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GEOLOGICAL REVIEW - DOLPHIN OREBODY/OPEN CUT

MARCH, 1980

by

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LIST OF PLANS

Ore Resource Table (12/2/80) Dolphin.

Dolphin Mine Production (12/2/80)

In attached folder:

Geological Cross Section	219 840E
" " "	219 880E
" " "	219 920E
" " "	219 960E
" " "	220 000E
" " "	220 040E
" " "	220 080E
" " "	220 120E
" " "	220 160E
" " "	220 200E
" " "	220 240E
" " "	220 280E
" " "	220 320E
" " "	220 360E
Geological Level Plans	-50 m R.L. West
" " "	Central
" " "	East
" " "	-100 m R.L. Central
" " "	East
" " "	-150 m R.L. Central
" " "	East
" " "	-200 m R.L.
" " "	-250 m R.L.
" " "	-300 m R.L.
Geological Long Sections	563 900N
" " "	564 000N
" " "	564 100N
" " "	564 200N

INTRODUCTION

Mining first commenced in 1917 in the No. 1 Orebody area and Open Cut production continued until October, 1974.

The Dolphin Mine has been in operation since June 1973 and the main decline has progressed to the -273 m R.L.

Production is currently from the Upper Wedge, Upper Pit, Upper Central and Lower Pit stopes with development being carried out in the Lower and Mid Wedge areas. The annual production budget is 267 000 tonnes.

C Lens oreblocking has been substantially completed between 220 000E and 220 360E with the exception of the Southern Area. A total of 4.429 million tonnes of ore has been proven in C Lens. A reinterpretation of the structure was carried out in the Open Cut area together with a recalculation of the ore resource. All ore in the Open Cut and B Lens (Dolphin) is classified as probable.

Diamond drilling is currently proposed to oreblock B Lens, east of the Decline Fault zone, C Lens Lower Central Area and to test and define the Decline Fault zone adjacent to the planned Lower Wedge open stoping area.

This report reviews the progress since the previous review reports (Bujtor, October 1978) (Danielson, 1977, 1975).

SUMMARY

The underground oreblocking programme is continuing with a total of 278 holes being completed for 20 792 m. A total of 19 holes were completed for 2 423.9 m in the Open Cut during the past 18 months.

The present underground drilling programme has proved 4 407 500 tonnes at 1.20% WO_3 . The total Proven and Probable resource at Dolphin is 5 741 500 tonnes at 1.13% WO_3 . A further 129 000 tonnes is classified as Possible.

The specific gravity used in the current calculation is 3.40 as against 3.49 in October, 1978 and 1979. The use of a lower specific gravity in this calculation makes a difference of 152 000 tonnes in the total Proven and Probable resource of the Dolphin Mine.

The 'B' Lens resource has increased by 80 600 tonnes to 543 600 tonnes at 0.83% WO_3 due to oreblocking diamond drilling since the last calculation in October 1978. This resource remains classified as Probable.

The Probable resource present in the Open Cut has been decreased to 627 000 tonnes at 0.55% WO_3 .

CONCLUSIONS

The basic structure of the Dolphin Mine is an anticlinal nose plunging 30° to the south-east. This anticline has later been subjected to three periods of faulting while dividing the area up into five major blocks.

The Upper Pit area is structurally complex due to a series of subparallel north-west - south-west striking faults. The other four blocks are relatively less complex in tectonics.

The best potential for ore in B Lens is within a zone adjacent to the Northern Boundary Fault.

The irregular nature of B Lens mineralisation will necessitate the continuation of the close spaced (20m) drilling programme to provide adequate definition for mining purposes.

The Decline Fault is not expected to affect C Lens Wedge stoping operations above the -200m R.L. Below this level the fault lies in the immediate hangingwall of the C Lens stoping areas where ground conditions may be poor.

The mineralisation in No.1 Orebody (west of 219840E) is discontinuous and further half section drilling will have to be carried out to define the resource in this area prior to mining.

RECOMMENDATIONS

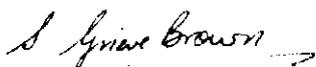
It is recommended that the proposed oreblocking-structural diamond drilling programme be approved.

Priority should be given to the development required to provide sites for B Lens oreblocking in the area east of the Decline Fault.

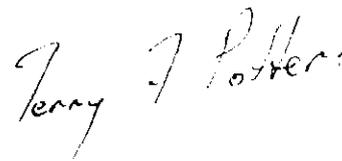
Extension of the M9 (-200m R.L.) Lower Pit Dag access west to 220000E is required to allow oreblocking of the Southern area to be carried out.

Testing of the area east of the Grassy River Fault be treated as a high priority and development of the S10 drive to the proposed drill site be carried out prior to commencement of mining in the Lower Wedge.

Diamond drilling in the Open Cut area be continued to establish the continuity of the ore horizons in the Pit and Southern Areas.



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ACTION SHEET

DOLPHIN MINE
GEOLOGY REVIEW

Main Decline

The main decline has now advanced to the -273m R.L.

In the period under review the main decline advanced 121.3m in banded biotite/pyroxene hornfels and adamellite. Steel setting was required at the adamellite contact, but good ground conditions prevail within the adamellite itself.

B Lens

Approximately 200m of development took place in B Lens marble in the N13 area. Ore production was 1 970 tonnes at 0.29% WO_3 . The ground throughout was competent and only rockbolting was required to maintain the backs. Mineralisation was erratic both in grade and distribution.

Diamond drilling carried out from the -200m drive (S13) has shown that the mineralisation in B Lens occurs in two different ways. There is a narrow stratigraphic horizon at the top of the B Lens marble, the equivalent of the B Lens at Bold Head, and a zone of mineralisation replacing marble adjacent to the Northern Boundary Fault, the equivalent of B Lens East at Bold Head.

It is the discovery of this fault related mineralisation which is responsible for the increased resource in B Lens.

C Lens Pit Area1. -75m R.L.

No further work.

2. Stoping area -119 to -157m R.L.

Access to this stoping area is still the J16 ramp. Stope production for completed lifts has been as follows:

	Upper C Lens		Lower C Lens	
	Tonnes	Grade	Tonnes	Grade
Benching/Undercut, 1st and 2nd Lifts)	24 829	1.52	34 534	0.76
3rd Lift	19 790	0.91	11 620	0.71
4th Lift	19 910	0.90	2 289	0.41
5th Lift	7 668	0.62	7 013	0.57
6th Lift	4 009	0.47	3 733	0.37
7th Lift	5 577	0.60	5 765	0.49
8th Lift	4 658	0.60	6 790	0.47
9th Lift	3 788	0.54	8 034	0.73
10th Lift	3 228	0.71	5 310	0.47

As stated in the last review (Bujtor 1978) this area is structurally more complex than other areas in the Dolphin Mine, with numerous north-west - south-east trending faults being present. These faults have caused localised block failure between the Central and Swan Faults.

The size and grade of the mineralised zone in the upper part of this area is larger than anticipated from the results of the oreblocking diamond drilling. This has necessitated the inclusion of a new regional pillar in the mining plan for this area (P56 pillar).

3. Pit Stope Access (O10 at -195m R.L.)

This access has been developed 131.0m, through biotite/pyroxene hornfels, the Central/Wedge Fault zone and Upper C Lens skarn, during the period under consideration.

A total of 7 210 tonnes at 1.14% WO₃ has been obtained from this stope.

4. Pit Stope Ramp Access (N13)

The N13 (-215m R.L.) Pit Stope Access advanced 224.3m through banded footwall beds, biotite/pyroxene hornfels and B Lens marble. This drive has passed through the Swan and Duck Faults on both legs of its southern loop and has provided valuable structural data in this area of complex faulting.

Total Production amounted to 2 656 tonnes at 0.48% WO₃.

5. Stoping area -218m to -228.5m R.L.

Development of the undercut encountered a larger tonnage of ore than anticipated. This was due to the footwall contact of Lower C Lens being further north than interpreted. The previous interpretation did not allow for the presence of a shallow dipping (25°) north-south fault, the Duck Fault. This Fault being narrow and subparallel to bedding was not recognised in drill core, appearing to be a disturbed bedding plane.

Stope production for completed lifts has been as follows, resource grade in parenthesis:

	Upper C Lens		Lower C Lens	
	Tonnes	Grade % WO ₃	Tonnes	Grade % WO ₃
Undercut	Nil		12 498	0.52 (0.58)
1st Lift	2 612	0.89 (1.15)	16 736	0.63 (0.58)

6. Pit Dag Access (M9 at -200m R.L.)

This drive has been developed 88.7m through biotite hornfels and the Swan Fault. This drive will provide basal access to the Pit Dag ore pod.

C Lens Central Area1. -75 m R.L.

No further work in this area.

2. Access ramp to -116 m R.L. (J15)

This ramp was designed to provide access to the Central stope once access is lost via H15.

Development was completed with 80.3m of driving through quartzites, the No. 3 Fault and banded footwall beds.

3. Stoping Area -114 m to -151 m R.L.

Stoping operations continued in this area with the sixth, seventh and eighth lifts being completed. Mining is currently progressing on the ninth and tenth lift.

The structure remains as outlined in the previous review (Bujtor 1978).

Stope Production for completed lifts has been as follows, resource grade in parenthesis:

	Upper C Lens		Lower C Lens	
	Tonnes	Grade % WO_3	Tonnes	Grade % WO_3
-150 m Undercut	2 283	1.12 (1.81)	16 062	0.80 (0.84)
1st lift	3 285	1.71 (1.81)	11 187	0.78 (0.84)
2nd lift	3 542	1.25 (1.81)	7 164	0.75 (0.84)
3rd lift	6 531	0.90 (1.81)	15 034	0.79 (0.84)
4th lift	6 409	0.92 (1.81)	9 506	0.76 (0.84)
5th lift	5 491	0.91 (1.81)	16 316	0.71 (0.84)
6th lift	5 365	1.21 (1.81)	14 838	0.64 (0.84)
7th lift	4 073	1.22 (1.45)	21 239	0.76 (0.98)
8th lift	9 847	1.31 (1.45)	17 337	0.67 (0.98)

C Lens Wedge Area1. Above -75 m R.L.

No further work.

2. -90 m R.L.

A new access drive is being developed through the Wedge Fault to provide access to the fourteenth lift.

3. Stoping Area -86 m to -130 m R.L.

Stoping operations have continued in this area with the eighth to thirteenth lifts being completed.

A summary of production to date is given below, resource grade in parenthesis.

	Upper C Lens		Lower C Lens	
	Tonnes	Grade % WO_3	Tonnes	Grade % WO_3
-130 m Undercut	39 950	1.19 (1.36)	31 464	0.69 (0.72)
1st lift	26 846	1.01 (1.28)	17 331	0.61 (0.70)
2nd lift	17 594	1.07 (1.28)	15 710	0.68 (0.70)
3rd lift	18 892	1.01 (1.28)	15 112	0.67 (0.70)
4th lift	21 611	1.12 (1.28)	14 748	0.69 (0.70)
5th lift	19 677	0.94 (1.28)	14 787	0.93 (0.70)
6th lift	15 283	1.14 (1.28)	13 005	0.78 (0.70)
7th lift	14 033	1.04 (1.28)	16 694	0.73 (0.70)
8th lift	12 136	1.01 (1.28)	14 605	0.78 (0.70)
9th lift	9 585	1.19 (1.32)	10 085	0.81 (0.71)
10th lift	8 640	0.88 (1.32)	11 191	0.77 (0.71)
11th lift	10 907	1.01 (1.32)	9 772	0.75 (0.71)
12th lift	9 597	1.21 (1.32)	4 809	0.83 (0.71)
13th lift	8 628	0.98 (1.32)	12 942	0.69 (0.71)

Production grades in Upper C have continued to be below the resource grade whereas there has been good correlation in Lower C Lens. The over estimation in Upper C Lens appears to be due to the fact that mineralisation in the hangingwall pyroxene garnet hornfels is not as continuous as indicated from diamond drilling.

4. Access to Mid Wedge Stope (P11 -195m R.L.)

This drive has been developed 69.2m through biotite/pyroxene hornfels, the Wedge Fault, biotite hornfels and lower volcanics. Ground conditions in the biotite hornfels have necessitated setting. It will provide access to the undercut horizon of the Mid Wedge Stope at -200m R.L.

5. Access to Mid Wedge Stope (O13 -194m R.L.)

This drive to gain access to the Mid Wedge area at -180m R.L. advanced 16.8m in banded biotite pyroxene hornfels. The start of this drive has required setting due to bad ground conditions caused by a combination of heavily bedded rock, a minor fault and an aplite dyke.

6. Lower Wedge Stope -200m R.L. to -300m R.L.

Development of this stope has been carried out on three levels:

-200m R.L. The S11 access drive and its associated strike drive and crosscuts were developed 146.7m within Upper and Lower C Lens.

-220m R.L. The R15 access drive was developed 123.3m through banded biotite pyroxene hornfels, lower volcanics, banded footwall beds and Lower C Lens sharn. The strike drive has progressed 27.1m in Lower C Lens skarn.

-240m R.L. The T10 strike drive and associated crosscuts were developed 220.5m within upper and lower C Lens.

In all cases the geology was broadly as anticipated with only minor relocation of the ore contacts being necessitated.

Total production from the Lower Wedge area has been 28 179 tonnes at 0.95% WO₃.

DISCUSSION OF RESULTS

Stratigraphy

The continuation of the diamond drilling programme and the development of mine openings have confirmed the stratigraphy detailed by previous workers, e.g. (Danielson 1976), with minor variation in the footwall sequence.

The granite basement was intersected as expected at -260 m R.L. in the main decline. All stratigraphic units including upper metavolcanics and basal quartzites have now been intersected in mine openings.

Structure/Faulting

The basic structure of the Dolphin mine series is an anticlinal nose plunging south-east at about 30° as described by Danielson (1974, 1975, 1976). This anticline has subsequently been subjected to block faulting. The various blocks remain as defined by Bujtor (1978) with only minor changes due to the reinterpretation of the faulting history.

It is now considered that there are at least three periods of faulting.

The earliest faults are the east-west trending faults such as the No. 3, Central and Swan Faults. These are cut and displaced by the second series of north-west south-east trending faults such as the Wedge, Penguin and Pheasant.

The third set of faults is represented by the Decline Fault, and possibly the Grassy River Fault, although there is insufficient data for a conclusive interpretation to be made in this case.

The position of the Shag and Duck Faults in time is unknown. They appear to be truncated by the Swan and Central Faults but are not in contact with any other set, nor are they known to occur outside of the Pit Area. They are considered to post date at least the earliest period of faulting.

The Duck Fault is located in the Pit area and is a shallow dipping fault striking north-north-west south-south-east and dipping east at between 45° and 25° . This fault has a throw of about 70m west side up and effectively truncates the lower portion of the Pit orebody. (Refer long section 563950N). This fault will meet the Shag Fault in the north-west of the Pit block (at -170m R.L.) but the relationship between these faults is not yet known.

All other faults remain basically as described by Bujtor (1978) except for the Swan Fault where the displacement mentioned in that report has now been shown to be a cross fault of similar age and direction to the Wedge. This fault has been named the Penguin Fault.

With the Wedge Fault now interpreted as later than the Central Fault the Lower Central area is now considered to be fault block bounded by the Wedge, Central and Swan Faults and to have dropped relative to the adjacent Wedge and Pit areas.

Fault mapping in the Open Cut has shown that the No.2 Fault is a continuation of the Teal Fault of the Upper Pit area and that the No.9 Fault is a continuation of the Central Fault. The Swan Fault in the Upper Pit area is seen to continue along the southern batter of the Open Cut, this was unnamed in the Open Cut mining period. South of the Swan Fault there is a system of step faulting parallel to the Swan but with only approximately 10m vertical movement on each fault.

The Central Fault in the underground openings is dipping $60-70^{\circ}$ south whereas within the Open Cut area, the drill hole interpretation has shown a 45° south dip. This shallow dip means that at approximately -190m R.L. the Central merges with the $60-70^{\circ}$ south dipping Swan Fault.

Following the reinterpretation of the Open Cut area and the detailed work within the Dolphin mine, it is now apparent that the whole area should be examined as a single entity. Particular reference should be made to the characteristics of the faulting (e.g. relative ages, relationship with each other, which set carries mineralisation etc.), the changes in the granite contact and the special distribution of skarnification and tungsten mineralisation within C Lens. The outcome of this work would be a better understanding of the orebody which can then be applied as an exploration tool for the processing of the data amassed from the field work carried out on the Island.

Ore Resource

In the period under review the total C Lens Proven and Probable resource has been increased from 5 003 500 tonnes at 1.13% WO₃ to 5 741 000 tonnes at 1.13% WO₃.

During this period C Lens ore mined has been 357 828 tonnes at 0.82% WO₃.

This revised calculation therefore represents an overall increase in resource tonnage of 1 095 328 tonnes over the August 1978 calculation. This is due almost entirely to oreblocking in Lower Wedge and B Lens (east of Decline Fault), and a reassessment and reinterpretation of the Pit block based on data from diamond drilling and mine openings.

The C Lens Possible resource tonnage has been reduced from 345 000 tonnes to 53 000 tonnes, due to transfer of tonnage to the Proven and Probable categories as a result of continued diamond drilling oreblocking.

The B Lens resource has increased from 463 000 tonnes at 0.83% WO₃ to 543 600 tonnes at 0.83% WO₃ due to oreblocking diamond drilling. The resource remains classified as Probable.

B Lens resource defined above the -50m R.L. amounts to 127 000 tonnes at 0.68% WO₃.

The Possible resource in B Lens stands at 71 000 tonnes, previously no possible resource was given for B Lens but diamond drilling has shown a possibility for increased ore within the B Lens marble adjacent to the Northern Boundary Fault.

DIAMOND DRILLING 1979/80

The underground oreblocking programme has continued and a total of 278 holes for 20 792 m have been completed since oreblocking commenced in December 1973.

Figures for the King Island Scheelite, M5 and M10 rigs are included in the above total.

Diamond drilling carried out to date in the current year together with the proposed final figures are detailed below.

	Budget (m)	Drilled to 11/3/79 (m)	Remaining to be drilled 1979/80	Expected Performance on Budget (m)
B Lens	620	498.3	275	+153.3
C Lens	450	263.6	190	+ 3.6
South area	120	48.0	72	-
Open Cut	110	-	-	-110.0
Skew Drilling	100	89.4	40	+ 29.4
Structural	100	77.3	70	+ 47.3
Total	<u>1 500</u>	<u>976.6</u>	<u>757</u>	<u>+123.6</u>

The proposed over-run is due to additional drilling required to test B Lens between the Decline and Grassy River Faults. Definition of this area is required at an early date prior to the commencement of mining in the Lower Wedge open stopes.

DRILLING PROGRAMME 1980/81

The proposed programme for 1980/81 is outlined below together with a costing based on current prices.

	Scheduled Metres	Cost/m \$	Total Cost \$
1. C Lens oreblocking	1 035	43.10	44 608.50
2. B Lens oreblocking	775	43.10	33 402.50
3. Structural	280	43.10	12 068.00
4. Skew Drilling to define Decline Fault zone	200	43.10	8 620.00
5. Exploration east of Grassy River Fault	300	65.00	19 500.00
Total	<u>3 590</u>		<u>118 199.00</u>

This drilling is mainly required for oreblocking of B and C Lenses east of 220380E. Additional metres are required to allow the complex structure occurring in a number of the heavily faulted areas to be understood.

The exploration drilling east of the Grassy River Fault, as defined in underground openings, is designed to test the possibility that a down faulted block of mine series rocks could occur between this point (220380E) and the position of the major fault (220780E) derived from the airborne magnetic survey.

ENGINEERING GEOLOGY

Engineering geology studies continue to be directed towards diamond drilling and mine openings.

All diamond drilling core obtained in the oreblocking programme is logged for its engineering parameters and information is recorded in the drill logs and on Engineering Geology sections.

In mine openings all pillars continue to be photographed. Records are maintained by the Rock Mechanics Engineer.

A structural model of part of the Upper Central stope is currently being made. Should this model prove to be of use in elucidating the structure and allowing areas of difficult ground to be recognised then it will be extended to cover the whole stope and models will be made for each mining block.

Comments made under Engineering Geology (Danielson, 1976) remain applicable.

COMPUTER

All diamond drilling and grab sample assay data are forwarded to the computer group in Sydney on a regular basis.

The computer is now producing block grade estimates at three levels of prediction.

- a. Historic data for the lift just completed.
- b. Final prediction for the lift immediately above the working level.
- c. Preliminary prediction for the lift immediately above that.

Computer block grade predictions in the Wedge and Central areas are approaching an acceptable level of accuracy but appear to be slightly underestimating grades in the Pit area. In the Pit area, block grade predictions are limited by the small number of grab sample assays available.

