000

047001

D of M. | A.O. | C.G. | E.O.
E. DIR.
- 3 FEB 1986
DEPT. OF MINES
REF. No. 964/86

OPEN FILE

GREAT PYRAMID TIN DEPOSIT
NORTHEAST TASMANIA
RESOURCE ESTIMATES

Author: D B Hall, D N Carter
Date: January 1986

Report No.: 08.3157

MICROFILMED

001

GREAT PYRAMID TIN DEPOSIT

This compilation contains the following reports, correspondence, memos etc:

- Geological Resource Estimates, Hall D.B., Wright R., 1983-4.
- Mining Study, Kaleta S., 1983.
- Preliminary Metallurgical Investigation of Tin Ore Deposit, Mineral Deposits Ltd, 1984 (Report No. 16.020.1/1)
- Correspondence regarding Report No. 16.020.1/1, Mineral Deposits Ltd, 1984.
- A Further Study of Cassiterite Occurrence in Middling Products from Testwork Report No. 16.020.1/1, Mineral Deposits, 1984.
- Great Pyramid Project Review, Platt J, 1984. Reply, Carter D.N., 1984.
- Comparison of Analytical Data from Bulk and their Equivalent Channel Samples at the Great Pyramid Tin Prospect, Carter D.N., 1985.
- Comments on data review, Foo K, 1985.

The various studies completed at Great Pyramid have often produced apparently conflicting results. However, the reserves calculated by Hall and Wright (viz 3.1 Mt at 0.22% Sn using 0.1% Sn cut off), supported by the grades reported by Carter, are considered to be sufficiently accurate to enable a meaningfuly ecnomic screening of the deposit to be made.

Under present economic conditions, the deposit is not considered viable.

002

047003

GREAT PYRAMID

GEOLOGICAL RESOURCE ESTIMATES
1983-1984

Report No.: 08.2959
BXP/AHO : D B Hall
BXH/TAS : R Wright

003

CONTENTS

SUMMARY

INTRODUCTION

DATA RELIABILITY

DATA COLLATION AND PRESENTATION

PROBABLE RESOURCE BLOCK DEFINITION

PROBABLE RESOURCE CALCULATION

POSSIBLE RESOURCE ESTIMATE

UNDERGROUND SAMPLING

GRADE COMPARISONS

HIGH GRADE RESOURCE ESTIMATE

APPENDICES

I : SUMMARY OF DRILLING AND SAMPLING PROGRAMMES AT GREAT PYRAMID

II : CHANNEL AND BULK SAMPLING - LEVEL DISTRIBUTION

III : ADIT SAMPLING - CORRELATION WITH INTERPRETED RESOURCE OUTLINES

TABLES

1. TOTAL INTERCEPTS USED IN PROBABLE RESOURCE CALCULATION - 0.1% Sn CUT-OFF
2. NORTH BLOCK PROBABLE RESOURCE - 0.1% Sn CUT-OFF
3. SOUTH BLOCK PROBABLE RESOURCE - 0.1% Sn CUT-OFF
4. BROCKS BLOCK PROBABLE RESOURCE - 0.1% Sn CUT-OFF
5. TOTAL GREAT PYRAMID PROBABLE RESOURCE - 0.1% Sn CUT-OFF
6. TOTAL INTERCEPTS USED IN PROBABLE RESOURCE CALCULATION - 0.2% Sn CUT-OFF
7. NORTH BLOCK PROBABLE RESOURCE - 0.2% Sn CUT-OFF
8. SOUTH BLOCK PROBABLE RESOURCE - 0.2% Sn CUT-OFF
9. BROCKS BLOCK PROBABLE RESOURCE - 0.2% Sn CUT-OFF

PLANS

Level Plans and Cross Sections are in separate folders.

VOL 2 PLANS 580-602

VOL 3 PLANS 565-579

005

SUMMARY

Utilising all previous drilling data, a geological resource estimate has been calculated for the Great Pyramid tin project in northeast Tasmania.

The tin mineralization can be separated into three separate areas, referred to in this report as "Blocks", and the tonnage and grade are given below, using a 0.1% Sn cut-off.

North Block:	897,300	tonnes at 0.19% Sn
South Block:	1,980,200	tonnes at 0.24% Sn
Brocks Block:	252,700	tonnes at 0.17% Sn
Total:	3,130,200	tonnes at 0.22% Sn

It is stressed that this estimate is preliminary only, and has been calculated utilising the "envelope" principle, using data that is probably inaccurate. The estimate has been prepared in order to verify previous estimates prepared by Aberfoyle and BHP and to provide the basis of a preliminary economic evaluation.

INTRODUCTION

The Great Pyramid tin project is within EL10/80, northwest of Scamander in northeast Tasmania. SCOA is carrying out exploration of the area, after entering a Joint Venture agreement with BHP In 1982.

Various reports have been prepared by BHP and Shell, containing the results of work completed to date. These reports should be referred to for all relevant geological, geochemical, geophysical and drilling details.

Prior to this resource estimate by SCOA, three other estimates had been made, and are summarised below:

Assessment by	In Situ Reserves (indicated)	(indicated + "inferred")	Method of Determination
Paringa-Aberfoyle (1969-74)	4mT at .3%Sn		Based on cross-sections
BHP (1981)	4.10mT at .22% Sn	8.29mT at .19%Sn	Triangulation, based on levels (to 90 level)
BHP (1981)	3.3mT at .26%Sn	-	Rectangular, based on 170 level only with correction applied to all levels.
BHP (1981)	*(442,101T at .20% Sn)		
	**(658, 527T at .19% Sn)	-	Use of sludge assays in diamond holes (BPD series only).

- tonnage for North Block in "possible" category (*) with correction for estimated increase in grade from sludge assays (**).

The BHP estimates were based on all available data as at September 1981, at the conclusion of the BHP drilling programme. Details are presented in BHP report on EL 10/80 for the six months ended 21 January 1982. Their calculations assumed equal weighting of grades determined from all sources.

007

This report outlines the methodology of the SCOA resource estimates, and the results obtained.

A summary of previous drilling, channel and bulk sampling programmes is included as Appendix I.

✓

008

DATA RELIABILITY

The aim of the resource estimate is to provide a tonnage and grade that can be used in a preliminary economic evaluation, in order to indicate whether the deposit has the potential to be economically viable.

The data used in the estimate is unreliable, and it is difficult to assign a degree of confidence to the results. Every assay value is assigned an equal weight, since there is no way of assigning a factor to allow for the different drilling methods.

From investigations made by BHP on sludge assays from diamond drilling, it is apparent that diamond drilling undervalues the grade. It is also probable that percussion drilling undervalues the grade, but this cannot be quantified. With the tin mineralization being associated with quartz in steeply dipping joints and fractures, it is more than likely that the percussion drilling has not recovered all the cassiterite.

There is no way of allowing for any variation in sample collection, preparation and analysis.

DATA COLLATION AND PRESENTATION

All available drillhole survey and assay data was collected, essentially from BHP, and an ex-BHP geologist (D. Steele) was employed to transfer it to the SHLMET system data sheets. This work was instigated by A. Donaldson of SCOA, and supervised by R. Wright (BXH, Tasmania).

An initial plot of the drillhole profiles on cross-sections indicated that all the Aberfoyle series of percussion drillholes were at variance with topographic and other drillhole levels. The collar elevations of all these holes were manually corrected to a best fit contour map of the hill and the BHP drilling data. Aberfoyle had apparently not surveyed in the percussion drillhole collars. BHP were able to locate some of the Aberfoyle holes and did survey the collar positions.

For presentation purposes a series of 24 cross sections were plotted on a bearing of 320° magnetic, essentially parallel to the line of the Aberfoyle grid drilling, and perpendicular to the mineralized joint set. Section interval is approximately 15 metres, and drillholes not on the section line are projected to the nearest section. Each hole is annotated with the hole number, drill collar co-ordinates and level, and the tin assay value in ppm for each sample intercept.

A series of level plans at 10 metre intervals were also produced, from RL 1070 to RL 1210. On each level plan, each drillhole intercept is annotated, and the weighted tin assay value for the 10 metre interval above the level is annotated.

PROBABLE RESOURCE BLOCK DEFINITION

In view of the uncertainties inherent in the assay data being used in this estimate, it was decided to use the envelope method to outline the resource.

A cut-off grade of 0.1% Sn was used to define the intercepts of each drillhole on a cross-section. The top of the block assigned to each hole was taken at the first intercept greater than 0.10% Sn, and the bottom of the block at the last intercept greater than 0.1% Sn, provided that the weighted average grade for the total intercept was also greater than 0.1% Sn. Varying numbers of individual intercepts of less than 0.1% Sn are thus included in the total intercept.

The boundaries of the blocks assigned to drillholes are placed at the mid-point between mineralized and barren holes, and where there is no adjacent hole on the section, the boundary has been placed 15 metres from the mineralized intercept.

Many of the Aberfoyle percussion drillholes bottomed in mineralization, either by design or due to loss of air pressure. In these cases the lower boundary has been extrapolated from adjacent holes, but usually kept close to the base of the holes.

The resource blocks are outlined on the E-W cross-sections, together with the grade of the total intercept.

The boundaries were then transferred to the level plans, and the boundaries smoothed to present a more "geological" outline.

The resource outlined has been assigned to the "probable" category, with a reasonable degree of confidence on the tonnage estimate, but a very low confidence level on the grade.

PROBABLE RESOURCE CALCULATION

The tonnages have been calculated for each 10 metre level, using the "prismoidal" method, with an assigned specific gravity of 2.65. The volume of material in a level is calculated from the following formula:

$$\text{volume} = h \frac{(a_1 + a_2 + \sqrt{a_1 \times a_2})}{3}$$

where: h = height between level (i.e. 10 metres)
a_1 = area of base of level
a_2 = area of top of level

The areas were calculated for each level using a planimeter.

The average grade for each level was calculated using an arithmetic average of all intercepts on the level, enclosed in the resource boundaries. It was decided that the unreliability of the data did not warrant calculating individual drillhole areas of influence and calculating a weighted average assay.

The "probable" in-situ geological resource is estimated to be 3.13 million tonnes at 0.22% Sn. All the data is summarised in Tables 1 to 5.

POTENTIAL RESOURCE ESTIMATE

There are significant gaps in the drilling pattern, adjacent to mineralized drill holes (i.e. >0.1% Sn). The cross-cutting diorite dyke appears to influence the grade of mineralization, particularly in South Block, with significantly higher grade zones close to the dyke. On many of the cross-sections the host rocks have not been drill tested close to the dyke.

All those areas between mineralized holes and the dyke have been included as a "potential" resource.

With many of the Aberfoyle percussion drill holes bottoming in mineralization, there is scope in many places for increasing the tonnage available.

Boundaries have been placed around "potential" areas on the cross-sections, with a great deal of subjectivity. The outlines were transferred to the level plans, and the boundaries "smoothed" to present a more geologically acceptable outline. From the level plans a tonnage has been calculated, but no grade can be assigned.

The "potential" tonnage is summarised below:

North Block	:	1,200,000 tonnes
South Block	:	1,100,000 tonnes
Brocks Block	:	200,000 tonnes
Total Potential		2,500,000 tonnes

013

UNDERGROUND SAMPLING

A series of 14 Adits were excavated in the early 1900's, presumably by the original company that attempted to mine the deposit - Great Pyramid Tin Company.

There are no records available, to Shell's knowledge, of the tin grade of the material extracted, if it was assayed or processed at all.

Channel sampling in many of the adits was done by the Great Pyramid Tin Company and by the Troy Tin Syndicate in 1909 to 1911, and in 1914, respectively.

The Tasmanian Mines Department carried out some minor bulk sampling in areas of richer old workings in 1957 and 1963. The tin values from these samples was consistently higher than previously indicated.

BHP in 1964-1965 mapped all the adits, and in 1980-81 carried out some limited channel and bulk sampling to provide new information regarding grade distribution and comparisons with previous sampling.

The absolute values of the channel sampling by the Great Pyramid Tin Company and the Troy Tin Syndicate are not reported in any of the data obtained by Shell, but have been represented on plans as 0.1% Sn intervals, e.g. 0.2 to 0.3%. The variability of the grades reported supports recent evidence of the patchiness of the cassiterite distribution.

Continuous channel samples were collected by Shell in three adits (North, C and 1SLL) to enable comparison between actual assay results and calculated block grades in areas included in the ore reserve estimate. Samples were collected on a lithological basis. Sample sizes varied depending on sample width. Most samples collected were in excess of 5 kgs in weight. Geological information and assay results are documented on Plan D/LH 01/502, 503, 531-534. Channel sample results are indicated below:

Channel Sample Assay Results

Adit	No. of Metres	Bulk Grade
North (west wall)	70.45m	0.119% Sn
North (east wall)	12.2m	0.072% Sn
C	62m	0.23% Sn
1SLL	40.1m	0.23% Sn

(an average overall grade of 0.175% Sn)

GRADE COMPARISONS

An attempt has been made to assess the effect of adit channel sampling and bulk sampling on the overall drill-estimated grade. The paucity of reliable data prevents any meaningful quantifiable comparison of grades.

Recent bulk sampling by SCOA indicated a head grade significantly higher than a calculated grade from channel sampling, 0.39% as against 0.22%. Unfortunately the bulk sample was a composite of samples taken from different adits, so no direct comparison can be made with individual areas.

BHP collected, processed and analysed four bulk samples, from North, C, 2SLL and 2NLL Adits. The tin grade tended to be equal to or slightly higher than grade from channel sampling.

A substantial channel sampling programme was carried out by Great Pyramid Tin Mines N.L. in 1909, and the Troy Tin Syndicate in 1914. Unfortunately the actual results are not available, but have been recorded as ranges of values at 0.1% Sn intervals, e.g. 0.1-0.19%.

Appendix III presents in "note format" a summary of the adit sampling results, compared to drill indicated results.

The actual results obtained from the various underground sampling programmes have not been incorporated into the reserve calculation. However, the outlines of the reserve have been adjusted to allow for indicated mineralization in areas of no drill information.

Of the two major drilling programmes completed to date, the Aberfoyle percussion drilling has indicated a higher grade than the BHP diamond/percussion drilling programme (SCOA Report 08/1905). The mean value of all percussion drill samples is 0.14% Sn, and for all diamond drill samples is 0.10% Sn. However, many of the percussion holes did not penetrate the mineralized horizon, whereas the diamond drilling was testing non-mineralized zones, both laterally and vertically. It is significant that BHP drilled two percussion holes adjacent to two diamond drillholes (1m. separation), and the mean tin value was 40% higher from the percussion samples.

A separate study by BHP of the sludge assays from diamond drilling, indicate an increase of up to 30% in the mean tin value in the sludge samples.

HIGH GRADE RESOURCE ESTIMATE

In order to assess the potential for higher grade zones within the "envelope" of plus 0.1% Sn, blocks were outlined using a 0.2% Sn cut-off.

A higher grade block was outlined using the following parameters:

- individual intercepts in drillhole ≧ 0.2% Sn;
- minimum of 2 adjacent intercepts in each drillhole;
- a single intercept of less than 0.2% Sn was included if it could be "carried" by an intercept of ≧ 0.2% Sn either side of it;
- a block requires a minimum of 2 adjacent drillhole intercepts either on the same or adjacent section.

The same prismoidal method of calculation was used as for the 0.1% cut-off.

As expected, the 0.2% cut-off produces several seperate blocks of reserves, with the only major one that has reasonable continuity occurring in South Block, between levels 140 and 190, close to the dyke. An estimated tonnage of 306,000 tonnes is indicated, at a grade of 0.46% Sn, in this area.

Intercepts used, and tonnage and grade estimates, are report in Tables 6,7,8 and 9.

