

MINERAL HOLDINGS AUSTRALIA PTY LTD

**EXPLORATION LICENCE 10/2003
CANN CREEK, NW TASMANIA**

**ANNUAL REPORT ON EXPLORATION
TO MARCH 2005**

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EL 10/2003 – CANN CREEK, NW TASMANIA – ANNUAL REPORT 2005**ABSTRACT**

This report describes the work carried out by Mineral Holdings Australia Pty Ltd in Year One of the licence covering 10 sq km of the area between Meunna township and the Arthur River in NW Tasmania.

The licence covers the two Proterozoic, carbonate-bearing sedimentary horizons of the Arthur Metamorphic Complex and the targets of exploration include magnesite, dolomite, talc and silica resources.

The Year One program has involved further evaluation of the magnesite resources by re-logging and re-analysing the core from two diamond holes drilled by CRA in the 1980s. Following the current sampling, no new zones of high grade magnesite have been found in the diamond drill core equal to the tenor of the magnesite in the creek outcrops (ie MgO >40%), in the lower trench and in some of the percussion drilling.

However, the sampling has confirmed the lower 6.4m thick magnesite interval in DD85CC2 which was based on only two previous spot samples. In addition, two new magnesian dolomite intervals have been recognised, one of 3.7m in DD85CC2 and one of 11.5m in DD84CC1. These rocks have MgO in the range 25-35% and CaO 10-15% and have some silicification with SiO₂ 18-20%.

The magnesian dolomites with MgO greater than CaO may be altered from ordinary dolomites or from high grade magnesites by diagenesis, hydrothermal solutions or metamorphism.

There is a talcose dolomite schist zone on the eastern border of the magnesite zone exposed in Cann Creek which has still to be evaluated. Some grab samples of the schist presented in this report returned analyses typical of relatively pure ceramic grade talc but whether there are commercial volumes of this material contained in this folded and sheared metamorphic belt remains to be proved.

EL 10/2003 – CANN CREEK, NW TASMANIA – ANNUAL REPORT 2005**1.0 INTRODUCTION**

EL 10/2003 was applied for by Mineral Holdings Australia Pty Ltd (MHA) on 11th February 2003 and granted on 12th March 2004 for Category 3 and 5 (a) Minerals. The application for 10 sq km was part of ERA 592- Preolenna and is described as some 5km southwest of Meunna. This is the annual report for Year One of the Licence.

The application is for industrial minerals and construction materials only reflecting the company's focus on carbonates, particularly magnesite and dolomite, silicas and talc for a wide range of applications in the chemical, refractory, mineral processing and environmental industries. Other tenements held by MHA in the general area specifically for silica products are RL 1/2001 Meunna, RL 2/1996 Champion Road and EL 38/2002 Dip Range (Plan 1).

The current exploration focus is to define smaller but higher grade magnesite resources in the up to 100,000 tonnes category to provide feedstock for smaller scale processing plants providing specialist products for niche markets.

Dolomite, talc and silica are also being considered for chemical and industrial applications.

2.0 PREVIOUS EXPLORATION

The geology of the district consists of Late Proterozoic sedimentary and igneous rocks, deformed and metamorphosed in the Cambrian to blueschist and amphibolite grades and then retrogressed to greenschist facies.

The tenement covers the boundary or zone between two carbonate-bearing horizons of the Arthur River Metamorphic Complex (historically called the Arthur Lineament) from the high grade magnesite outcrops in Cann Creek south west to the Champion Rd silica flour deposits held by MHA under RL 2/1996 (Plan 2)).

This NE-SW aligned zone is parallel to and probably stratigraphically above the Arthur River-Lyons River trend which lies 6km to the south and which contains the large magnesite deposits discovered and promoted by MHA and currently held under RLs 17 and 18/1987 by Tasmania Magnesite NL.

The local geology of the licence area from Geological Survey mapping consists of a lower sedimentary formation (Pac) of chlorite schist and minor phyllite, dolomite and magnesite. Amphibolites are found in the sequence probably as dykes rather than sills or extrusives. Stratigraphically higher and to the west occurs another sedimentary formation (Pap) of phyllite and minor schist, quartzite and dolomite and rare siliclastic conglomerate (Plan 2).

Tertiary basalt cover comes in to the north and remnant caps of basalt, silica flour and quartz gravel, sand and clay are found in places.

2.1 MAGNESITE

Exploration in the district over the last few decades has been dominated by Mineral Holdings Australia Pty Ltd under EL 43/1970 and field activities carried out by that company or its joint venture partners mainly CRA and Hilmac Pty Ltd gave rise to the discoveries of the large magnesite deposits of Arthur and Lyons Rivers as well as the magnesites of Cann Creek.

Early reports by P B Nye (1973 and 1977) have prospector Kevin Pinner finding outcrops of carbonate in Cann Creek. Sketch mapping suggested a curved zone of carbonate outcrops along about 150m of the creek in the shape of a possible fold running under basalt cover to the north.

As part of the joint venture with CRA on El 43/1970, the Cann Creek prospect was investigated in conjunction with the Keith and Lyons River magnesite deposits. The purpose was to find a higher-grade resource than the main Lyons River deposit. The prospect lies in a parallel zone some 4km stratigraphically above the Keith and Lyons River deposits and north of the Arthur River.

The prospect geology is shown on Plans 3-5 which contain the outcrop mapping by CRA of the Cann Creek area with magnesite marked in blue and talc schist in pink with the plotted diamond drill holes and also the quarry and costean sites.

Sampling on the outcrops by CRA (Table 1, TCR 84- 2214)) gave values of high-grade magnesite with minor impurities in the ranges MgO 42-46%, CaO 0.37- 4.30%, SiO₂ 0.35- 1.13%, Al₂O₃ 0.07- 0.12% and Fe₂O₃ 0.04- 0.2%. As such, these are the purest magnesites known in Tasmania (Table 1).

The richest grades of magnesite were to the west towards the contact with the overlying meta-sediment.

Evaluation of the prospect by CRA in 1984-85 resulted in the drilling of two diamond holes with accompanying mapping and more outcrop sampling.

Geological mapping at 1:2,000 scale traced the poorly-exposed carbonate horizon to the south for two 2 km, the horizon being marked by residual patches of silica. The host rock is believed to be talc schist which as interbeds with the carbonates.

The first hole DD84CC1 (TCR 84- 2214) was drilled some 450m to the south of Cann Creek and was inclined 45 degrees to the west to test the southern strike extension of the target zone and the depth of the silica capping in the adjacent silica gravel pit. No magnesite was encountered but the core revealed large intervals of dolomite of 159m and 55m encased in schists, some of them talcose particularly in the upper level of the drill core. The dolomitic intervals have schist interbeds. Geochemistry based on 20 cm sawn core samples every 10 metres or so show some dolomite can approach MgO + 21% and CaO + 29% with SiO₂ up to 3.41%. Other analyses of dolomite are much less pure with silica flooding, veining and banding giving SiO₂ values up to about

60%. Although outcrop was mostly poor, geological mapping of the carbonate zone, defined by a remnant siliceous cap, was interpreted as extending south from the outcrops in Cann Creek to the drilled area.

The first drill hole was not successful in finding a southerly strike extension of the magnesite zone.

