CR50/2

C.R.D. LIBRARY MELBOURNE

REPORT

on

CR 50/2

THE "HOME OF BULLION" COPPER MINE,

NORTHERN TERRITORY

by

Brendan P. Thomson.

000955

OKEN HILL, N.S.W.
June, 1950.

CONTENTS

PLANS

- - - - - - - - -

REPORT ON "HOME OF BULLION" COPPER MINE, N.T.

by

Brendan P. Thomson

INTRODUCTION

The writer, accompanied by Mr. H.V. Wilkins of Enterprise Exploration staff, spent from 7th to 14th May at the Home of Bullion Copper Mine, during which time the mine area was examined and sampled both surface and underground, and a magnetometer survey made. Also a geological reconnaissance was made for several miles along the strike of the lodes. The aid of aerial photographs, kindly loaned by the Commonwealth Bureau of Mineral Resources, greatly facilitated geological mapping.

SUMMARY AND RECOMMENDATION

Mining at the Home of Bullion mine has been almost entirely confined to the high grade (20%) chalcocite ore between 120' and 180' vertical depth. This ore is shipped to Port Kembla via Alice Springs. The small size of the known deposit and rapid zoning in depth of the high grade secondary ore to primary ore (3.5% Cu.) (as proved by recent diamond drilling) immediately reduces interest in the prospect. Another serious drawback is the high cost of transport of ore from this relatively remote area. If local treatment of lower grade ore is considered (by concentration and/or smelting) lack of water supply and power must be overcome.

Geological and geophysical evidences indicate possible concealed orebodies associated with the known lodes, but most probably of small size and lacking the valuable secondary enrichment which makes the present mine possible.

The decision to test the mine area by further drilling would appear to be warranted only if prospects of new and larger orebodies existed in other parts of the district. Little is known of the regional geology and until this is investigated, further testing is not recommended.

LOCATION AND ACCESS

The Home of Bullion mine is located approximately 15 miles East South East of Barrow Creek in the Northern Territory. Road distance from Barrow Creek to Alice Springs along the bitumenized Stuart Highway, is 176 miles. From Barrow Creek the mine may be reached by two ways - either via Neutral Junction Station, making a total of 22 miles (the first eleven being fair bush track, the remainder graded bush road) or the second way, which is used by heavy transport, is to turn off the highway 9 miles North of Barrow Creek and then travel 16 miles along a graded bush road. The bush roads are in fair condition and passable except after heavy rain which

floods the deeply entrenched creek beds (the largest is the Taylor). Loads of ore up to 20 tons are transported by semi-trailer from the mine to Alice Springs, a total road distance of 201 miles.

Two earth airstrips have been cleared and graded (one mile West of the mine). Some soil erosion was visible on the short strip but the long strip (2,600') appeared in fair condition at the time of inspection, except for the regrowth of occasional light shrubs up to two feet high, which could be cleared at short notice.

CLIMATE AND WATER SUPPLY

The Barrow Creek area has an average annual rainfall of approximately 11 inches, most of which falls between November and April. During the summer high temperatures are frequently recorded. In the dry season the climate is cool and invigorating.

No water supply is available at the mine. All water is carted from a well on Redbank station, a distance of 77 miles by graded earth road. A bore (depth unknown) was put down several miles north of the mine, without success.

Up to two hundred gallons of water per day are said to be pumped from the mine - how much of this is introduced by mining operations was not ascertained.

VEGETATION

In the vicinity of the mine the vegetation is light mulga and other small trees, mainly in creek beds. Several miles north of the mine white gums occur in the larger creek beds, only few of these trees appear to be suitable for mine timber.

Fortunately for the present operators, no timbering is required in the open stopes.

THE MINE

Geological Outline

Four lodes associated with copper mineralization have been recognised. These are the Main Lode, East Lode and South Lodes Nos. I and II. Apart from several small parcels of carbonate ore obtained from the gossan of South Lode II, production has been limited to the central portion of the Main Lode - which outcrops as a series of gossan lenses over a distance of 480 feet, exclusive of the East Lode.

The lodes, although following in part fault planes, appear to conform closely with the bedding of the host rocks - PreCambrian sericite andalusite schists - which dip North at 50°-60° and strike N70°W.

Probably a fuller information
orebody
CKK

To the south of the mine the PreCambrian rocks are concealed by a dissected plateau of flatly dipping grits and sandstones - representing several hundred feet thickness of sediments, probably of Cambrian or Ordovician age - called'Cambro-Ordovician' for convenience. These rocks outcrop in the vicinity of the South Lodes and also occur as outliers capping hills.North East of the mine.