APPENDIX I

Summary of Drilling and Sampling Programmes at Great Pyramid

DRILLING PROGRAMMES

Aberfoyle: Percussion (1970):	H1-H137
Aberfoyle: Diamond (1970):	GPY1-GPY6
BHP: Percussion (1965):	PDUS1-PDUS21 PDUS24-PDUS26
BHP: Diamond (1980):	BPD1,2A,2B,3,4,5,7,9A,9B,10,11,12 & 8 (sludge only)
BHP: Diamond (1965):	DDS-1
TMD: Diamond (1976):	MD1-MD4

CHANNEL SAMPLING

1. Great Pyramid Tin Co. (1909):

'C' Adit:	W. Wall some high grade $\frac{>0.5\%}{15m}$; $\frac{>0.5\%}{12m}$
'B' Adit:	N. Wall, 3 x 3m sample <0.2%
2 NLL Adit:	W. Wall. Low grade, minor >0.2%
3 NLL Adit:	S & W. Wall. Min or low grade.
3 SLL Adit:	E. Wall: 0.1-0.2%.
North Adit:	60% of E Wall: High grade patch $\frac{>0.2\%}{22m}$

2. Troy Tin Syndicate (1914):

2 SLL Adit:	40% of both walls, patchy low grade. Both walls of drive : med-high grade.
'C' Adit:	30% of both walls, alternate; patchy low and high grade.
2 NLL Adit:	"X-Cut": 60% of N & S walls, low grade.
3 NLL Adit:	Both walls. Traces only.
'A' Adit:	20% sampled : trace → 0.2%.
North Adit:	40% both walls : trace → >0.5%.

3. BHP (1980):

2 NLL (Drive):	100% of N. wall 50% of S. wall	$\frac{0.27\%}{46m}$

4. Shell (1983):

North Adit:	85% of W. wall. ~ 20% of E. wall.	Variable lithologies & grades.

'C' Adit:	70% of W. wall.	High and low grades average about 0.23%
1 SLL:	60% of W. wall.	Variable grade, average is 0.226%.

BULK SAMPLES

1. Tasmanian Mines Department (1957):

2 SLL Adit:	98m W. wall.
Drive:	10m N. wall; 26m N. wall.
'C' Adit:	16m W. wall; 42m E. wall.
2 NLL Drive:	16m N wall; 43m N. wall
1 SLL Adit:	W. wall @ end.

2. BHP (1980):

North Adit:	E. Wall 16-18m	PBS-1	0.50% Sn
'C' Adit:	W. Wall 34-36m	PBS-2	0.30% Sn
2 SLL Drive:	N. Wall 1-3m	PBS-3	0.65% Sn
2 NLL Adit:	E. Wall 19-21m	PBS-4	0.35% Sn

3. Shell (1983):

3 separate samples bulked together. Overall grade 0.37% Sn

North Adit:	21.7-24.4m W. wall	4 drums
'C' Adit:	11-13m W. wall	4 drums
1 SLL Adit:	48.65-51.15 W. wall	3 drums

1 sample taken, not assayed.

2 NLL Adit

APPENDIX II

Channel and Bulk Sampling -

Level Distribution

CHANNEL & BULK SAMPLING - LEVEL DISTRIBUTION

190L:			
	North Adit: (194m RL)	*Channel Samples:*	Great Pyramid Tin Co. Troy Tin Syndicate Shell
		Bulk Samples:	BHP Shell
180L:			
	'C' Adit: (183m RL)	*Channel Samples:*	Great Pyramid Tin Co. Troy Tin Syndicate Shell
		Bulk Samples:	TMD BHP Shell
	'F' Adit (181m RL)	*Channel Samples:*	Troy Tin Sydnicate
	'E' Adit: (182m RL)	*Channel Samples:*	Great Pyramid Tin Co.
	'A'Adit: (181m RL)	*Channel Samples:*	Troy Tin Syndicate
	'B' Adit: (188m RL)	*No Records*	
160L:			
	2 NLL Adit: (166m RL)	*Channel Samples:*	Great Pyramid Tin Co. Troy Tin Syndicate BHP
		Bulk Samples:	TMD BHP
	1 NLL Adit: (163m RL)	*No Sampling.*	
140L:			
	3 NLL Adit: (142m RL)	*Channel Samples:*	Great Pyramid Tin Co. Troy Tin Syndicate
	3 SLL Adit: (142m RL)	*Channel Samples:*	Great Pyramid Tin Co.
	1 SLL Adit: (143m RL)	*Channel Samples:*	Shell Troy Tin Syndicate
		Bulk Samples:	TMD Shell

130L:

2 SLL Adit: (137m RL)	*Channel Samples:*	Troy Tin Syndicate
	Bulk Samples:	TMD BHP
Brocks Adit: (135m RL)	*Channel Sampling:*	TMD (1963)

170L:

'D' Adit: (174m RL)	*No Sampling.*

(024

APPENDIX III

Adit Sampling - Correlation with Interpreted Resource Outlines

190L

North Adit:

- Approximate level: 194m.
- Affects the 190L blocks in the North Block.
- Channel sampling indicates variability of Sn content with lithology.
- Average grade of Shell channel sampling = 0.12% Sn.
  Average grade of Shell Level Reserve = 0.15%.
- High grade of channel sampling, and BHP bulk sample ~ 14m from portal @ junction. Just within boundary of Shell interpreted zone of >0.2% Sn.

17WE: ~ 0.1% Sn.

18WE: Low grade x <0.1%.

19WE: Area of 0.18% Sn/4.25m.

20WE: Close to section of 0.28% Sn/4.9m in Adit adjacent to H17 - x = 0.14% above 190L.

21WE: Not sampled by Shell. Original sampling indicates 0.3-0.5% Sn.
Projection of drill collar to X section gives upper limit of mineralization at floor of adit. Only Shallow zone.

Conclusions:

- Overall grade of Shell sampling 0.12%, as against 0.14% for total level grade.
- High grade area is within higher grade area outlined on 190L reserve plan.

- Conflicting lithologies as mapped by BHP and Shell. Poor recognition of rock types.

- High grade bulk sample by BHP correlates with high grade channel sampling ~ 0.5% Sn.

180L

'C' Adit:

- Approximate level 183 RL.
- Affects 180L blocks in South Block.
- More distinct association of Sn with the sandstone/quartzite units, and sandstone/shale units.
- Shell channel sampled W. wall over 62m, average grade 0.23% Sn.
- Located in an area of variable drill indicated grade, but estimated at ≤ 0.2% Sn.
- Located sub-parallel to Aberfoyle drill sections, and between lines.
- Higher grade channel sampling by Shell, e.g. 27.5m @ 0.35% Sn and 6.4m @ 0.45% Sn.
- Tasmanian Mines Department bulk sampling grades do not correlate well with channel sampling grades, one about same grade: ~ 0.4-0.5%, and one indicated low, 0.1-0.2% in area of 0.35% in channel.

7WE: Portal at this section. Starts in high grade, < 0.5% Sn.

8WE: Area of <0.2% Sn from drillhole samples, high grade channel and bulk samples (>0.5%).

9WE: Interpreted <0.2% Sn area. 3m from BHP bulk sample @ 0.3% Sn; variable grade channel sampling by Shell; high grade channel sampling in 1909.

10WE: Located between low and medium grade drillholes, PDUS5 and H24. Edge of high grade of ore in channel sampling, 6.4m @ 0.45% Sn. Close to TMD bulk sample of 0.4-0.5% Sn.

11WE: Low grade area in drilling, <<0.1% Sn. No Shell channel sampling, close to <0.01%.

12WE: No Shell channel sampling. Low grade, <0.1% Sn; values from 1909 channel sampling.

Conclusions:

- Good correlation of grade with lithology.
- High grade mineralization in channel and bulk sampling of quartzites.
- Definitely barren in north part of adit from just north of 10WE section.

'E' Adit:

- Approximate level 182m RL.
- Situated between North and South Block on west side of hill.
- No drill information.
- Some average mineralization reported in channel sampling in 1909, 20m @ 0.1-0.3%, & 12m @ 0.1-0.3%.

'A' Adit:

- Approximate level 181 RL.
- Portal SE of North Block, north trending. End of adit just in interpreted limit of mineralization.
- Sampling in 1914 indicated low grade at end face and walls, <0.1%, <0.2%.
- Geology shows some unsampled quartzite and sandstone.

'F' Adit:

- Approximate level 181 RL.
- Affects east side of South Block.
- Drilling indicates medium to high grade.
- Channel sampling in 1914 (Troy Tin Syndicate) gave variable results, but all above 0.1% Sn, and up to 0.5% Sn.

160L

2 NLL Adit:

- Approximate level 166m RL.
- Affects 170L blocks in North Block.
- Channel sampling results indicate correlation of cassiterite with favourable lithologies - quartzites and sandstones. Much of the obvious shale units were not sampled in the early days, presumably the operators recognized that the shales were relatively barren.
- Sampling indicates variable grade, higher grade possibly related to more strongly fractured zones.
- TMD bulk sampling of high grade channel sampled area (i.e. >0.5% Sn); results were 0.83%, 0.37% and 0.42%.
- BHP bulk sample (PBS-4) from quartzite unit in area of 0.2%-0.4% Sn, returned a value of 0.35% Sn.
- BHP channel sampling of drive indicates average grade of 0.27% Sn over 46m.
- Average grade of probable, drill-indicated reserve at 160L, estimated at 0.26% Sn.

20WE: End of adit, indicated by channel sampling at 0.1-0.2% Sn, drilling (H4) indicates 0.22%.

21WE: No channel sampling at this point; lithology shown as sandstone and shale. Drilling (H6) indicates <0.1% Sn.

West drive is medium to high grade in drill indicated low grade area.

22WE: Area of low grade channel sampling in adit. Drill assays <0.1% Sn (H10).
Drive channel sampling up to 0.34%.
Indicates higher grade than drilling.

23WE: Low grade at adit level. Higher grade above and below.
Channel sampling very variable, but weak.

24WE: Low grade. Shale lithology. Outside reserve.

1 NLL Adit:

- No recorded sampling.
- Dangerous, with foul air.

140L

1 SLL Adit: (143m RL): within South Block

- Shell channel sampled the southern half, and the Troy Tin Syndicate channel sampled the northern half in 1914.
- Level block grade estimated from drilling at 0.27% SN.
- Overall grade of SCOA sampling is 0.23%.
- Mainly quartzite, sandstone and some shale.
- North end sampling indicated low grade, with some >0.2% in the walls at the north end of adit.

3WE: Through dolerite dyke, no tin values.

4WE: Start of higher grade area, channel sampling indicates 22.55m at 0.29% Sn.

Close to holes H41 and GPY-5, both with high grade Sn, 0.52% and 0.49% respectively; not reflected in channel sampling.

5WE: 7m from PDUS-20 which contain high grade values.
Channel sampling indicates 0.1-0.2% Sn.
Close to edge of probable reserve outline.

6WE: Beneath percussion drill outlined high grade zone, H54 at 0.72% Sn.
8m laterally from GPY-6 with >0.2% Sn.
Good potential.
Channel sampling indicates very low grade.

7WE: No drilling data. Below base of percussion drilling, all finished in good grade minieralization.
Channel sampling gave very low grades.

8WE: Interpreted average grade area, but above actual level. Good potential.
Channel sampling give 0.1-0.3%.

3 SLL Adit: (142m RL)

- East wall channel sampled by Great Pyramid Tin Co. (1909). All values indicated 0.1-0.2% Sn in the quartzites and sandstones.
- Outside area of drill delineated reserves.

3 NLL Adit: (142m RL)

- Channel sampled by Troy Tin Syndicate (1914) and partly by Great Pyramid Tin Co. (1909).
- Patchy values in shale, including a single sample >0.5% Sn, others 0.1-0.4% Sn.
- Some potential for reserves in this area; may require some testing.

130L

Brocks Adit: (135m RL)

- Through lower levels of Brocks Block.
- Evidence of old workings, some stoping and winzing.
- Quartzite, and mixed quartzite, sandstone and shale.
- Only recorded sampling by TDM in 1963; essentially barren, but some values <0.5% near old workings.

2 SLL Adit: (137m RL)

- Through lower levels of South Block.
- Channel sampled by Troy Tin Syndicate (1914), particularly in quartzite, sandstone, and mixed sandstone/shale lithologies.
- Very variable grade, <0.1 to >0.5% Sn.
- Overall high grade in drive off adit, particularly in the quartzite.
- Only 1 drillhole at this level is close to the adit, H38.
- Bulk sampling by TMD only in higher grade areas, confirms grade.
- Extends area of probable reserve, and would effectively upgrade this level. Drill estimated grade 0.25% Sn.

2WE: Just outside area of low grade reserve.

3WE: Edge of low grade reserve area, but close to high grade channel sampling.

035

4WE: Adjacent to base of H38, a low grade hole, average 0.1% Sn.
Variable grade in adit 0.1-0.5%.
Medium to high grade in drive.

5WE: Area of no drill information.
Adit channel sampling is medium to high grade, close to limit of favourable lithology.
Drive sampling low to high grade, 0.1% to >0.5% Sn.
Good potential for extra tonnes and grade.

6WE: Outside drill indicated reserves. No channel sampling, probably because of shale lithology.

7WE: Some medium grade values associated with quartzite and sandstone/shale.
No drill data.
Some potential for tonnage/grade.

8WE: Some low grade channel samples, 0.1-0.2%.
Beneath interpreted limit of drill indicated reserve.
Some potential for tonnage/grade.

TABLE 1

TOTAL INTERCEPTS USED IN PROBABLE RESOURCE CALCULATION

0.1% Sn Cut-Off

1. North Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
17WE	H88	196	215	19.0	0.17	
18WE	BPD2A	188	207	19.0	0.11	
	PDUS26	175.5	217	41.5	0.14	
	H87	186	203	17.0	0.14	
	H1	183.5	200.5	17.0	0.32	*
19WE	BPD1	169.5	212.0	42.5	0.14	
	H133	179.0	212.0	33.0	0.20	*
	H28	180.5	211.0	30.5	0.19	*
	H186	182.5	211.0	28.5	0.13	
	H2	184.0	206.5	22.5	0.10	
20WE	BPD5	166	180	14.0	0.17	
	BPD4	169	190	21.0	0.11	
	PDUS15	176	206	30.0	0.14	*
	H17	168	205	37.0	0.27	*
	H4	159	201.5	42.5	0.22	*
	H135	157.5	168.5	11.0	0.14	
21WE	H29	171.0	197.5	26.5	0.12	*
	H8	151	197	46.0	0.26	*
	H7	150	194	44.0	0.16	*
	H6	151.5	188.5	37.0	0.18	
	H5	149	180	31.0	0.45	

* Drill Hole Bottomed in Mineralization (>0.1% Sn)

1. North Block (Cont'd)

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
22WE	BPD3	147.5	170	22.5	0.14	
	PDUS14	143.5	190	46.5	0.14	
	H16	159	186.5	27.5	No Assays	
	H10	144.5	187.5	43.0	0.16	
	H11	175	179.5	4.5	0.18	
23WE	H14	144	176	32.0	0.25	*
	H15	144	180.5	36.5	0.20	
24WE	H13	170.5	174	3.5	0.13	
	PDUS13	164.5	177.5	13.0	0.22	

2. South Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
2WE	H124	140.5	148	7.5	0.17	
	H124	114.5	125	10.5	0.19	*
	H123B	109.5	149	39.5	0.27	*
	GPY2	91.5	110	18.5	0.12	
3WE	BPD10	134	158.5	24.5	0.17	*
	H122	127	155	28.0	0.26	*
4WE	H38	138	162.5	24.5	0.10	*
	H37	134	169	35.0	0.14	*
	BPD10	110	134.5	24.5	0.20	
	H41	134.5	165	30.5	0.36	*
	GPY5	109	165	56.0	0.30	
	H85	124.5	129.5	5.0	0.24	*
	H82	94	119.5	25.5	0.34	
	H126	88.5	102	13.5	0.27	*
5WE	PDUS20	134	167	33.0	0.36	
	H42	131	167.5	36.5	0.22	*
	BPD11	105	131.5	26.5	0.10	
	H81	102.5	136	33.5	0.15	*
6WE	H57	156	179	23.0	0.12	*
	GPY6	148.5	183.5	35.0	0.30	
	H54	153.5	178	24.5	0.72	*
	H43	143.5	172	28.5	0.40	
	H80	108.5	137	28.5	0.18	