The second hole DD85CC2 (TCR 85-2498), also inclined 45 degrees to the west, was drilled under the discovery outcrops in the creek to measure the down dip expression of the magnesite zone. The core returned mainly siliceous dolomite with two bands of magnesite and with occasional schist and amphibolite bands.

The magnesite intervals are 4.4m (131.8- 136.2m) and 6.5m (158.5- 165.0m) and are about 100m vertically below the outcrops. They are described as angular magnesite breccias and are not as pure as the surface outcrops being in the ranges MgO 35-39%, CaO 8-13%, SiO₂ 6-11%, Al₂O₃ 0.22- 0.36% and Fe₂O₃ 0.20% (Table 2).

The dolomites are massive, coarse clastic or well-bedded and, in places, interbedded with shales. Based on 20cm sawn core every 5 or so metres, it is difficult to get a picture of their bulk geochemistry. Spot values of +21% MgO, +28% CaO and SiO₂ up to 4.68% are commonplace in the upper parts of the core. One 4m zone of medium grey, dolomite alternately bedded, massive or as a coarse breccia went 18.24% MgO, 24.53% CaO and 13.04% SiO₂. These are not as pure as the younger dolomites in the Smithton Basin.

To further investigate the outcrops in Cann Creek, an access track and quarry cut was developed 10m north of the creek bed exposing some 18m of massive magnesite flanked by dolomitic talc schist to a distance of 15m to the west and 30m to the east.

A parallel costean, 100m long and running NW- SE some 40m north of the first, encountered only 0.20m of badly weathered carbonate in schists. About 150m north of the creek and some 20m up hill, the entire succession is overlain by Tertiary basalt.

Systematic face sampling of the magnesite in the lower quarry cut every 2m gave high quality magnesite averaging 44.2% MgO, 3.6% CaO, 1.0% SiO₂ and Fe₂O₃ 0.06% over a continuous 18m across strike. The individual assays are presented in Table 3 (after Funnell, 1987).

On the basis of the previous exploration, the situation for substantial quantities of magnesite at this prospect was assessed as limited. With no magnesite in the upper costean and only thin intersections of lower grade magnesite in dolomite 100m below the creek in drill hole CC2 and only dolomite in CC1 450m along strike to the south, the magnesite body appears to have a very irregular shape and gives way to dolomite facies in every direction although it still has to be tested for a shallow plunge north or south. A possible resource of 285,000 tonnes was estimated and described as very optimistic (Dickson, in TCR 87- 2716).

In 1988, in an effort to define the shape and tonnage of the magnesite body, 20 percussion holes were developed by Hilmac Pty Ltd for an aggregate of 468m using

an Atlas Copco drill around the outcrops at Cann Creek, mainly north of the creek bed (TCR 88- 2862).

Intersections of up to 5m of magnesite were obtained in the drilling although cavities prevented the full depth of the carbonate to be measured and 30% of the holes ended in magnesite. Analyses gave MgO values in the range 36-45% (Table 4).

The conclusions were–

- 10% of the carbonate sequence is high grade magnesite,
- cavities and irregular karst topography make assessment of the near surface carbonates difficult,
- a complicated structure is evident with folding and faulting,
- down dip extent and shape of magnesite body are still to be defined,
- the target of 100,000 tonnes of high grade magnesite not obvious from the drilling,
- No tonnage was reported for carbonate or talc resources.

Recommendations were–

- Explore down dip extent of magnesite (and dolomite) by mapping and drilling,
- Use a combination of rotary and diamond drilling to overcome the cavity problem
- Prepare accurate base maps to plot all exploration results

Further testing of magnesite was carried out involving mineralogical investigation and pilot kiln testing and calcining.

A mineralogical description by CSIRO on four samples (Frost and Tsambourakis, 1988) showed that the magnesite is macrocrystalline similar in texture to those at Arthur and Savage River. The samples were of massive, dense magnesite, mottled grey in colour with minor amounts of dolomite and talc. Iron, manganese and nickel contents in magnesite were found to very low at 50, 40 and 20 ppm respectively.

In 1995, 100kg of Cann Creek magnesite were subject to box furnace calcination by David Mitchell Ltd at Mole Creek, Tasmania. The results gave a white calcine with low contents of Fe₂O₃ and SiO₂ and showed that the material would be suitable for a plant trial in a shaft kiln which was recommended.

Another calcination test was carried out by Amdel (2004) in a muffle furnace to 776 degrees C which produced a very pure, white calcine with low contents of Fe₂O₃ at 0.17% and SiO₂ at 1.6%.

2.2 TALC

Talc schist is exposed in the quarry, cut by MHA in the 1970s, east of the magnesite zone immediately north of the bed of Cann Creek, along the Bird No 5 access track and is logged in the upper 50m of the CRA diamond drill hole DDHCC1. The eastern extent of the talc schist is not known and poor exposure will limit surface geological mapping.

Historical analyses by David Simpson in 1987 across the face of the quarry and others by the Mines Department and Rio Tinto in the 1980s showed some variability in purity of the talc although the chemistry of the samples analysed by the latter two agencies were close to the theoretical composition of 31.88% MgO and 63.36% SiO₂ (Table 5).

The preliminary mineralogical investigation conducted by Rio Tinto on a single talcose rock sample demonstrated that under x-ray diffraction no other minerals were identified other than talc and that, using scanning-electron microscopy, the pure talc was found to be in flakes up to 100µm in length by up to 30µm wide (Latti, 1987).

2.3 SILICA FLOUR

Previous exploration involving percussion drilling and pitting by excavator (Threader, 1989 & 1991) has established an estimated resource of 45,000 cu m in one area. The mean thickness is 2.5m but sections can reach up to 11m thick.

Further exploration is warranted in several adjacent areas to the north and southwest.

The deposit overlies Precambrian schist bedrock some of which is carbonate-rich and rounded quartz pebbles to 100mm in size found in pits in the centre of the resource indicate that the deposit has been transported and deposited in a stream channel (Threader, 1989). However, the exposures in the faces of the existing quarry show a sequence of clast-supported breccias with tabular and angular fragments of now-frangible silica. This offers the possibility that at least part of the deposit is in situ and derived from the underlying carbonates by solution collapse and subsequent silicification and replacement.

Analyses show that Cann Creek silica flour contains slightly higher levels of contaminants than that at Champion Road.

3.0 CURRENT EXPLORATION

Recent logging and sampling were carried out in the Mines Department core store at Mornington on the two diamond holes drilled by CRA in 1984-85 at the Cann Creek Prospect under the joint venture with MHA on EL 43/1970. The work was directed at the possibility of increasing the magnesite intersections in the drill cores particularly in DD85CC2 which was drilled under the high grade magnesite outcrops in Cann Creek.

Grab sampling of the sparse outcrops mainly along the main access of Bird No 5 track was conducted to build up a picture of the possible distribution of talc schist.

3.1 DD84CC1 CORE SAMPLING

This hole was drilled some 450m south of the Cann Creek magnesite outcrops to test whether there was magnesite along strike. The hole also tested under a silica cap exposed in old silica open pits.

The carbonate zone was about 227m thick and was logged as massive to banded dolomite interbedded with talc schists and shales particularly in the upper 50m of the core. No magnesite was logged by CRA. Some of the dolomite from 100-160m has white sections and bands due to quartz veining and flooding and this zone may have contributed up dip to the silica cap.