History and Ownership

The mine was discovered by a prospector, William Garnett, in 1923. He sold the lease in 1924. There is no record of production until 1936 when a trial parcel of 110 tons was dispatched. In 1946 12 leases (viz. M.L's 38F, 39F, 63F to 72F inclusive), totalling 470.4 acres, were taken out for Lindley Duffield & Company of London. These leases are now held privately by a former agent of the company, W. F. Hartley of 6 Fowlers Road, Glen Osmond, Adelaide. The mine is at present operated under tribute by Mr. Ted Gordon, with working partners Messrs Reg. Rattley and Roy Cubitt. Two men are employed.

During 1950 five diamond drill holes were put down by the Northern Territory Mines Department, under the direction of C. J. Sullivan of the Commonwealth Bureau of Mineral Resources, proving rapid grading to primary 3.5% Cu. ore below the 200 feet level and pronounced easterly pitch of ore body.

Previous Examinations

C. T. Madigan exmmined the mine in 1934 for the South Australian Government and Roland Blanchard in 1936 for Mount Isa Mines Limited. Blanchard considered the deposit too small to be of interest in this locality. These reports were not read but comments on them by P. C. Benedict were available in the Zinc Corporation Limited's files. Other examinations by visiting geologists are said to have been made but no records are available.

In 1937 a Northern Australian Aerial, Geological and Geophysical Survey party under P. Hossfeld examined and sampled the mine and mapped local geology from air photos. The report (N.T. No. 29) is the only published information available.

In April 1950, C. J. Sullivan reported on the mine for the lessee. Full use of his report and plans was made.

Mine Operation

This is very simple. Compressed air is supplied by two Broomwade compressors. The ore is broken in the stope or rise by jackhammer or stoper and shot into the drive. No chutes are used in this operation.

The ore is loaded into empty bitumen drums (many thousands of these drums were available after the completion of the Stuart Highway) and hauled to the surface where a lid is inserted and the drum sealed by bending the edges (see illustration). The ore is then ready for shipment. The average weight of a sealed drum is 0.56 tons (20 drums = 11 tons).

Hand sorting is unnecessary because of the high grade of ore. A grab sample is taken from each drum and a check bulk assay is made at the mine from each shipment. Haulage is by friction winch belt driven to a single cylinder Southern Cross diesel (see illustration).

Another single cylinder diesel drives a small ventilation fan and small generator which charges a 12 volt battery system, providing electric light for underground and surface. Army type field telephones are used for underground - surface communication.

As the main shaft is the only opening connected with the surface ventilation is carried out by discharging surface air at the working face at the 180 feet level or above, from 8" galvanized pipes connected to the surface fan.

Although working conditions are agreeable on the 180 feet level a marked rise in temperature is felt at the 145 feet level where the heat of oxidation of sulphides is apparent to the touch on broken surfaces.

Production Record

Northern Territory Mines Department records show -

Year Ending 30th June	Ore Tons	Value £A	
1936	110	1,100	£10/T
1937-39	No production	-	
1939-40	No record	-	
1941	210	1,540	£7⅓ /T
1942-43	50	1,018	£20 /T
1944	No production	-	
1945	68	1,878 (24 tons average 23%)	£28/-/T
1946	196	4,725	£24
1947	118	2,529	£21
1948	No production	-	
1949	2,433	82,448 (average 21%)	£34
Total	3,185	95,238	

According to C. J. Sullivan's report, Ore Purchase Notes at the mine show that between 31 March 1949 and 31 January 1950 approximately 2,450 tons of ore averaging 22.5% Cu. and valued at £76,000 were shipped to Port Kembla.

Hence total recorded production to January 1950 is approximately -

5,100 tons of ore, average grade 20% Cu. - Value = £155,700.

Costs

From data supplied by Tributor -

Transport and Cost of Empty Drums	£-6/-	per ton
Ore transport, Mine to Alice Springs	£5/-/-	" "
Port Kembla Costs (sampling & smelting[x]) and Rail Transport	£12/16/3	" "
Operating & Sundry Costs[xx] (by difference)	£8/16/-	" "
Total Cost ...	£26/18/4	" "

The value of one ton of 20% ore is £34. The above high costs and limited production must severely reduce the margin of profit of the present operators.