2. South Block (Cont'd)

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
7WE	H105	154.5	163.5	9.0	0.35	
	H55	162.5	188.5	26.0	0.37	*
	BPD9A	178.5	193	14.5	0.15	*
	H44	148.5	173	24.5	0.39	*
	H119	111.5	128.5	17.0	0.15	*
	H130	102	134	32.0	0.15	*
	H128	118	127.5	9.5	0.24	*
	H53	167.5	188.5	21.0	0.26	*
8WE	H96	161	171.5	10.5	0.22	
	MD4	161.5	172	10.5	0.21	
	PDUS25	158.5	171	12.5	0.15	
	GPY3	109	185	74.0	0.32	
	H56	160.5	185	24.5	0.30	*
	H79	165	191.5	26.5	0.11	*
	H52	170.5	195	24.5	0.33	*
	BPD9A	140.5	183	42.5	0.17	
	H45	150	176	26.0	0.13	
	H131	119	140.5	21.5	0.30	
9WE	H92	162.5	184	21.5	0.15	*
	H103	172.5	190.5	18.0	0.64	
	H26	167.5	200	32.5	0.23	*
	MD3	164	189.5	25.5	0.17	*
	H25	165.5	199	33.5	0.12	*
	PDUS7	170	200	30.0	0.29	
	H51	167	195	28.0	0.50	*
	H46	160.5	177.5	17.0	0.26	*
	H117	157	161.5	4.5	0.17	*

2. South Block (Cont'd)

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
10WE	H111	140	167	27.0	0.42	
	H109	176	186.5	10.5	0.20	
	H91	178.5	184.5	6.0	0.21	
	PDUS5	172.5	194	21.5	0.13	
	H24	174	207.5	33.5	0.22	
	H22	174.5	201.5	27.0	0.18	*
	H47	178	184	6.0	0.34	
11WE	H108	149	187.5	38.5	0.15	
	H32	165.5	193	27.5	0.17	*
	H21	169.5	206	36.5	0.15	*
	PDUS8	169	201.5	32.5	0.08	
	H49	151	189.5	38.5	0.13	
12WE	H113	164	177	13.0	0.16	
	H34	164.5	175	10.5	0.23	
	H20	173.5	201	27.5	0.24	*
	H50	170	185	15.0	0.17	
13WE	H114	147	166.5	19.5	0.20	*
	H30	183	194	11.0	0.15	
	PDUS6	183	197	14.0	0.11	
	H19	185.5	206.5	21.0	0.29	*
14WE	H36	183	194	11.0	0.20	

3. Brocks Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
2WE	H65	136.5	170.5	34.0	0.17	*
	H64	151.5	161	9.5	0.34	*
3WE	H66	141.5	172	30.5	0.20	*
	PDUS2	137.5	172	34.5	0.12	
	H63	137	167.5	20.5	0.17	
4WE	H72	150	156	6.0	0.29	
	H67	161	172	11.0	0.25	
	H62	130.5	162	31.5	0.18	
5WE	H73	133	142	9.0	0.13	
	H68	148	160	12.0	0.23	
	H61	165	177.5	12.5	0.18	
6WE	H69	135.5	141.5	6.0	0.27	
	H60	142.5	148.5	6.0	0.32	
	H95	147	156	9.0	0.17	

TABLE 2

GREAT PYRAMID

BLOCK: NORTH CATEGORY: PROBABLE DATE: SEPT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 x A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1xA2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
200-210	4980	1910	3084	33245	88100	0.21	185
190-200	7025	4980	5915	59735	158300	0.15	235
180-190	6930	7025	6975	69765	184900	0.22	405
170-180	7310	6930	7115	71190	188700	0.21	395
160-170	5210	7310	6170	62305	165100	0.21	345
150-160	3330	5210	4165	42350	112200	0.14	160
140-150		3330					
TOTAL					897300	0.19	1725

TABLE 3

GREAT PYRAMID

BLOCK: SOUTH CATEGORY: PROBABLE DATE: SEPT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
200-210	2315					0.20	
190-200	8075	2315	4324	49045	130000	0.18	235
180-190	11725	8075	9730	98435	260800	0.24	625
170-180	10455	11725	11072	110840	293700	0.23	675
160-170	11065	10455	10755	107585	285100	0.25	715
150-160	7315	11065	8997	91255	241800	0.36	870
140-150	5745	7315	6483	65145	172650	0.26	450
130-140	7605	5745	6610	66535	176300	0.23	405
120-130	6295	7605	6920	69400	183900	0.18	330
110-120	3995	6295	5015	51015	135200	0.21	285
100-110	1620	3995	2544	27200	72100	0.18	130
90-100	625	1620	1006	10835	28700	0.16	45
80-90		625					
TOTAL					1980200	0.24	4765

044

TABLE 4

GREAT PYRAMID

BLOCK: BROCKS CATEGORY: PROBABLE DATE: SEPT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
170-180	1890					0.24	
160-170	3060	1890	2405	24515	65000	0.17	110
150-160	3030	3060	3045	30450	80700	0.19	155
140-150	2630	3030	2825	28285	74900	0.15	110
130-140	230	2630	778	12125	32100	0.19	60
120-130		230					
TOTAL					252700	0.17	435

TABLE 5

GREAT PYRAMID

BLOCK: TOTAL CATEGORY: PROBABLE DATE: SEPT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
NORTH					897300	0.19	1725
SOUTH					1980200	0.24	4765
BROCKS					252700	0.17	435
TOTAL					3130200	0.22	6925

TABLE 6

TOTAL INTERCEPTS USED IN PROBABLE RESOURCE CALCULATION

0.2% Sn Cut-Off

1. North Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn
19WE	H133	200	206	6.0	0.41
	BPD1	188.5	193	4.5	0.27
	H28	180.5	188	7.5	0.24
	"	202	208	6.0	0.37
20WE	H17	174.5	185	10.5	0.35
	"	199	203.5	4.5	0.67
	H4	159	179	20.0	0.27
	"	195.5	201	5.5	0.26
21WE	H8	154	164.5	10.5	0.27
	"	180	193.5	13.5	0.46
	H7	157.3	161.8	4.5	0.25
	"	188	191	3.0	0.41
	H6	172.8	181.3	8.5	0.37
	H5	156.5	179.5	23.0	0.56
22WE	H10	172	186	14.0	0.34
23WE	H14	144	150	6.0	0.33
	"	162	172.5	10.5	0.38
	H15	148.5	153	4.5	0.31
	"	160.5	166.5	6.0	0.38
	"	174	180	6.0	0.31
24WE	PDUS13	164.5	173.5	9.0	0.27

2. South Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn	
2WE	H124	116	120.5	9.0	0.21	
	"	140.5	143.5	3.0	0.29	
	H123B	114	123	9.0	0.27	
	"	135.5	149	13.5	0.35	
3WE	BPD10	139.5	142.5	3.0	0.25	
	H122	130.7	143	12.3	0.35	
4WE	H37	134	140	6.0	0.27	
	BPD10	129.5	134.5	5.0	0.53	
	GPY5	133	165	32.0	0.41	
	H41	134.5	165	30.5	0.36	
	H82	100	120	20.0	0.40	
	H126	88.5	91.5	3.0	0.90	
5WE	PDUS20	141.5	163.5	22.0	0.52	
	H42	141.5	167.5	26.0	0.29	
	H81	116	123.5	7.5	0.26	
6WE	GPY6	144	176	32	0.46	
	H54	153.5	178	24.5	0.72	
	H43	143.3	151	7.7	0.30	
	H43	161.6	172.2	10.6	0.71	
	H80	127	133	6.0	0.43	
7WE	H55	162.8	176.5	13.7	0.42	*
	"	181.2	188.7	7.5	0.40	
	H53	167.2	171.8	4.6	0.58	*
	"	178	185.5	7.5	0.29	
	H44	153	159.2	6.2	0.64	
	"	168.5	173	4.5	0.70	

047

2. South Block (cont'd)

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn
7WE	H119	116	120.5	4.5	0.24
	H130	117.5	120.5	3.0	0.25
	H128	118.5	121.5	3.0	0.43
8WE	H90	156	159	3.0	0.52
	GPY3	148.5	173	24.5	0.49
	H52	172.5	175.5	3.0	0.33
	"	186.5	194.0	7.5	0.57
	BPD9A	169	174.5	5.5	0.38
	H45	171.5	174.5	3.0	0.27
	H131	131.5	137.5	6.0	0.66
9WE	H103	183.2	191	7.8	1.33
	H26	168	174	6.0	0.56
	H25	165.5	170	4.5	0.33
	PDUS7	169.7	182.5	12.8	0.43
	"	186	193.5	7.5	0.30
	H51	171.5	190	18.5	0.66
	H46	166.7	177.5	10.8	0.33
10WE	H24	185	195.5	10.5	0.35
	H22	182	186.5	4.5	0.29
	H47	177.5	182	4.5	0.41
12WE	H20	178	181	3.0	1.17
	H50	171.5	174.5	3.0	0.40
13WE	H19	185.5	196	10.5	0.34
	"	199.5	205.5	6.0	0.34

3. Brocks Block

SECTION	HOLE NO.	RL FROM	RL TO	TOTAL DEPTH	% Sn
2WE	H65	137	146	9.0	0.42
	H64	151.8	161	9.2	0.34
3WE	H66	155.5	158.8	3.3	0.51
	"	165	172.5	7.5	0.31
	PDUS2	159.5	163.2	3.7	0.37
	"	168.7	172.2	3.5	0.33
	H63	161.5	167.5	6.0	0.45
4WE	H72	153	156	3.0	0.86
	H67	161.2	172.4	11.2	0.29
	H62	153.2	162.5	9.3	0.28
5WE	H68	148	158.5	10.5	0.25
	H61	166.5	169.5	3.0	0.23
	"	172.5	175.5	3.0	0.22
6WE	H69	135.5	141.5	6.0	0.27
	H60	142.5	147	4.5	0.39

(. 049

TABLE 7

GREAT PYRAMID

BLOCK: NORTH CATEGORY: PROBABLE - H1 GRADE DATE: OCT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
200-210	950					0.57	
190-200	1230	950	1080	10850	28700	0.42	
180-190	2290	1230	1680	17300	45800	0.36	
170-180	2050	2290	2170	21700	57500	0.35	
160-170	1570	2050	1800	18100	47900	0.34	
150-160		1570					
TOTAL					180000	0.36	650

TABLE 8

GREAT PYRAMID

BLOCK: SOUTH CATEGORY: PROBABLE - H1 GRADE DATE: OCT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
200-210	400	-				0.34	
190-200	1890	400	870	10550	27900	0.39	
180-190	2195	1890	2040	20400	54100	0.55	
170-180	3875	2195	2920	29950	79400	0.42	
160-170	2770	3875	3280	33100	87700	0.50	
150-160	2790	2770	2780	27800	73700	0.54	
140-150	2100	2790	2420	24350	64600	0.35	
130-140	290	2100	780	10550	28000	0.40	
120-130	690	290	450	4750	12600	0.24	
TOTAL					428000	0.43	1840

NB: Does not include material East of Dyke.

TABLE 9

GREAT PYRAMID

BLOCK: BROCKS **CATEGORY:** PROBABLE - H1 GRADE **DATE:** OCT. 84

LIFT	A1 SQ. M.	A2 SQ. M.	$\sqrt{A_1 \times A_2}$	VOL. $\frac{h}{3}(A1+A2+\sqrt{A1 \times A2})$	ORE TONNES (+) @ S.G.=2.65	GRADE % Sn	TONNES Sn
170-180	540	-				0.30	
160-170	1270	540	830	8800	23300	0.31	
150-160	435	1270	740	8160	21600	0.31	
140-150	645	435	530	5370	14200	0.37	
130-140		645					
TOTAL					59100	0.32	190

MEMORANDUM

TO: BEM (BCD)

FROM: AHO BEM/2:SK:YP

DATE: February 9, 1983

SUBJECT: GREAT PYRAMID PROSPECT

Introduction

The object of this memorandum is to provide sufficient mining information for "in-house" evaluation of the Great Pyramid Prospect.

The ore reserves calculation used for the mining study comes from "Great Pyramid Tin Prospect - Statistical Study of Drillhole Data" prepared by BEC/2. The mine equipment selection and costing has been carried out independently by BEM/2 using current costs from the Australian Mining Industry. The mining part of the evaluation is presented in 2 separate cases:

Case 1: Mining done by SCOA's own group
Case 2: Mining carried out on a contract basis

General Description

The project area is located near Scamander in NE Tasmania. SCOA entered the prospect by Joint Venture with the licence holder BHP later in 1982. The area has low infrastructure requirements as sufficient power and water supply, ample labour market and good roads surround the prospect.

Geological Basis for Mining Study

The Great Pyramid prospect was first located in 1909. Since that time numerous investigations by adit sampling, percussion drilling and diamond drilling have been carried out. The geology of the deposit has been described in BHP Exploration Report "Specification for Exploration of the Great Pyramid Mine" (Hine R. and Goode A., 1980).

An interbedded and gradational sequence of sandstones, siltstones and shales of the Siluro - Devonian Mathinna Beds form the host to the tin mineralisation.

The quartzite (more correctly, a silicified sandstone) which forms the Great Pyramid ridge is generally a hard, grey massive rock. Bedding is

usually difficult to recognise although it is parallel to a well developed jointing direction. In the main outcrops, beds are commonly several metres in thickness, separated by very thin (1-2 cm) shale beds.

The mudstones, siltstones and shales range in thickness from a few cm up to 2m. They are sheared, incompetent rocks, which pinch and swell along strike.

Observations both underground and on surface indicate most bedding strikes approximately north west and dips about 70 degrees south west, although many variations of strike and dip do occur. Asymmetrical folds have been observed plunging 20 to 30 degrees south east.

A major north west trending fault possessing a steep northerly dip transects the Great Pyramid prospect. Due to the absence of marker horizons the extent of displacement across the fault is unknown, although a large displacement is implied by the existence of two structurally distant zones on either side.

The bulk of the tin mineralisation comprises an area of cassiterite bearing close spaced joints. These joints strike about 070 degrees (at, or near, right angles to the strike of the bedding) and dip 60 to 70 degrees to the north west. The mineralised joints are generally 1-5mm in width and are locally lined with quartz and limonite.

The cassiterite occurs as grains generally coarser than 0.1mm (100u) with one or more of the following minerals: muscovite, fluorite, siderite, sulphides (arsenopyrite, pyrite, sphalerite, galena), tourmaline and wolframite.

Jointing and veining are best developed in the thicker, more massive sandstone and quartzite beds and, while present in the interbedded sandstones and shales, mineralisation is rare.

Two zones of mineralisation have been defined to date (a 'north' zone and a 'south' zone) which have been interpreted as being truncated by the fault described earlier. Some high grade tin intersections have been reported from the fault zone which probably has a width of 3-5 metres.

A narrow, non-mineralised dyke of intermediate composition (a 'quartz dolerite' in the petrological descriptions) crosses the deposit on an ENE-WSW trend.

The major controls of 'veinlet' style mineralization at Great Pyramid, therefore appear to be as follows:

1. Rock type: there appears to have been a strong preference for mineralised veinlets to develop in competent sandstones and quartzites.

2. Dense, close-spaced jointing, oriented normal to the local fold axis.

3. Proximity to a throughgoing fault. However, the importance of the fault as the principal conduit for ore fluids is questionable.

Drilling and Sampling Programmes

The following observations have been made regarding the drilling/sampling to date:

1. The BHP percussion holes ('PDUS' Series) were drilled on too widely spaced centres (50-60 metres) to adequately test the mineralised zones. Only 3 holes intersected significant mineralisation.

2. The Aberfoyle - Paringa percussion holes ('H' Series) were drilled generally on a grid pattern to test soil anomalies, at a spacing of 50' (15m) on lines 100' (30m) apart. This is the most extensive borehole coverage although it does not include all areas of indicated and potential mineralisation. Several boreholes were terminated in mineralised zones due to loss of air pressure.

3. The Mines Department diamond holes ('MD' Series) were drilled parallel to the main joint set and hence do not give reliable grade estimates.