Spot geochemical sampling every 10m or so by CRA ended about 200m deep leaving an untested 24 m zone, logged as grey massive dolomite, some of it coarse clastic, in the same stratigraphic position against the schist of the western formation where magnesite was found to be present in the northern drill core.

To test this zone, chip samples were taken from the core and bagged in two sections and analysed (Table 2) as samples **P230038** (238.5- 250.0m, 11.5m) and **P230039** (252.0- 264.5m, 12.5m).

The upper section came out as magnesian dolomites (**P 230038**) with 28.7% MgO, 13.5% CaO and SiO₂ 18.8% (or more improbably, normal dolomites interbedded with thin magnesites or cut by magnesite veins). The lower section had more conventional dolomite chemistry (**P 230039**) with MgO less than CaO and both depressed because of silicification like the whole of the upper dolomites above 200m in the hole.

3.2 DD85CC2 CORE SAMPLING

Two intervals of magnesite were intersected in DD85CC2, an upper one of 4.4m and a lower one of 6.5m, both mostly of magnesite breccia. Only the upper interval had been cut and analysed completely, the lower had been spot sampled only in two localities. Despite being logged as dolomite, the lower section was eventually considered by CRA as being magnesite breccia probably following their spot chemical data. This shows that magnesite may not always be recognised in the core without analyses.

To provide a more effective test of the magnesite potential, the lower interval (158.6-165.0m) was sawn completely and sampled as quarter core. The same was done to a higher interval of 3.7m (151.0- 154.7m) and two lower intervals of 3m each (165.0-168m) and 174.1- 177.1m) which consist of carbonates, some with coarse clastic or agglomeratic sections logged as dolomite but which could be magnesite.

The results of the analyses from AMDEL (original results in Appendix) are given in the accompanying Table 2.

The lower magnesite breccia interval (**PS 230035**) comes out in the entire section analysis (over 6.5m) as MgO about 35% although with appreciable CaO at 10% and SiO₂ at 13% and compares well with the spot geochemistry of the previous analyses (Table 2).

The other intervals analysed (**P 230034, 230036**) have MgO contents (about 25% +) above the theoretical composition for dolomite (21.7%) which makes them magnesium dolomites apart from the lowest interval which has more conventional dolomite geochemistry at MgO less than CaO (**PS 230037**).

These magnesium dolomites in this zone contrast with the dolomites in the upper 130m of the drill core which have conventional geochemistry except for the high silica content (up to 43%) produced by quartz veining and flooding which has a depressing effect on both the Ca and Mg values.

3.3 OUTCROP SAMPLING

In October 2004, Kevin Pinner selected some talc rich samples from outcrops along the Bird No 5 Track at Cann Creek. Four of these (P230040-043) were taken from the No 5 track just past the junction of the track to the Cann Creek magnesite quarry and a fifth (P230044) was from an outcrop on the creek bank.

The AMG positions of these samples are as follows P230040-042 AMG 369,800mE; 5,446,700mN: P230043 AMG 369,860mE; 5,446,780mN: P230044 AMG 369,000mE; 5,447,000mN.

The objective was to survey the likely extent of the talc deposit best expressed on the eastern edge of the high-grade magnesite deposit exposed in the small quarry face cut in the 1970s by MHA on the lower costean just north of the creek bed.

The results on the purity of the talc have just been returned from Amdel (original results in Appendix) and are laid out in Table 5 where they are compared with MHA's previous analyses.

Four out of the five samples of varying shades of white and grey talc have SiO₂ and MgO in the range 55-66% and 23-30% respectively with Fe₂O₃ being 0.24- 0.71%. They are generally not quite as good in grade as the samples analysed in the 1980s by Rio Tinto and the Mines Department which are close to the theoretical composition of pure talc (Table 5).

They are just as good if not better than the Foya talc sampling carried out on the discovery outcrops just east of the magnesite face by Dave Simpson in 1987 which are really quite variable in grade (Table 5).

All of the MHA talc schists in Table 5 have an iron content less than the 0.8% Fe₂O₃ which Rio Tinto regards as the upper limit for ceramic grade talc.

There is obviously a zone of talc and dolomite schists on the eastern border of the magnesite exposed in Cann Creek which is ill-defined at present but which contains

ceramic grade talc. Because of the limited outcrop, the zone can only be further evaluated by pitting, trenching or drilling.

An additional two samples, selected and analysed (results in Appendix) about a month later, are as follows-

P230076 greyish white, greasy talc with some brown iron stained fractures
 from outcrop near collar position of DDH 84 CC1
 AMG 369,458mE; 5,446,564mN

Al₂O₃-7.09, CaO- 0.18, Fe₂O₃- 0.86, MgO- 23.2, SiO₂- 59.8, LOI- 7.74 (all percent)

This sample was marginally not as good as the ones picked up off the track by Kevin Pinner which had Fe₂O₃ in the range 0.24-0.71% and is just on the upper limit of 0.8% that Rio Tinto wanted for its ceramic grade talc.

The other sample was from the area of the best talc outcrop next to the magnesite quarry and was submitted for comparison purposes but turned out not to give a good talc analysis-

P230077 dark green lustrous talc schist with talc foliae in grey matrix.
 from Foya talc outcrop next to the magnesite quarry
 AMG 369,582mE; 5,447,033mN

Al₂O₃- 0.27, CaO- 22.8, Fe₂O₃- 0.21, MgO- 21.8, SiO₂- 19.8, LOI- 25.7 (all percent)

This analysis reveals the rock sample to be talcose dolomite schist and similar in chemistry to the talc rich dolomites in the upper part to DDH 84 CC1. It also shows similarities to the Foya talc zone analyses by Dave Simpson (see Table 5).

None approach the purity of the talc samples analysed in the 1980s by Rio Tinto and the Mines Dept which were close to the theoretical composition. This could arise because the 1980s samples, the locations of which are unknown, may have been specially hand picked talc samples.

This suggests that the Foya zone (next to the magnesite quarry) is not solid talc at all but simply talcose dolomite similar to that found in the two diamond drill holes particularly DDH 84 CC1.