Main Lode

Dimensions and Structure : The lode outcrops for 480 feet (146 m) and can be divided roughly into three lenticular portions up to 12 feet wide, connected by narrow channels which in places diminish to mere filaments of mineralization. Branching of the lode and development of spurs of ore in the walls occur at the ends of the lode or at a change in strike. Surface dips are 50° to 60° to the North. The main lens in which the orebody occurs (probably occupying a fault plane) outcrops for approximately 160 feet (48 m) at the eastern end of the lode and strikes N55°W; the central portion of the lode strikes N75°W and the western portion East-West. A similar change in strike appears to take place in the east lode. Small buckles in the hanging wall of both lodes plunge 30° to 60° to the north east.

Underground, the strike of the orebody varies between that of the eastern and central portions of the outcrop (N55°W to N75°W) down to 180 feet level. At the 200 feet level the strike is apparently East-West, that of the western end of the outcrop.

How much of this apparent strike change is due to errors in compass readings, can only be determined by careful resurvey. It may be that the lode branches at the 200 feet level shaft section, where locally the hanging wall structures are complex. If this interpretation is correct then the 200 feet level has been driven in a large spur in the footwall of the main lode (61 m) channel. The steep 85° dip of the hanging wall at the western end of the drive is otherwise not understandable.

The main orebody has an average length of 185 feet (56 m) on the two levels on which it has been fully developed. The width varies from 12 feet to 5 feet. Sullivan's average of 8 feet for ore width seems a fair estimate. The western end of the body ends abruptly in heavy ground, probably due to a steep dipping shear trending N65°E. The only mineralization seen in the mine West of this disturbed section is a narrow seam showing copper staining at the face on the 180 feet level. The eastern end of the lode splits into narrow branches, as does the outcrop.

---

x = Cost of converting, refining, realization @ £1/14/- per ton is based on the factor 1165.3 units = £96/14/-

xx = Probably does not include royalties to lessee.

Diamond drilling revealed a continuation of the lode into primary sulphides at approximately 300 feet vertical depth. The intersected body has a length greater than 160 feet and an average true width of 10 feet. The strike of the three lode intersections at 300 feet depth is N75°W - viz. that of the central portion of the lode outcrop.

The four drill hole intersections indicate a marked north easterly pitch of the orebody with a suggestion of flattening in pitch in depth (see longitudinal section), coinciding with the change in dip near the 200 feet level. Small buckles in the hanging wall at the surface pitch in this direction. The control of pitch of the ore shoot is not understood. Marked lineation of the schist caused by intersecting fractures in the vicinity of fold axes pitches in an easterly direction at 60° to 70°. Surface mapping and drill hole information (see Main Shaft section) suggest that the lode channel may be confined to certain sedimentary horizons.

In the hanging wall of the lode a band of chlorite biotite rock up to four feet wide has been recognized in a number of places, but its origin remains obscure.

Pug seams and some brecciation are apparent in both footwall and hanging wall of the lode, suggesting that part if not all of the lode also occupies a plane of movement.

Tight folding is apparent in the hanging wall rock (see 1" = 200' plan) the folds plunge west 50° to 70° and are overturned to the south, the axial planes dipping north probably at about 60° or more. The pitch of the orebody is therefore opposed to the plunge of the folding. If the ore favours certain beds these beds must eventually pitch away to the north and bottom the deposit. The section drilled by holes 1 and 2 is largely synclinal although anticlinal structures probably exist close to the hanging wall of the lode.

Lode Mineralogy & Grade:

Oxidized Zone. (Surface to 120 feet). The zone, consisting of leached limonite gossan, ends sharply at the water table which is marked by a white leached zone 2' to 4' thick. In places, a short distance above the water natural openings up to two feet wide have been formed, these are lined with limonite in stalactitic forms.

Copper is rather irregularly dispersed in the gossan as carbonate or more rarely as oxide. 328 tons of oxidized ore averaging approximately 14% Cu. were obtained during World War II, mainly from pits and the opencut on the main lode. This appears to have been hand picked ore. The average of all representative samples taken in the oxidized zone would be 3 to 4% Cu. Sampling indicates a slightly higher grade in the footwall of the lode.

Lead carbonate is dispersed irregularly throughout the gossan, some high assays were obtained at the ends of the lode channel. The guessed average for the entire zone would be 2 to 3% Pb.

Secondary Sulphide Zone (120' to 220' approximately)

The ore consists of sooty and massive chalcocite with bornite, remnants of pyrite (in crystals up to 1"), marcasite and little chalcopyrite. No pyrrhotite was recognized. No galena was seen but small grains of cerussite are common in the ore. Some sphalerite is reported in the 200 feet level.