The computer group is now moving to produce an overall Dolphin ore resource tonnage and grade estimate. Initially the resource will be calculated below the -200 m R.L. and then extend above the 200 m R.L.

The computer group has also estimated the molybdenum resource grades above the -150 m R.L. divided into Wedge Upper (0.046% Mo), Wedge Lower (0.031% Mo), Central (0.025% Mo) and Pit (0.027% Mo). There are no manually calculated grades for comparison.

The computer grade predictions are now being routinely used for mine planning purposes.

NO. 1 OREBODYDISCUSSION OF RESULTS

No. 1 Orebody is defined as all ore west of 219 840E and consists of three areas called the Open Cut, Western Extension and the Wedge Block. No further work has been carried out on the latter two areas and hence the structure and resource figures are taken from Report KI/75/4 by M. J. Danielson.

The Open Cut area was previously interpreted for Open Cut mining and hence extensive detailed reinterpretation was necessary in preparation for underground mining. Additional information was gained from the 1978 diamond drilling programme, relogging of old holes and a better understanding of the mine series structure based on data from the Dolphin underground workings.

The reinterpretation shows that the structure strikes about 290° I.S.G. with dip variations of $15-20^{\circ}$ within the mined-out area steepening to $55-60^{\circ}$ down dip at the eastern end and a general dip of $30-40^{\circ}$ at the western end. All strata dip southwards. The granite contact appears to strike about 315° I.S.G. with a dip of $35-40^{\circ}$ northwards and contains no embayments such as occur in Dolphin.

The interpretation has shown that the east-west faulting of Dolphin continued westward with the introduction of some 'cross' faulting. The Central Fault, named the No. 9 Fault in the Open Cut mining, strikes due west and then veers to 305° I.S.G. where as the Swan, and the minor parallel faults to the south, strike due west to the granite intrusion. Two faults, called the Plover and Curlew, strike 315° I.S.G. (i.e. parallel to granite) and dip 70° southward with a vertical movement component of 10 m. Both of these faults merge into the Central and Swan Faults. At the western end there exists two significant faults, the Albatross and the Kiwi, both dipping northwards at 70° with a vertical movement component of 10-20 m. The Albatross strikes 280° I.S.G. and displaces the Central Fault inferring a younger age. The Kiwi is a short fault between the Central and the granite, it is sub-parallel to the Albatross but its effect on the Central Fault is unknown.

Mineralisation within the mined area was very thick and of high grade whereas down dip it becomes thin discontinuous lenses of lower grade. The interpretation of Lower C Lens presents a distinct problem as the boundary with the banded footwall beds becomes very arbitrary. The skarnification becomes much more patchy towards the west and this is reflected in the mineralisation. There are however some respectable blocks of ore which should be amenable to underground mining.

Areas of complexity occur within the lower volcanics region west of 219700E and the 2-5m (?) thick aplite dyke at 219770E. Both of these are considered to be of little importance with respect to mineralisation. The remaining area of complexity concerns the faulting between 219750E-219800E, where several holes show major brecciation. This has not been included in the reinterpretation. The information is insufficient to detail the fault system but it appears to be striking north-south with a possible steep easterly dip. These fault zones show mineralisation and are considered to be of importance not because of their ore potential but more because they hold another key to the method of mineralisation of the mine series. Mineralisation, was noticed within the Curlew Fault zone 17m below the granite contact and further work is warranted to obtain a better understanding of the orebody.

DIAMOND DRILLING PROGRAMME 1980/81

A programme of 430m of diamond drilling is proposed for No.1 Orebody in the 1980/81 budget. Two holes totalling 180m, are proposed to test the down dip continuity of mineralisation on Lines 9.5 and 12.5. Another two are planned to test the extension of ore horizons on Lines 10 and 13.5.

Budget cost for this drilling is \$52.80 per metre and current prices and hence total planned cost is \$22 704.

Future drilling in the Open Cut area may be divided into three categories:

- a. A hole to be drilled on Line 13.5 to test whether the mineralisation along the granite - C Lens contact (as seen in Line 13) has any strike length. Mineralisation in a similar position at Bold Head has provided the bulk of the tonnage mined from the H59, C Lens West stope. If significant mineralisation is intersected then further work is warranted and this may amount to 600m of drilling.
- b. Half section drilling is warranted on two new lines, 10.5 and 11.5 to test continuity of ore along strike. This will amount to 250m of drilling and should be planned just prior to mining within this area.
- c. There is a need for extra drilling to be carried out on the Western Extension to delineate the ore both down dip and along strike. This is difficult to detail at present as it is dependant on mining method, i.e. Open Cut or underground, which will influence the required density and type of drilling.

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SUMMARY OF DIAMOND DRILLING RESULTS

FOR UNDERGROUND HOLES COMPLETED SINCE OCTOBER 1978

<u>DRILLING SECTIONS</u>	<u>HOLE NO</u>	<u>BEARING</u>	<u>INCLINATION</u>	<u>TOTAL DEPTH (m)</u>	<u>MINERALISATION</u>		<u>REMARKS</u>
219 960	D960/2	360	-72	67.0	Lower C-lens	43-49 m, 6 m @ 0.75% WO ₃	
	D960/3	180	-63	107.0	B-lens(?)	56-59 m, 3 m @ 0.34% WO ₃	
	D960/4	0	-84	69.0	Upper C-lens	38-42 m, 4 m @ 0.73% WO ₃	
					Lower C-lens	45-53 m, 8 m @ 0.40% WO ₃	
	D960/5	359	+65	55.0	Lower C-lens	24-36 m, 12 m @ 0.52%	
220 020	D020/5	0	0	20.0	Lower C-lens	7-8 m, 1 m @ 0.35% WO ₃	
						9-10 m, 1 m @ 0.60% WO ₃	
	D020/6	180	-62	88.6	Upper C-lens	13-22 m, 9 m @ 1.90% WO ₃	
						29-36 m, 7 m @ 0.60% WO ₃	
	D020/7	180	-43	113.3	B-lens	16-20 m, 4 m @ 0.73% WO ₃	
	D020/8	180	-33	141.0	Upper C-lens	84-93 m, 9 m @ 1.62% WO ₃	
	D020/9	180	-84	61.8	C-lens	10-21 m, 11 m @ 1.33% WO ₃	
	D020/10	180	25	118.0	B-lens	22-23 m, 1 m @ 1.46% WO ₃	
						29-33 m, 4 m @ 0.37% WO ₃	
						88-91 m, 3 m @ 0.34% WO ₃	
	D020/11	0	-70	30.0	Upper C-lens	6-10 m, 4 m @ 1.10% WO ₃	
D020/12	0	+28	20.0	Lower C-lens	2-6 m, 4 m @ 0.53% WO ₃		
220 040	D040/12	180	-42	34.58	Lower C-lens	0-2 m, 2 m @ 0.59% WO ₃	
						6-23 m, 17 m @ 1.88% WO ₃	
	D040/13	054	-90	20.0	Lower C-lens/hfb	1-10 m, 9 m @ 0.58% WO ₃	
220 050	D050/1	0	+1	10.7	Lower C-lens	0-9 m, 9 m @ 1.44% WO ₃	
	D050/2	0	-43	21.3	Lower C-lens	0-7 m, 7 m @ 1.34% WO ₃	
hfb						9-11 m, 2 m @ 0.90% WO ₃	

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220 050	D050/3	0	-90	17.3	Lower C-lens	0-13 m, 3 m @ 0.95% WO ₃
	D050/4	0	0	19.7	Lower C-lens	0-9 m, 9 m @ 1.44% WO ₃
220 060	D060/1	155	-90	18.35	No significant mineralisation	
	D060/2	0	0	18.0	B-lens	3-9 m, 6 m @ 0.38% WO ₃
					Lower C-lens	9-18 m, 9 m @ 2.26% WO ₃
	D060/3	0	-45	21.0	Lower C-lens	10-14 m, 4 m @ 0.73% WO ₃
	D060/4	090	0	20.0	No significant mineralisation	
	D060/5	045	0	25.3	Lower C-lens	12-15 m, 3 m @ 1.62% WO ₃
	D060/6			20.1		
220 080	D080/15	0	-67	59.2	Lower C-lens	38-50 m, 12 m @ 0.58% WO ₃
	D080/16	0	-25	62.74	Upper C-lens	39-44 m, 5 m @ 1.84% WO ₃
					Lower C-lens	50-54 m, 4 m @ 2.64% WO ₃
	D080/17	0	-70	54.0	Lower C-lens	22-24 m, 2 m @ 0.34% WO ₃
	D080/18	180	-80	67.6	Upper C-lens	25-29 m, 4 m @ 1.70% WO ₃
					Lower C-lens	49-54 m, 5 m @ 0.82% WO ₃
220 100	D100/1	0	+90	35.0	Lower C-lens	0-8 m, 8 m @ 0.49% WO ₃
						12-17 m, 5 m @ 0.82% WO ₃
					Upper C-lens	20-31 m, 11 m @ 1.54% WO ₃
220 120	D120/21	180	-83	119.6	Upper C-lens	62-64 m, 2 m @ 0.32% WO ₃
						66-67 m, 1 m @ 0.47% WO ₃
						69-70 m, 1 m @ 0.63% WO ₃
					C-lens	72-90 m, 18 m @ 1.83% WO ₃
	D120/22	005	-88	47.8		
	D120/23	180	+45	38.0	No significant mineralisation	
220 140	D140/8	0	-16.5	109.5	Upper C-lens	0-4 m, 4 m @ 3.79% WO ₃
						12-48 m, 36 m @ 1.21% WO ₃
						56-61 m, 5 m @ 1.42% WO ₃
						64-74 m, 10 m @ 1.15% WO ₃
					Lower C-lens	78-95 m, 17 m @ 0.53% WO ₃

Awaiting assay

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220 140	D140/9	195	-85	40.05	Upper C-lens	7-9 m, 2 m @ 0.37% WO ₃ 18-21 m, 3 m @ 1.05% WO ₃
					Lower C-lens	subgrade
	D140/10E	103	+15	21.0	Lower C-lens	7-9 m, 2 m @ 0.58% WO ₃
	D140/11E	103	+32	16.8	Lower C-lens	6-15 m, 9 m @ 0.57% WO ₃
220 160	D160/20E	155	+19	10.8	Not split	
220 180	D180/8	090	+45	103.3	No significant mineralisation	
	D180/9E	105	+50	4.3	Not split	
220 200	D200/26	090	+36	55.6	No significant mineralisation	
	D200/27	0	-14	118.05	Upper C-lens	79-94 m, 15 m @ 1.56% WO ₃
	D200/28	180	-62	148.7	Upper C-lens	39-40 m, 1 m @ 0.36% WO ₃ 41-42 m, 1 m @ 0.35% WO ₃
	D200/24 Ext.					
220 220	D220/10	0	-8	25.9	B-lens	15-18 m, 3 m @ 0.80% WO ₃
	D220/11	204	-90	20.7	B-lens	3-5 m, 2 m @ 1.01% WO ₃
	D220/12	090	+23	42.35	B-lens	0-3 m, 3 m @ 0.38% WO ₃
	D220/13	340	-32	93.0	Upper C-lens	62-68 m, 6 m @ 0.74% WO ₃
	D220/14	340	-51	100.0	B-lens (?)	2-4 m, 2 m @ 0.54% WO ₃
					Upper C-lens	51-58 m, 7 m @ 1.09% WO ₃
					Lower C-lens	67-73 m, 6 m @ 0.74% WO ₃
	D220/15A	0	-15	111.0	Lower C-lens	95-100m, 5 m @ 0.75% WO ₃
	D220/16	0	-32	99.0	Upper C-lens	52-62 m, 10 m @ 0.80% WO ₃
					Lower C-lens	73-76 m, 3 m @ 0.74% WO ₃ 79-83 m, 4 m @ 0.72% WO ₃
	D220/17	0	-52	97.7	C-lens	50-67 m, 17 m @ 1.15% WO ₃
	D220/18	0	-74	90.0	B-lens	1-4 m, 3 m @ 1.83% WO ₃
					Upper C-lens	37-40 m, 3 m @ 1.86% WO ₃ 43-57 m, 14 m @ 0.97% WO ₃
					M/M	59-60 m, 1 m @ 0.46% WO ₃
					Lower C-lens	62-74 m, 12 m @ 0.58% WO ₃

220 220	D220/19E	309	-64	6.3	Not split		Not split
220 240	D240/18	185	-74	40.0	Upper C-lens	3-21 m, 18 m @ 1.86% WO ₃	
	D240/19	0	-70	40.0	Upper C-lens	7-16 m, 9 m @ 1.78% WO ₃	
	D240/20E						
	D240/21E	225	-29	15.0	Not split		
	D240/22E	223	0	15.0	Not split		
220 250	D250/1	43	0	15.0			Awaiting assays
220 260	D260/3	0	-47	77.5	B-lens Lower C-lens	34-35 m, 1 m @ 2.03% WO ₃ 76-77.5m, 1.5m @ 0.91% WO ₃	
220 320	D320/8	180	-38	100.5	Lower C-lens bfb	0-30 m, 30 m @ 0.73% WO ₃ 37-39 m, 2 m @ 0.90% WO ₃	
	D320/99	090	-41	53.0	M/M	24-50 m, 26 m @ 1.21% WO ₃	
	D320/10	0	-47	79.4	C-lens	0-50 m, 50 m @ 1.30% WO ₃	
	D320/11	0	+80	31.0	M/M Upper C-lens	2-6 m, 4 m @ 0.72% WO ₃ 6-29 m, 23 m @ 1.82% WO ₃	
	D320/12	0	+42.5	80.8	Upper C-lens	6-57 m, 51 m @ 1.46% WO ₃ 63-67 m, 4 m @ 0.73% WO ₃	
	D320/13	090	0	35.0	Not split		
	D320/4	180	+51	61.0	M/M Upper C-lens	3-6 m, 3 m @ 0.89% WO ₃ 6-37 m, 31 m @ 1.49% WO ₃	
	D320/15	0	-45	50.0	Lower C-lens	19-34 m, 15 m @ 1.46% WO ₃ 38-41 m, 3 m @ 0.52% WO ₃	
	D320/16	180	-68	86.0	B-lens (?) Lower C-lens B-lens (?)	24-28 m, 4 m @ 1.16% WO ₃ 49-52 m, 3 m @ 1.11% WO ₃ 55-57 m, 2 m @ 0.71% WO ₃	
	D320/17	0	-15	53.9	Lower C-lens bfb	0-28 m, 28 m @ 0.98% WO ₃ 31-34 m, 3 m @ 0.72% WO ₃	
	D320/18	180	-71	46.7	Upper C-lens Lower C-lens bfb	1-9 m, 8 m @ 1.44% WO ₃ 13-37 m, 24 m @ 1.66% WO ₃ 41-45 m, 4 m @ 0.55% WO ₃	

220 320	D320/19	090	-90	73.6	B-lens	38-42 m, 4 m @ 0.60% WO ₃
	D320/20	0	-14	50.0	Upper C-lens Lower C-lens	22-27 m, 5 m @ 0.82% WO ₃ 28-42 m, 14 m @ 1.48% WO ₃ 45-50 m, 5 m @ 0.66% WO ₃
	D320/21	180	-50	116.7	B-lens	58-60 m, 2 m @ 0.74% WO ₃ 64-72 m, 8 m @ 0.84% WO ₃
220 340	D340/3	090	-10	57.0	Upper C-lens	0-12 m, 12 m @ 2.66% WO ₃
	D340/4	180	-85	64.0	Upper C-lens Lower C-lens	16-37 m, 21 m @ 1.39% WO ₃ 43-57 m, 14 m @ 1.28% WO ₃
	D340/5	180	-61.5	95.0	Upper C-lens (C-lens) Lower C-lens	16-27 m, 11 m @ 1.11% WO ₃ 27-36 m, 9 m @ 1.37% WO ₃ 41-60 m, 19 m @ 1.14% WO ₃
	D340/6	010	-90	52.6	Upper C-lens Lower C-lens	0-14 m, 14 m @ 1.82% WO ₃ 18-29 m, 11 m @ 0.97% WO ₃
	D340/7	0	-52	40.0	Upper C-lens M/M Lower C-lens bfb	0-18 m, 18 m @ 1.59% WO ₃ 18-23 m, 5 m @ 1.51% WO ₃ 23-34 m, 11 m @ 0.89% WO ₃ 34-40 m, 6 m @ 0.42% WO ₃
	D340/8	180	-45	78.0	Upper C-lens M/M Lower C-lens bfb	0-26 m, 26 m @ 2.01% WO ₃ 26-30 m, 4 m @ 1.28% WO ₃ 30-59 m, 29 m @ 1.98% WO ₃ 65-67 m, 2 m @ 1.43% WO ₃
	D340/9	180	0	57.25	Upper C-lens	0-50 m, 50 m @ 1.82% WO ₃
	D340/10	180	-37	95.7	Upper C-lens	30-84 m, 54 m @ 1.63% WO ₃
	D340/11	180	+45	31.0	Upper C-lens	0-4 m, 4 m @ 1.31% WO ₃ 4-29 m, 25 m @ 0.72% WO ₃
	D340/12	0	+30	39.0	Upper C-lens	0-23 m, 23 m @ 1.93% WO ₃ 23-32 m, 9 m @ 2.58% WO ₃
	D340/13	180	+20	45.5	Upper C-lens	0-17 m, 17 m @ 1.39% WO ₃ 20-35 m, 15 m @ 0.99% WO ₃
	D340/14	0	-25	54.1	Upper C-lens C-lens	32-36 m, 3 m @ 0.94% WO ₃ 39-50 m, 11 m @ 1.31% WO ₃

220 340	D340/15	090	-78	72.0	Lower C-lens	33-57 m, 24 m @ 1.07% WO ₃	
	D340/16	028.5	-60	77.6	Lower C-lens	30-60 m, 30 m @ 1.23% WO ₃	
	D340/17	018	-31.5	58.4	Upper C-lens	17-53.4m, 36.4m @ 1.34% WO ₃	
	D340/18	162	-67.5	65.4	B-lens	37-48 m, 11 m @ 1.81% WO ₃	
	D340/19	169	-53	111.0	B-lens	71-78 m, 7 m @ 0.90% WO ₃	
	D340/20	201.5	+90	39.5	B-lens	28-32 m, 4 m @ 0.45% WO ₃	
	D340/21	180	+24	54.0	B-lens	39-43 m, 4 m @ 0.71% WO ₃	
	D340/22	0	+45	66.0	Lower C-lens	40-48 m, 8 m @ 0.48% WO ₃ 52-61 m, 9 m @ 0.51% WO ₃ 64-75 m, 11 m @ 1.95% WO ₃	
	D340/23	0	+24	40.1			Awaiting assays
220 360	D360/3	090	-70	53.1	B-lens	9-19 m, 10 m @ 0.67% WO ₃	
	D360/4	090	0	25.7	B-lens (?)	3-4 m, 1 m @ 1.81% WO ₃ 6-7 m, 1 m @ 0.49% WO ₃	
	D360/5	0	+2	50.0	B-lens (?)	0-17 m, 17 m @ 0.65% WO ₃ 24-25 m, 1 m @ 0.55% WO ₃ 27-36 m, 9 m @ 1.56% WO ₃ 40-41 m, 1 m @ 0.48% WO ₃ 43-48 m, 5 m @ 0.46% WO ₃	
	D360/6	003	-45	61.3			Awaiting assays
D360/7	D360/7	0	+90	18.5			Awaiting assays
	D360/8	3	-45	61.3	(?)		Awaiting assays
220 360	D360/9	0	+45	42.0	B-lens	0-6 m, 6 m @ 0.48% WO ₃ 12-15 m, 3 m @ 0.94% WO ₃ 20-21 m, 1 m @ 0.46% WO ₃	
	D360/10	090	-9	42.3			To be logged
	D360/11	090	-60	30			To be logged

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SUMMARY OF DIAMOND DRILLING RESULTS