4.0 CONCLUSIONS

- 1) Following the new sampling, no zones of high grade magnesite have been found in the diamond drill core equal to the tenor of the magnesite in the creek outcrops (ie MgO >40%), in the lower trench and in some of the percussion drilling.
- 2) The sampling has confirmed the lower 6.4m (158.6-165.0m) magnesite interval (at 35% MgO, P 230035) in DD85CC2 which was based on only two previous spot samples.
- 3) Two new magnesian dolomite intervals have been recognised, one of 3.7m (151.0- 154.7m) in DDCC2 (P 230034) and one of 11.5m (238.5- 250.0m) in DDCC1 (P 230038). These rocks have MgO in the range 25-35% and CaO 10-15% and have some silicification with SiO₂ 18-20%.
- 4) Two other dolomite intervals were tested one of 3m (174.1- 177.1m) in DDCC2 (P230037) and one of 12.5m (252.0- 264.5m) in DDCC1 (P 230039). They proved to have conventional dolomite chemistry with MgO less than CaO but are somewhat silica rich with SiO₂ in the range 21-24%.
- 5) The magnesian dolomites with MgO greater than CaO may be altered from ordinary dolomites or from high grade magnesites by diagenesis, hydrothermal solutions or metamorphism.
- 6) It is obvious that potential tonnages of the high grade magnesite zone are liable to be small. The only places left to test for an extension of the deposit are shallow plunges north and south of the outcrops. This could be carried out a diamond drilling north of the creek and costeaning or shallow drilling south of the creek. At the same time, trenching could investigate the dimensions of the talc body east of the magnesite.
- 7) The main requirement of the exploration is to determine the resource tonnages, shape and purity of the magnesite at Cann Creek in view of the fact that this is the purest magnesite known in Tasmania. The target is high-grade magnesite resources up to the 100,000 tonnes category. If the drilling results were promising, bulk sampling could be envisaged to provide for furnace testing and mineral processing and chemical studies including the new carbothermic process.
- 8) The dolomite, talc and silica resources will also be examined. There is a talcose dolomite schist zone on the eastern border of the magnesite zone exposed in Cann Creek which has still to be evaluated. Small grab samples of the schist return analyses typical of relatively pure ceramic grade talc but whether there are commercial volumes of this material contained in this folded and sheared metamorphic belt remains to be proved.

5.0 ENVIRONMENT

All previous exploration activities have been rehabilitated and are now overgrown by natural regrowth. The log bridge to the quarry has been removed from Cann Creek bed and access tracks blocked by soil bunds.

Most of the exploration activities described above for Year One of the present licence were carried out on core materials in the Mornington core library.

The small program of weathered outcrop samples produced no appreciable damage so no rehabilitation is necessary.

6.0 EXPENDITURE

Exploration expenditure on the licence in Year One to end December was \$20,029. An additional amount will be added up to the anniversary period of 12th March 2005 when available.

7.0 REFERENCES

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8.0 KEYWORDS

Cann Creek, Arthur River Metamorphic Complex, Magnesite, Dolomite, Talc, Silica Resources.