The grade of ore is clearly defined by the limits of the stoped area which is confined to approximately 20% ore. Chip samples of the orebody on 140 feet level crosscut averaged 16% over 14 feet (which included lower grade material in the hanging wall). On the 180 feet level crosscut a chip sample averaged 19.4% copper over 10 feet. Beyond the stoped portion the ore falls in grade to 6 or 8%. All samples showed higher copper enrichment towards the footwall side of the lode.

Between the 180' and 200' level there is a marked decrease in width and grade as the ore becomes more pyritic and chalcocite rarer. Average grade in the drive is about 6% copper. Since the orebody is pitching east, higher grade ore can be expected in the main lode channel, east of the shaft.

Primary Sulphide Zone (below 220')

The lode core from No. 3 diamond drill hole was the only material examined from this zone. The core intersected 12 feet of lode material. Sections of core up to 18" or more are of massive pyrite and marcasite with small sections of massive sphalerite, chalcopyrite (up to 15% of core), and galena as veinlets also are present.

Average grade, taking into account 30% core loss, is approximately 3.5% Cu., 3% Pb., 10% Zn, over a width of ten feet at the level of diamond drill holes Nos. 1 and 2 intersections.

Ore Estimates

Oxidised Zone.

Assuming a length of 400 feet and an average width of 8 feet, estimated tonnage is 25,000 tons containing 3 - 4% Cu; 2 - 3% Pb.

Secondary Sulphide Zone

Assuming a factor of 8 cubic feet per ton for high grade ore and an average width of 8 feet, the ore body as mined, indicates about 160 tons per vertical foot. Approximately 3,000 tons of 10% to 20% ore remains above the 180' level in the form of pillars etc. Above the 200 feet level, west of the shaft, there is a further 2,000 tons of 6% ore, and to the east a further 1,000 tons of 10% or better ore, is inferred.

Beyond this stage further estimates are speculative.

From the 200 feet level to the assumed base of the chalcocite zone at 220 feet, 3500 tons of 6% Cu. and 2% Pb. are estimated.

To the west another smaller body of secondary sulphide ore may occur as the root of the western lens exposed in the opencut. Pitch evidence from the main lens tends to reduce the size of such a body. The most discouraging evidence is the poor (15", 5.6% Cu.) intersection of No. 4 diamond drill hole. This intersection would be near the pitch line of the centre of the inferred western lens. It may be argued that No. 4 hole intersected a narrow neck in the lens but No. 2 hole intersection would require a similar explanation.

To the east there is no reliable evidence to indicate that substantial amounts of secondary ore of mineable grade exist.

Primary Sulphide Zone

Drill holes Nos. 1 and 4 suggest a body of primary ore representing some 200 tons per vertical foot of depth. From the 220 feet to 300 feet vertical depth, 25,000 to 30,000 tons of ore are estimated, which is probably largely primary, although local slight enrichment by secondary sulphides may occur[x]. Overall grade is estimated as 5% Cu., 3% Pb., 10% Zn. Below 300 feet vertical depth the grade of the primary ore is probably $<$3.5% Cu.

OTHER LODES

The East Lode

This lies several hundred feet south east of and en echelon to the main lode which it parallels in strike. It outcrops boldly for 170 feet as a quartz vein up to three feet wide. The vein contains patches of gossan, small amounts of cuprite and copper and lead carbonates. At the eastern end the lode feathers into small quartz veins, but the lode channel may persist several hundred feet farther east where iron stained quartz stringers and fragments of gossan are visible in an old costean.

A chip sample of the east lode assayed - over 3' width -

3.6% Cu., 5.8% Pb., 3.0 oz.(Ag+Au), 0.5% Zn.

Three samples by Hossfeld show values of the same order. Gold values range from 0.1 to 1.5 dwt. per ton. The siliceous nature of the East Lode contrasts with the massive gossan of the Main Lode, in which quartz is limited to narrow veinlets and silicification near the footwall or at the terminations of the lenses.

---

[x] a little chalcocite is reported in No. 4 D.D.H. intersection.

The east lode may form a spur from a fault plane common to both lodes. If so, the east lode may form the uppermost siliceous fringe of a concealed orebody.

South Lode I

This forms a bold outcrop of massive siliceous hematite with irregular siderite veinlets. No leached sulphide boxwork is visible. Detailed mapping revealed the hematitic body to be roughly oval in shape and at least 145 feet long and 50 feet wide. Small bands of sericite schist separate parts of the body.