4. The Aberfoyle - Paringa vertical diamond holes ('GPY' Series) have recorded some of the best intersections to date e.g. GPY 5 (33m at 0.36% Sn from 0-33m), GPY 6 (41m at 0.40% from 0-41m) and GPY 3 (33m at 0.38% from 0-33m and 20m at 0.38% from 56-57m).

5. The BHP diamond drillholes ('BPD' Series) were drilled on bearings normal to the mineralised joint set. During this campaign it was noticed that a significant proportion of the cassiterite was reporting to the drilling sludges. Sludges were collected and assayed over 3 metre intervals where sufficient water return was achieved. Two diamond holes, BPD2 and BPD9, were abandoned and percussion holes drilled alongside the discontinued diamond holes.

Statistics

The major findings of the statistical study were that:

1. The tin assay grades derived from the Aberfoyle - Paringa percussion drilling program ('H' Series) tend toward a lognormal distribution with similar estimates of the mean tin grade.

2. There is a considerable variability of grades over short distances. Corresponding downhole intervals from diamond holes and the adjacent percussion holes show no correlation between tin grades. This suggests that either the 'nugget effect' is very significant and/or that sampling and assaying problems have been considerable.

3. There is no apparent statistical correlation between tin grade and fracture density in either quartzite/sandstone, or in the quartzite and

interbedded shale lithologies.

4. It would not be possible to use kriging for ore reserve estimation given the drillhole data available at the present time. This is because the semi-variogram range (or zone of influence) is less than the drillhole and line spacing for the 'H' Series percussion holes.

Ore Reserve Estimates

The 'H' Series holes were used to derive reserve estimates at different cut-off grades using inverse distance squared weighting technique. The estimated reserves at a 0.1% tin cut-off grade are presented below:

Level	Tonnes	Mean Sn Grade (%)
2	103,723	0.260
3	267,649	0.204
4	389,518	0.246
5	442,683	0.205
6	578,170	0.263
7	342,938	0.232
8	274,057	0.201
9	156,650	0.188
10	133,400	0.175
11	48,403	0.218
12	33,216	0.235
13	25,838	0.116
Total	2.8 mln tonnes	0.225% Sn

Mining

The following mine design parameters and production criteria were derived or assumed for the mine equipment selection and the mine facilities construction:

Mill Feed	300,000 tonnes/year
Mine Production	
- Ore	1,225 tonnes/day
- Waste	940 tonnes/day
Total Movement	2,165 tonnes/day
Mining Ratio	0.8
Mine Life	8.5 years
Operating Time	245 days/year, 1 shift,

8 hours/shift

Ore Density 2.65 tonnes/m3

MINING COSTS

Clearing and Mine Development

All clearing of the hill from the forest and forest litter removal as well as the first 65,000 tonnes of overburden removal (entire level 1) will be done by a contractor specialising in this type of work. The contractor will also develop 1.3 km of hauling road connecting South and North part of the pit with the crusher area. The overall supervision of the clearing and mine development work will be SCOA's responsibility.

Cost Per Year

Type of Work	Area (ha)	Cost
Litter Removal	12	25,000
Bench & Road Development (1km road - $140,000)		180,000
Pre-production Overburden Removal		115,000
Drainage		10,000
Total Mine Development		$ 330,000

Production Mining

Drilling

Gardner Denver RDC-16B rotary drills are going to be used to drill holes of 6 metres depth and nominal 100mm diameter. Drilled holes will be sampled to provide more accurate information for grade control.

Drilling Data

Tonnes to be drilled	530,000/year
Drill availability	90%
Utilisation	60%
Drill fleet	2

Operating Cost

Operating supplies	10,000
Power	26,000
Maintenance	40,000
Total Operating	$ 76,000
Unit Cost	0.14 $/tonne mined

Capital Cost

2 x Gardner Denver RDC-16B drill	$510,000
+ Contingency (10%)	51,000
Total Capital	$561,000

Blasting

The blast design and optimisation will be carried out by the Mine Planner/Grade Controller. The blasting practices will be carried out accordingly to the local rules and regulations.

Consumable Cost		92,000
Labour		46,000
Equipment Cost	Operating $	Capital $
Mixing Unit	12,000	50,000
1 Hydraulic Rock Breaker	4,000	40,000
1 Bobcat	1,000	14,000
1 Magazine (Explosives)	1,000	10,000
1 AN Magazine	1,000	80,000
	19,000	
Total Operating	$157,000	
Total Capital		$194,000
+ Contingency 10%		20,000
		$214,000
Unit Cost - Blasting	0.29 $/tonne mined	

Loading & Hauling

A conventional open pit system using loader and truck was chosen for ore and overburden removal from the pit. Cat 966 (3.1/m~) rubber tyred front-end loaders and 20 tonne dump trucks were selected. The mining fleet (for 2km hauling cycle) will consist of 2 rubber tyred front-end loaders and seven 20 tonne trucks, together with ancilliary equipment such as grader, 1 dozer and 1 water cart.

Loader Selection:

Daily Production	2,165 tonnes
Availability	75%
Utilisation	75%
Fleet Units Required	2 Cat 966 (3.1 m~)

Truck Selection:

Dipper Size	3.1 m~
Tonnes Per Dipper	4.6
No. of Passes	(4-5)
Truck Capacity 20 Tonnes	(Komatsu HD-200)
No of Trucks Required	5

Labour Cost (1 Loader Operators + 4 Truck Operators) x 23,000 =	115,000
Maintenance Cost	
- Loaders $18/Loader/oper hr	35,000
- Trucks $17/Truck/oper hr	133,000
Power	
- Loaders	26,000
- Trucks	74,000
Total Operating Loading & Hauling	$ 383,000
Unit Cost - Loading & Hauling	0.72 $/tonne mined

Capital Costs

2 x Cat 966	434,000
5 x Komatsu HD200	875,000
	$1,309,000
+ 10% Cost	130,000
	1,439,000

060

Mine Facilities

Labour (1 first aid)	23,000
Supplies (25% of labour cost)	6,000
	29,000

Unit Cost Mine Facilities 0.05 $/tonne mined

Auxilliary Equipment

Auxilliary equipment is going to be required for minor production tasks.

Equipment	Number	Oper Cost	Cap Cost
Cat D7	1	18,000	241,000
Grader	1	8,000	156,000
Washdown Unit	1	1,000	50,000
Water Cart	2	4,000	30,000
		39,000	485,000
		+ 10% Cont	50,000
			535,000
Manpower		23,000	
Maintenance		80,000	

Total Auxilliary Equipment Operating Cost 142,000

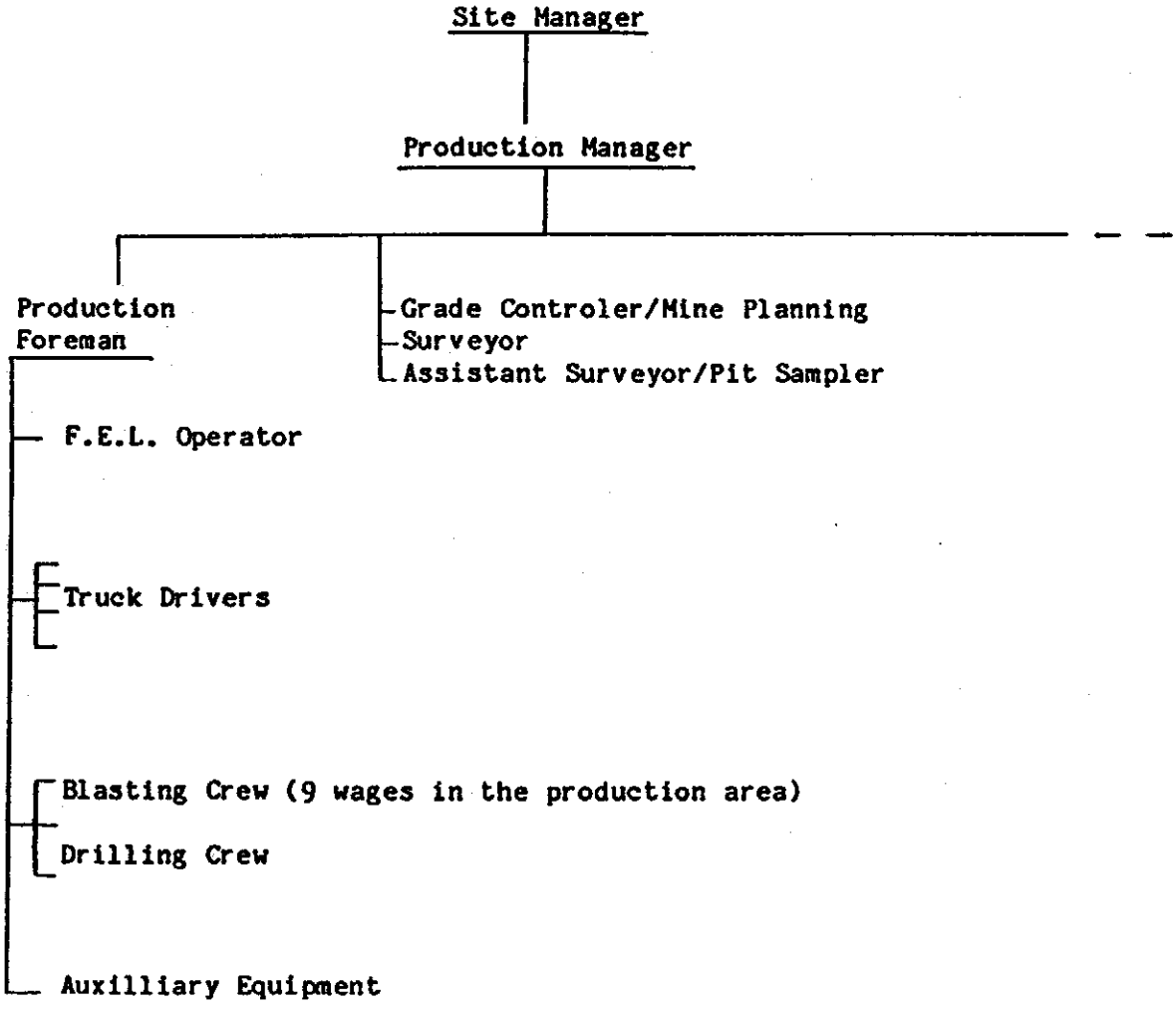
Unit Cost 0.27 $/tonne mined

Maintenance

There will not be a pit workshop. All repairs will be done in the main workshop. The main workshop will be equipped to repair the mining equipment as well as the plant and the concentrator.

General Mine Expense

The following organizational chart is proposed to facilitate administration cost estimation.



4 men x $26,000 = 104,000
Operating Administration Cost is $104,000
Unit Cost 0.19 $/tonne mined

Summary

The project area is located near Scamander in NE Tasmania. The bulk tin mineralisation comprises of an area of cassiterite bearing close spaced mineralised joints lined with quartz and limonite. Two zones of mineralisation have been defined: North Zone and South Zone. A narrow, non mineralised dyke of intermediate composition (quartz-dolerite) crosses the deposit and separates the zones.

Potential tonnage and grades of tin so far discovered were calculated from assay results of the Aberfoyle percussion holes ('H' Series) drilled at 15 metres spacing on lines 30 metres apart using inverse

distance squared weighting technique. The estimated reserves at 0.1% tin cut-off grade are 2.8 mln tonnes 0.225% Sn. For this evaluation, the mining reserves of 2.615 mln tonnes 0.22% Sn (after 5% dilution factor) were selected.

Production rate of 300,000 tonnes of ore/annum was assumed with operations consisting overburden removal, drilling, blasting, loading and trucking. A workforce of some 13 people will be employed at the mine site. No provision has been made for housing at this stage of the project evaluation.

The calculated unit cost for mining operations maintained with the SCOA's group (Case 1) is 1.66$/tonne mined. The capital cost of the mine development and mine equipment is $445,000 and 2,750,000 respectively.

The cost unit for the same mining operation quoted by Roche Bros. Pty. Ltd. (Case 2) is 2.36 $/tonne mined. Both cases were compared (see Attachment 1) and it was shown that Case 1 is more favourable as the NPV of the outlays is approximately 7.06 mln compared with 7.229 mln in the second case.

Conclusions

It is concluded that the difference between 2 outlays of the costs while mining using SCOA's mining group or a contractor is relatively insignificant and practical factors like gaining practical experience for the Group, prefered method of financing project should decide the selection.

Stan Kaleta.

Case 1

Unit Cost - Mining Operations

$ / tonne mined

Drilling	0.14
Blasting	0.29
Loading & Hauling	0.72
Auxilliary Mine Equipment	0.27
General Mine Expense	0.19
Mine Facilities	0.05
	1.66

Attachment 1

Comparison of Mining Alternatives

Case 1 -
Case 2 -

Year	0	1	2	3	4	5	6	7	8
Case 1	2.75	.88	.88	.88	.88	.88	.88	.88	.88
Case 2		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25

0.88 x 6.2469 = 5.497

where 6.2469 = Present value of $1 received annually for 9 years at 8%

As the payment was not made by the end of year 1, it is necessary to bring once more the cash from year 1 to 0.

5.497 x 0.9259 = 5.089

where 0.9259 the present value of $1 factor for 1 year at 8%.

The same logics follow case 2 calculation

1.25 x 6.2469 = 7.808

7.808 x 0.9259 = 7.229

Annual depreciation = - 344

Tax gain = - 158 (46%)

NPV of the tax gains = - 778

Case 1	Case 2
2.75	
+ 5.089	
7.839	
- .778	
7.061	7.229

GREAT PYRAMID - CAPITAL COSTS A$'000 (MID 1983)

		-2	-1	0	1	2-7	8	WHOLE
FEASIBILITY:	100% SCOA	727						
	SHARED	100						
	PRE-PRODUCTION		410	35				
MINE CAPEX MINE EQUIPMENT				2,749				
PROCESSING CAPEX			4,000	5,000	250	-		
GENERAL CAPEX			1,000	750				
TOTAL								
WORKING CAPITAL			-----	ALLOW 3 MONTHS OP COSTS			-----	

APPENDIX 3: GENERAL

The General section covers those aspects of the project not covered in appendicies 2.1 and 2.3.

a) Operational Costs

(i) Capital Costs

	$
Site Preparation	100,000
Compensation	100,000
Laboratory	200,000
Maintenance Facilities	200,000
Offices	100,000
General Site Services(telephone/telex/ power etc.)	150,000
Off Site Costs (Senior Staff Housing) (1 x $100,000) (2 x $ 80,000) (5 x $ 65,000)	585,000
Sub Total	1,435,000
Contingency	315,000
Grand Total	1,750,000

(ii) Operating Costs

Senior Metallurgist	0.75	50,000	40%	52,500
Administration Supt.	1.0	30,000	40%	42,000
Administration Dept.	7.0	20,000	25%	175,000
Total Personnel	8.75			269,500
Office Costs (rentals, supplies, insurances etc.)				210,000
Total Administration Op Costs				479,000

Transport of Concentrate $200/tonne

Feasibility Study

Object No 1:	To demonstrate relationship of drilling to ore	
Procedure:	Exploratory Driving : Re sampling of adits etc.	
Allow	$500/metre and 250 metres (1.8m x 1.8m) (2100 tonnes)	$125,000
	Allow 1000 Samples at $30	$ 30,000
	Allow Supervision 1.5 x 3 x 8,000	$ 36,000
	Allow Surveys	$ 15,000
	Allow Sampling/metallurgical testwork etc.	$100,000
	Allow Reporting	$ 24,000
	Allow unbudgetted items (20%)	$ 66,000
	Allow contingency (20%)	$ 79,000
		$475,000
Object No 2:	To demonstrate project costs/feasibility	
Allow	Feasiblity Study SCOA/Consultant Say 20 man months x $10,000	$200,000
Allow	Management (Corporate/Government/ Public Contact)	$ 60,000
Subtotal		$735,000
	Allow + 12½% Company Overheads	$827,000

069

047068

GREAT PYRAMID

GREAT PYRAMID

THE SHELL COMPANY OF AUSTRALIA LIMITED
METALS DIVISION

PRELIMINARY METALLURGICAL INVESTIGATION

OF TIN ORE DEPOSIT

FROM TASMANIA

GREAT PYRAMID

Report No. 16.020.1/1

MINERAL DEPOSITS LIMITED
MINERAL TECHNOLOGY DIVISION
BUNDALL - QUEENSLAND
AUSTRALIA

INDEX

1.	INTRODUCTION		
	1.1	Test Material	1
	1.2	Objective	1
	1.3	Terms of Reference	1
	1.4	Conclusions	2
2.	TEST EQUIPMENT AND PROCEDURES		
	2.1	Sample Preparation	4
	2.2	Grinding and Screening	4
	2.3	Hydrosizing	5
	2.4	Spiral Tests	5
	2.5	Table Tests	6
	2.6	Mineralogical Examination	6
	2.7	Tin Assays	6
	2.8	Sizing Analysis	6
3.	RESULTS AND DISCUSSION		
	3.1	Sample Processing Flowsheet	7
	3.2	Head Assay	7
	3.3	Ore Crushing and Milling	7
	3.4	Hydrosizing	9
	3.5	Spiral Tests	10
	3.6	Wet Table Testwork	11
	3.7	Magnetic Separation	12
	3.8	Recommendations	12
4.	APPENDICES		14

1. INTRODUCTION

1.1 Test Material

Eleven drums of tin ore were submitted by the Shell Company of Australia, Metals Division, from a deposit in Tasmania. The sample weighed 3.17 tonnes dry, and was nominally -100mm. The tin content was expected to be 0.2-0.25% Sn.