APPENDIX

PLANS 1 - 5

TABLES 1 - 5

**MINERAL HOLDINGS
SILICA TENEMENTS
NW TASMANIA**

Scale 1:100,000

PLAN 1

Thomas Mt ML 8M/89

EL 38/2002 Dip Range

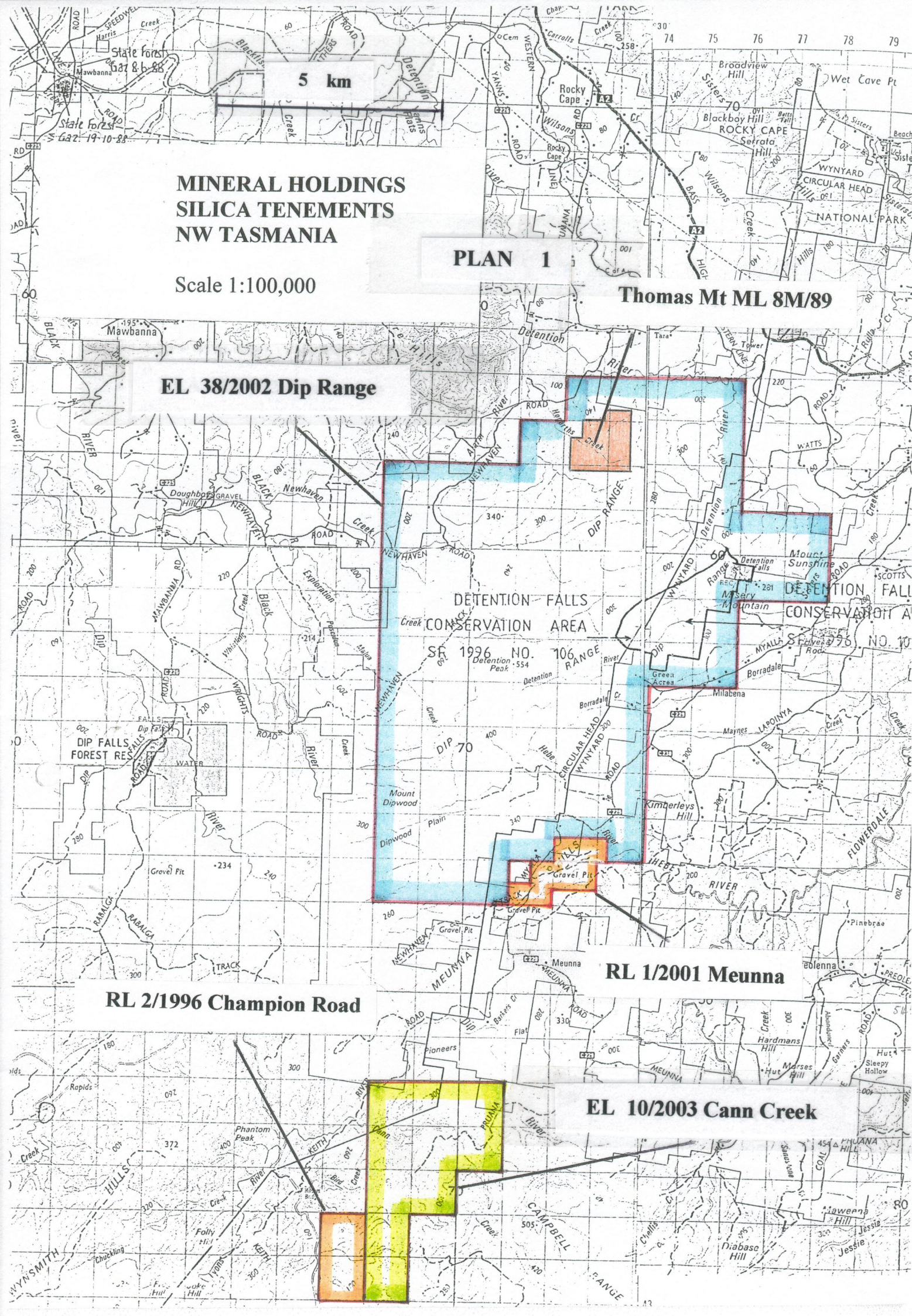
DETENTION FALLS
CONSERVATION AREA

SF 1996 NO. 106 RANGE

RL 1/2001 Meunna

RL 2/1996 Champion Road

EL 10/2003 Cann Creek



PLAN 2 – MRT GEOLOGY MAP, FOLLY 1:25,000 SCALE

0