FOR OPEN CUT HOLES COMPLETED SINCE OCTOBER 1978

<u>DRILLING SECTIONS</u>	<u>HOLE NO</u>	<u>BEARING</u>	<u>INCLINATION</u>	<u>TOTAL DEPTH (m)</u>	<u>MINERALISATION</u>			<u>REMARKS</u>
OPEN CUT								
9.5	462A	019.5	-69	58.7	Upper C-lens	27-31 m, 4m @ 1.07% WO ₃		
					Lower C-lens	subgrade		
					Mineralised bfb	47-51 m, 4 m @ 0.50% WO ₃		
9.5	463	203	-81	98.5	Upper C-lens	subgrade		
					Lower C-lens	subgrade		
					bfb	62-67 m, 5 m @ 0.57% WO ₃		
						71-74 m, 3 m @ 0.65% WO ₃		
						77-80 m, 3 m @ 1.55% WO ₃		
9.	464	197	-90	95.0	B-lens	subgrade		
					Upper C-lens	42-51 m, 9 m @ 0.34% WO ₃		
					Lower C-lens	74-86 m, 12 m @ 0.42% WO ₃		
8.5	465	019.5	-65	47.5	Upper C-lens	15-17 m, 2 m @ 0.80% WO ₃		
					Lower C-lens	20-24 m, 4 m @ 0.42% WO ₃		
8.5	466	019.5	-80	61.5	Upper C-lens	subgrade		
					Lower C-lens	30-37 m, 7 m @ 0.45% WO ₃		
					bfb	51-56 m, 5 m @ 1.86% WO ₃		
8.5	467	199.5	-80	71.5	Upper C-lens	25-31 m, 6 m @ 0.70% WO ₃		
					Lower C-lens	subgrade		
219 960E	468	028	-87	255	B-lens	subgrade		
					Upper C-lens	183-192m, 9 m @ 0.70% WO ₃		
					Lower C-lens	subgrade		
219 920E	469	0	-64	202.7	B-lens	subgrade		
					C-lens (?)	161-163m, 2 m @ 0.62% WO ₃		
219 960E	470	180	-79	217.0	No significant mineralisation			No C-lens or B-lens intersection

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219 920E	471	290	-90	209.7	bfb	165-171m, 6 m @ 0.54% WO ₃
9.5	472	009	-85	98.5	Lower C-lens	53-55 m, 2 m @ 0.51% WO ₃ 59-61 m, 2 m @ 0.51% WO ₃ 64-75 m, 11 m @ 0.67% WO ₃
8.5	473	199.5	-90	104.0	Upper C-lens	42-49 m, 7 m @ 0.44% WO ₃ 58-61 m, 3 m @ 0.42% WO ₃ 66-77 m, 11 m @ 0.80% WO ₃
3.5	474	327	-75.5	110.5	No significant mineralisation	
10	475	227	-88	98.0	Upper C-lens	32-36 m, 4 m @ 0.76% WO ₃
					Lower C-lens	51-58 m, 7 m @ 0.46% WO ₃
					bfb	69-80 m, 11 m @ 0.63% WO ₃
10	476	209	-71	113.5	Upper C-lens	43-50 m, 7 m @ 0.91% WO ₃ 52-59 m, 7 m @ 0.64% WO ₃
219 920E	477	0	-78.5	201.0	B-lens	142-145m, 3 m @ 0.35% WO ₃
					Lower C-lens	172-178m, 6 m @ 0.36% WO ₃
9.5	478	010.5	-85	139.3	Upper C-lens	102-112m, 10 m @ 0.40% WO ₃
5	479	019.5	-57	133.2	No significant mineralisation	
8.5	480	199.5	-73	109.0	No significant mineralisation	

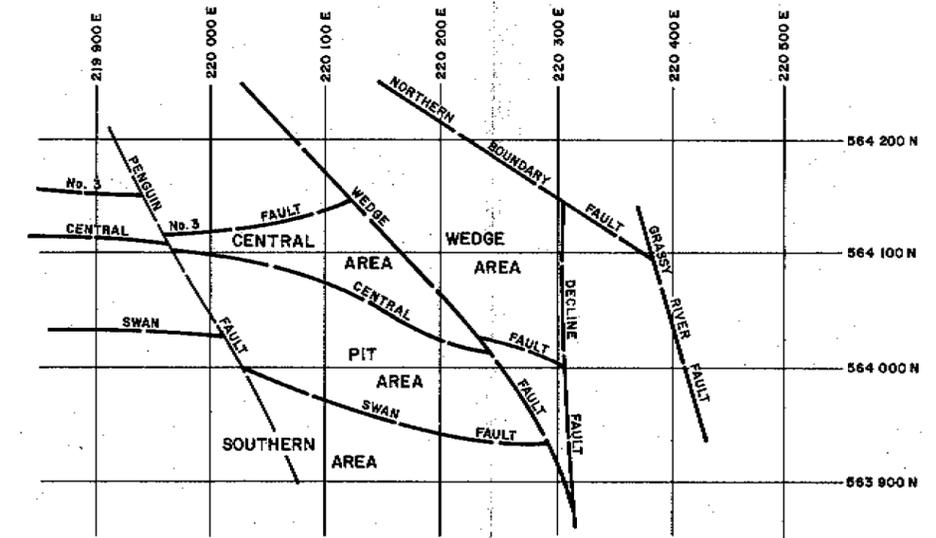
ORE RESOURCE AND MINING RESERVE TABLE
12-02-80

out for S.E. report

say 125000 for S.E. report

	WEDGE AREA		CENTRAL AREA		PIT AREA		SOUTHERN AREA		TOTAL		CUMULATIVE TOTAL	
	GEOLOGICAL RESOURCE	MINING RESERVE										
	11,900 1-10	—	11,100 1-65	—	3,300 1-90	—	—	—	26,300 1-43	—	26,300 1-43	—
	—	—	—	—	254,800 0-77	—	—	—	254,800 0-77	—	254,800 0-77	—
-75m.R.L.	—	8,500 0-95	—	8,800 1-49	10,000	187,200 *0-69	—	—	10,000	204,500 0-74	10,000	204,500 0-74
	69,200 0-98	—	71,600 1-57	44,100 1-37	4,200 1-36	3,700 1-09	—	—	145,000 1-28	47,800 1-35	171,300 1-31	47,800 1-35
	—	—	—	—	152,800 0-62	77,500 0-50	—	—	152,800 0-62	77,500 0-50	407,600 0-71	77,500 0-50
-100m.R.L.	—	90,500 1-06	—	15,400 1-62	—	55,200 *0-62	—	—	—	161,100 0-96	10,000	365,600 0-84
	MINED OUT	—	196,800 1-19	133,900 1-05	50,700 0-88	44,700 0-70	—	—	247,500 1-13	178,600 0-96	418,800 1-20	226,400 1-04
	—	—	—	—	15,500 0-74	12,300 0-59	—	—	15,500 0-74	12,300 0-59	423,100 0-71	89,900 0-51
-125m.R.L.	—	10,800 1-23	—	26,000 1-39	—	—	—	—	—	36,800 1-34	10,000	402,400 0-88
	474,000 1-02	260,100 0-88	21,500 1-59	14,900 1-38	MINED OUT	—	—	—	495,500 1-04	275,000 0-91	914,300 1-11	501,400 0-97
	—	—	—	—	—	—	—	—	—	—	423,100 0-71	89,900 0-51
-150m.R.L.	—	145,200 1-11	—	14,900 1-36	—	4,200 0-90	—	—	—	164,300 1-13	10,000	566,700 0-95
	1,096,600 1-25	865,100 1-08	113,900 1-38	70,100 1-20	602,000 1-11	399,000 0-97	—	—	1,812,500 1-21	1,334,200 1-05	2,726,800 1-18	1,835,600 1-03
	—	—	34,800 1-60	24,600 1-39	110,400 1-18	78,600 1-03	63,000 0-53	47,900 0-48	208,200 1-05	151,100 0-91	631,300 0-83	240,900 0-76
-200m.R.L.	—	2,900 1-62	7,000	24,500 1-38	—	97,600 1-15	5,000	—	12,000	125,000 1-21	22,000	691,700 1-00
	1,178,900 1-37	984,700 1-16	40,000 0-96	30,500 0-86	255,300 0-78	166,400 0-68	228,000 1-08	192,600 0-97	1,702,200 1-23	1,374,200 1-07	4,429,000 1-20	3,209,800 1-05
	118,600 1-40	110,500 1-19	—	—	—	—	19,000 1-37	14,500 0-65	137,600 1-40	125,000 1-13	768,900 0-93	365,900 0-89
	—	202,700 1-42	20,000	—	—	18,200 1-10	16,000	—	36,000	220,900 1-39	58,000	912,600 1-09
TOTALS	2,830,600 1-25	2,109,900 1-09	454,900 1-31	293,500 1-13	915,500 1-01	613,800 0-87	228,000 1-08	192,600 0-97		PROVEN:	4,429,000 1-20	3,209,800 1-05
	118,600 1-40	110,500 1-19	34,800 1-60	24,600 1-39	533,500 0-81	168,400 0-75	82,000 0-72	62,400 0-52		PROBABLE:	768,900 0-93	365,900 0-89
	—	460,600 1-24	27,000	89,600 1-43	10,000	362,400 0-83	21,000	—		POSSIBLE:	58,000	912,600 1-09

N.B. 8,500 0-95.....PROVEN RESOURCE IN MAJOR PILLARS EXCLUDING POST PILLARS
187,200 *0-69.....PROBABLE RESOURCE IN MAJOR PILLARS EXCLUDING POST PILLARS



DOLPHIN OREBODY SUMMARY

ORE RESOURCE:

PROVEN ORE RESOURCE.....C LENS.....	4,429,000 TONNES at 1-20 %WO ₃
PROBABLE ORE RESOURCE.....C LENS.....	768,900 TONNES at 0-93 %WO ₃
B LENS.....	543,600 TONNES at 0-83 %WO ₃
TOTAL PROVEN PLUS PROBABLE ORE RESOURCE.....	5,741,500 TONNES at 1-13 %WO₃
POSSIBLE ORE RESOURCE.....C LENS.....	58,000 TONNES
B LENS.....	71,000 TONNES
TOTAL POSSIBLE ORE RESOURCE.....	129,000 TONNES

MINING RESERVE:

PROVEN RESERVES AVAILABLE TO MINING.....C LENS.....	3,209,800 TONNES at 1-05 %WO ₃
PROBABLE RESERVES AVAILABLE TO MINING.....C LENS.....	365,900 TONNES at 0-89 %WO ₃
B LENS.....	258,600 TONNES at 0-79 %WO ₃
TOTAL PROVEN PLUS PROBABLE RESERVES.....	3,834,300 TONNES at 1-02 %WO₃
TOTAL PROVEN PLUS PROBABLE RESOURCE IN MAJOR PILLARS EXCLUDING POST PILLARS.....	975,000 TONNES at 1-06 %WO₃

WEDGE 460,600 TONNES at 1-24 %WO₃
CENTRAL 89,600 TONNES at 1-43 %WO₃
PIT 362,400 TONNES at 0-83 %WO₃
B LENS 62,400 TONNES at 0-61 %WO₃

'B' LENS ORE RESOURCE AND MINING RESERVE
(PROBABLE RESOURCE and RESERVE)

out for S.E. Report

	110,000 0-63	55,400 0-57	13,600 1-06	7,000 0-95	—	—	—	—	123,600 0-68	62,400 0-61	123,600 0-68	62,400 0-61
-50m.R.L.	290,000 0-86	178,600 0-77	96,600 0-96	59,500 0-96	9,000 0-94	5,500 0-85	24,400 0-80	15,000 0-72	420,000 0-88	258,600 0-79	543,600 0-83	258,600 0-79
	71,000 0-77	—	—	—	—	—	—	—	71,000	—	71,000	—

160,000* TONNES at 0-86% EAST OF DECLINE FAULT ZONE
51,000** TONNES EAST OF DECLINE FAULT ZONE

METHOD OF GRADE CALCULATION:
Modified polygonal method of weighted arithmetic means.

METHOD OF TONNES CALCULATION:
Truncated cone formula, using geological floor plans in the Wedge Area and all other areas below -150m.R.L.

'C' LENS EXTRACTION

	WEDGE		CENTRAL		PIT		SOUTHERN		TOTAL		CUMULATIVE TOTAL	
	11,756	0.74	—	—	32,207	0.53	—	—	43,963	0.59	43,963	0.59
	53,521	1.11	16,863	1.17	3,604	0.85	—	—	73,988	1.11	73,988	1.11
	65,277	1.04	16,863	1.17	35,811	0.56	—	—	117,951	0.92	117,951	0.92
-75mR.L.	45,437	0.76	—	—	10,280	0.48	—	—	55,717	0.71	99,680	0.66
	47,072	1.01	9,097	1.22	—	—	—	—	56,169	1.04	130,157	1.08
	92,509	0.89	9,097	1.22	10,280	0.48	—	—	111,886	0.88	229,837	0.90
-100mR.L.	156,866	0.72	41,106	0.72	23,624	0.57	—	—	221,506	0.70	321,186	0.69
	191,522	1.07	13,920	1.28	11,674	0.61	—	—	217,116	1.06	347,273	1.07
	348,388	0.91	54,936	0.86	35,298	0.58	—	—	438,622	0.88	668,459	0.89
-125mR.L.	4,505	0.61	103,254	0.75	62,931	0.64	—	—	170,690	0.71	491,876	0.70
	13,665	1.14	30,624	1.09	92,393	0.99	—	—	136,682	1.03	483,955	1.06
	18,170	1.01	133,878	0.83	155,324	0.85	—	—	307,372	0.85	975,831	0.88
-150mR.L.	512	0.41	4,169	0.55	24,463	0.66	—	—	29,144	0.64	521,020	0.70
	5,761	1.62	—	—	1,981	1.58	—	—	7,742	1.61	491,697	1.07
	6,273	1.52	4,169	0.55	26,444	0.73	—	—	36,886	0.84	1,012,717	0.88
-200mR.L.	19,269	0.72	—	—	30,260	0.59	—	—	49,529	0.64	570,549	0.69
	8,910	1.45	—	—	2,612	0.89	—	—	11,522	1.32	503,219	1.08
	28,179	0.95	—	—	32,872	0.61	—	—	61,051	0.77	1,073,768	0.87
TOTAL	238,345	0.73	148,439	0.74	183,765	0.60	—	—	LOWER 'C':	570,549	0.69	
	320,451	1.09	70,504	1.16	112,264	0.95	—	—	UPPER 'C':	503,219	1.07	
	558,796	0.94	218,943	0.88	296,029	0.73	—	—	TOTAL:	1,073,768	0.87	

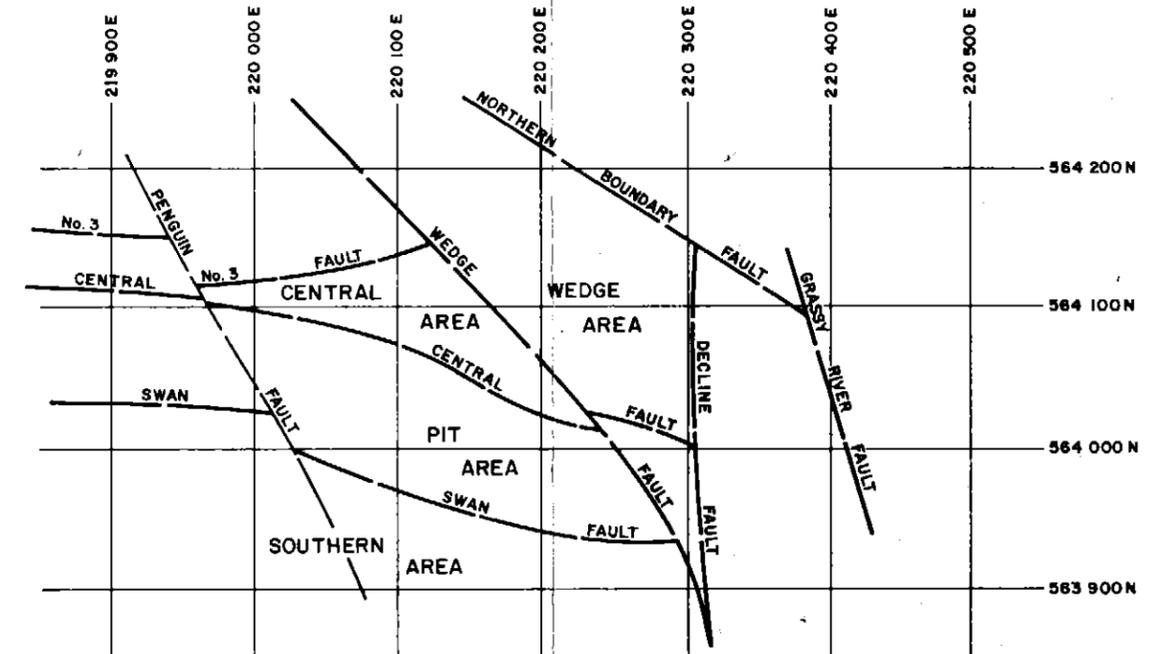
'B' LENS EXTRACTION

-50mR.L.	—	—	—	—	—	—	—	—	—	—	—	—
	8,703	0.41	3,022	0.47	1,149	0.32	2,779	0.28	15,653	0.39	15,653	0.39

(Figures adjusted to mill weightometer)

KING ISLAND SCHEELITE
UNDERGROUND TECHNICAL SERVICES

EXTRACTION TABLE
12-02-80



DOLPHIN EXTRACTION SUMMARY

ORE MINED: C LENS	
LOWER C	570,549 TONNES at 0.69 %WO ₃
UPPER C	503,219 TONNES at 1.07 %WO ₃
TOTAL C LENS.....	1,073,768 TONNES at 0.87 %WO₃
ORE MINED: B LENS.....	
	15,653 TONNES at 0.39 %WO ₃
TOTAL ORE MINED:.....	1,089,421 TONNES at 0.86 %WO₃

ISG REFER REPORT 70-0676

DOLPHIN OREBODY

GEOLOGICAL PLANS and SECTIONS

SCALE 1:1000

GEOLOGICAL CROSS-SECTION

" "
" "
" "
" "
" "
" "
" "
" "
" "
" "

219 840 E
219 880 E
219 920 E
219 960 E
220 000 E
220 040 E
220 080 E
220 120 E
220 160 E
220 200 E
220 240 E
220 280 E
220 320 E
220 360 E

GEOLOGICAL LONG SECTION

" "
" "
" "

563 900 N
564 000 N
564 100 N
564 200 N

GEOLOGICAL LEVEL PLANS

" "
" "
" "
" "
" "
" "
" "
" "

- 50 m R.L. E
- 50 m R.L. M
- 50 m R.L. W
- 100 m R.L. E
- 100 m R.L. M
- 150 m R.L. E
- 150 m R.L. M
- 200 m R.L. E
- 250 m R.L. E
- 300 m R.L. E

**RESTRICTED
FILE**

93-3452
Vol 2 of 2

To accompany Report:

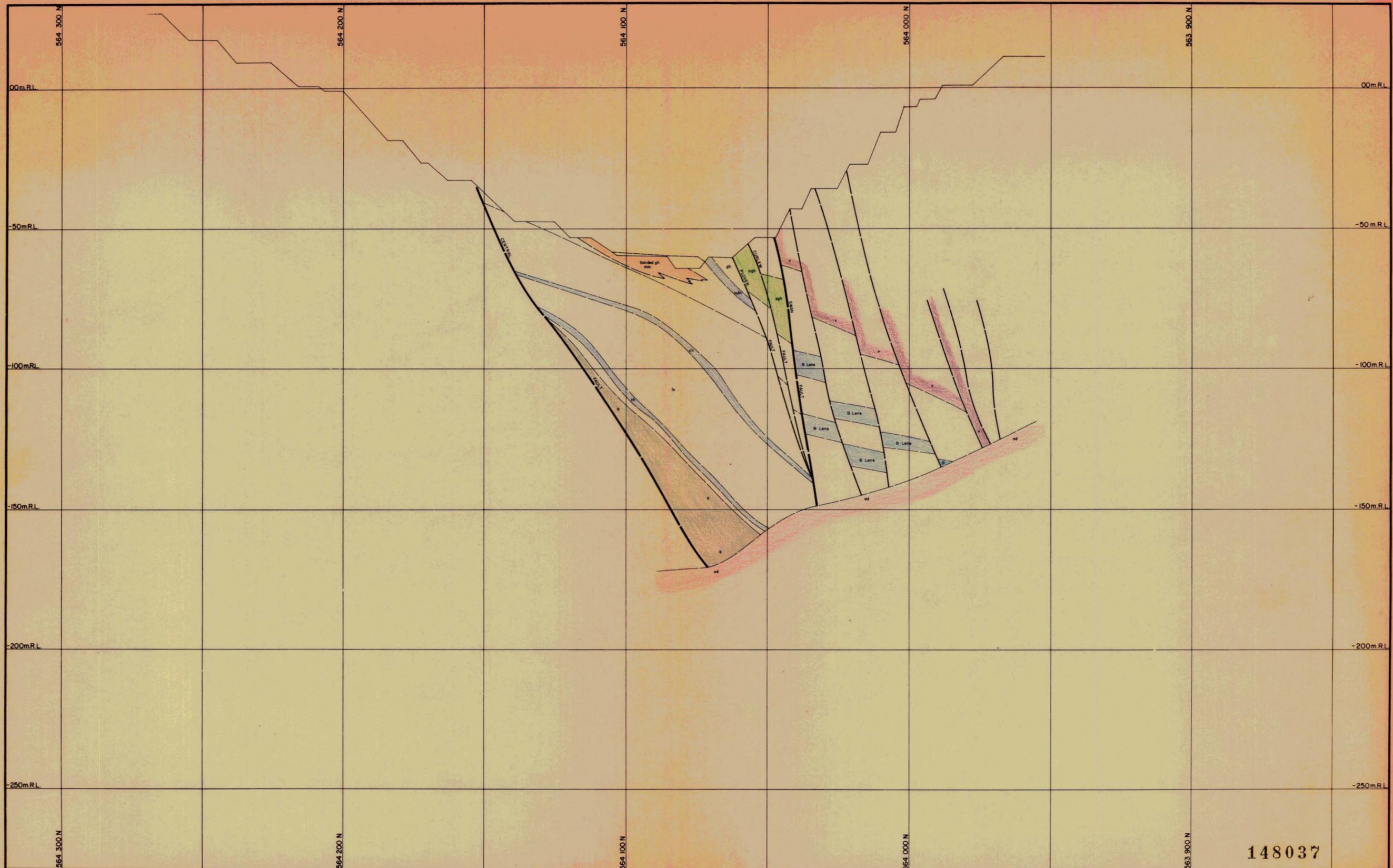
"GEOLOGICAL REVIEW - DOLPHIN and No. 1 OREBODIES, MARCH 1980"