1.2 Objective

The objectives of the testwork were to:

1.2.1 Derive an estimate of the mass and metallurgical balances for the elements in the programme.

1.2.2 Produce a concentrate by gravity methods assaying greater than 30% Sn and a rejectable gravity tailing.

1.2.3 Upgrade the tin gravity concentrate to a saleable product.

1.3 Terms of Reference

1.3.1 Correspondence from Mr. Bruce Spiers of Shell Metals Division (SMD) outlining the test programme requirements, dated March 16, 1983.

1.3.2 Initial verbal communications between Mr. Bruce Spiers of SMD and Dr. Roger Richards of Mineral Deposits Limited (MDL) on February 21, 1984.

1.3.3 Letter of confirmation from Mr. Bruce Spiers, SMD, to Dr. Roger Richards, MDL, dated February 22, 1984.

1.3.4 A quotation, dated March 1 1984, from Dr. Roger Richards, MDL, for testwork as outlined.

1.3.5 Correspondence from Mr. Stan Kaleta, SMD, accepting the test proposal and submitting SMD's Order No. 48214.

1.4 Conclusions

The data produced from the testwork suggests the following:

1.4.1 A gravity concentrate of greater than ~~30%~~ 65% Sn content is achievable, using classification and wet gravity techniques.

1.4.2 A significant proportion of the feed, possibly as high as 30% or better, could be rejected as a final gravity tailing.

Not proven → (see p.8).

1.4.3 Liberation of over 20% of the total tin content of the feed in a size suitable for gravity concentration is achievable by grinding to less than 400 microns.

So what? →

1.4.4 Improvements in recovery of tin by gravity concentration in a production plant over the results achieved by the testwork carried out are possible by regrinding select middling products, recirculation of various product streams within the flowsheets, and better operating techniques achievable on a continuous operating basis.

Obviously.

073

1.4.5 Introducing different size feeds to tne separate gravity circuits may improve separation efficiency although this was not confirmed in this test programme.

1.4.6 Upgrading the gravity concentrates to saleable product by magnetic separation techniques appears possible.

1.4.7 No other valuable mineral was upgraded to any significant degree.

M. V. ATFIELD,
CHIEF METALLURGIST.

P. A. BUTLER,
SNR. PROJECT TECHNICIAN.

G. F. BALDERSON,
MANAGER - TECHNICAL SERVICES.

2. TEST EQUIPMENT AND PROCEDURES

2.1 Sample Preparation

The total sample was initially weighed and then thoroughly mixed. Approximately two tonnes were then split out by cone and quarter techniques for feed for the pilot test circuit. A further representative sample was obtained by coning and quartering and later ground and riffled to obtain a head assay.

2t feed
Contains 40-50kg Sn
= 60-70kg SnO_2

4" feed ??

2.2 Grinding and Screening

The sample was initially crushed in a jaw crusher and then screened on a vibrating screen fitted with a 13mm aperture punch plate screen cloth. The screen oversize was recirculated to the jaw crusher for further reduction. The screen undersize constituted feed to the rod mill for grinding.

No pretesting with heavy liquids therefore arbitrary choice of grind size, therefore the value of this work greatly reduced

The rod mill product was screened on a 1m diameter Kason vibrating screen fitted with a 400 microns aperture screen cloth. The oversize was returned to the rod mill (for further grinding) and the undersize flowed through a series of four hoppers to allow dewatering. Overflow from the fourth hopper which carried some fine slime was not retained.

The total rod mill ground product was then placed on a concrete pad to drain the excess water. The ground material was then thoroughly mixed and a sample was obtained by a coning and quartering procedure for moisture, head assay and screen analysis.

2.3 Hydrosizing

The Hydrosizer (of similar design to a Concenco three-cell model constricted plate classifier) was fed at approximately 60% solids w/w at 2tph. The aim was to produce three products: i.e. coarse, medium and slimes fractions. The three classifier underflow fractions were collected in 200 litre drums and the classifier overflow fines fraction was collected in a large tank. The classifier underflows were then sampled and weighed, and moisture determinations and size assays were performed on representative samples. The data indicated that the products from cells 1 and 2 could be combined to give three fractions; i.e. coarse, medium and fine. The fine fraction was grab-sampled during classifier operation. The grab sample was size analysed and assayed for tin.

2.4 Spiral Tests

The coarse and medium fractions were passed separately over a Reichert type LG7 single-start spiral separator in open circuit. The spiral was fed at approximately 2.5 tph and 40% solids. Three spiral products (concentrate, middling and tailing) were produced. The spiral splitters were set by eye to obtain good tin recoveries to concentrate. All products were weigned, sampled and assayed. The concentrate was also size analysed and the size fractions assayed for tin.

2.5 Table Tests

Tne spiral concentrates were individually passed over a laboratory-scale wet shaking table, adjustments being made by eye to produce acceptable performance. Splitters were set below the cassiterite line for tne concentrate take and just into the silica line for middling/tailing take. All products (concentrate, middling, tailing) were weighed, sampled and assayed.

Details? Reproducibility? Were tests examined to determine efficiency of test? Cleaning tests?

Magnetic Separation!

2.6 Mineralogical Examination

The table concentrates were individually passed over a laboratory-scale Carpco induced-roll magnet to further upgrade the tin concentrate. Three fractions were produced: highly susceptible magnetics, 0.35 amp magnetics, and a non-magnetics fraction. The fractions from the magnetic separation were weighed, assayed for tin, and subjected to microscopic examination to determine the degree of liberation of tin and also identify other minerals present.

Were these the only mineralogical tests? Middlings?

At the end of the test! →

What were being removed?

2.7 Tin Assays

Samples of less than 10% Sn were assayed for tin by volatilising the samples in ammonium iodide and subsequent reading against standards using an Atomic Absorption Spectrophotometer. The test products greater than 10% Sn were titrated (following a peroxide fusion and nickel reduction) against iodine with starch as tne indicator.

Reliability?

2.8 Sizing Analysis

Sizing analysis was performed using British Standard sieves. Samples were wet screened at 38 microns prior

077

3. RESULTS AND DISCUSSION

3.1 Sample Processing Flowsheet

Table 1 shows the weight distribution and tin assay and distribution to the various stage final products. The sample processing flowsheets (Appendices 4.1.1, 4.1.2, 4.1.3) show each stage of the processing as well as the weight splits and tin grade and distribution

3.2 Head Assay

That's what you get by coning + quartering at 4" for a head assay!

3.2.1 The head assayed 0.385% Sn, which was significantly higher than the expected 0.2-0.25% Sn. This figure is confirmed by the other assays in the flowsheet.

?

3.2.2 The head tin assays for most stages calculated back from the stage products gave reasonable agreement - considering the number of tin assays involved.

3.2.3 The final ground product assayed 0.414% Sn,. which was a little higher than the head assay; the increase being due mainly to the upgrading effect of the lower tin content slime rejected in the storage hopper overflow.

7% of the Sn in feed was lost in this assay!

3.3 Ore Crushing and Milling

Why weren't fines removed before milling?
Why no effort to explain the high chrome losses?

The finisned ground product size and tin analysis data is tabulated in Appendix 4.2. The fines content of this data is lower than true mill output, as it does not include the fines lost as overflow from the final settling bin in the series of four bins. The size

078

TABLE 1: Overall Flowsheet Performance

	Wt. %		% Sn	Sn Dist
FINAL TIN CONCENTRATES				
Coarse size magnetic non-mags	<0.1%		70.85	14.33
Medium size magnetic non-mags	<0.1%		66.63	5.94
Combined	<0.2%	(Calc)	69.10	20.27
FINES FRACTIONS				
Fine slime ex ground product	22.8%		0.286	16.96 ?
Hydrosizer overflow	28.8%		0.220	19.00
Combined	51.6%	(Calc)	0.250	35.96 !
REJECTABLE FRACTIONS				
Coarse size spiral tailing	23.7%		0.110	6.96
Medium size spiral tailing	12.6%		0.070	1.66
Combined	36.3%	(Calc)	0.096	8.62
HIGH GRADE TIN GRAVITY PRODUCT				
Coarse size wet shaking table concentrate	0.1%		47.92	15.65
Medium size wet shaking table concentrate	<0.1%		42.36	6.51
Combined	<0.2%	(Calc)	45.70	22.16
MIDDLING FRACTIONS				
Coarse size spiral middling	4.6%		0.34	3.97
Medium size spiral middling	3.4%		0.28	1.78
Coarse size shaking table mid	0.4%		17.50	19.44 Locked !
Medium size shaking table mid	0.2%		20.80	6.28 Locked !
Coarse size shaking table tail	1.7%		0.28	1.28
Medium size shaking table tail	1.6%		0.18	0.51
Combined	11.9%		--	33.26

?? How do we know that these are rejectable?

* where are the mag sep rejects?

3.4 Hydrosizing

The Hydrosizer produced four products, of which the two coarser fractions were combined to give an approximate split of 35:30:35 by weight.

Then why not repeat the experiment !!!!

Hydrosizer performance was retarded due to problems with the initial operation and the presence of some undispersed slime particles in the feed, which tended to report to cell No. 1 underflow; thus increasing the fine slimes content to underflow.

The results recorded in Appendix 4.8 show, however, that even under the previously described operating conditions, upgrading of the tin content of cell Nos. 1 and 2 combined product did occur with 56.95% of the tin in the feed to the classifier reporting in 39.38% of the original feed weight, resulting in the combined 1 and 2 cell product assaying 0.51% Sn; whereas the original feed assayed 0.41% Sn. The medium size fraction, or No. 3 cell product, assayed 0.31% Sn; somewhat below headfeed grade, due to depletion of recoverable tin by cell Nos. 1 and 2. This fraction did, however, contain significant liberated tin as shown by later testwork.

i.e. Such ... and ... see testwork.

The slime or overflow fraction was downgraded to 0.22% Sn, with a -38 micron rejection to overflow of approximately 80% despite the initial operational problems.

What is surprising about this!

It is interesting to note that the finer fractions recovered in the underflow products were much higher in tin content than similar size fractions in the overflow.

Appendix 4.3 is a graph of size vs. cumulative weight for the products and head.

O.K In Appendix 4.4 the Hydrosizer separation efficiency is plotted.

4.6 missing Appendices 4.5 - 4.7 are the size analysis and tin assays of the size fractions for the three final products which includes also dry weight and tin distribution calculated on a feed basis.

3.5 Spiral Tests

3.5.1 The results of both the coarse and medium size spiral tests are summarised in Appendix 4.9. The spiral concentrate size analysis and tin assays for the size fractions are tabulated in Appendix 4.10.

3.5.2 The test data revealed that reasonable results were achieved, particularly as there was only sufficient material for one test run. Further adjustment should improve performance.

The same sample could have been re-run repeatedly. →

3.5.3 The coarse size test data showed that 85.69% of the tin in the feed could be recovered in 22.16% of the original feed weight. The size analysis data on the concentrate and the feed showed significant tin upgrading was achieved on all size fractions.

Coarse Spiral

3.5.4 The medium size test data showed that 90.11% of the tin in the feed could be recovered in 29.43% of the original feed weight. The size analysis data on the concentrate and the feed indicated significant tin upgrading on each size fraction. Recovery of tin in the -38 micron fraction was also being achieved.

Medium Spiral

3.5.5 The combined spiral test data indicated that 36.3% of the original feed weight could be discarded for a loss of 8.62% of the Sn in the original feed.

Promising (if we knew why +50% wt had already been rejected as slimes.

3.6 Wet Table Testwork

3.6.1 The wet table performance data for both the coarse and medium fractions are summarised in Appendix 4.11.

3.6.2 The coarse size test data showed that a concentrate grade of 47.92% Sn could be achieved. The recovery to the concentrate was 42.78% of the total tin in the feed, in 5.43% of the original feed weight.

3.6.3 The data from the medium size testwork showed similar results to the coarse size testwork. Slightly lower concentrate grade was produced (42.36% Sn), but a slightly higher recovery was achieved. Overall tin loss to tailing was low.

3.6.4 In an operating situation, table middling would circulate back to the head feed or be reprocessed in a separate circuit. Wet table performance would, therefore, be improved.

✓, but by how much? The test method chosen has yielded minimal data

3.6.5 Chemical analysis of both wet table concentrates (Appendix 4.13) indicates only minor quantities of most contaminants present, with the exception of iron-bearing minerals which are readily rejected by magnetic separation.

3.7 Magnetic Separation

Why selected?

3.7.1 The results of the magnetic separation of both table concentrates are summarised in Appendix 4.12.

3.7.2 The data from the coarse size testwork indicated that high grade concentrates (70.85% Sn) could be produced at high recoveries (91.23%) of the tin in the feed using magnetic separation.

3.7.3 The medium-size test data showed that a high grade concentrate (66.63% Sn) could be produced at high recoveries (91.23%) of tin.

3.7.4 The magnetic separation testwork on both table products showed that a significant proportion of the tin recovered from the gravity flowsheet was in a liberated form. The data also showed that the concentrates contained high proportions of other heavy minerals which were mainly magnetic in nature.

Not necessarily

3.7.5 A dry induced roll type magnet was used for the test programme. In an operating circuit, a wet high intensity magnet would most likely be selected for the duty.

3.8 Recommendations

No!!! A high-quality bench-scale amenability study is required

Sufficiently encouraging results have been produced from the testwork to justify a recommendation for a further larger scale test programme which could be approached in two ways:

(1) Produce either one or a number of bulk samples of 20 - 30 tonnes, the number depending on the variability of the metallurgical characteristics of the ore body, and processing the samples on a more detailed basis at our Bundall laboratory.

It is irresponsible to propose construction of a pilot plant on the basis of testwork of the degree of accuracy & definition of this report. We haven't even looked for the liberation size !!!

(2) Design and construct a pilot plant which could operate on a continuous basis on-site, processing large bulk samples from various areas of the ore body.