2km

MINERAL HOLDINGS AUSTRALIA PTY LTD

5,448,000mN

ELA 10/2003

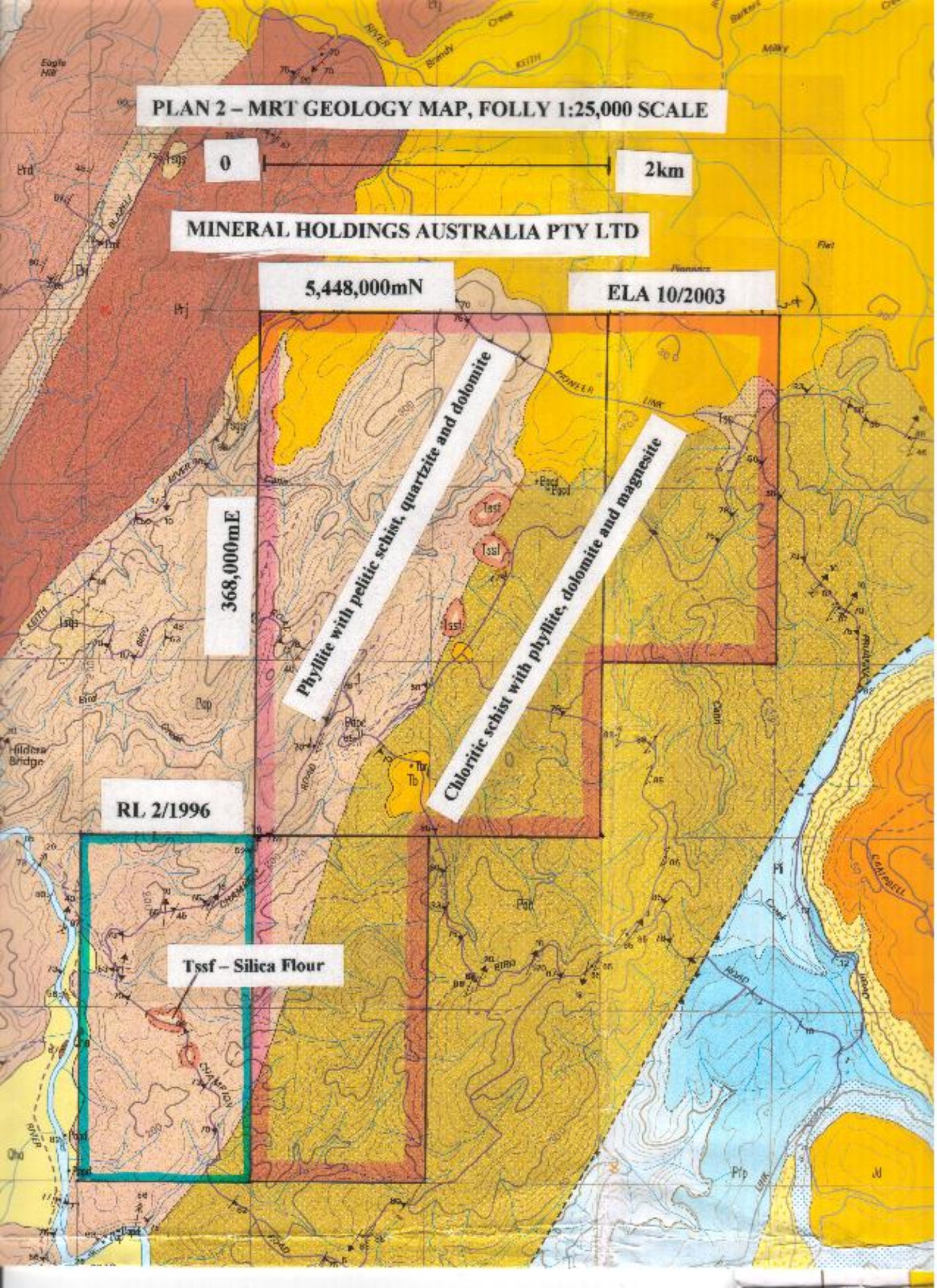
368,000mE

Phyllite with pelitic schist, quartzite and dolomite

Chloritic schist with phyllite, dolomite and magnesite

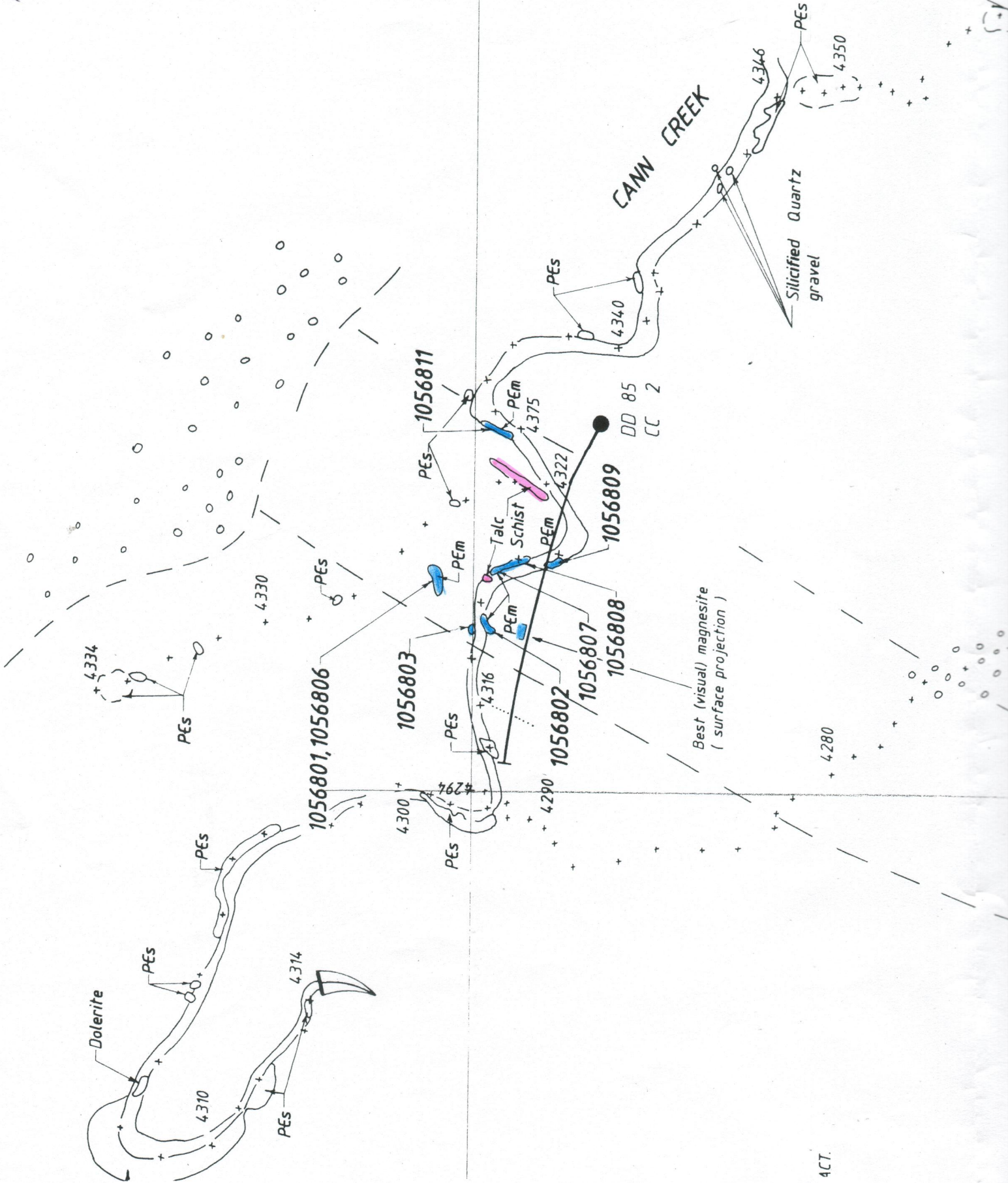
RL 2/1996

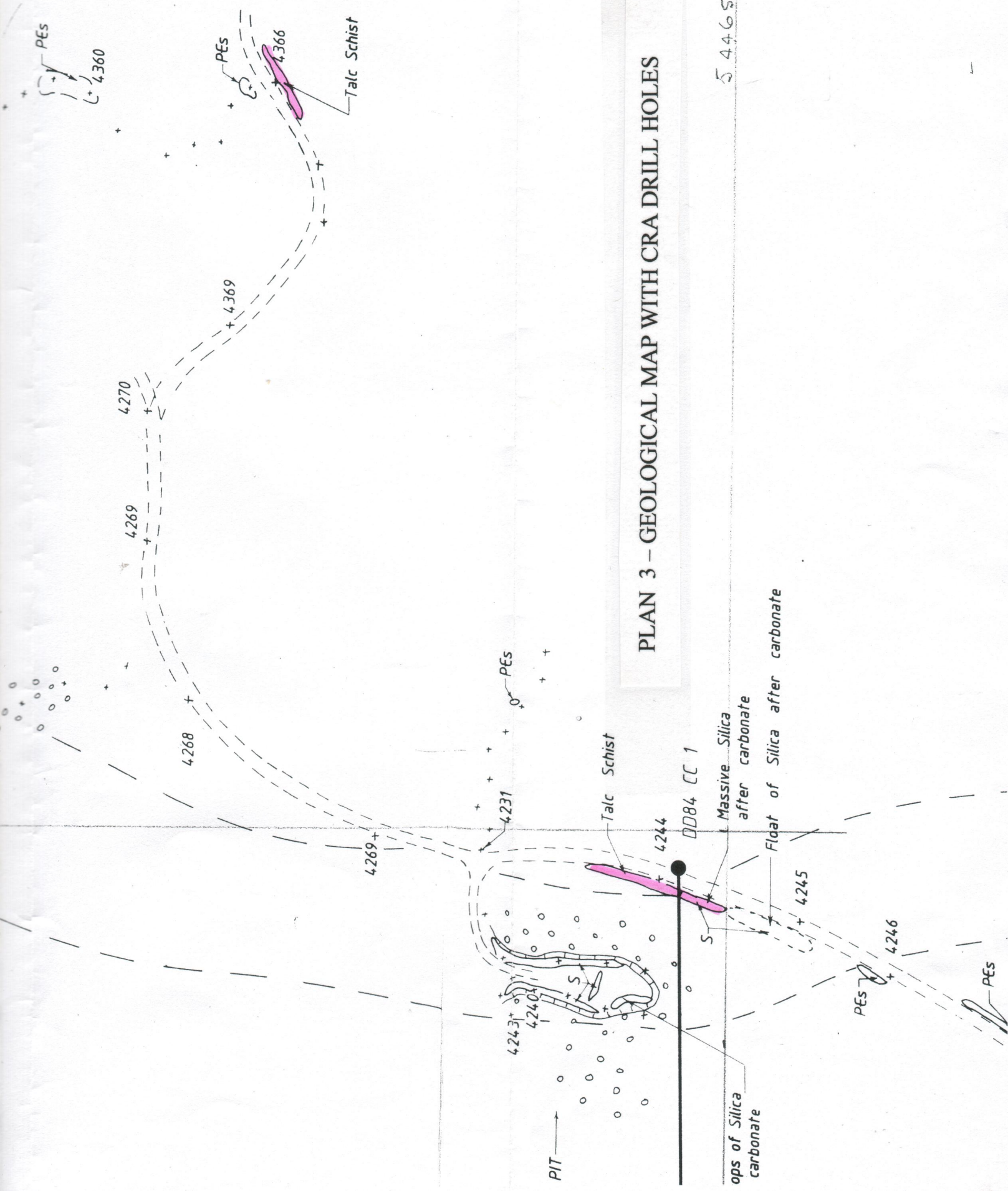
Tssf – Silica Flour



TU 85-2498

5 447 000m N(AMG)