A small area of similar hematitic material is exposed 50 feet from the eastern end but it is not known if it represents an extension of the main body. A small opencut in the western end was chip sampled and across a 12 feet face gave the following assay -

2.8% Cu., 0.2% Pb., 0.2 oz./ton (Ag+Au)

Occasional weak copper staining is visible in the outcrop.

On the southern side the lode is bounded by andalusite sericite schist. On the northern side occasional outcrops of flatly bedded grit and sandstones (Cambro-Ordovician) appear to extend from the collar of D.D.H. No. 5 to the northern edge of the outcrop. D.D.H. No.5 intersected from 131' to 137' a zone of brecciated and puggy schist, suggesting a fault channel. From 137' to 178' feeble copper mineralization was encountered in the form of tiny carbonate and cuprite veinlets up to ¼" wide, and traces of native copper on small shear planes.

No trace of hematitic material or siderite was observed in the core. Either the hematite body is a mere capping on the lode channel or if it persists in depth, pitches flatly above the drill hole lode intersection. If so, this direction is probably to the east, by analogy with the main lode orebody.

South Lode II

A shaft 50 feet deep has been sunk on the lode and a small opencut about 8 feet deep has been made. The only surface exposure of the lode is about 27 feet in the opencut and appears to amount to little more than copper staining in a shear, although parcels of ore up to 19% Cu. are said to have been obtained from the opencut.

A chip sample across 12 feet of the face of the opencut indicated -

0.9% Cu., 0.2% Pb., 0.5 oz/ton (Ag+Au)

The associated rocks appear considerably altered and comprise siliceous biotite hematite rocks and well sheared sericite schist.

Sandstone and grit (most probably Cambro-Ordovician) extend under the dump of No. 3 shaft and may partly explain why no lode outcrop is visible there. It is said to be hidden by the dump.

In the eastern drive 50 feet below the shaft collar, 25 feet of limonite gossan is exposed. The outline of the gossan is faulted and obscure and may represent a small ore pipe or irregular body.

Copper carbonates are sprinkled sparsely throughout the gossan. A chip sample five feet wide across the drive assayed -

2.8% Cu., 5.6% Pb., 0.6 oz/ton (Ag+Au).

Although one of Hossfeld's samples from the drive showed 22% Cu., a grade of 3% Cu. and 5% Pb. seems a fair estimate for the gossan body.

Other Surface Mineralization

On the dump of the dry well, three-quarters of a mile south east of the mine, quartz fragments and copper stained schist are visible. The copper mineralization could have been introduced along the South Lode I fault lode channel, the south eastern extension of which may pass through the well site.

Two thousand feet east of the main shaft three feet of white quartz is exposed in a pit. It assayed 1% Cu., 0.4% Pb., 0.5% Zn. This is surprising because no copper staining of carbonate or oxide is visible. A sample by Hossfeld, probably from the same exposure, assayed - 0.06% Cu. Hence, contamination of the sample is suspected.

MAGNETOMETER SURVEY

Method. A 2000' base line was laid out with compass and range poles along a bearing 301°45' magnetic. The base line was measured with 100 feet metallic tapes and pegged at 100 feet intervals. At 00N and 8E, traverse lines at right angles to the base line were pegged at 100 feet intervals for 700 feet and 1,500 feet respectively. Another base line 1300' long at 700 feet North was also pegged. The remainder of the area surveyed was traversed by compass and pacing. The magnetometer observations and compilation of results were entirely carried out by Mr. H.V. Wilkins.

Results. Three distinct anomalies were found -

No. 1 Anomaly, of+300 gamma intensity, is entered 500 feet west of the main shaft and trends NE - SW through the western end of the lode. The anomaly axis was traversed by No. 4 drill hole without finding interesting mineralization. The main orebody has little, if not a slightly negative effect, on the magnetic profiles, although magnetic material occurs in the lode intersected by No. 3 drill hole (the only lode core tested with the magnetometer). Between 100 feet and 190 feet in No.4 D.D.H. the magnetometer log of the core showed it to be moderately magnetic. It is suggested that this anomaly may be caused by the introduction of magnetic material, such as disseminated magnetite or pyrrhotite, along a shear extending north west from the western end of the lode.

No. 2 Anomaly. This relatively small negative anomaly of -100 gamma intensity is centred 550 feet S.S.W. of the main shaft and trends a little north of east. This is the trend of the faulted unconformity between schists and Cambro-Ordovician sediments. The cause of this anomaly is not evident. It appears to be linked with a zone of low magnetic intensity extending for several thousand feet to the east.