Brown, S.G. & Potter, T.F. 1980. Geology review - Dolphin Orebody / Open Cut. Geoparko

ISG COORDINATES
REFER REPORT 70-0676

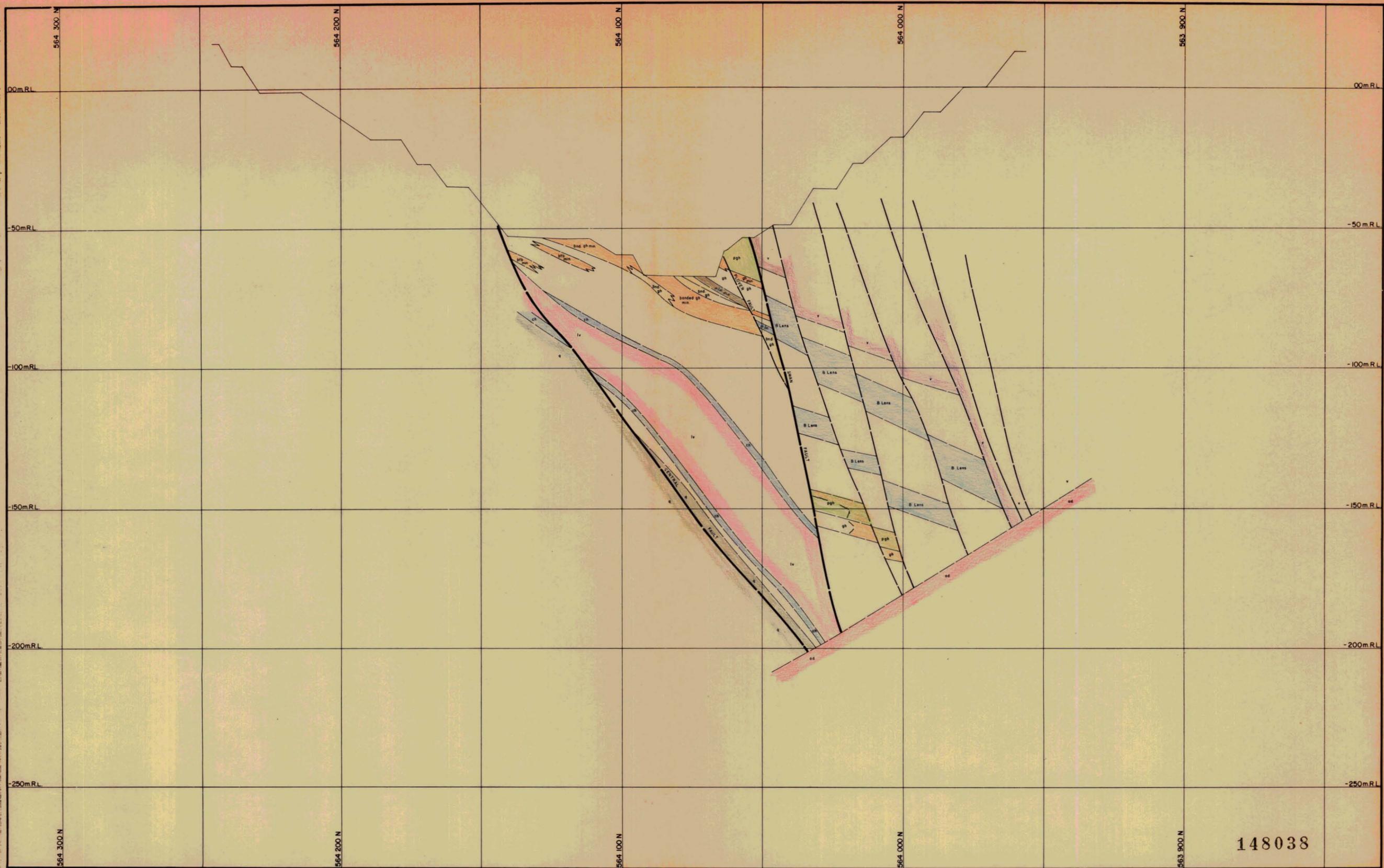
148/2

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148037

Legend: <ul style="list-style-type: none"> Upper metavolcanics Banded hornfels Marble Biotite hornfels Pyroxene garnet hornfels Garnet hornfels 		<ul style="list-style-type: none"> Banded footwall beds Biotite pyroxene hornfels Lower metavolcanics Quartzite Apatite 		<ul style="list-style-type: none"> Strike and dip Joint, inclined Joint, vertical Fault Degree of uncertainty in Fault position Direction of bedding with respect to core axis 		Legend: RQD - Rock Quality Designator J/M - Joints per Metre of recovered core RQD % >90 - Maximum or no support 60-90 - Intermediate support, rockbolts and one shortwall application <60 - Maximum support (after E. Miller, March, 1972)		ISG REFER REPORT 70-0676 SCALE 1:300 No KG2-	
? m/m marble marker?						DATE: / / GEOLOGIST: TFP DRAWN: R.F. CHECKED:		DOLPHIN MINE GEOLOGICAL CROSS-SECTION 219 840 E	

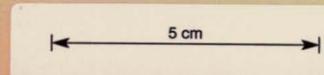


148038

Legend:

Upper metavolcanics	Banded hornfels beds	Strike and dip
Banded hornfels	Biotite pyroxene hornfels	Joint, inclined
Marble	Lower metavolcanics	Joint, vertical
Biotite hornfels	Quartzite	Fault
Pyroxene garnet hornfels	Aplite	Degree of uncertainty in fault position
Garnet hornfels		Direction of bedding with respect to core axis

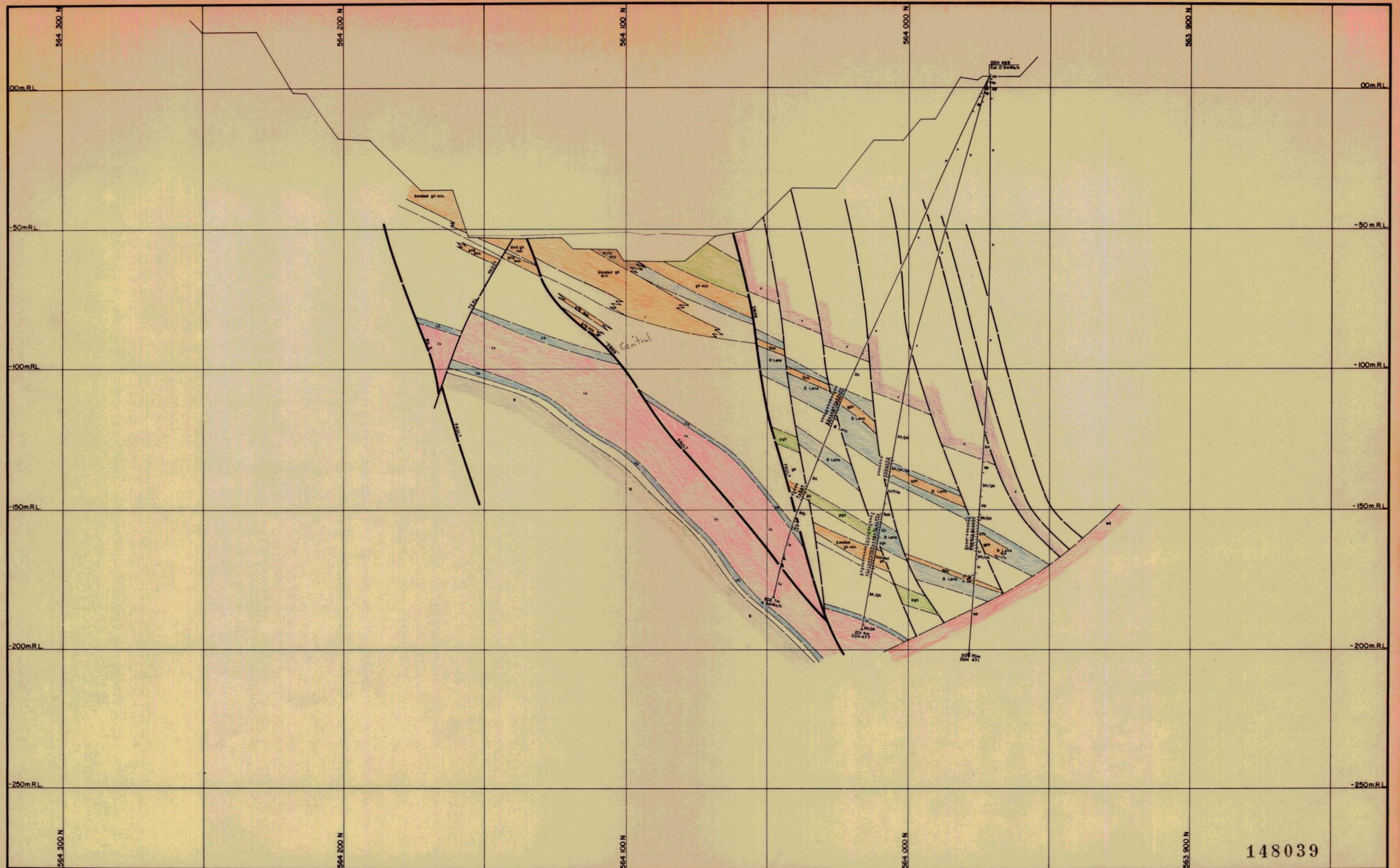
RQD Rock Quality Designator
 J/M Joints per Metre of recovered core
 RQD %
 >90 Maximum or no support
 60-90 Intermediate support, rockbolts and one shotcrete application
 <60 Maximum support
 (after E. Miller, March, 1972)



ISG REFER REPORT 70-0676

DATE
GEOLOGIST TFP
DRAWN M+ES
CHECKED

KING ISLAND SCHEELITE
 No. KG2-
DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 219 880 E



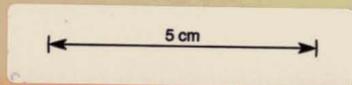
148039

- Legend:**
- Upper metavolcanics
 - Banded hornfels
 - Marble
 - Biotite hornfels
 - Pyroxene garnet hor. mts
 - Garnet hornfels
 - Banded hornfels beds
 - Biotite pyroxene hornfels
 - Lower metavolcanics
 - Quartzite
 - Aplite

- 60 Strike and dip
- 35 Joint, inclined
- Joint, vertical
- Fault
- Degree of uncertainty in fault position
- Direction of bedding with respect to core axis

RQD Rock Quality Designator
 J/M Joints per Metre of recovered core

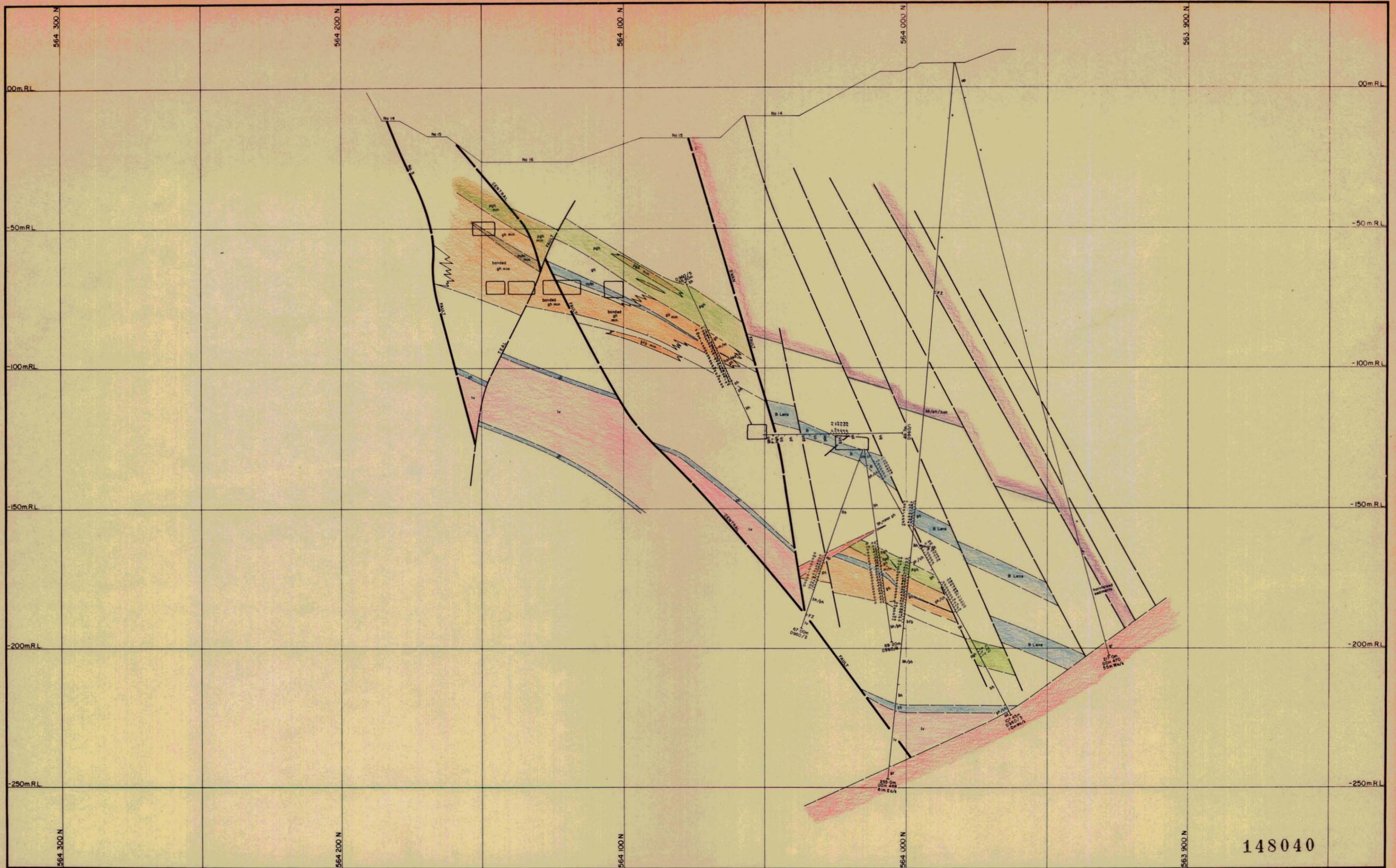
RQD %
 >90 Minimum or no support
 60-90 Intermediate support, rockbolts and one shoring application
 <60 Maximum support (after E. Miller, March, 1972)



ISG REFER REPORT 70-0676

DATE
 GEOLOGIST TFP
 DRAWN BY
 CHECKED

KING ISLAND SCHEELITE
 No. KG2-
 DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 219 920 E



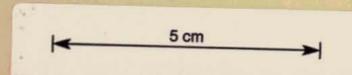
148040

Legend:

- | | | |
|--------------------------|---------------------------|--|
| Upper metacalcans | Banded footwall beds | Strike and dip |
| Banded hornfels | Biotite pyroxene hornfels | Joint, inclined |
| Marble | Lower metacalcans | Joint, vertical |
| Siliceous hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | Apatite | Degree of uncertainty in fault position |
| Garnet hornfels | | Direction of bedding with respect to core axis |

RQD Rock Quality Designator
 J/M Joints per Metre of recovered core

RQD %
 >90 Minimum or no support
 60-90 Intermediate support, rockbolts and one struts application
 <60 Maximum support
 (after E. Miller, March, 1972)



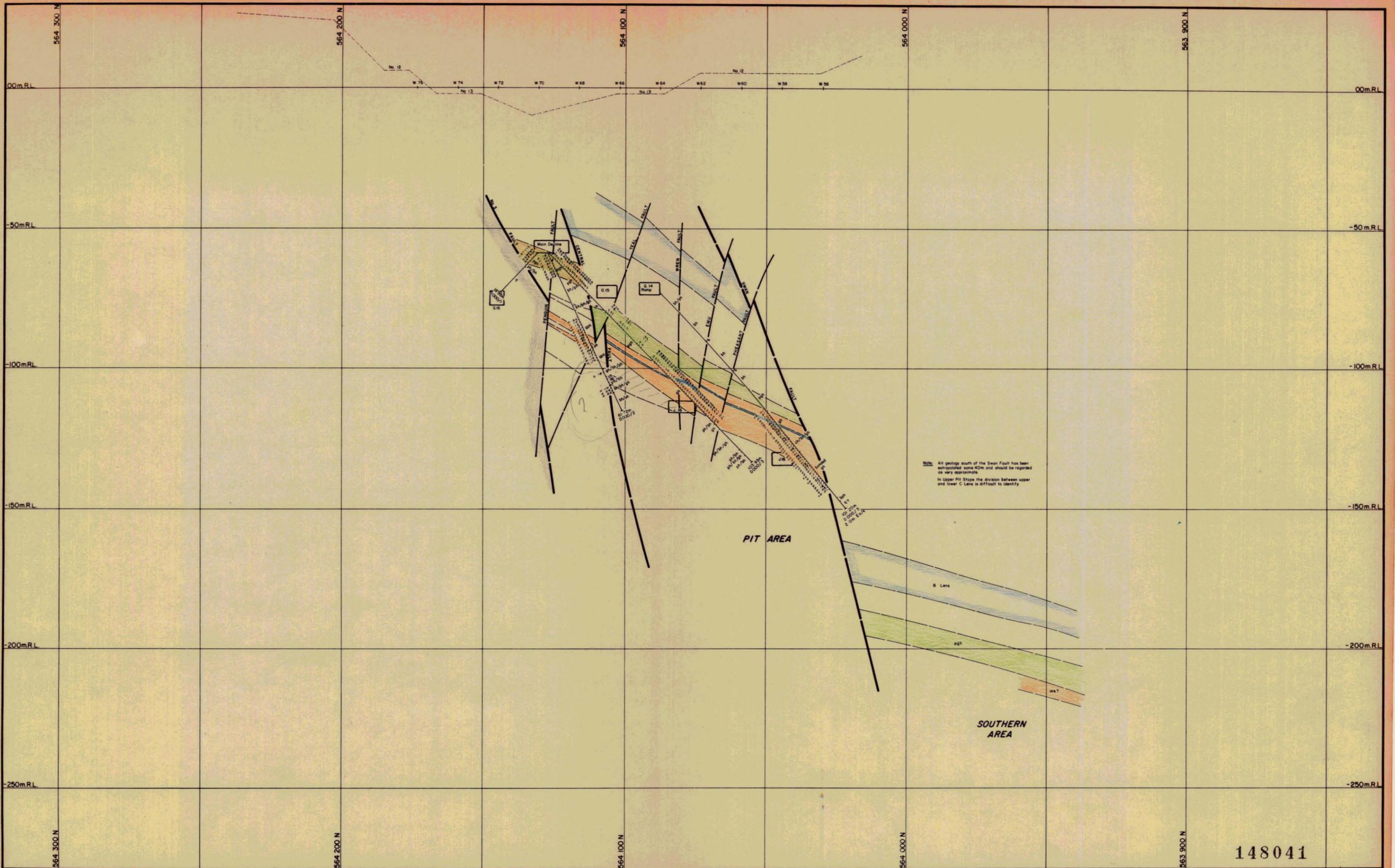
ISG REFER REPORT 70-0676

DATE
GEOLOGIST TFP
DRAWN BY
CHECKED

KING ISLAND SCHEELITE

No. KG2-

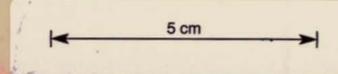
DOLPHIN MINE
GEOLOGICAL CROSS-SECTION
219 960 E