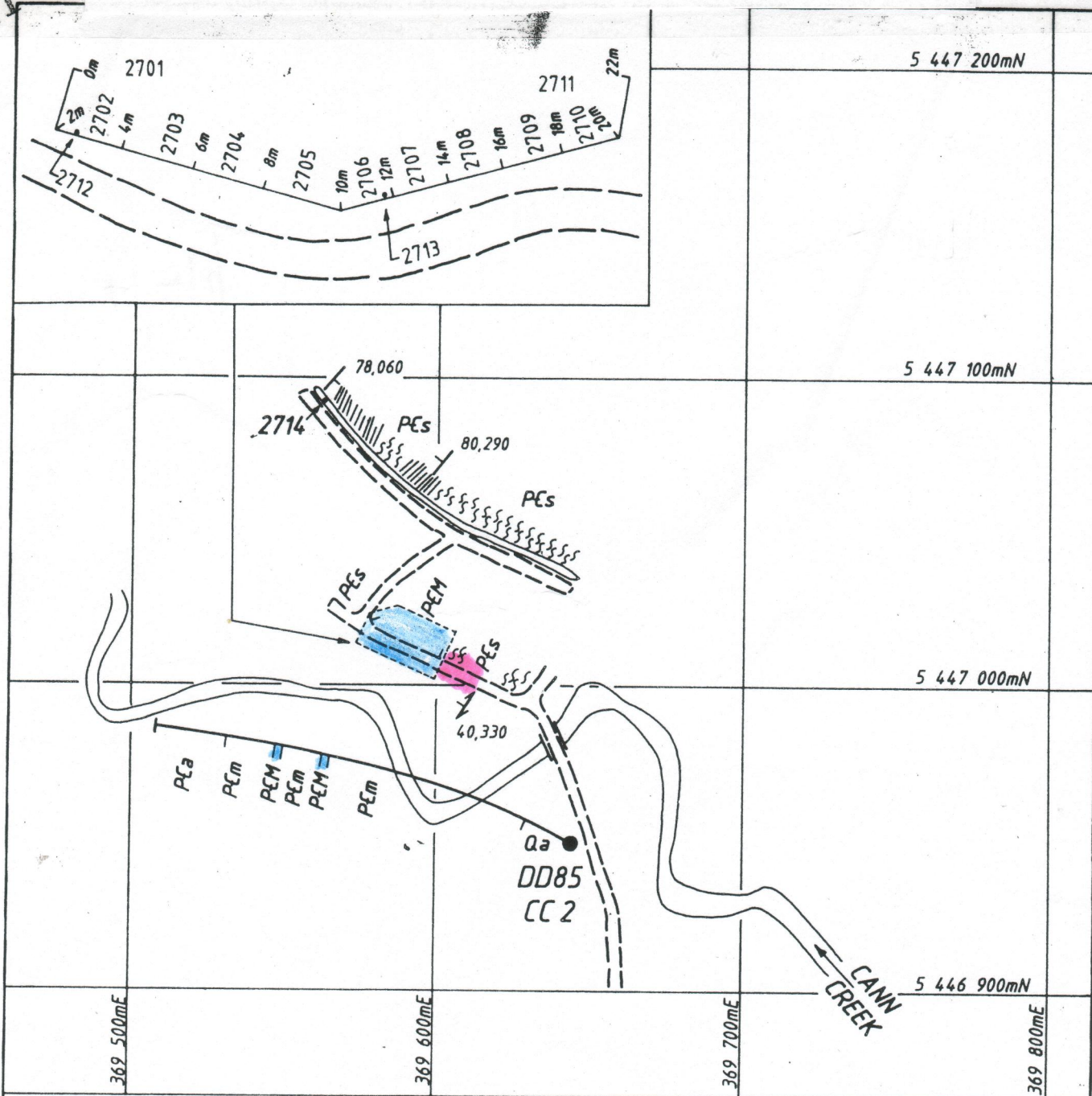




PLAN 3 - GEOLOGICAL MAP WITH CRA DRILL HOLES

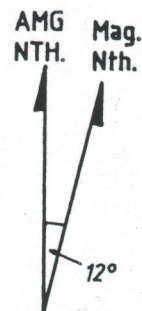
5 446500

PLAN 4 - PROSPECT MAP WITH QUARRY AND COSTEANS | 0



REFERENCE

- Qa** Quaternary alluvium
- PEm** Interpreted magnesite. In CC2 is nearly entirely Dolomite
- PEM** Magnesite
- PCa** Amphibolite
- PEs** Keith Beds
- ~~~~~** Shear Zone
- |||||** Approximate dip of bedding
- ↗ 40,330** Shear schistosity: dip, dip direction



CRA EXPLORATION PTY. LIMITED

ARTHUR RIVER E.L. 43/70
CANN CREEK PROSPECT
GEOLOGY &
SAMPLE No. LOCATION PLAN

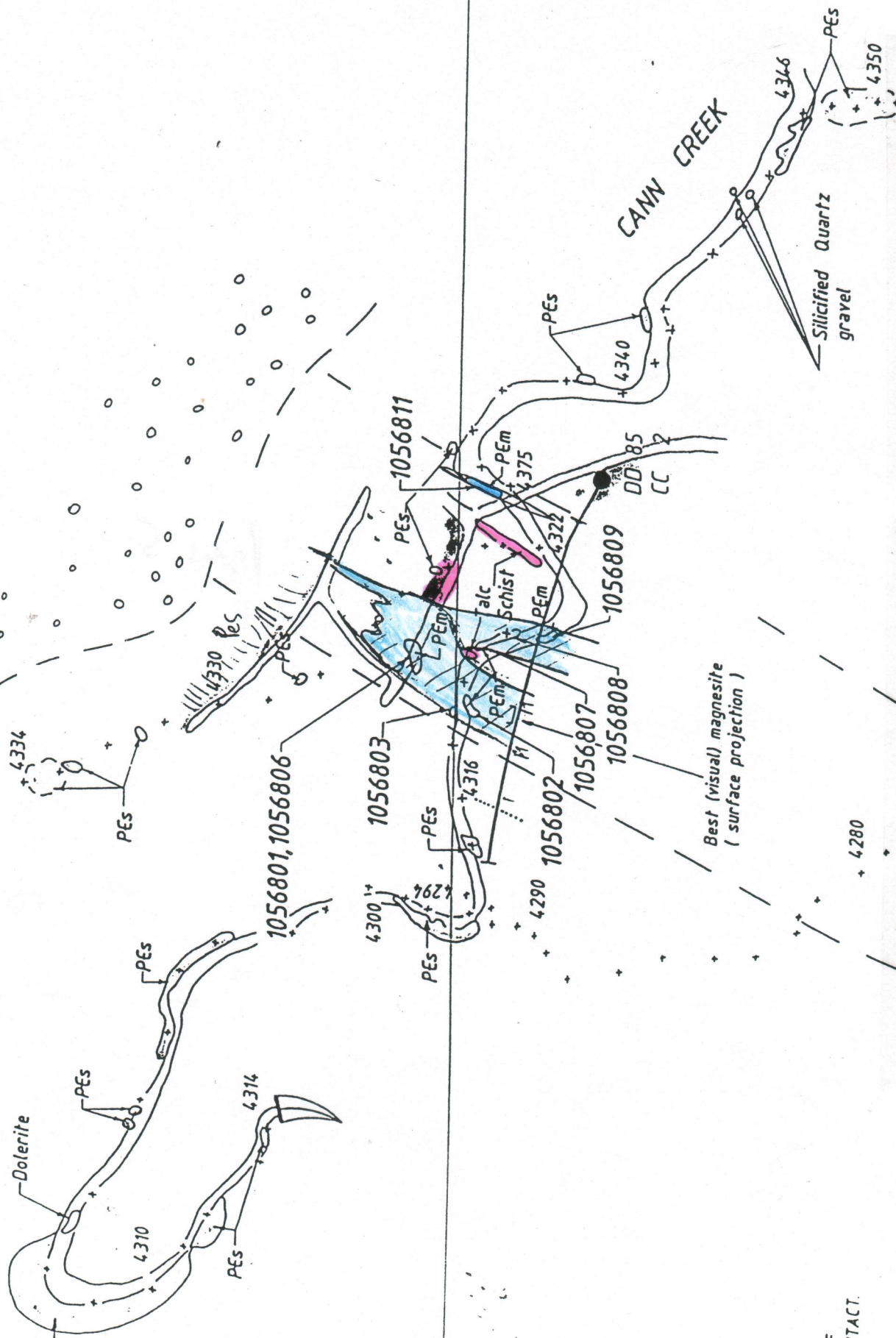
REF.

SK55 - 3

(7915)

5 cm

5 447 000m N(AMG)



PLAN 5 - PROSPECT MAP WITH MAGNESITE RESOURCE

TABLE 1

MAGNESITE OUTCROP ANALYSES

CANN CREEK

Sample Nos	MgO	CaO	SiO2	Al2O3	Fe2O3	LOI
1056801	42.4	4.3	0.63	0.08	0.06	50.4
1056802	45.5	1.11	0.35	0.09	0.04	51.2
1056803	45.7	0.37	0.44	0.07	0.2	51.5
1056806	44.6	2.44	1.13	0.12	0.16	50.4
1056807	42.9	1.11	12	0.18	0.05	43.3
1056808	44.7	1.84	2.12	0.12	0.07	49.5
1056809	40.5	1.53	18.9	0.16	0.18	36.7
1056811	40.7	5.8	2.9	0.23	0.19	48.2

Percents**Compiled from CRA Annual Report for EL 43/1970, TCR 84_2214**

CANN CREEK

last two samples in zone 158.5- 165.5m, 6.5m eventually considered as magnesite breccia by CRA

TABLE 3

CRA - MAGNESITE FACE SAMPLING

CANN CREEK

Sample Nos	MgO	CaO	SiO2	Al2O3	Fe2O3
1652701	43.6	3.14	3.28	<0.01	0.08
1652702	41.9	6.2	1.63	<0.01	0.07
1652703	45.9	1.25	1.53	0.07	0.04
1652704	46.6	1.6	0.35	<0.01	<0.01
1652705	45.7	1.94	0.31	<0.01	0.03
1652706	44.3	4.16	0.46	<0.01	<0.01
1652707	44.7	2.58	0.47	<0.01	0.13
1652708	44.8	3.66	0.37	<0.01	<0.01
1652709	42.4	5.35	0.36	<0.01	0.03
1652710	42.2	5.8	0.88	0.12	0.15
1652711	43.1	4.8	0.67	0.11	0.35
Percent					

Compiled from CRA Annual Report for EL 43/1970, TCR 87_2716

TABLE 4

BEST MAGNESITE ANALYSES- HILMAC PERCUSSION DRILLING

CANN CREEK

Sample Nos	MgO	CaO	SiO2	Al2O3	Fe2O3	LOI	Hole No PD88	CRA Logs
60609	36.6	3.3	14.4	1.85	2.15	39.6	CC 6, 6-9m, 3m	d grey & w mag dolomite
60912	43.1	1.85	4.6	0.35	0.7	48.6	CC 6, 9-12m, 3m	d grey & w mag dolomite
61215	41.8	2.35	8.5	0.4	0.5	45.5	CC 6, 12-15m, 3m	d grey & w mag dolomite
61518	28.4	11.6	25.9	0.45	0.43	32.3	CC 6, 15-18m, 3m	d grey & w mag dolomite
61821	25	11.8	37.7	0.4	0.27	24.5	CC6, 18-21m, 3m	d grey & w mag dolomite
100609	41.9	2.45	6.6	0.7	0.95	46.3	CC 10, 6-9m, 3m	d grey & w magnesite
190204	44.5	1.3	2.9	0.25	0.23	50.1	CC19, 2-4m, 2m	g & w magnesite, some dol
190406	44.2	1.2	1.4	0.5	0.12	52.2	CC 19, 4-6m, 2m	as above
190608	44	2.35	1.7	0.5	0.13	50.7	CC19, 6-8m, 2m	as above
190810	43.6	3	1.3	0.35	0.13	50.5	CC 19, 8-10m, 2m	w crystln magnesite
191012	35.8	4.6	16.6	2.5	3.2	35.9	CC 19, 10-12m, 2m	as above
210912	40.8	1.5	11.1	1.8	2.6	41.2	CC21, 9-12m, 3m	w & g mag breccia 80%
211215	41	1.75	11.5	1.85	2.5	41.3	CC21, 12-15m, 3m	w & g magnesite
Percent								

Compiled from HILMAC Report on EL 43/1070, TCR 88_2862

TABLE 5

RECENT MHA TALC ANALYSES- OUTCROP

CANN CREEK

Sample Nos	MgO	SiO2	Fe2O3	CaO	Al2O3	LOI	K2O	Na2O	TiO2	MnO	P2O5
P230040 talc	1.14	62.7	5.24	0.21	18.1	12.1	0.54	0.02	1.09	<0.01	0.03