No. 3 Anomaly. This anomaly of +300 gammas is centred 900 feet S.S.E. of the main shaft and covers a relatively broad area. The anomaly area is largely concealed by sand and the larger axis parallels the strike of the south lode No. 1. Sullivan reports traces of copper in a costean 600 feet south east of the anomaly centre.

The above facts and the close association of the positive No. 1 anomaly with the main lode makes No. 3 anomaly an interesting target in any future drilling campaign that may be conducted in the area.

Nature of Magnetic Material causing Anomalies.

Close examination with a hand lens of the highly magnetic portions of No. 3 D.D.H. lode core revealed no trace of pyrrhotite. Sphalerite appeared to be the predominant mineral in the core, and it is assumed that disseminated magnetite must be present.

The amphibolite appears to be non magnetic both from traverses over outcrops and testing of hand specimens.

GENERAL GEOLOGY

Geological reconnaissance covered a strip 3½ miles running East-West. The results emphasized the localization of the mine by folding and faulting in the PreCambrian schists. No similar large folded structures were observed in the limited area traversed. The contact between the schists and Cambro-Ordovician sediments strikes S80°W for over a mile from No. 3 shaft, suggesting that this is a fault line; probably of fairly recent age.

Another fault system striking approximately N50°W appears to be associated with the lodes. The system probably represents old fault lines in the PreCambrian basement. Sullivan considers that change in grade and size of the main lode in depth indicates movement on the lode of North block down.

The section through D.D.H. No. 5 strongly suggests similar movement on the south lode No.I. If a PreCambrian age be assumed for the mineralization, the small downfaulting of the Cambro-Ordovician may be due to a relatively recent revived movement on the old fault plane. No mineralization is known in the Cambro-Ordovician sediments. It is therefore assumed that the quartz veinlets in the grit are post ore mineralization in age.

Sullivan suggests that the chlorite-biotite rock in the hanging wall of the main lode may be a derivative of the amphibolite, outcropping in the creek bed 400 feet N.W. of No. 2 shaft. He therefore associates the ore with the amphibolite. The nearest known acid igneous rock is a small outcrop of pink porphyry, discovered by the writer in a creek bed two miles west of the mine.

Biotitic rocks are also associated with the South Lodes. A sample taken of the biotite-chlorite rock in the hanging wall of the main lode in the crosscut of No. 4 shaft assayed -

6.7% Cu., 0.9% Pb., 3.1 oz/ton (Ag+Au),

whether this is an erratic sample is not known.

The drill core (see main shaft section) indicates a marked zoning of chlorite or hydrothermal chloritoid minerals around the main lode channel. This may be a normal association with copper bodies. Contrary evidence to Sullivan's conclusion is presented by the association of the highest grade copper ore on the footwall with quartz veins and siliceous material.

Two large outcrops of "dolerite" are reported about 5 miles west of the mine, but according to Benedict's notes on Blanchard's report, they show "... no evidence of mineralization by either copper or pyrite...". These outcrops consist, probably, of the diorite which occurs on the western leases, mentioned by Hossfeld on page 1 of Northern Territory Report No. 29.

Insufficient time was available to visit the western lease area. Near the road to Barrow Creek large quartz blows were noticed approximately 7 miles west of the mine.

FUTURE PROSPECTS

Under the present conditions the operating life of the mine is short. The limited quantity of estimated ore and the difficulties associated with local ore treatment do not appear to warrant any interest by The Zinc Corporation in that direction.

There remains local exploration in the mine area for new orebodies - two possible locations for testing are suggested -

(i) The No. 3 magnetic anomaly, and

(ii) The eastern lode.

As pointed out in the summary, neither suggests a very large prize and secondary enrichment would be largely, if not entirely, absent. A possible third test would be to the south of No. 1 lode, to test the suggested south pitch of the hematitic body.

east

000955

New Mines are required and a hope remains that a retional study of the geology will help to find them. Aerial photography of the entire Barrow Creek area is being carried out by the R.A.A.F. The photographs are verticals taken from 15,000 feet and ideal for geological mapping. With the aid of these, it is hoped that something will be learnt to someday renew interest in the Barrow Creek field.

BRENDAN P. THOMSON,
Geologist.

Locality: Barrow Ck SF 53-6.

Broken Hill, N.S.W.
2 June, 1950.