148041

Legend:	
Upper metavolcanics	Banded talchell beds
Banded hornfels	Biotite syenite hornfels
Marble	Lower metavolcanics
Biotite hornfels	Quartzite
Pyroxene garnet hornfels	Aplite
Garnet hornfels	

Strike and dip	RQD Rock Quality Designator	RQD 100%
Joint, inclined	J/M Joints per Metre of recovered core	75-90 Minimum or no support
Joint, vertical		50-75 Intermediate support; rockbolts and one shotcrete application
Fault		25-50 Maximum support
Degree of uncertainty in Fault position		(after E. Miller, March, 1972)
Direction of bedding with respect to core axis		



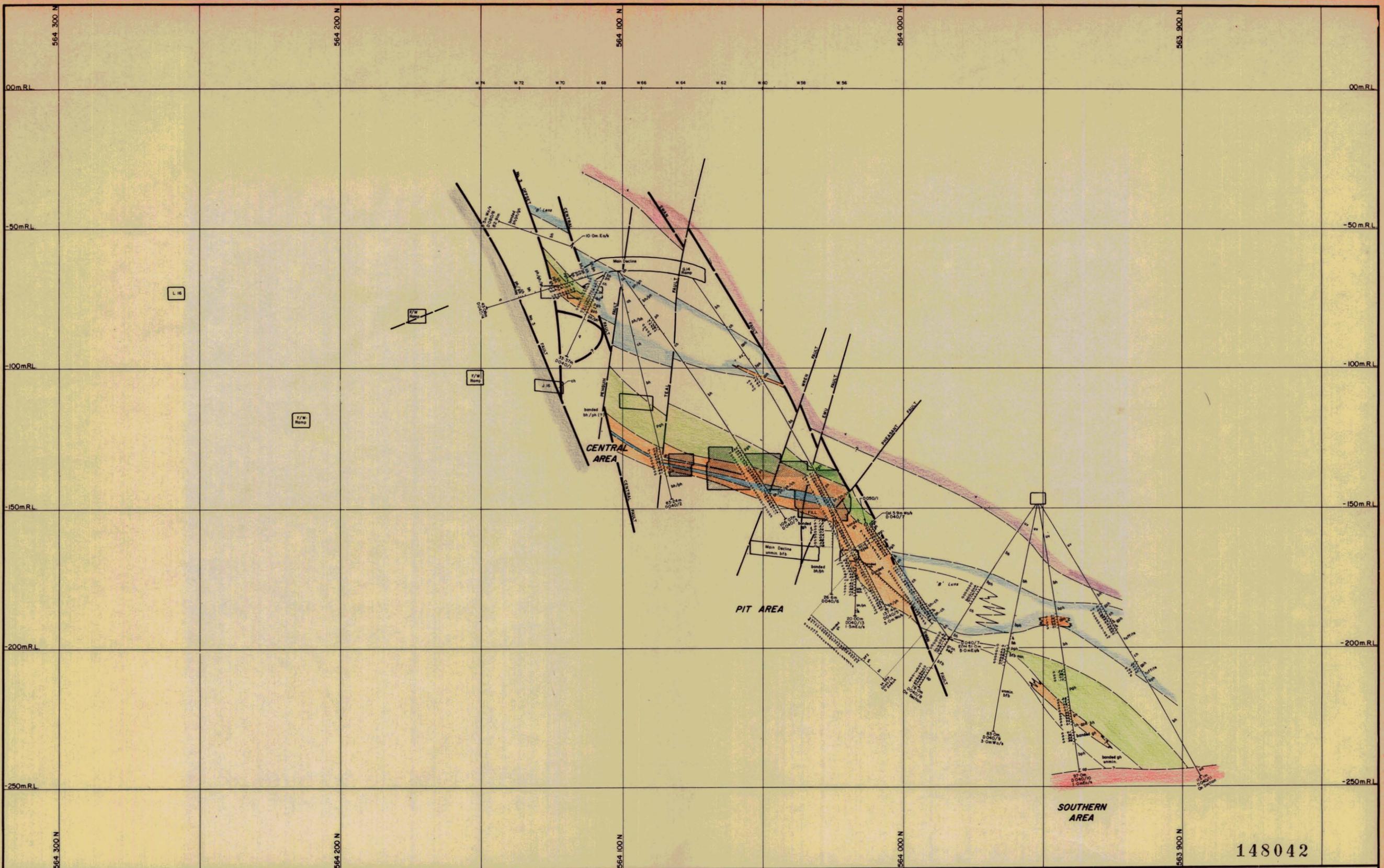
ISG REFER REPORT 70-0676

DATE
GEOLOGIST M.J.D.
DRAWN R.F.
CHECKED

KING ISLAND SCHEELITE

No. KG2-01-001

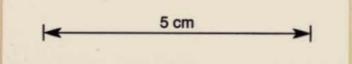
DOLPHIN MINE
GEOLOGICAL CROSS-SECTION
220 000 E



148042

Legend:	
	Upper metavolcanics
	Banded footwall beds
	Banded hornfels
	Marble
	Basalt hornfels
	Pyroxene garnet hornfels
	Garnet hornfels
	Basalt pyroxene hornfels
	Lower metavolcanics
	Quartzite
	Aplite
	Strike and dip
	Joint, inclined
	Joint, vertical
	Fault
	Degree of uncertainty in Fault position
	Direction of bedding with respect to core axis

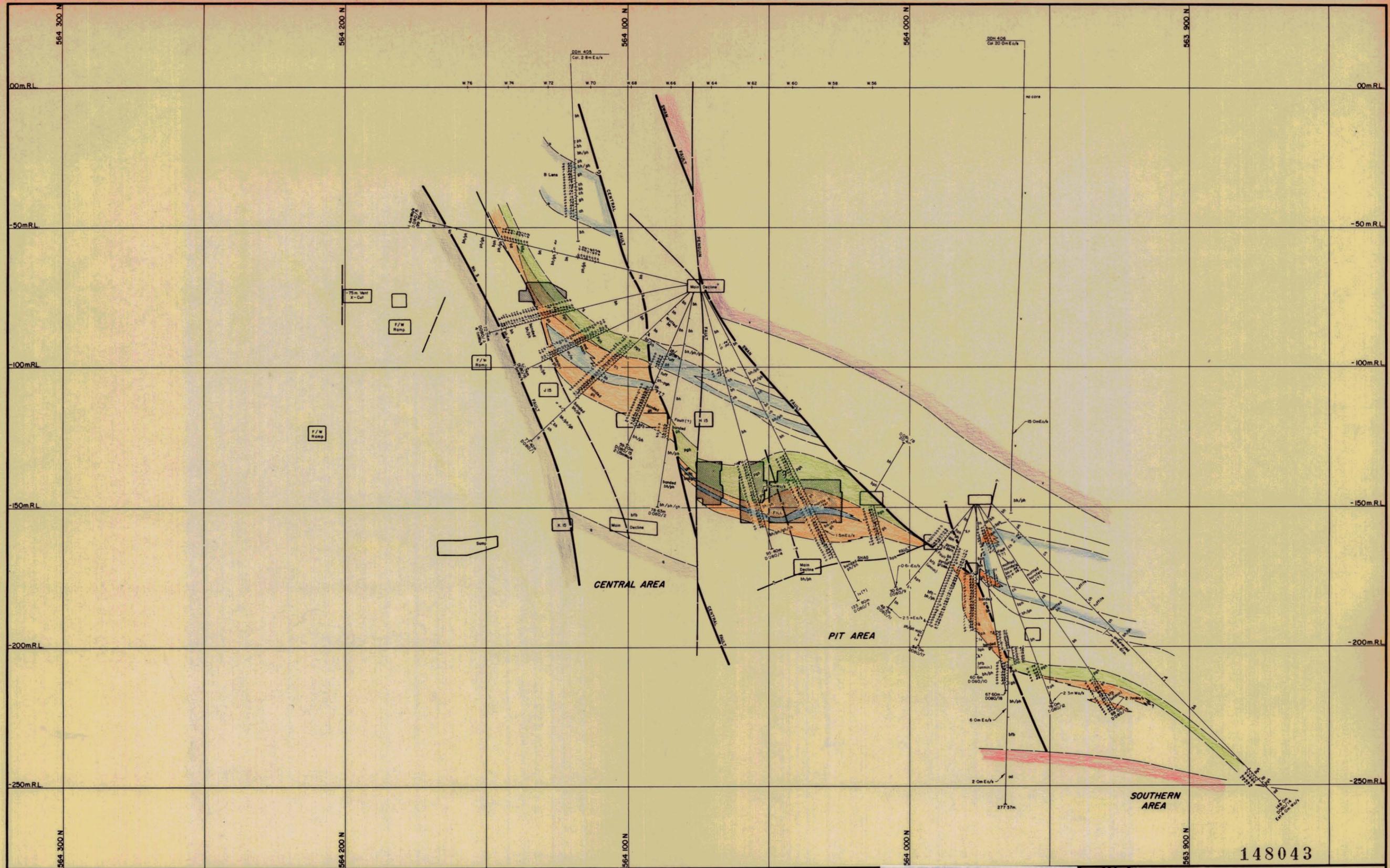
RQD Rock Quality Designator
 J/M Joints per Metre of recovered core



ISG REFER REPORT 70-0676

DATE
GEOLOGIST M.J.D.
DRAWN R.F.
CHECKED

KING ISLAND SCHEELITE
 No. KG2-01-003
 SCALE 1:500
 DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 220 040 E



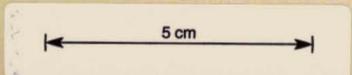
148043

Legend:

Upper meta-sediments	Banded hornfels beds	Strike and dip
Marble	Pyroxene garnet hornfels	Fault
Garnet hornfels	Garnet hornfels	Direction of bedding with respect to core axis
Marble	Lower meta-sediments	Degree of uncertainty in Fault position
Banded hornfels	Quartzite	Joint, vertical
Marble	Aplite	Joint, inclined
Banded hornfels		Joint, vertical
Marble		Fault
Garnet hornfels		Degree of uncertainty in Fault position

ROD Rock Quality Designator
 J/M Joints per Metre of recovered core

ROD %
 >90 Minimum or no support
 60-90 Intermediate support; rockbolts and one shotcrete application
 <60 Maximum support (after E. Miller, March, 1972)



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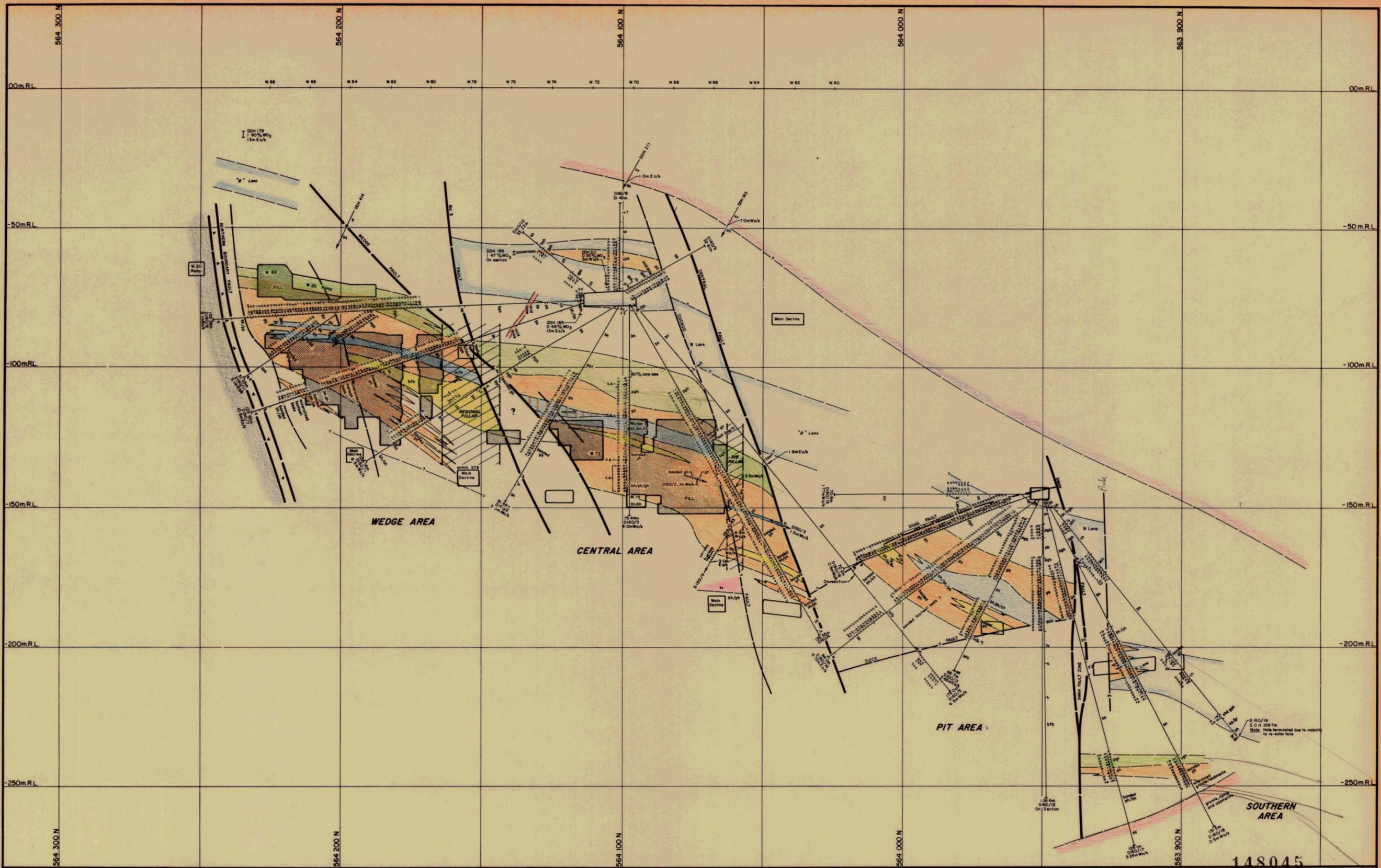
DATE
GEOLOGIST M.J.D.
DRAWN R.F.
CHECKED: J.S.

KING ISLAND SCHEELITE

SCALE 1:500

No. KG2-01-005

DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 220 080 E

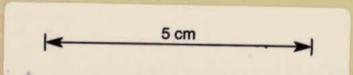


Legend:

- | | | |
|--------------------------|---------------------------|--|
| Upper metacarbonates | Banded fossiliferous beds | Strike and dip |
| Banded hornfels | Banded pyroxene hornfels | Joint, inclined |
| Marble | Lower metacarbonates | Joint, vertical |
| Biotite hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | Aplite | Degree of uncertainty in Fault position |
| Garnet hornfels | | Direction of bedding with respect to core axis |

RQD: Rock Quality Designator
 //M: Joints per Metre of recovered core

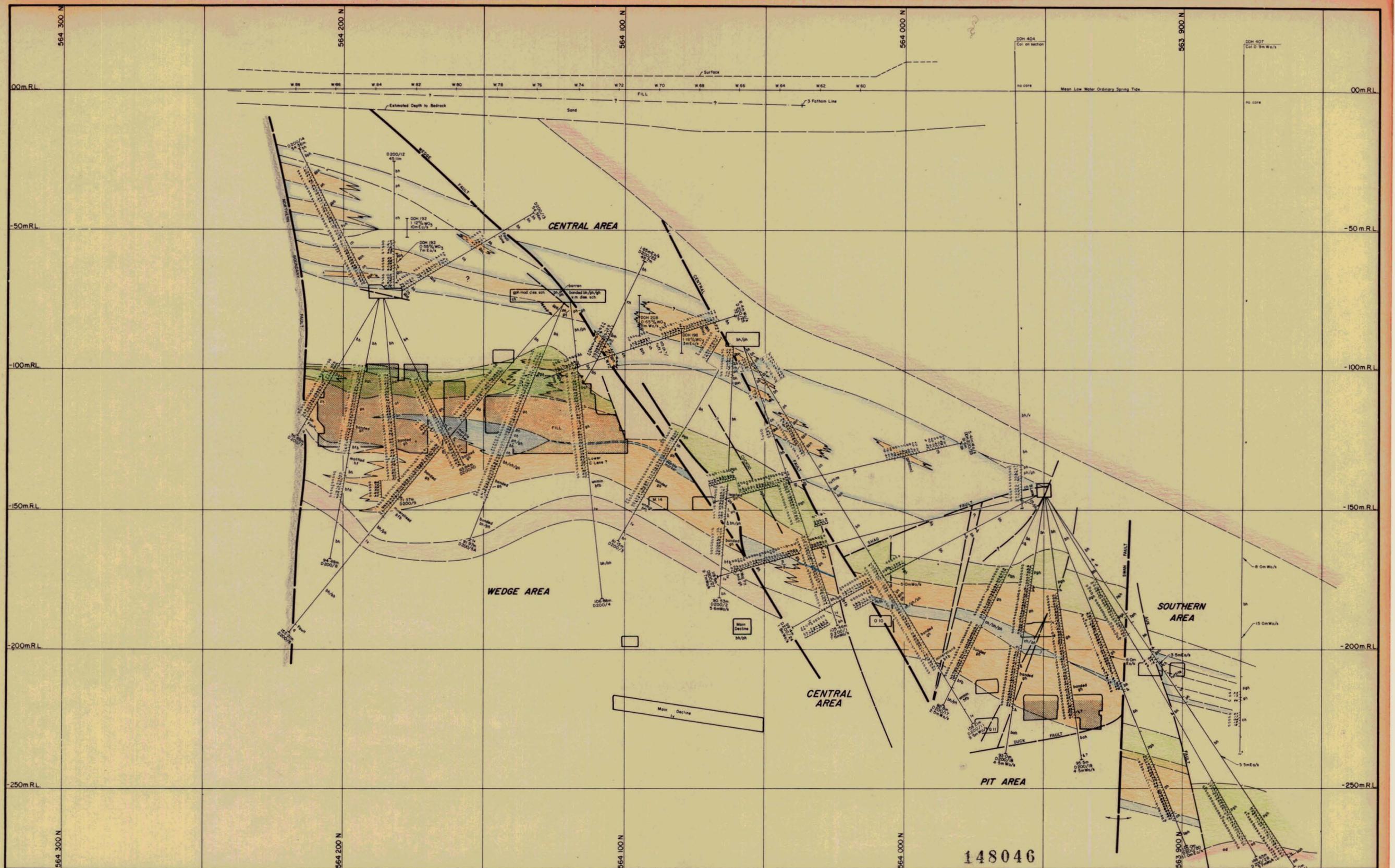
RQD %:
 >90 Minimum or no support
 60-90 Intermediate support, rockbolts and one shotcrete application
 <60 Maximum support (after E. Miller, March, 1972)



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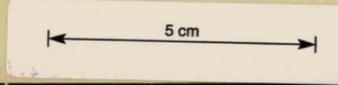
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 GEOLOGIST M.J.D.
 DRAWN R.F.
 CHECKED J.F.

