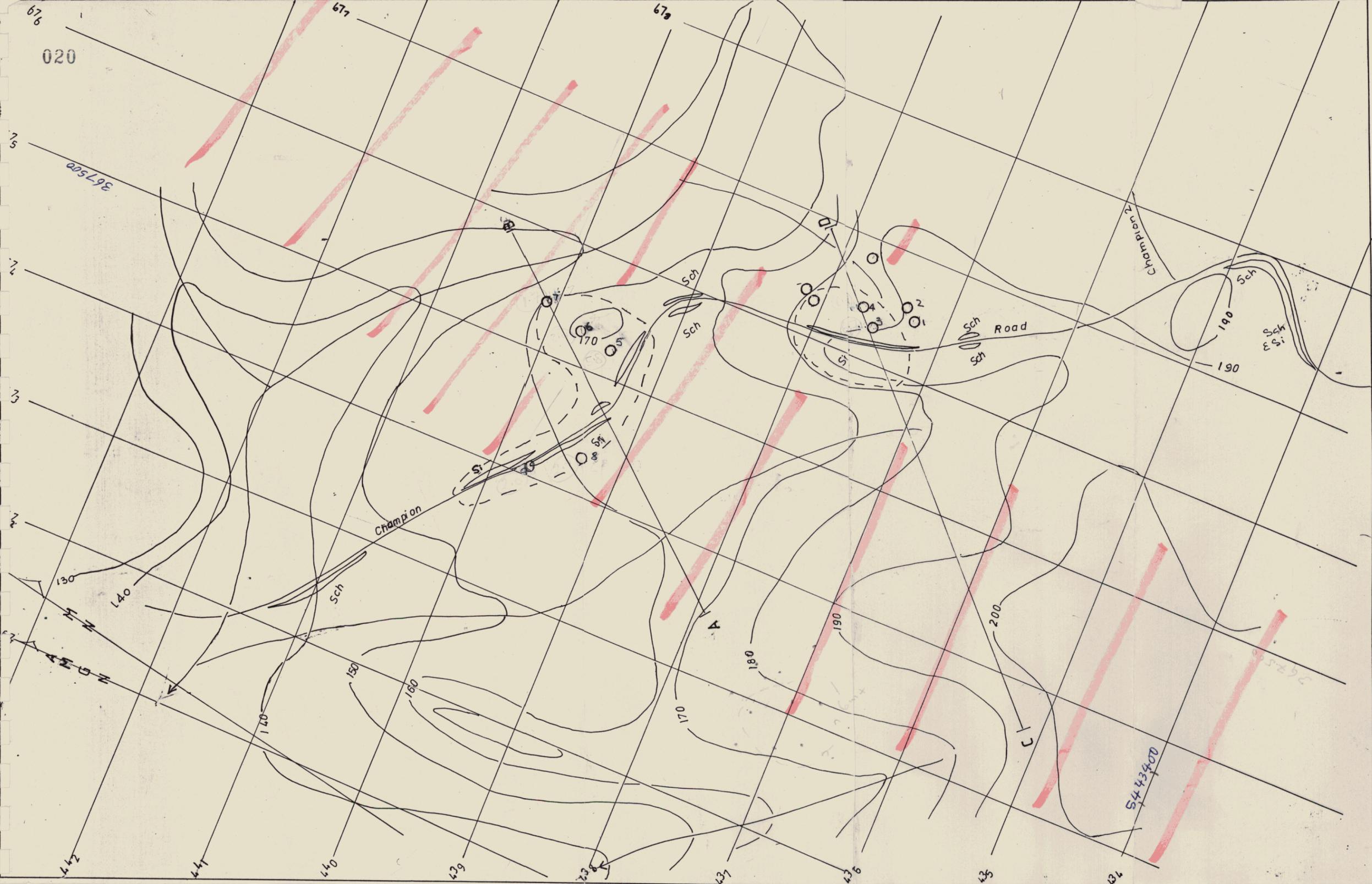
Vic Threader and Associates Pty. Ltd.

Figure 2

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Figure 3

CHAMPION ROAD
SILICA FLOUR DEPOSIT
MINERAL HOLDINGS AUSTRALIA PTY. LTD.

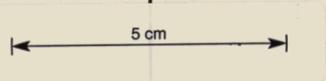


LEGEND

- Road
- 200— Contour
- ← Watercourse
- A—B Section Line
- Test pit - unsampled
- Test pit - sampled (thickness of silica flour in metres)
- Road cutting (Si) silica flour (Sch) schist
- Known deposit
- /// Prospective area

Scale (1 : 2500)

50 0 100 200 cm



577021