The most satisfactory approach on a metallurgical basis is the pilot plant proposal, which would produce much more accurate data for full-scale flowsheet development. However, some factors which may influence a decision on the scope of additional work are:

(a) Availability of large bulk samples;

(b) Magnitude of the full-scale operation envisaged;

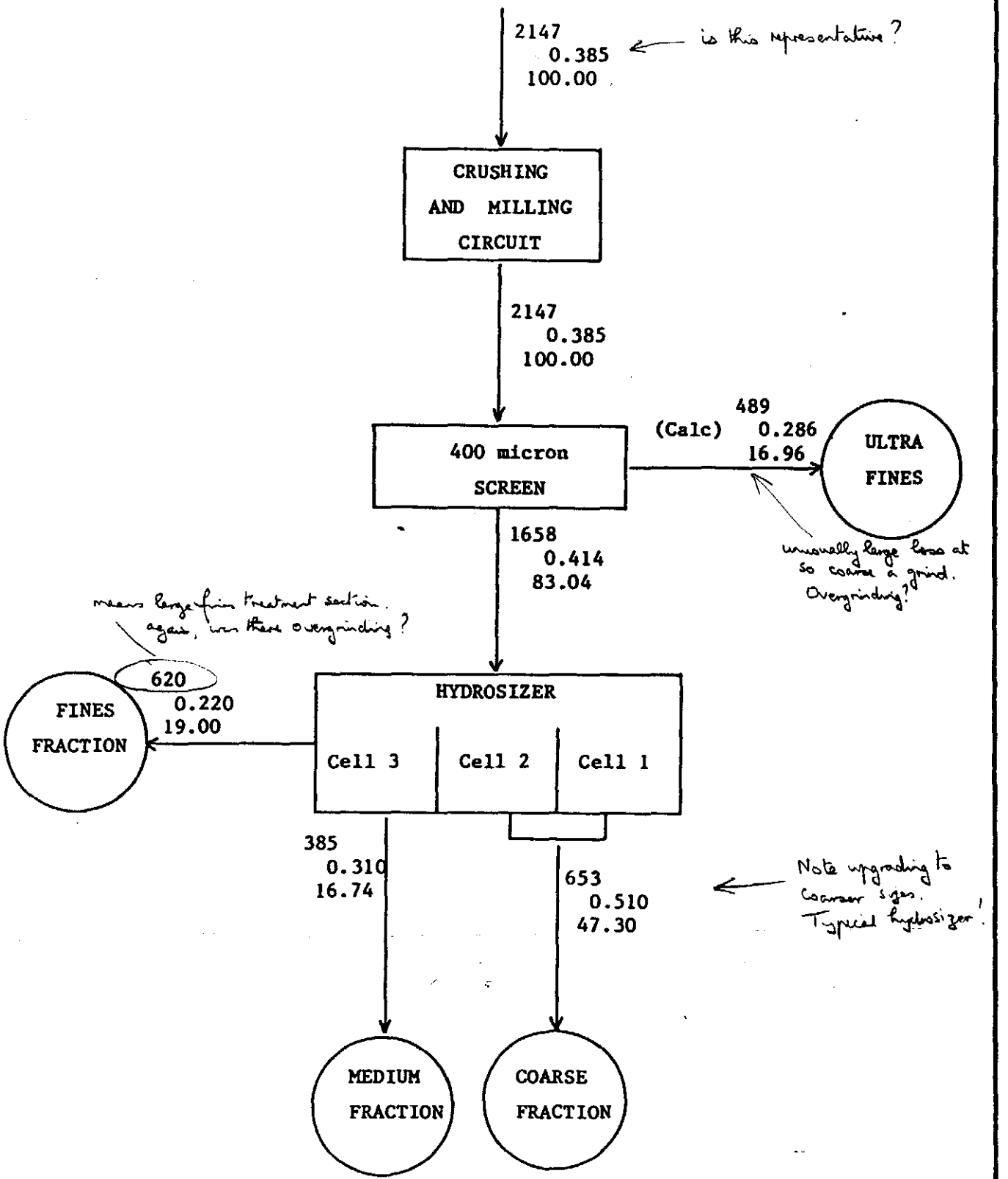
(c) Timing of the project;

(d) Variability of the metallurgical characteristics of the ore body.

4. APPENDICES

APPENDIX 4.1

Flowsheets



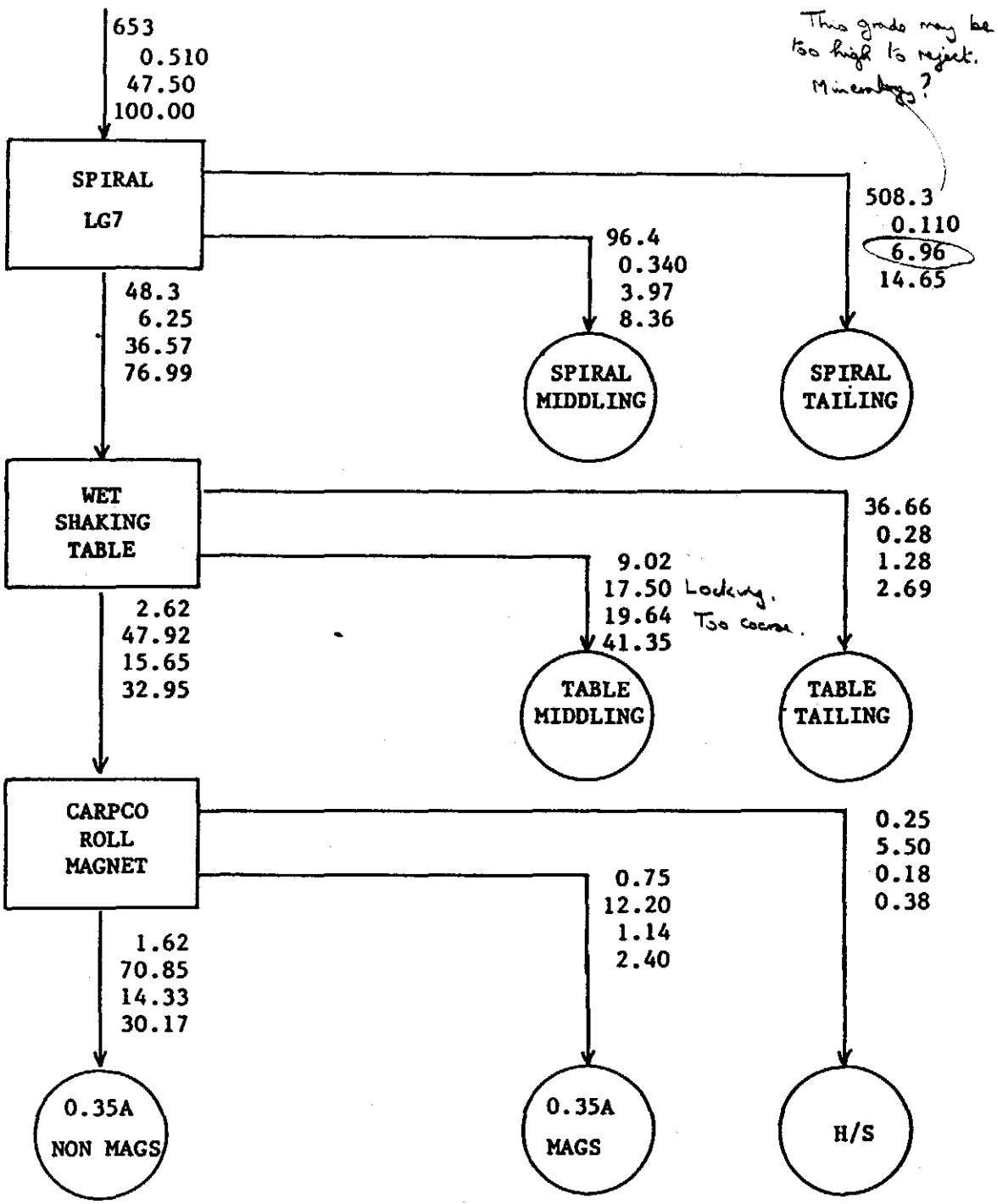
Key
Weight (kg)
% Sn
Mineral dist. to head feed (%)

RESEARCH AND ENGINEERING DEPARTMENT
MINERAL DEPOSITS LTD.—SOUTHPORT, QUEENSLAND

APPENDIX 4.1.1

SHELL METALS - TIN ORE FLOWSHEET
COMMINUTION STAGE

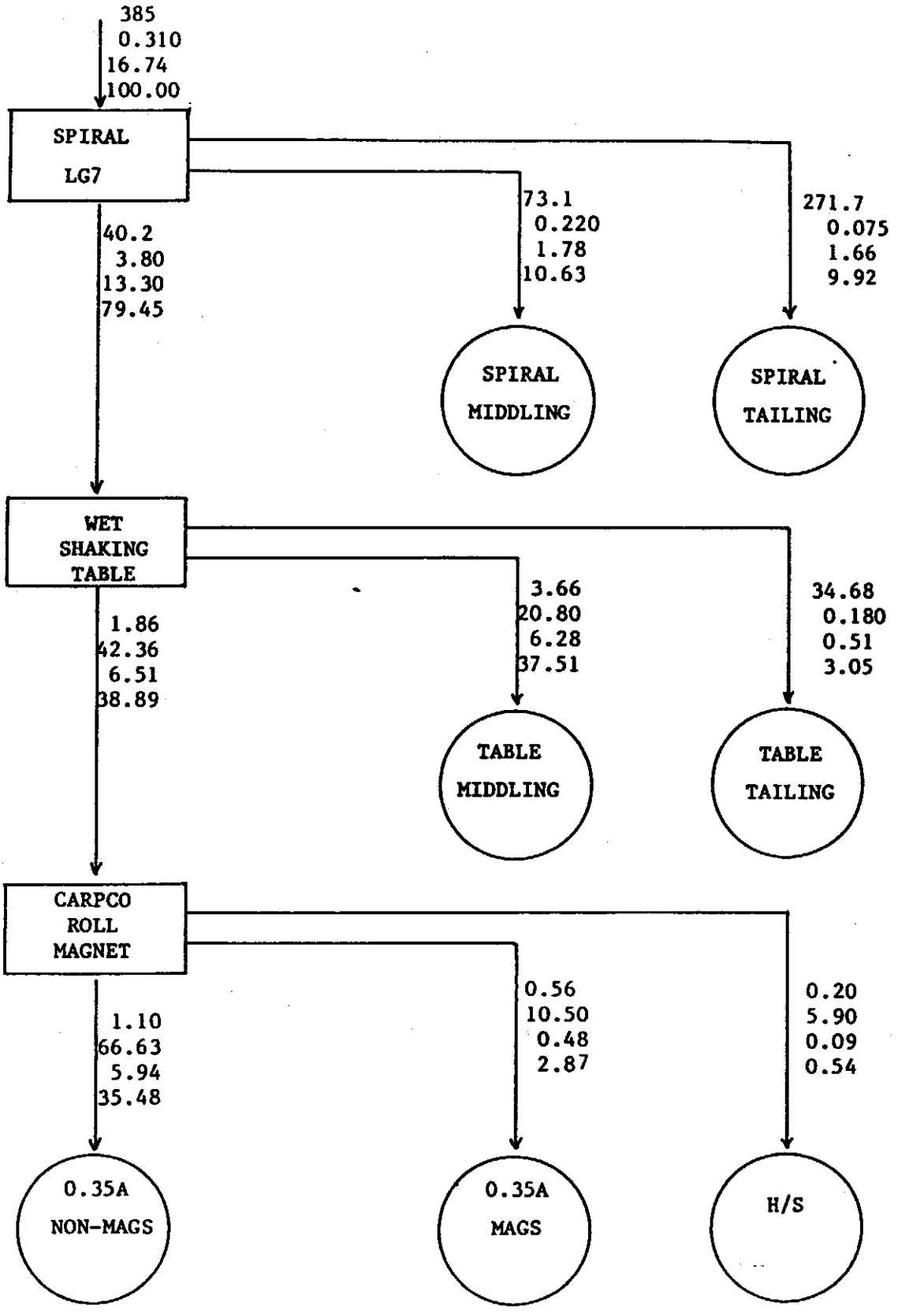
DRAWN PAB:PJY
DATE 28.6.1984



KEY

Weight (kg)
% Sn
Mineral dist. to head feed (%)
Mineral dist. to stage feed (%)

RESEARCH AND ENGINEERING DEPARTMENT **MINERAL DEPOSITS LTD.—SOUTHPORT, QUEENSLAND**	APPENDIX 4.1.2
SHELL METALS - TIN ORE FLOWSHEET CONCENTRATION STAGE, COARSE FRACTION	DRAWN PAB:PJY DATE 28.6.1984



KEY

weight (kg)
% Sn
Mineral dist. to head feed (%)
Mineral dist. to stage feed (%)

RESEARCH AND ENGINEERING DEPARTMENT MINERAL DEPOSITS LTD.—SOUTHPORT, QUEENSLAND	APPENDIX 4.1.3
SHELL METALS - TIN ORE FLOWSHEET CONCENTRATION STAGE, MEDIUM FRACTION	DRAWN PAB:PJY DATE 28.6.1984

APPENDIX 4.2: FINISHED GROUND PRODUCT

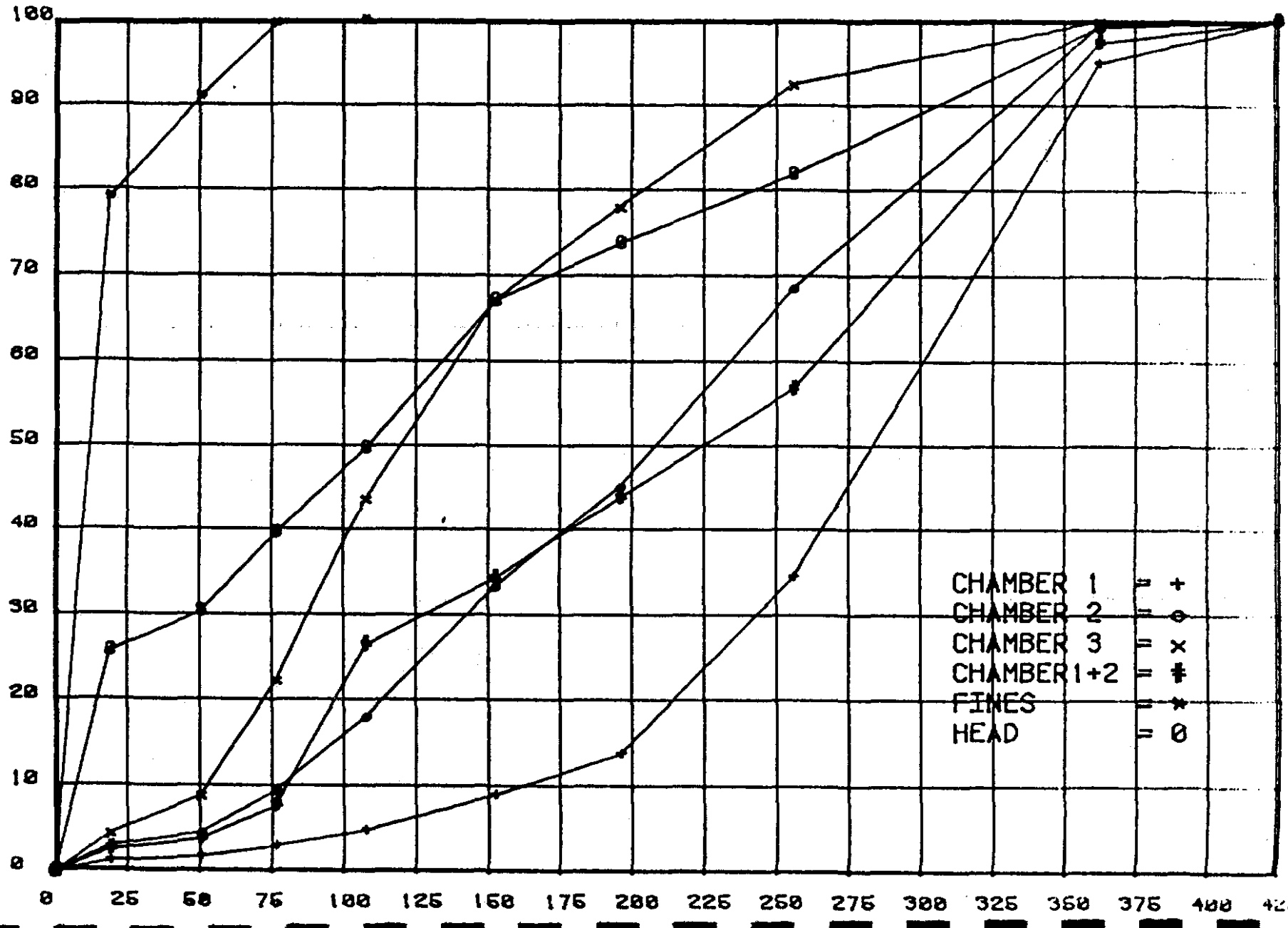
SHELL MINERALS TIN ORE.