148045
 KING ISLAND SCHEELITE
 No. KG2-01-009
 SCALE: 1:500
 DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 220 160 E



Legend:

RQC Rock Quality Designator
 J/M Joints per Metre of recovered core
 RQC %
 70 Minimum or no support
 60-90 Intermediate support, rockbolts and one shot/m application
 <60 Maximum support
 (after E. Miller, March, 1972)



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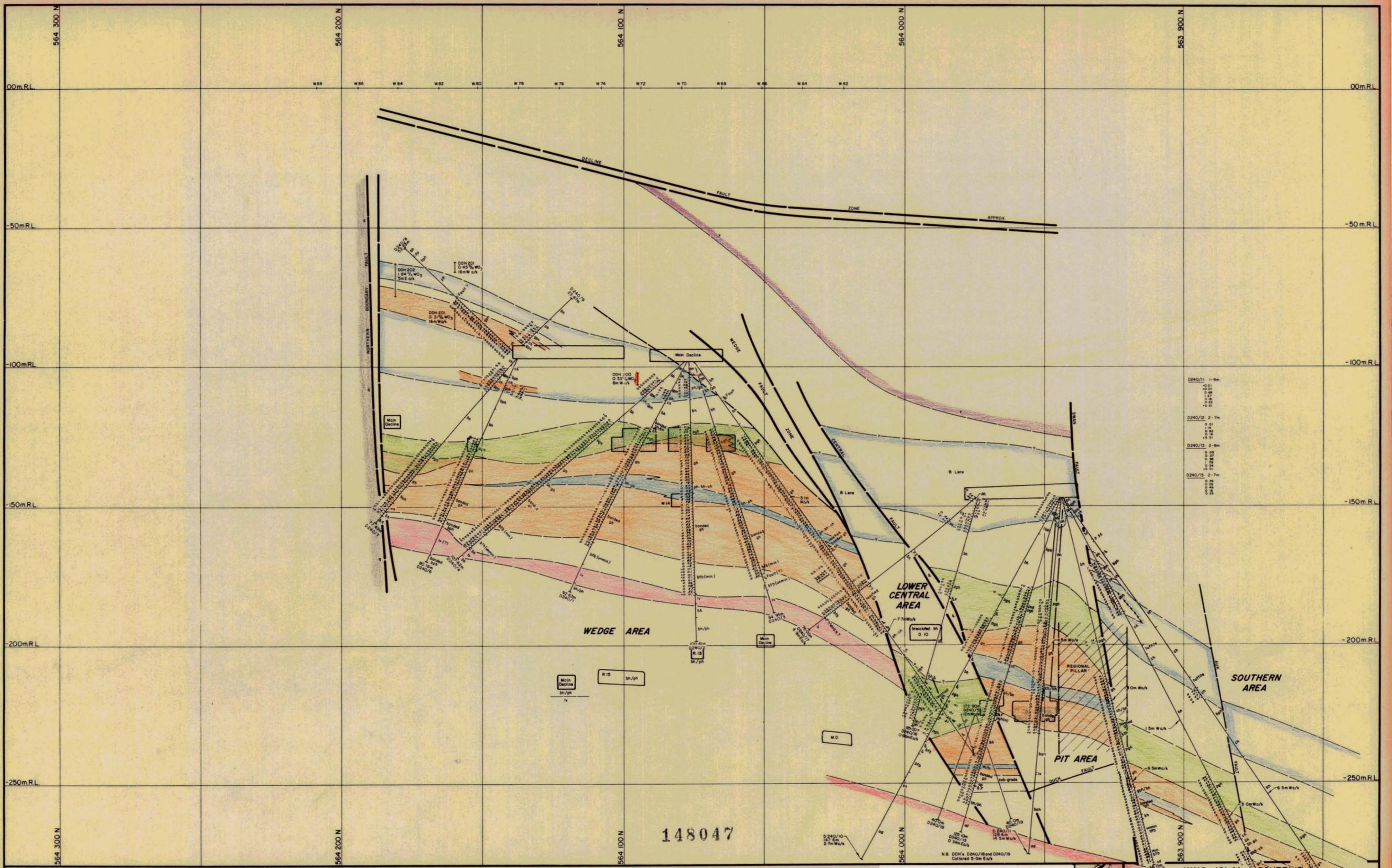
DATE
GEOLOGIST M.J.D.
DRAWN R.F.
CHECKED J.S.

KING ISLAND SCHEMATIC

SCALE: 1:500

No. KG2-01-011

DOLPHIN MINE
GEOLOGICAL CROSS-SECTION
220 200 E



D240/11	1-8m	0.01	0.01	0.01	0.01
D240/12	2-7m	0.01	0.01	0.01	0.01
D240/13	2-9m	0.01	0.01	0.01	0.01
D240/15	2-7m	0.01	0.01	0.01	0.01

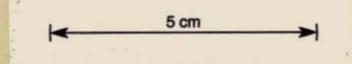
- Legend:**
- Lower metatronics
 - Banded hornfels
 - Marble
 - Granite hornfels
 - Quartzite
 - Aplite

- Banded hornfels
- Banded hornfels
- Lower metatronics
- Quartzite
- Aplite

- Strike and dip
- Joint, inclined
- Joint, vertical
- Fault
- Degree of uncertainty in fault position
- Direction of bedding with respect to core axis

RQD Rock Quality Designator
 J/M Joints per Metre of rock core

RQD %
 100 Maximum or no support
 60-90 Intermediate support, rockbolts and one shotcrete application
 <60 Maximum support
 (after E. Miller, March, 1972)

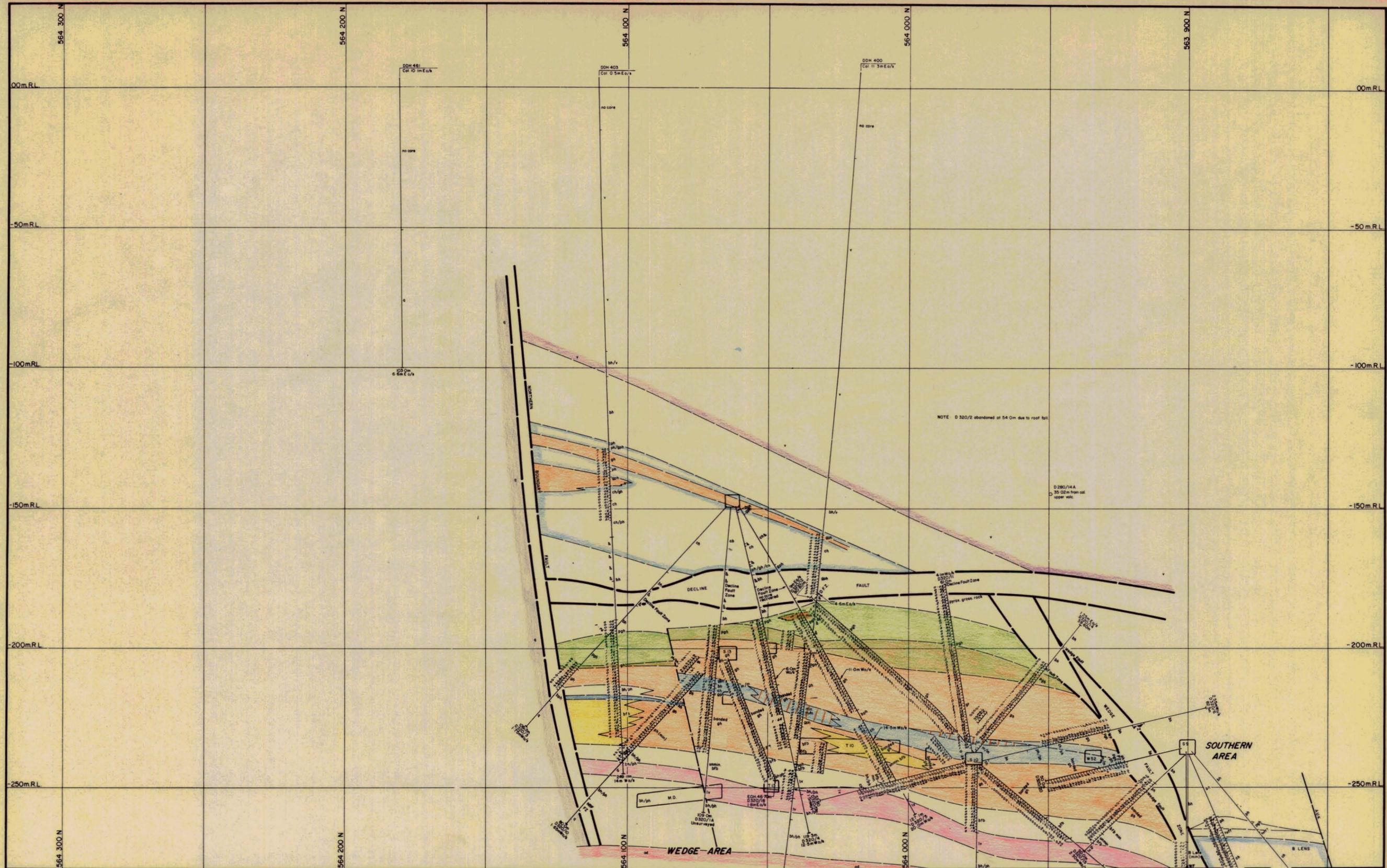


ISG REFER REPORT 70-0676

DATE	
GEOLOGIST W.J.D.	
DRAWN R.P.	
CHECKED	

SCALE 1:500
 No. K32-01-013

DOLPHIN MINE
 GEOLOGICAL CROSS-SECTION
 220 240 E



NOTE: D 320/2 abandoned at 54.0m due to roof fall

D 280/14A
35.02m from cut
upper etc.

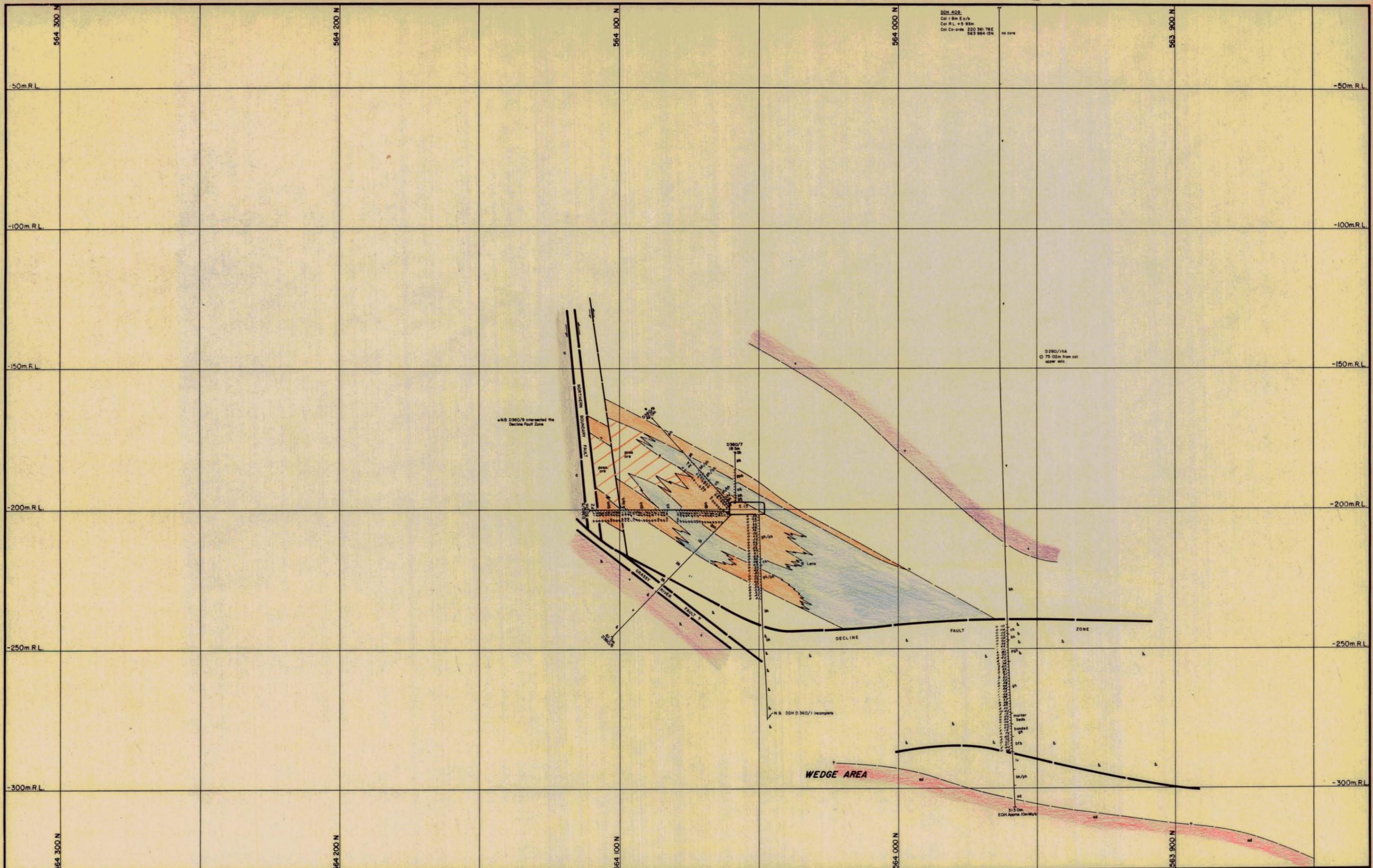
Legend:			60 Strike and dip 35 joint, inclined joint, vertical Fault Degree of uncertainty in Fault position Direction of bedding with respect to core axis
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ISG REFER REPORT 70-0676

148049

5 cm

<p>DATE</p> <p>GEOLOGIST M.J.D.</p> <p>DRAWN R.F.</p> <p>CHECKED 13/1/75</p>	<p>SCALE 500</p> <p>DOLPHIN MINE GEOLOGICAL CROSS-SECTION 220 320 E</p> <p>KG2-01-017</p>
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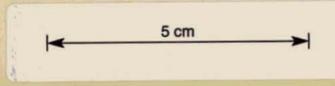


DDH 409
 Col. 1 8m E of A
 Col. R.L. + 8 93m
 Col. Co-ord. 220 361 78 E
 263 264 15 N
 no core

D 280/14
 O 73 02m from col
 upper vic.

- Legend:**
- Upper metavolcanics
 - Bonded footwall beds
 - Bonded hornfels
 - Basite pyroxene hornfels
 - Marble
 - Lower metavolcanics
 - Basite hornfels
 - Quartzite
 - Pyroxene garnet hornfels
 - Aplite
 - Garnet hornfels
- 60 Strike and dip
 - 30 Joint, inclined
 - Joint, vertical
 - Fault
 - Degree of uncertainty in Fault position
 - Direction of bedding with respect to core axis

HQC: Rock Quality Designator
 J/M: Joints per Metre of recovered core
 100%
 70 Minimum or no support
 60-90 Intermediate support; rockbolts and one shotcrete application
 <60 Maximum support
 (after E. Miller, March, 1972)



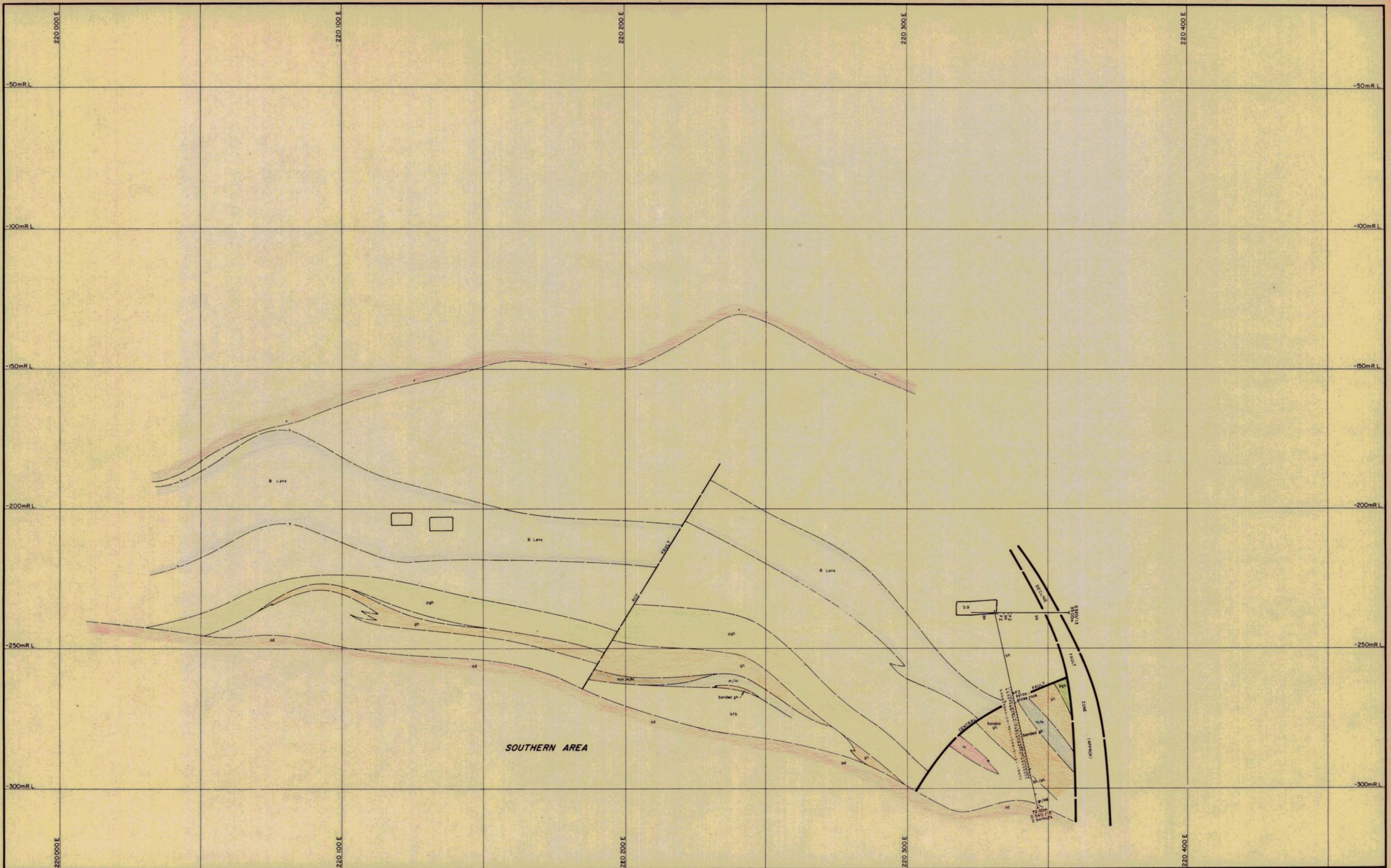
ISG REFER REPORT 70-0676

148050

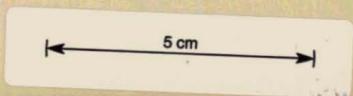
KING ISLAND SCHEELITE
 No. KG2-01-019

DATE
 GEOLOGIST M.J.D. 188 8/28
 DRAWN R.F.
 CHECKED 1/3

DOLPHIN MINE
GEOLOGICAL CROSS-SECTION
 220 360 E



- | | | |
|--------------------------|--------------------------|---|
| Upper metavolcanics | Banded footwall beds | Strike and dip |
| Banded hornfels | Barite pyroxene hornfels | Joint, inclined |
| Marble | Lower metavolcanics | Joint, vertical |
| Barite hornfels | Quartzite | Fault |
| Tricorne gneiss hornfels | Aplite | Degree of uncertainty in fault position |
| Spheral hornfels | Adamellite | |

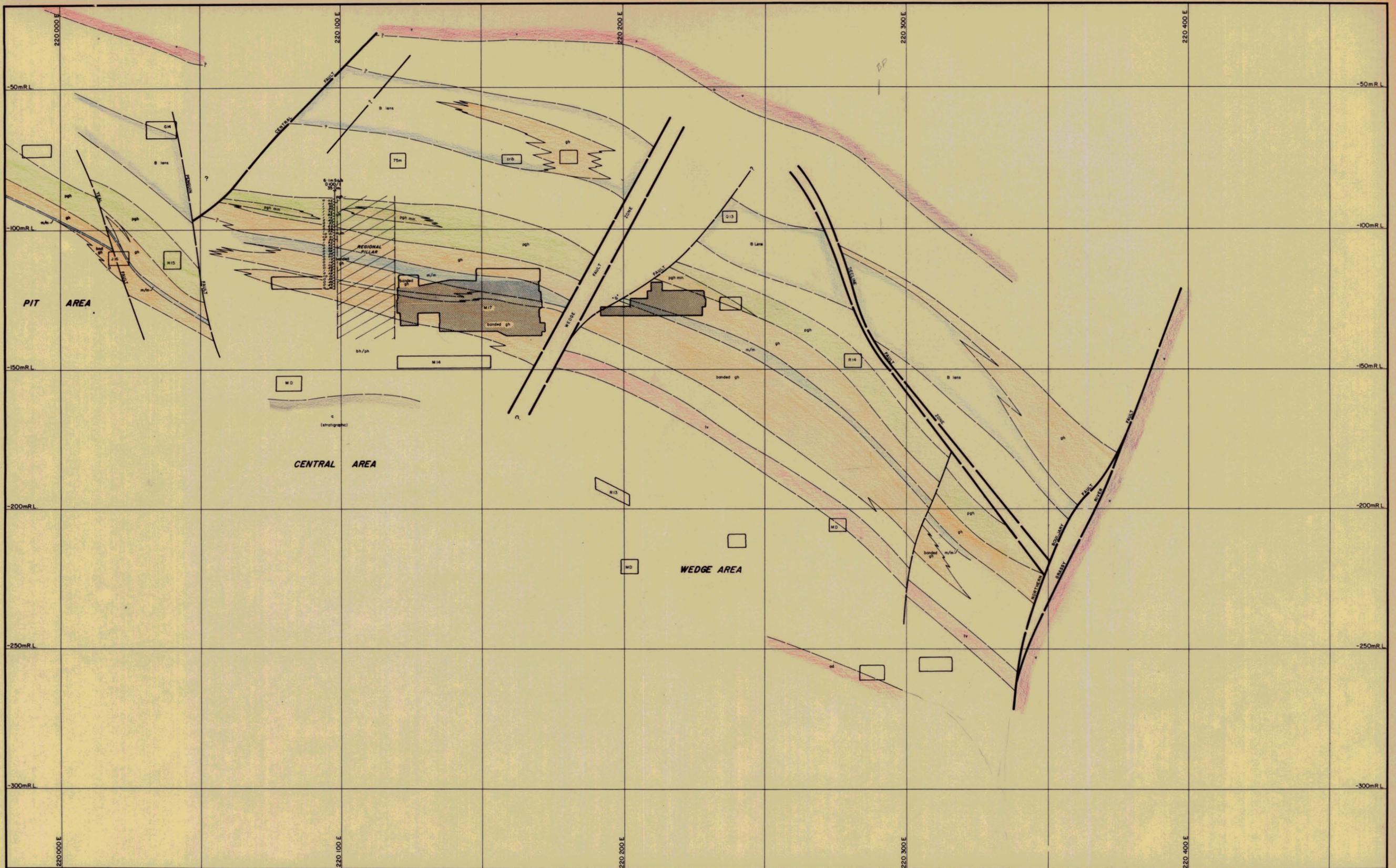


148051

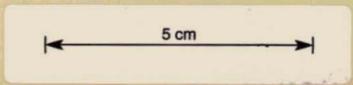
ISG REFER REPORT 70-0676

DATE: _____
 GEOLOGIST: GJB
 DRAWN: R.F.
 CHECKED: _____

KING ISLAND SCHEELITE
 SCALE 1:500
 No. KG2-04-042
 DOLPHIN MINE
 GEOLOGICAL LONG SECTION
 563 900 N



- | | | |
|--------------------------|---------------------------|---|
| Upper metavolcanics | Banded footwall beds | Strike and dip |
| Banded hornfels | Biotite pyroxene hornfels | Joint, inclined |
| Marble | Lower metavolcanics | Joint, vertical |
| Biotite hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | Apatite | Degree of uncertainty in fault position |
| Garnet hornfels | Adomelite | |