P230041 talc	30	61.4	0.71	0.04	1.06	5.48	0.02	0.05	0.05	<0.01	0.02
P230042 talc	light 27 grey	brownish 66	white 0.24	0.07	0.78	5.03	0.02	0.06	0.04	<0.01	0.01
P230043 talc	23 creamy	61 white	0.49	0.05	7.97	7.1	0.07	0.05	0.335	<0.01	<0.01
P230044 talc	26.9 grey	55	0.62	3.78	1.82	10.5	0.03	1.03	0.07	<0.01	0.02
Theoretical percent	31.88	63.36									
Previous Analyses											
Sample	32.3	64.49	0.085								
Rio Tinto	talc										
872478	32.1	61.7	0.21	<0.01	0.8	5.1					
Mines Dept	talc	white									
D Simpson	talc	blue	grey								
101001	25.6	44	0.14	10.9	0.29	19.2	<0.01	<0.01			
101002	22.2	26.5	0.1	19.4	0.24	31	0.02	<0.01			
101003	27.7	35.1	0.29	13.3	1	23.3	<0.01	<0.01			
101004	23.3	25.9	0.1	19.6	0.35	30.9	0.02	<0.01			
101005	22.9	61.9	0.26	4.4	0.6	9.8	0.01	<0.01			
101006	24.9	39.4	0.14	13.4	0.39	22.4	0.01	<0.01			
Three Springs Talc											
Min	30.55	60.52	0.08	0.01	0.46	4.68 nil		0.02	0.01	trace	nil
Max	31.33	62.47	0.25	0.16	1.23	5.19	0.02	0.31	0.03	0.01	0.15



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David McPherson Duncan
Mineral Holdings Australia Pty Ltd
11 Kent Court
TOORAK VIC 3124

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number: 4AD2834

Sample rec'd: 15/10/04

Results reported: 29/10/04

No. of samples: 6

Results apply to sample(s) as submitted by the client.

Report comprises a letter and report pages: 1 to 1

<u>Method</u>	<u>Description</u>	<u>Started</u>	<u>Analysed</u>	<u>Authorised</u>
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Please Note

- 1) The results for elements 'Al, Ba, Cr, Ti, W, Zr, Sn' by code IC3E digest are acid soluble only, and results may be semi-quantative.
'K' values >1% by code IC3E may bias low due to the insolubility of potassium perchlorate.
- 2) For scheme IC4, Total 'Fe' is analysed but is calculated and reported as 'Fe2O3'

Approved:

for
Alan Ciplis
Manager, Geoanalytical Central Region

Report Codes:

N.A. - Not Available
L.N.R. - Listed But Not Received
I.S. - Insufficient Sample

Distribution Codes:

CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

Job: 4AD2834
O/N:

Final

ANALYTICAL REPORT

SAMPLE	Al2O3	CaO	Fe2O3	MgO	SiO2	LOI
P 230034	0.78	14.0	0.35	27.9	19.6	36.1
P 230035	0.47	10.1	0.36	34.8	12.9	41.0
P 230036	0.19	25.2	0.09	24.7	3.04	45.9
P 230037	1.82	22.1	1.36	16.4	21.5	34.9
P 230038	0.61	13.5	0.27	28.7	18.8	37.1
P 230039	1.32	22.0	0.69	16.0	23.9	34.5

Job: 4AD3042
O/N:

Final

ANALYTICAL REPORT

SAMPLE	Al2O3	CaO	Fe2O3	K2O	MgO	MnO	Na2O
P230040	18.1	0.21	5.24	0.54	1.14	<0.01	0.02
P230041	1.06	0.04	0.71	0.02	30.0	<0.01	0.05
P230042	0.78	0.07	0.24	0.02	27.0	<0.01	0.06
P230043	7.97	0.05	0.49	0.07	23.0	<0.01	0.05
P230044	1.82	3.78	0.62	0.03	26.9	<0.01	1.03

Job: 4AD3042
O/N:

Final

ANALYTICAL REPORT

SAMPLE	P2O5	SiO2	TiO2	LOI
P230040	0.03	62.7	1.09	12.1
P230041	0.02	61.4	0.050	5.48
P230042	0.01	66.0	0.040	5.03
P230043	<0.01	61.0	0.335	7.10
P230044	0.02	55.0	0.070	10.5

Job: 4AD3543
O/N:

Final

ANALYTICAL REPORT

SAMPLE	Al2O3	CaO	Fe2O3	MgO	SiO2	LOI
P230076	7.09	0.18	0.86	23.2	59.8	7.74
P230077	0.27	22.8	0.21	21.8	19.8	35.7

UNITS	%	%	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01A
SCHEME	IC4	IC4	IC4	IC4	IC4	GRAV7