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	0.81	0.81	0.515	0.515	1.03	1.03
300	17.21	18.02	0.486	0.487	20.69	21.72
212	14.80	32.82	0.425	0.459	15.56	37.28
125	17.45	50.27	0.418	0.445	18.04	55.32
90	10.07	60.34	0.400	0.437	9.96	65.28
63	9.42	69.76	0.362	0.427	8.43	73.72
38	4.48	74.24	0.388	0.425	4.30	78.02
-38	25.76	100.00	0.345	0.404	21.98	100.00
TOTAL	100.00	0.00	0.404	0.000	100.00	0.00

047089

APPENDIX 4.3

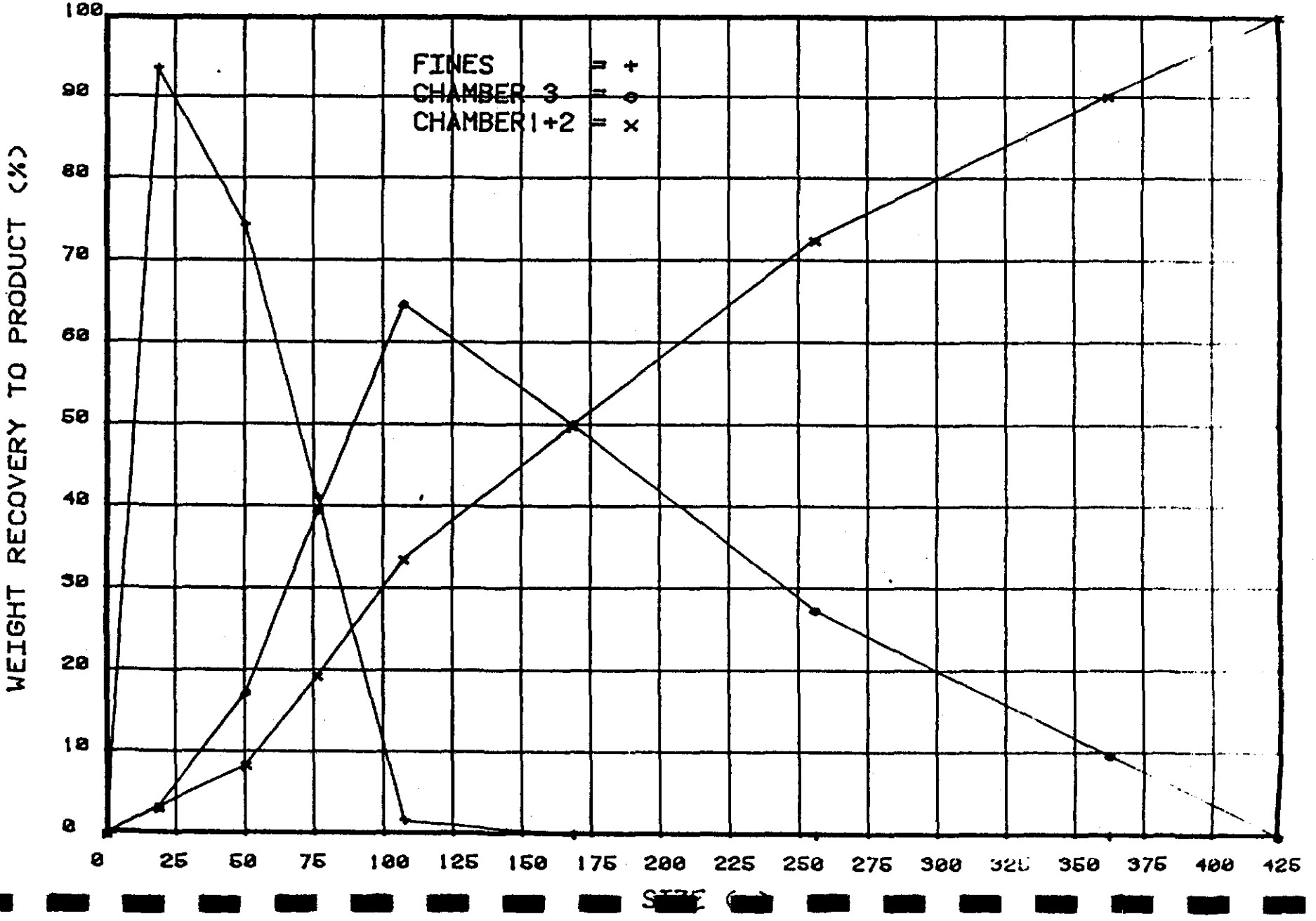
HYDROSIZER PERFORMANCE FOR SHELL MINERALS TIN ORE.



090

047090

HYDROSIZER PERFORMANCE FOR SHELL MINERALS TIN ORE.



091

APPENDIX 4.5: HYDROSIZER CELLS NOS. 1 & 2 UNDERFLOW

SHELL METALS TIN ORE. C 1+2

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	2.64	2.64	0.32	0.32	1.65	1.65
300	40.46	43.10	0.35	0.35	27.95	29.60
212	22.50	65.60	0.42	0.38	18.62	48.22
125	20.13	85.73	0.65	0.44	25.54	73.76
90	6.56	92.29	0.87	0.47	11.11	84.87
63	3.86	96.15	1.02	0.49	7.68	92.56
38	1.27	97.42	1.32	0.50	3.27	95.83
-38	2.58	100.00	0.83	0.51	4.17	100.00
TOTAL	100.00	0.00	0.51	0.00	100.00	0.00

SHELL METALS TIN ORE. C 1+2 FEED BASIS

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	1.04	1.04	0.32	0.32	0.94	0.94
300	15.93	16.97	0.35	0.35	15.92	16.86
212	8.85	25.84	0.42	0.38	10.61	27.47
125	7.93	33.76	0.65	0.44	14.55	42.01
90	2.58	36.35	0.87	0.47	6.33	48.34
63	1.52	37.87	1.02	0.49	4.38	52.72
38	0.50	38.37	1.32	0.50	1.86	54.59
-38	1.02	39.38	0.83	0.51	2.37	56.96
TOTAL	39.38	0.00	0.51	0.00	56.96	0.00

APPENDIX 4.7: HYDROSIZER SLIME OVERFLOW

SHELL METALS TIN ORE. FINES

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	0.00	0.00	0.00	0.00	0.00	0.00
300	0.00	0.00	0.00	0.00	0.00	0.00
212	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00
90	0.35	0.35	0.10	0.10	0.16	0.16
63	8.65	9.00	0.06	0.06	2.47	2.64
38	11.91	20.91	0.09	0.08	4.67	7.31
-38	79.09	100.00	0.25	0.22	92.69	100.00
TOTAL	100.00	0.00	0.22	0.00	100.00	0.00

SHELL METALS TIN ORE. FINES FEED BASIS

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	0.00	0.00	0.00	0.00	0.00	0.00
300	0.00	0.00	0.00	0.00	0.00	0.00
212	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00
90	0.13	0.13	0.10	0.10	0.04	0.04
63	3.23	3.37	0.06	0.06	0.57	0.60
38	4.45	7.82	0.09	0.08	1.07	1.67
-38	29.58	37.39	0.25	0.22	21.21	22.88
TOTAL	37.39	0.00	0.22	0.00	22.88	0.00

APPENDIX 4.8: HYDROSIZER PERFORMANCE DATA

Product	Wt. %	% Sn	Sn Distn.
No. 1 & 2 Cell U/F (Coarse Size)	39.4	0.510	56.6
No. 3 Cell U/F (Medium Size)	23.2	0.310	20.2
No. 3 Cell O/F (Slime Fines)	37.4	0.220	23.2

APPENDIX 4.9

SHELL METALS TIN ORE, COARSE FRACTION SPIRAL TEST.

PRODUCT	TPH	%WT.	%SOL	% Sn	UGR	DIST
CON	0.00	7.40	100.00	5.25	10.446	77.30
MID	0.00	14.76	100.00	0.34	0.568	8.39
TAIL	0.00	77.84	100.00	0.11	0.184	14.31
Feed	0.00	100.00	100.00	0.60	1.000	100.00
Prd.1-2	0.00	22.16	100.00	2.31	3.867	85.69

Ratio of Conc <3.

Too high.

SHELL METALS TIN ORE, MED. FRACTION SPIRAL TEST.

PRODUCT	TPH	%WT.	%SOL	% Sn	UGR	DIST
CON	0.00	10.44	100.00	3.80	7.611	79.45
MID	0.00	18.99	100.00	0.28	0.561	10.65
TAIL	0.00	70.57	100.00	0.07	0.140	9.89
Feed	0.00	100.00	100.00	0.50	1.000	100.00
Prd.1-2	0.00	29.43	100.00	1.53	3.062	90.11

Ratio of Conc
8:1

Better
(Taller Ribs?)

APPENDIX 4.10

SHELL METALS TIN ORE, COARSE FRACTION SPIRAL CON.

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
425	0.98	0.98	4.97	4.97	0.78	0.78
300	15.08	16.06	9.43	9.16	22.76	23.54
212	13.36	29.42	10.16	9.61	21.73	45.27
180	7.42	36.84	8.02	9.29	9.52	54.79
125	24.48	61.32	4.71	7.46	18.45	73.25
90	22.00	83.32	4.41	6.66	15.53	88.77
63	11.78	95.10	3.89	6.31	7.33	96.11
38	3.52	98.62	4.24	6.24	2.39	98.50
-38	1.38	100.00	6.80	6.25	1.50	100.00
TOTAL	100.00	0.00	6.25	0.00	100.00	0.00

Sn

↑ Very even grade distrib.

SHELL METALS TIN ORE, MED.FRACTION SPIRAL CON.

SIZE (um)	WT. %	CUM WT%	ASSAY %Sn	CUM ASSAY	DISTN %	CUM DISTN
300	8.45	8.45	0.40	0.40	2.45	2.45
212	8.64	17.09	0.58	0.49	3.63	6.09
180	5.18	22.27	0.62	0.52	2.33	8.42
125	15.91	38.18	0.75	0.62	8.66	17.07
90	23.28	61.46	0.77	0.67	13.00	30.07
63	24.22	85.68	1.36	0.87	23.89	53.97
38	9.59	95.27	2.82	1.06	19.62	73.58
-38	4.73	100.00	7.70	1.38	26.42	100.00
TOTAL	100.00	0.00	1.38	0.00	100.00	0.00

APPENDIX 4.11

SHWELL METALS TIN ORE, COARSE FRACTION TABLE TEST.

PRODUCT	TPH	%WT.	%SOL	% Sn	UGR	DIST
CN	0.00	5.43	100.00	47.92	7.879	42.78
MID	0.00	18.67	100.00	17.50	2.877	53.72
TAIL	0.00	75.90	100.00	0.28	0.046	3.49
Feed	0.00	100.00	100.00	5.08	1.000	100.00
Prd.1-2	0.00	24.10	100.00	24.35	4.004	96.51

SHELL METALS TIN ORE, MED.FRACTION TABLE TEST.

PRODUCT	TPH	%WT.	%SOL	% Sn	UGR	DIST
CON	0.00	4.53	100.00	42.36	10.560	48.89
MID	0.00	9.11	100.00	20.80	5.185	47.24
TAIL	0.00	86.26	100.00	0.18	0.045	3.87
Feed	0.00	100.00	100.00	4.01	1.000	100.00
Prd.1-2	0.00	13.74	100.00	28.07	6.996	96.13

APPENDIX 4.12

SHELL METALS TIN ORE, COARSE FRACTION MAG SEP.

PRODUCT	TPH	%WT.	%SOL	% SN	UGR	DIST
MAGS	0.00	61.69	100.00	70.85	1.484	91.57
MID	0.00	28.63	100.00	12.20	0.256	7.32
NON-MAGS	0.00	9.68	100.00	5.50	0.115	1.12
Feed	0.00	100.00	100.00	47.73	1.000	100.00
Prd.1-2	0.00	90.32	100.00	52.26	1.095	98.88

SHELL METALS TIN ORE, MED.FRACTION MAG SEP.

PRODUCT	TPH	%WT.	%SOL	% Sn	UGR	DIST
MAGS	0.00	59.22	100.00	66.63	1.541	91.23
MID	0.00	30.17	100.00	10.50	0.243	7.32
NON-MAGS	0.00	10.61	100.00	5.90	0.135	1.45
Feed	0.00	100.00	100.00	43.25	1.000	100.00
Prd.1-2	0.00	89.39	100.00	47.69	1.103	98.55

APPENDIX 4.13: QUANTITATIVE XRF SCAN OF TABLE CONCENTRATES

A. COARSE SIZE FRACTION TABLE CONCENTRATES

Assay Range	Elements Detected
>5	Sn
0.05% - 0.5%	Ti, Cr, Mn, Zr
50 - 500 $g.t^{-1}$	Ni, Cu, Zn, Y, Nb
50 $g.t^{-1}$	As, Rb

b. MEDIUM SIZE FRACTION TABLE CONCENTRATES

Assay Range	Elements Detected
>5	Sn
0.05% - 0.5%	Ti, Cr, Mn, Zr
50 - 500 $g.t^{-1}$	Ni, Cu, Zn, Y, Nb
50 $g.t^{-1}$	As, Rb

101

047099

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, BUNDALL, QUEENSLAND AUSTRALIA 4217

MVA:PJY

July 6, 1984.

The Manager,
The Shell Company of
Australia Limited,
Metals Division,
Box 872K G.P.O.,
MELBOURNE. VIC. 3001.

Attention Mr. John Collins

Dear Sir,

We refer to our conversation of July 3, and your subsequent telex re our report No. 16.020.1/1 on testwork on a tin ore sample submitted by your company. The items in your telex are noted, and commented on as follows:

Item 1: The mineralogical examination of wet table products as recorded in our scope of work February 22, 1984, refers to table products only. We feel the report adequately covered the table concentrate with observations and the magnetic separation backed up by chemical analysis. However, we will carry out further work on the following: (a) table concentrates; (b) table middling; (c) coarse spiral middling, as these fractions contain the bulk of the tin in the middling fractions. A further report will be issued.

Item 2: The general directives of the correspondence between MDL and SMD (see enclosed correspondence) did not state as a requirement application of the testwork to a flowsheet design; in fact, the implication of the correspondence from SMD was that the flowsheet had been fixed and that the testwork was part of a confirmation of the overall flowsheet concept.

We will, however, comment on the results re a plant flowsheet design as per your request as follows:

A general flowsheet concept would consist of the following basic stages:

POSTAL ADDRESS: P.O. BOX 5044 GOLD COAST MAIL CENTRE, BUNDALL 4217 QUEENSLAND AUSTRALIA
TELEX: MINDEP AA40438 CABLES: MINDEPOSIT BUNDALL QUEENSLAND TELEPHONE: (075) 39-9055

The Shell Company of
Australia Limited

July 6, 1984.

1. Primary crushing.
2. Secondary and tertiary crushing.
3. Autogenous or semi-autogenous grinding with (2) deleted.
4. Primary grinding with (3) deleted.
5. Gravity concentration - magnetic separation.
6. Regrind - gravity concentration - magnetic separation.
7. Flotation.

1-4: Crushing-Grinding

No testwork was conducted on the crushing or grinding characteristics of the ore. However, by observation of the crushing and grinding carried out to generate samples for the gravity concentration testwork, the ore appears to be relatively hard with resultant high energy requirement for reduction. No comments can be made on the ore susceptibility to autogenous and semi-autogenous grinding, although there could be distinct advantages with regard to operation and capital costs and simplicity of flowsheet if the ore could be ground by either of these methods.

5. Gravity Concentration

If the ore is as hard as suspected, there would be distinct advantages in energy savings in the grinding circuit by being able to reject coarse tailings. The gravity concentration testwork indicated that at least 30% of the original feed could be rejected as a final tailing at relatively coarse sizes and still maintain acceptable tin losses.

The proportion of the original feed that could be rejected to final tailing by gravity concentration in practice cannot be defined without having a detailed study carried out on the liberation characteristics of the ore and the gravity concentration process.