148053

ISG REFER REPORT 70-0676

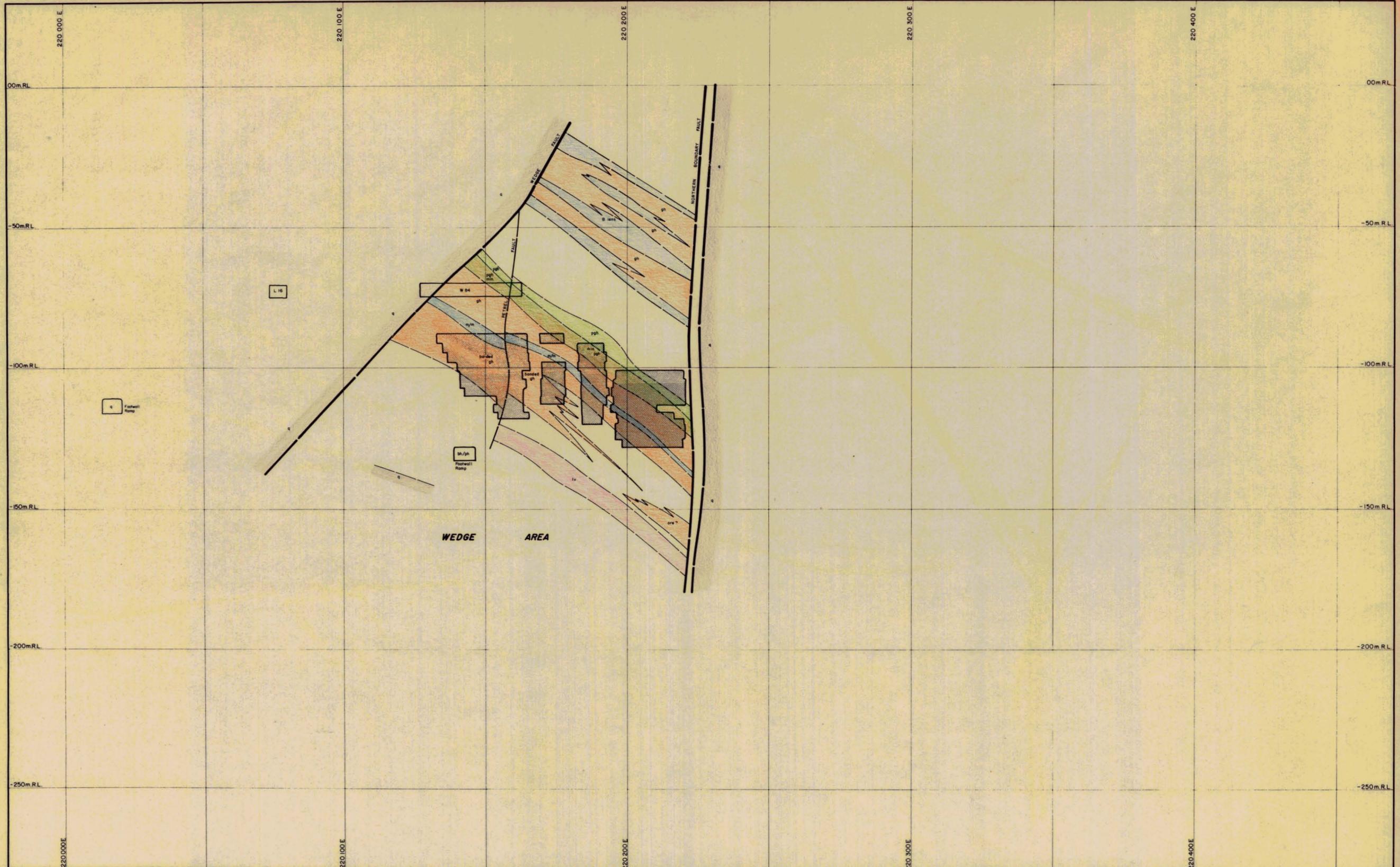
DATE: _____
GEOLOGIST: <i>gdb</i>
DRAWN: <i>RFA/JPM</i>
CHECKED: <i>gdb</i>

KING ISLAND SCHEELITE

SCALE 1:200

No. KG2-04-050

**DOLPHIN MINE
GEOLOGICAL LONG SECTION
564 100 N**



Legend

- Upper metatolites
- Banded hornfels
- Marble
- Biotite hornfels
- Pyroxene garnet hornfels
- Garnet hornfels
- Banded faultwell beds
- Biotite pyroxene hornfels
- Lower metatolites
- Quartzite
- Aplite

- Strike and dip
- Joint, inclined
- Joint, vertical
- Fault
- Degree of uncertainty in Fault position
- Direction of bedding with respect to core axis

RQD Rock Quality Designator
 J/M Joints per Metre of recovered core

RQD %
 >90 Minimum or no support
 60-90 Intermediate support, rockbolts and one shotcrete application
 <60 Maximum support
 (after E. Miller, March, 1972)

5 cm

148054

ISG REFER REPORT 70-0676

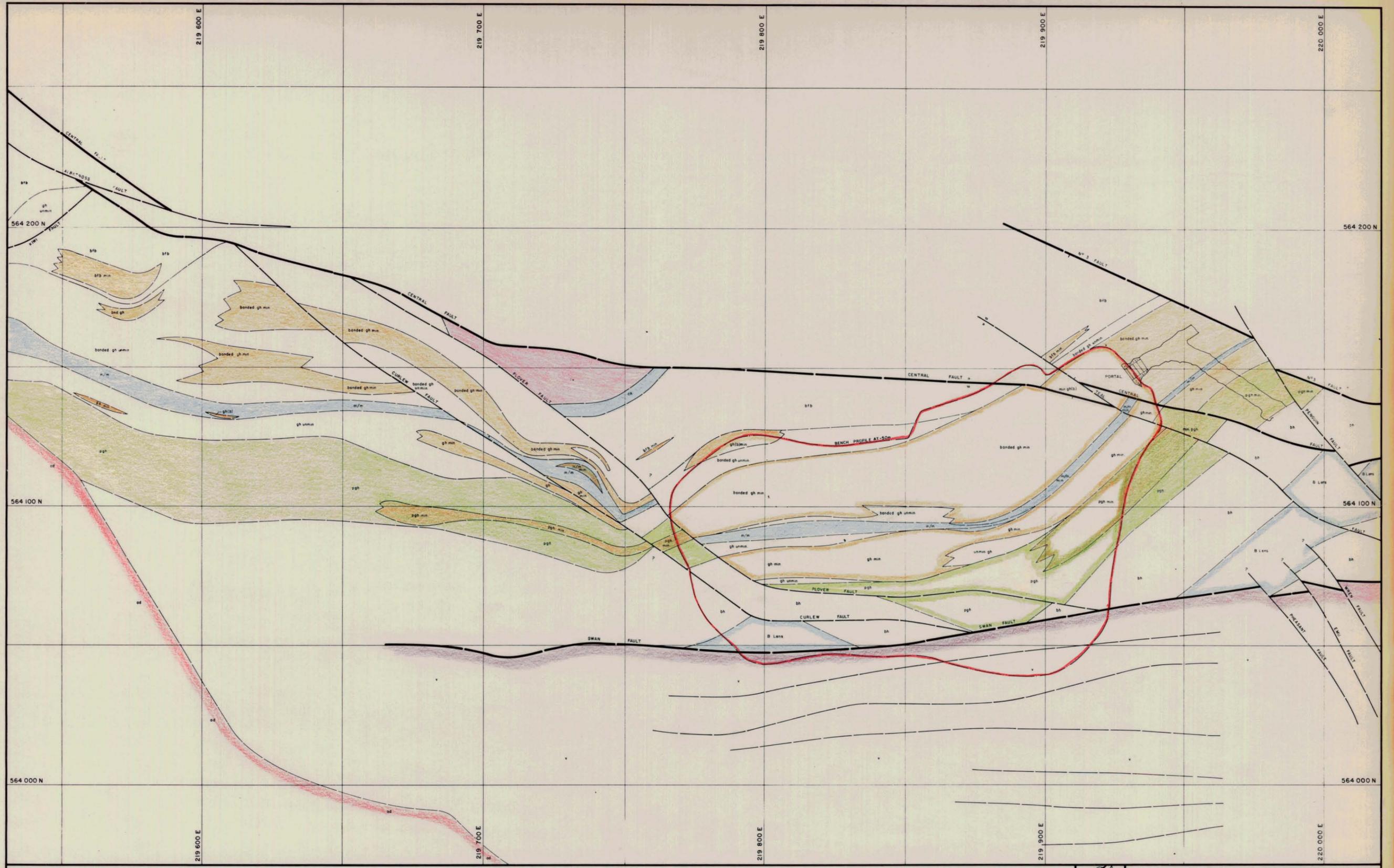

 DATE
 GEOLOGIST WJD
 SGB
 DRAWN R.F.
 CHECKED

KING ISLAND SCHEELITE

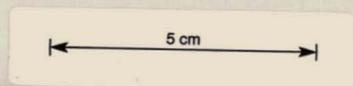
SCALE 1:500

No KG2-04-054

DOLPHIN MINE
 GEOLOGICAL LONG-SECTION
 564 200 N



- | | | |
|--------------------------|--------------------------|---|
| Upper metasediments | Banded tachylite beds | Strike and dip |
| Banded hornfels | Barite pyroxene hornfels | Joint, inclined |
| Marble | Lower metasediments | Joint, vertical |
| Barite hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | A.C. 1/2 | Degree of uncertainty in fault position |
| Quartz hornfels | A.C. 1/2 | |



ISG REFER REPORT 70-0676

148056

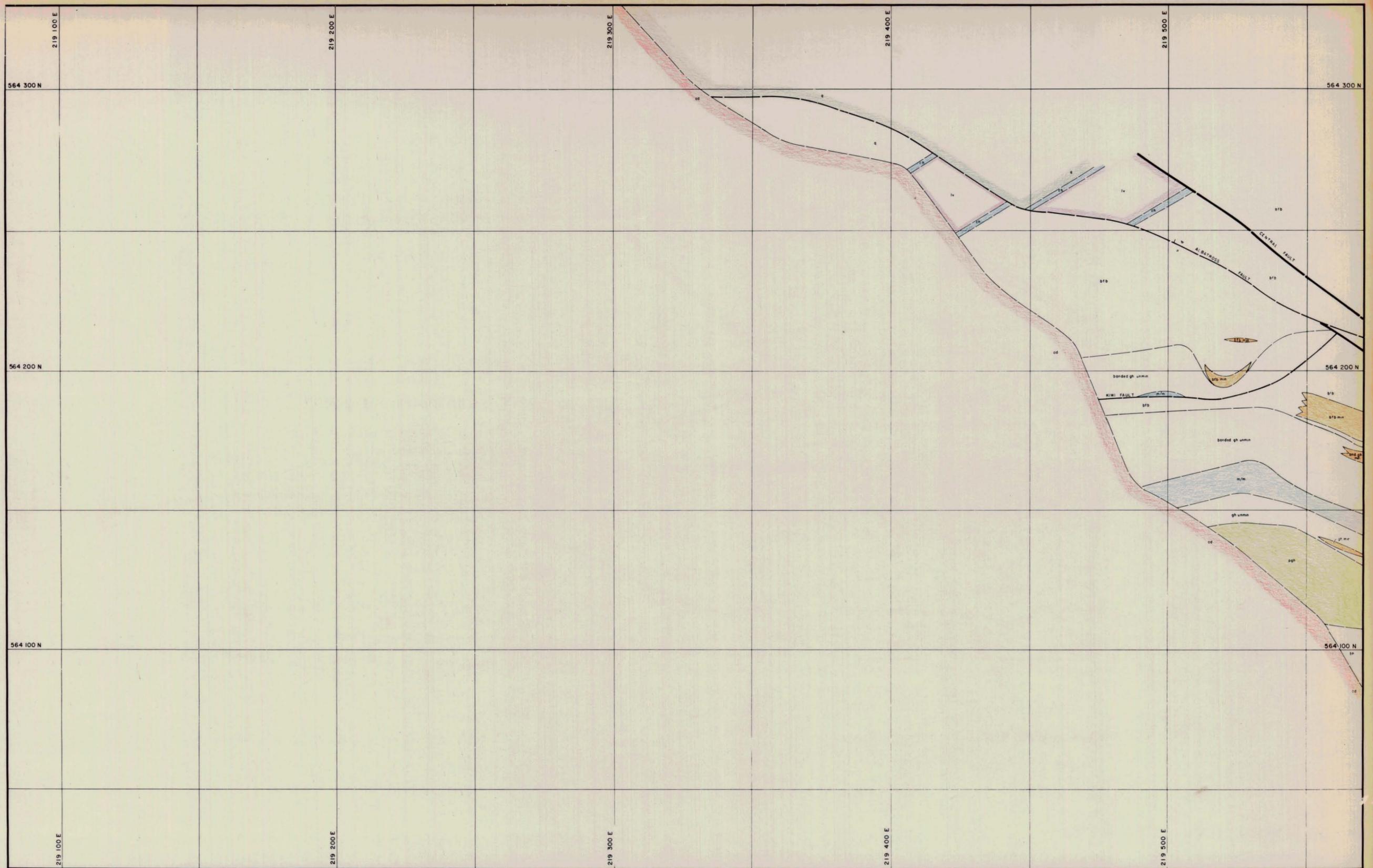
DATE: _____
GEOLOGIST: T.F.P.
DRAWN: M.G.S.
CHECKED: _____

KING ISLAND SCHEELITE

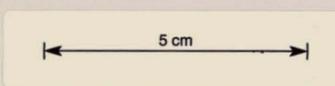
No. KG2-06-50-M

SCALE 1:500

DOLPHIN MINE
GEOLOGICAL LEVEL PLAN
- 50m R.L.



Upper meta-igneous	Banded footwall beds	Strike and dip
Banded hornfels	Biotite pyroxene hornfels	Joint, inclined
Marble	Lower meta-igneous	Joint, vertical
Biotite hornfels	Quartzite	Fault
Pyroxene garnet hornfels	Aplite	Degree of uncertainty in fault position
Garnet hornfels	Adomelite	



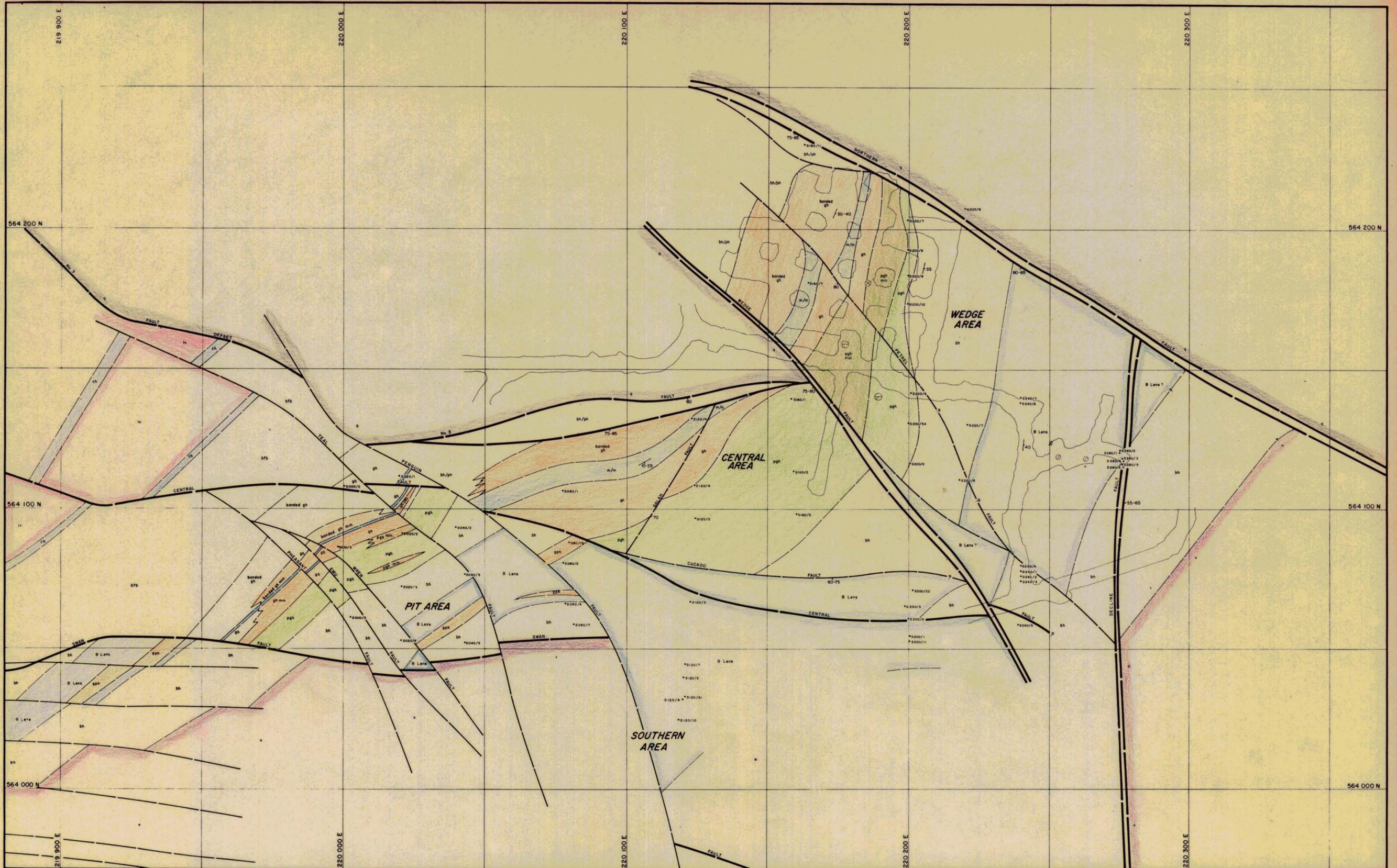
ISG REFER REPORT 70-0676
148057

DATE
GEOLOGIST T.F.P.
DRAWN M.V.S.
CHECKED J.L.C.

KING ISLAND SCHEELITE
No. KG2-06-50-W

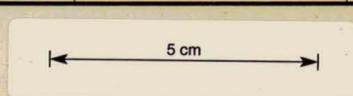
SCALE 1:500

DOLPHIN MINE
GEOLOGICAL LEVEL PLAN
- 50 m R.L.



	Upper metatuffs		Banded footwall beds
	Banded hornfels		Biotite pyroxene hornfels
	Marble		Lower metatuffs
	Biotite hornfels		Quartzite
	Pyroxene garnet hornfels		Aplite
	Quartz hornfels		Adomite

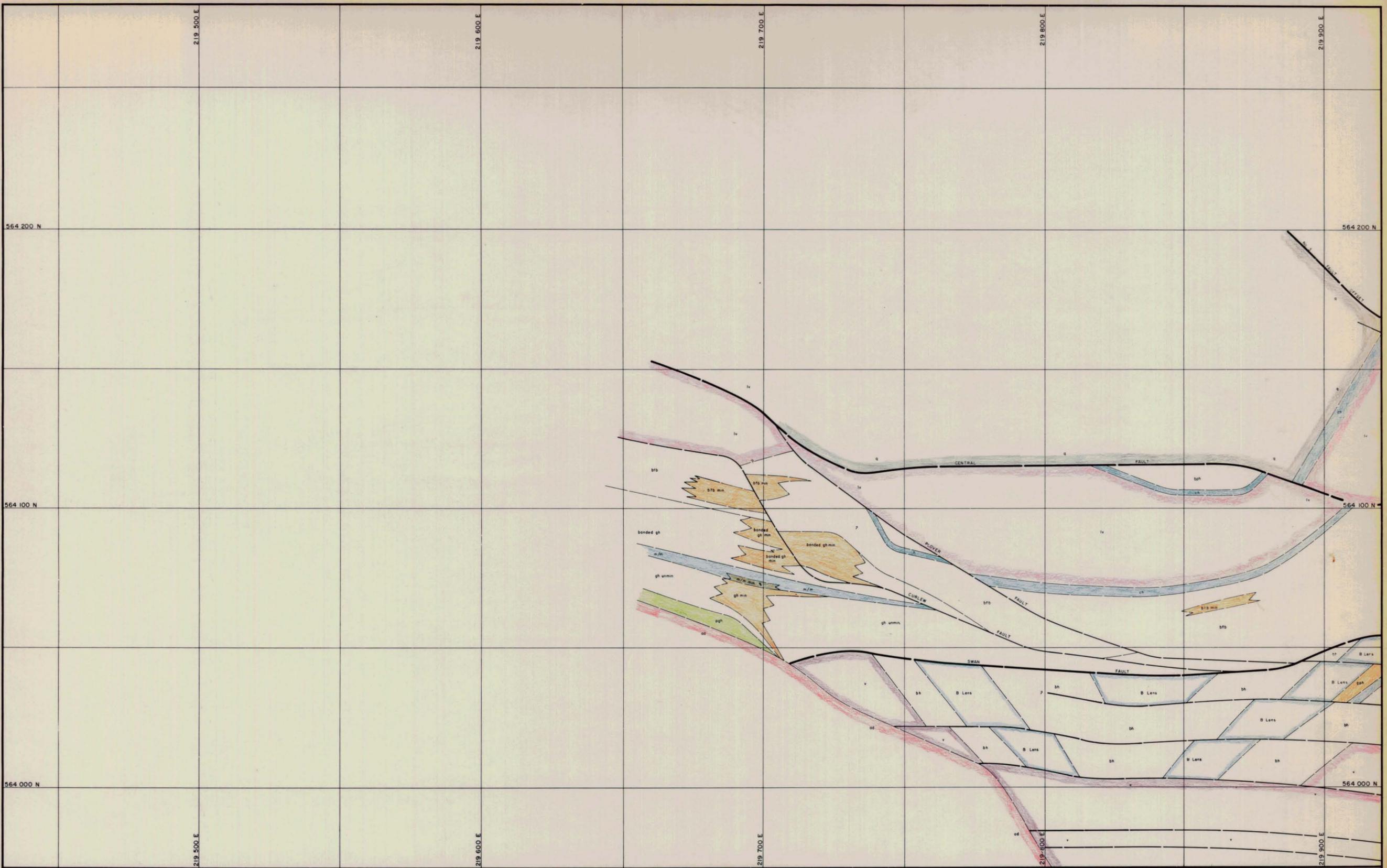
	Strike and dip
	Joint, inclined
	Joint, vertical
	Fault
	Roadway R.L. -127.5m



148058
 ISG REFER REPORT 70-0676

	DATE
	GEOLOGIST S.G.B.
	DRAWN R.F.
	CHECKED

KING ISLAND SCHEELITE
 No. KG2-06-100E
 DOLPHIN MINE
 GEOLOGICAL LEVEL PLAN
 -100m R.L.
 SCALE 1:500



- | | | |
|--------------------------|---------------------------|---|
| Upper metavolcanics | Banded footwall beds | Strike and dip |
| Banded hornfels | Biotite pyroxene hornfels | Joint, inclined |
| Marble | Lower metavolcanics | Joint, vertical |
| Biotite hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | Aplite | Degree of uncertainty in fault position |
| Garnet hornfels | Adamellite | |

5 cm

148059
ISG REFER REPORT 70-0676

DATE:
GEOLOGIST: T.F.P.
DRAWN: H.F.
CHECKED: *[Signature]*

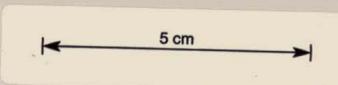
KING ISLAND SCHEELITE
SCALE 1:500
No. KG2-06-100M

DOLPHIN MINE
GEOLOGICAL LEVEL PLAN
-100m R.L.



- LEGEND:**
- Upper metapelitics
 - Banded footwall beds
 - Banded hornfels
 - Biotite pyroxene hornfels
 - Marble
 - Lower metapelitics
 - Biotite hornfels
 - Quartzite
 - Pyroxene garnet hornfels
 - Garnet hornfels
 - Apatite
 - Adamelite

- 60 Strike and dip
- Joint, inclined
- Joint, vertical
- Fault
- R-127.3 Roadway R.L. -127.3m

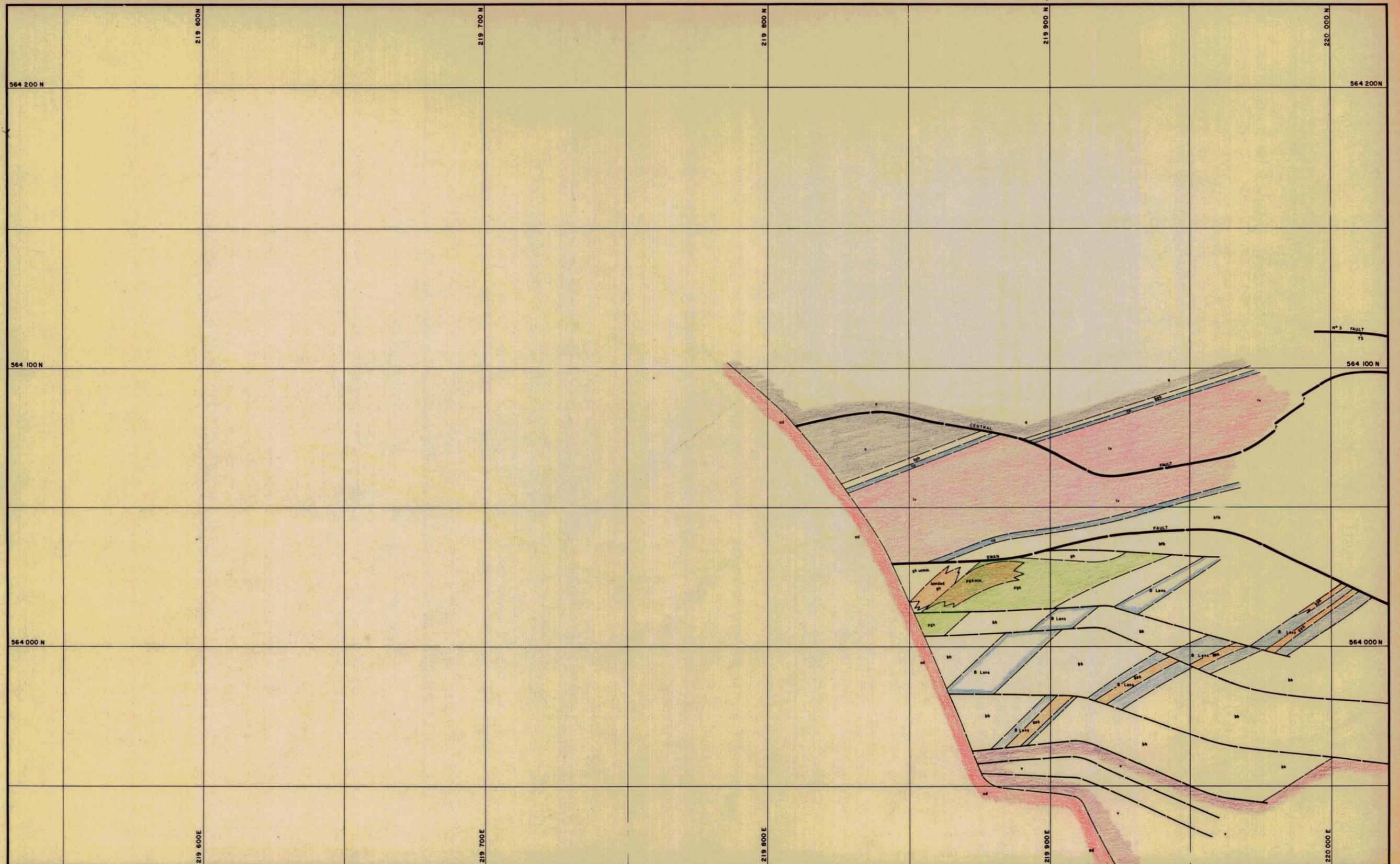


148060
ISG REFER REPORT 70-0676

DATE _____
GEOLOGIST S.J.B. _____
DRAWN R.F. _____
CHECKED _____

KING ISLAND SCHEELITE
SCALE: 1:500
No. KG2-06-150 E

DOLPHIN MINE
GEOLOGICAL LEVEL PLAN
- 150m R.L.



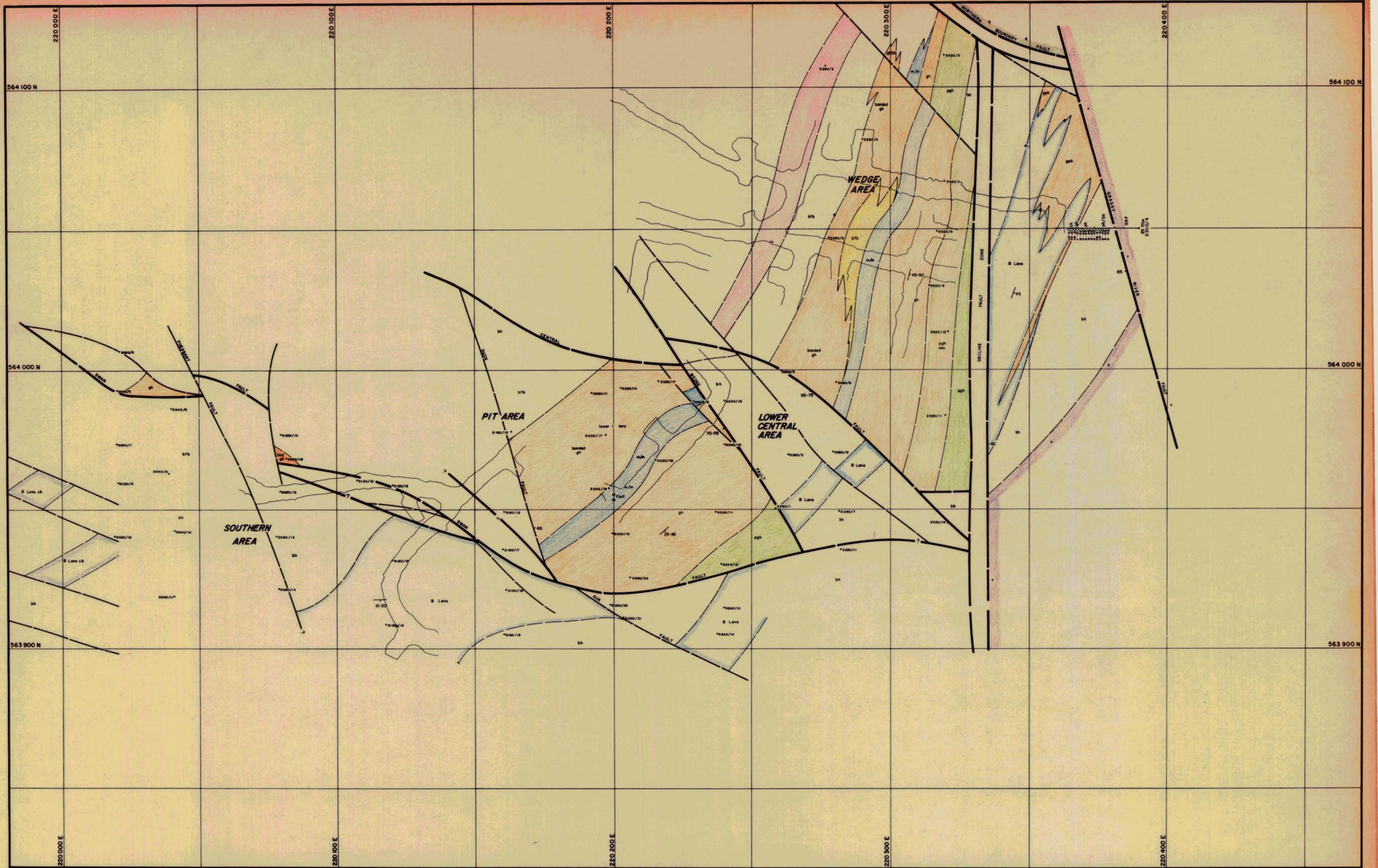
- | | | |
|--------------------------|---------------------------|---|
| Upper metavolcanics | Banded footwall beds | Strike and dip |
| Banded hornfels | Biotite pyroxene hornfels | Joint, inclined |
| Marble | Lower metavolcanics | Joint, vertical |
| Biotite hornfels | Quartzite | Fault |
| Pyroxene garnet hornfels | Aplite | Degree of uncertainty in fault position |
| Garnet hornfels | Adoninite | |



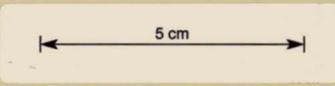
148061
 ISG REFER REPORT 70-0676

DATE: _____
 GEOLOGIST: T.P.P.
 DRAWN: M.v.s.
 CHECKED: _____

KING ISLAND SCHEELITE
 No. KG2-06-150 M
 DOLPHIN MINE
 GEOLOGICAL LEVEL PLAN
 -150m R.L.



- | | | | |
|--------------------------|-------------------------|----------------------|--|
| LEGEND: | | | |
| Upper metavolcanics | Banded footwall beds | Strike and dip | |
| Banded hornfels | Spite pyroxene hornfels | Joint, inclined | |
| Marble | Lower metavolcanics | Joint, vertical | |
| Spite hornfels | Quartzite | Fault | |
| Pyroxene garnet hornfels | Apatite | Roadway R.L. -127.3m | |
| Garnet hornfels | Adomellite | | |



ISG REFER REPORT 70-0676

148062

DATE _____
 GEOLOGIST _____
 DRAWN R.F.J.P.M.
 CHECKED _____

KING ISLAND SCHEELITE
 No. KG2-06-200E

SCALE: 1:500

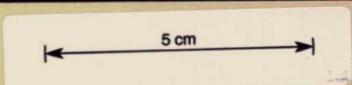
DOLPHIN MINE
 GEOLOGICAL LEVEL PLAN
 -200m R.L.



LEGEND

	Upper metatuffaceous		Banded footwall beds
	Banded hornfels		Blocky pyroxene hornfels
	Mafic		Lower metatuffaceous
	Blocky hornfels		Quartzite
	Pyroxene garnet hornfels		Aphite
	Corundum hornfels		Adomellite

	Strike and Dip
	Joint, inclined
	Joint, vertical
	Fault
	Roadway R.L. -127.3m



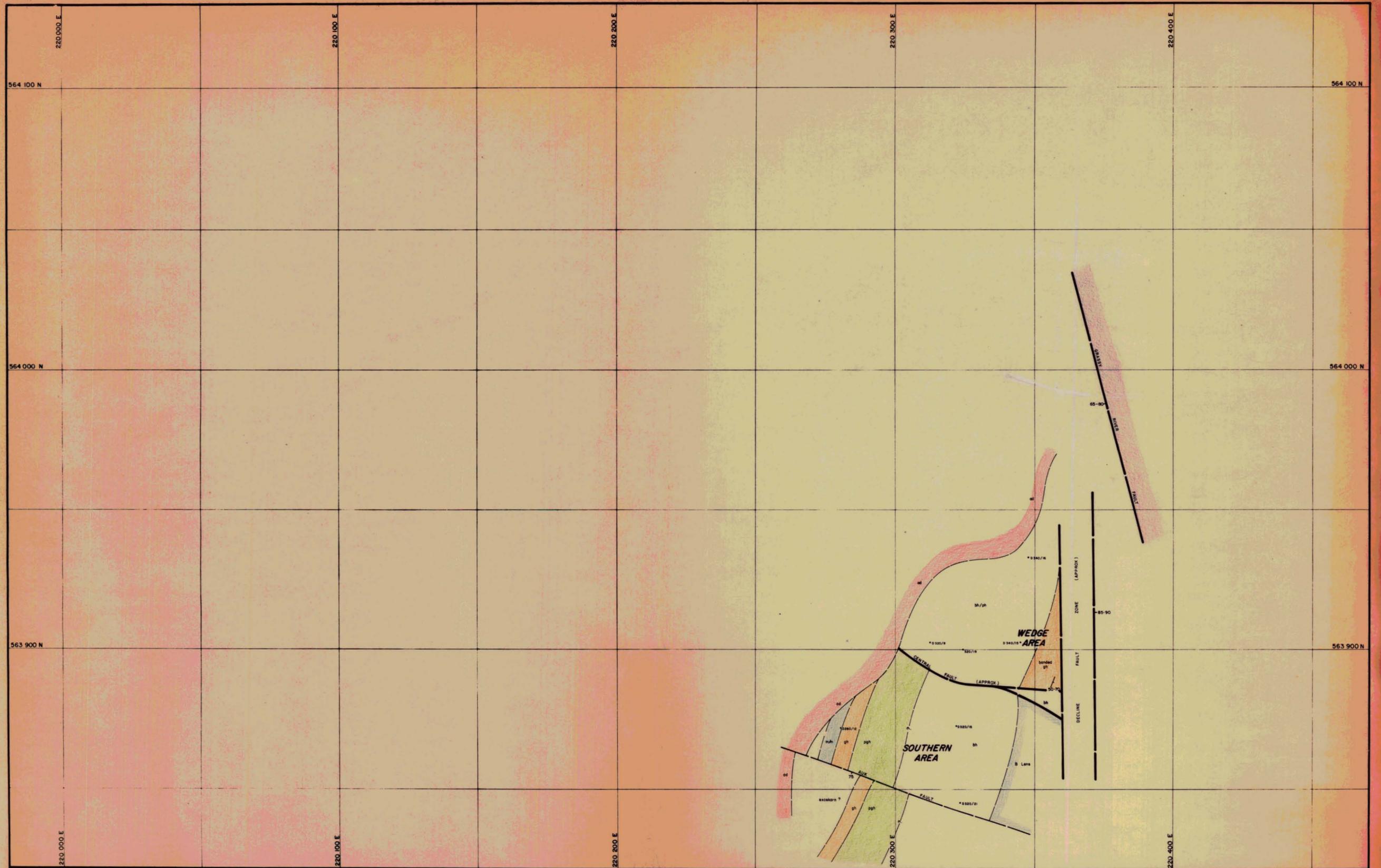
148063
ISG REFER REPORT 70-0676

	DATE
	GEOLOGIST
	DRAWN
	CHECKED

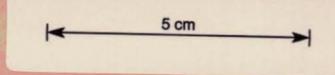
KING ISLAND SCHEELITE
No. KG2-06-250E

SCALE 1:500

DOLPHIN MINE
GEOLOGICAL LEVEL PLAN
- 250m R.L.



LEGEND	
	Banded footwall beds
	Biotite pyroxene hornfels
	Lower metabasaltics
	Quartzite
	Aplite
	Adomellite
	Banded hornfels
	Marble
	Biotite hornfels
	Pyroxene garnet hornfels
	Garnet hornfels
	Strike and dip
	Joint, inclined
	Joint, vertical
	Fault
	R-127.3 Roadway R.L. -127.3m



ISG REFER REPORT 70-0676

148064

	DATE
	GEOLOGIST G.J.B.
	DRAWN R.F.
	CHECKED J.F.

KING ISLAND SCHEELITE
 No. KG2-06-300E
 DOLPHIN MINE
 GEOLOGICAL LEVEL PLAN
 -300m R.L.