In other words, it may be possible to initially grind coarser than -0.400mm, which should result in less "slime" tin being generated. Gravity concentratiosn followed by a regrind of select middling products and furtner gravity concentration may improve both the recovery of tin to final product and also the proportion of the original feed rejected by the gravity

concentration stage, thus reducing the energy requirement for preparation of a flotation feed.

Initial magnetic separation testwork on final gravity concentrate showed significant upgrading could be achieved by rejection of the magnetic fraction of the heavy mineral gravity concentrate while maintaining acceptable tin losses. Final non-magnetic concentrate grades of between 66% and 70% Sn were achieved. Magnetic separation after gravity concentration in a flowsheet can therefore be justifiably included at this stage. Although an induced roll dry magnetic separator was used in the test programme, in practice the testwork indicated that acceptable results could be achieved on a Wet High Intensity Magnetic Separator (WHIMS). Further investigation on the performance of a WHIMS would be required.

6. Flotation

No flotation testwork has been conducted so comment is difficult. However, until the pretreatment stages are defined the actual feed to a flotation circuit cannot be generated; so meaningful testwork at this stage would be difficult to achieve.

Item 3: A further recommended programme of testwork would consist of three phases:

Phase 1: (a) A fundamental liberation test programme to define the optimum size to which the ore should be ground initially to achieve a maximum recovery of tin by gravity concentration while maintaining maximum rejection of the solids to tailings and a minimum generation of tin "slimes".

(b) Further liberation testwork on select middling fractions followed by gravity concentration to increase tin recovery and increase tailing rejection at the gravity concentration stage.

(c) Further investigations on upgrading the gravity concentrate.

The work would be conducted on a bench scale with small samples - say ten to 20 kg - from the remainder of the sample supplied. Grinding would be conducted in bench scale wet grinding mills and the ground products concentrated on laboratory scale wet shaking tables.

The basic data produced from the bench scale test programme will allow the better definition of a full scale test programme.

Phase 2: The results from the bench scale testwork plus the additional work carried out on table and spiral products from the current testwork will allow a decision to be made on whether additional testwork is justified on products such as spiral middling and wet shaking table tailings which have been generated from the current testwork. This testwork, if completed, would take the form of further gravity concentration/regrind stages to assess whether further improvements to the current test circuit, such as increased rejection of tailings and additional recovery of tin by gravity methods, was achievable.

Phase 3: The scope of work of Phase 3 would be dependent on the findings of Phases 1 and 2, and also the finding of the current report. If a large scale laboratory testing programme is recommended, the form would probably be:

1. Generate large bulk samples of 20-35 tonnes.

2. Define crushing-grinding characteristics of the ore which is needed to select crushing-grinding equipment.

3. Carry out crushing-grinding test programme.

4. Full scale gravity concentration programme.

5. Flotation testwork programme.

The Shell Company of
Australia Limited

July 6, 1984.

We hope that we have clarified the points that you have raised, and will despatch to you the additional test data as soon as it comes to hand.

Yours faithfully,

M. V. ATFIELD,
CHIEF METALLURGIST.

107

047104

THE SHELL COMPANY OF AUSTRALIA LIMITED

METALS DIVISION

A FURTHER STUDY ON CASSITERITE OCCURRENCE IN MIDDLING PRODUCTS FROM TESTWORK REPORT NO.16.020.1/1

REPORT NO. 16.020.1/2

MINERAL DEPOSITS LIMITED
MINERAL TECHNOLOGY DIVISION
BUNDALL QUEENSLAND
AUSTRALIA

INDEX

1. INTRODUCTION 1

2. TESTWORK 1

2.1 Material 1
2.2 Procedure 1

3. RESULTS OF TESTWORK 2

4. CONCLUSIONS 6

C. 109

1. INTRODUCTION

This report covers the further examination of the spiral and table middlings products that were produced from testwork reported by Mineral Deposits Limited (MDL) (Report No. 16.020.1/1). The examination followed verbal discussion between Mr. John Collins of Shell Metals Division (SMD) and Mr. Max Atfield of MDL.

The object was to determine the degree of liberation of the tin in the middling products.

2. TESTWORK

2.1 Material

The samples examined were:

2.1.1 Coarse fraction spiral middling;
2.1.2 Medium fraction spiral middling;
2.1.3 Coarse fraction table middling;
2.1.4 Medium fraction table middling.

2.2 Procedure

The samples were individually processed in the following manner:

2.2.1 Sink-float separation using Bromoform (s.g. 2.90).
2.2.2 Magnetic separation of 2.90 s.g. sink material to produce three clean products:
2.2.2.1 Highly susceptible Ilmenite/Magnetite;
2.2.2.2 0.35 amp Magnetics (Ilmenite);
2.2.2.3 0.35 amp Non-magnetics;
using a laboratory-scale Carpco Induced Roll Magnet.

2.2.3 Further heavy liquid sink-float separation using Clerici's Solution (s.g. 4.05) on the 0.35 amp Non-magnetic fraction.

2.2.4 All samples were subjected to the standard HCl-Zinc block test procedure to allow ease of identification of the Cassiterite particles by microscopic examination.

2.2.5 The samples were then screened at +180 microns, +106 microns and -106 microns so as to observe the size distribution of the Cassiterite grains.

3. RESULTS OF TESTWORK

3.1 Table 1 below shows the weight distributions of the heavy liquid and magnetic separations:

TABLE 1

Spiral Middlings	Coarse Fraction	Medium Fraction
S.G. 2.90 Float	93.63	94.45
H/S - Magnetite	0.49	0.29
0.35 amp Mags	0.34	0.10
0.35 amp N/mags s.g. 4.05 float	5.24	4.66
s.g. 4.05 sink	0.30	0.50
Table Middlings	**Coarse Fraction**	**Medium Fraction**
S.G. 2.90 float	22.55	34.15
H/S - Magnetite	4.77	2.27
0.35 amp Mags	25.78	18.80
0.35 amp N/mags s.g. 4.05 float	24.16	35.48

3.1.1 Comment

Microscopic examination of the 2.9 s.g. floats fractions and the highly susceptible magnetic fractions from the four products revealed that no significant free or composite Cassiterite grains occurred in these fractions.
Microscopic examination of the 0.35 amp Magnetic fractions indicated that less than 0.5% of the grains present were fine Cassiterite grains which were present in sizes below 106 microns. These fine Cassiterite grains probably reported to the Magnetic fraction as a result of mechanical entrapment.

3.2 Tables 2 - 5 summarise the results of the size analysis and microscopic examination of the size fractions of the 0.35 amp Non-magnetics from each product where most of the tin occurs.

check meaning

The degree to which the tin minerals are locked was estimated on a volumetric basis by observation and must be accepted on that basis.

TABLE 2: Coarse Fraction Spiral Middlings

DEGREE OF LIBERATION

FRACTION	LIBERATED Sn MINERALS	HIGH Sn MIN. CONT	MED/HIGH Sn MIN CONTENT	MED/LOW Sn MIN CONTENT	LOW/TRACE Sn MIN CONTENT
N/M -4.05 +180	—	—	—	8	92
+160	—	—	—	7	93
-106	—	—	—	2	98
N/M +4.05 +180	18	31	31	6	15
+106	21	16	15	8	40
-106	28	7	5	—	60

Comment

The results show that a significant proportion of the Sn minerals are liberated in each size fraction.

A high proportion of the tin minerals occur in the fractions which have a liberation potential. Sn minerals do occur to some degree throughout most of the range.

TABLE 3: Medium Fraction Spiral Middlings

FRACTION	DEGREE OF LIBERATION				
	LIBERATED Sn MINERALS	HIGH Sn MIN.CONT	MED/HIGH Sn MIN CONTENT	MED/LOW Sn MIN CONTENT	LOW/TRACE Sn MIN CONTENT
N/M -4.05 +180	—	—	—	1.5	98.5
+106	—	—	—	1.0	99.0
-106	—	—	—	Trace	100
N/M +4.05 +180	5	4	1	—	90
+106	5	2	1	—	92
-106	40	—	—	—	60

Comment

The results show that the bulk of the tin minerals occur as liberated grains. The liberated grains are much finer than the coarse spiral middling.

TABLE 4: Coarse Fraction Spiral Middlings

FRACTION	DEGREE OF LIBERATION				
	LIBERATED Sn MINERALS	HIGH Sn MIN.CONT	MED/HIGH Sn MIN CONTENT	MED/LOW Sn MIN CONTENT	LOW/TRACE Sn MIN CONTENT
N/M -4.05 +180	—	—	—	8.5	91.5
+106	—	—	—	3.0	97
-106	—	—	—	1.0	99
N/M +4.05 +180	35	29	27	6	3
+106	21	23	15	5	36
-106	41	14	6	5	54

Comment

The results indicate that a significant proportion of the Sn minerals are liberated, with a significant proportion occurring below 106 microns.

A high proportion of the Sn minerals occur in the fractions which have a liberation potential.

Sn minerals occur to some degree throughout most of the range.

TABLE 5: Medium Fraction Table Middlings

FRACTION	DEGREE OF LIBERATION				
	LIBERATED Sn MINERALS	HIGH Sn MIN.CONT	MED/HIGH Sn MIN CONTENT	MED/LOW Sn MIN CONTENT	LOW/TRACE Sn MIN CONTENT
N/M -4.05 +180	—	--	---	9.5	90.5
+106	—	—	—	4	96
-106	—	—	—	1	99
N/M +4.05 +180	11.5	6	9.5	6.5	66.5
+106	13.5	3.5	9.0	3.5	70.5
-106	25.0	8.0	3.5	—	63.5

Comment

The data show that a significant proportion of the Sn minerals is liberated and is relatively fine.

A high proportion of the Sn minerals occurs in the fractions which have a liberation potential.

Sn minerals occur to some degree throughout most of the range.

4. CONCLUSIONS

4.1 The data show that all four products (which contain the bulk of the tin in the middling fractions) examined contained significant proportions of liberated tin which could be recovered by further gravity concentration.

4.2 The bulk of the tin minerals in the medium spiral middlings is liberated and therefore further grinding is not justified.

4.3 The coarse spiral middlings and both table middlings contain a high proportion of potentially recoverable tin minerals in the form of composites and investigation on regrinding and further gravity concentration is justified.

4.4 The data show that significant proportions of the other liberated or near-liberated heavy minerals are occurring in the middlings fractions and some may be rejected with careful control of the process.

4.5 A significant proportion of the Sn values is reporting to the -106 micron fraction in all middling products. The testwork originally reported indicated that Cassiterite particles finer than 106 microns could be recovered by gravity concentration. However, grinding initially to a coarser top size may reduce the tendency to overgrind valuable heavy minerals.

M. V. Atfield

M. V. ATFIELD,
CHIEF METALLURGIST.

P. A. Butler

P. A. BUTLER,
SENIOR PROJECT TECHNICIAN.

Bundall,
July 19, 1984.

NOTE

To : MTE/2
BXG - B.A., Melbourne
From : MTE/24
Cc. : MTE, MTE/23, CF
BXP, BXHE, BXHE/1, B.A. Melbourne
Date : 15th November, 1984

Subject : Great Pyramid Project Review

1. This note summarises observations and comments, discussed with BXG and BXP in Scamander, Tasmania, and Melbourne, Victoria , on 9 and 10 October 1984, which followed on my review of the Great Pyramid data package at Scamander on 8/9 October 1984. An appendix carries a number of additional observations from B.A. which both complement and qualify the comments made hereunder. A more detailed examination of selected aspects of the review will be carried out in due course.

2. The Great Pyramid prospect has a composite physical configuration of a well defined hill feature with prolific outcrop, sparingly vegetated. It has been extensively accessed by both Forestry and Exploration interests. Exploration work consists of 2 diamond drilling programmes (23 holes total); 3 surface costeans; a percussion drilling programme on a 15 m (along lines) by 30 m (line spacing) grid (127 holes); and 15 adits from various entry points around the circumference of the hill, basically at 2 distinctive levels of entry.

3. The adits, which total 1250 m in length (driven over the period 1909-1914) were designed to follow, rather than crosscut mineralization, but end up doing about an equal amount of both. The adit walls have been cumulatively channel sampled at various periods since the adits were driven - most recently by BA in three key locations. Selected bulk (large volume) samples have also been taken from the adits in recent years for both comparative grade analysis and metallurgical testwork.

4. The total output of this work effort adds up to a large and well knit database, fully adequate for a preliminary appraisal of mineral reserves. The project is bona fide advanced stage, but in that the data in hand was gathered by a number of operators over an extended number of years, the interrelationships and compatibility of the constituent data types need further rationalisation.

5. The geological model for the Great Pyramid deposit has been very positively defined both from the gross sense in its regional setting, and from the local model sense, with its structural and geological controls to mineralization.

6. The deposit is hosted in a sequence of interbedded Lower Devonian quartzites, sandstones and shales, which strike NW and maintain a general dip of 70° to the SW. Quartzite and sandstone predominate in the Great Pyramid hill.

7. A set of close spaced joints follows the regional NE-SW fracture trend (at right angles to bedding) and are best developed in the quartzites. Sn mineralization (as cassiterite) is contained by the joints, which dip at about 70° NW. The joints are up to 5 mm wide, but normally in the order of 1 mm, with or without quartz healing. Some are partially open. Joint intensity is in the order of 80 or so per m, but may be double this in the main mineralized areas. Hence mineralization relates lithologically to quartzite, and varies in grade proportionally with joint density.

8. Three distinctive "blocks" of preferentially enhanced Sn mineralization, known as North, South and Brocks blocks, have been defined within the Great Pyramid geological sequence.

9. The Great Pyramid mineral reserves have been assessed by BA and their predecessors on the project, on the basis of the percussion drilling sample results, which form the most general and consistent data set in the database. The percussion holes were drilled vertically at about 150 mm diameter (unconfirmed) and are up to 60 m deep. A number of the holes bottom is significant Sn mineralization.

10. The results of diamond drilling have not been used in mineral reserves estimation, apart from one instance of a limited area assessment by BHP using their own 19 hole programme. The BHP holes were oriented parallel to bedding and normal to joint direction - those holes in the second diamond drilling programme (Tasmanian Mines Dept.), were drilled normal to bedding strike. The latter was out of step with the (now) recognised geological controls to Sn mineralization (see also appendix, item 1).

11. Comparative grade studies (BHP) have shown that diamond drilling produces consistently lower grade results than does percussion drilling. There is convincing evidence in the drill core that significant Sn values are being lost to sludge during drilling. Records report numerous drill operational problems in the intensely jointed ground. The question of diamond drill grade validity calls for further investigation.

12. The results of adit wall channel sampling are illustrative of the lateral variability of Sn grades, but are at the same time supportive overall of reserve block grades estimated from the percussion drilling data. They lend a measure of confidence to the reserve estimation. Extension of channel sampling to provide comprehensive and BA validated coverage of all adits is worth consideration in a future work programme.

13. In that the geological continuity of the deposit is assured, the grade consistency of the database is the definitive criterion in reserve estimation. Using the percussion drilling, with channel sample support, a number of reserve estimates have been made, most notably by BA and their project predecessors BHP and Aberfoyle.

14. The estimates range from 3 million tonnes grading 0.20% Sn up to 4 million tonnes grading 0.30% Sn for the three identified mineralized blocks. The figures are a measure of the limits of the drilled deposit. There remains potential for extension at depth which can add to the estimated tonnage.

15. The methods used for mineral reserves estimation were basically polygonal/area of influence type, incorporating preferred variations depending on who did the estimation. At this stage of the project it is not possible to envisage that the data could have been more correctly treated in an alternative manner. A mineral reserve made by BA via the medium of SHLMET using an inverse distance weighting technique gave an outcome within the lower range of the polygonal estimates (see also appendix, item 2).

16. A statistical analysis of Sn grade data (SHLMET) demonstrated unimodality and highlighted discrepancies between diamond drill and percussion drilling grades. Acceptably structured and stable downhole semivariograms were calculated on diamond drill grades, and indicated a range of influence of only 5 m. The impracticality of designing a drilling programme to cope with this limitation is obvious.

17. The mineral reserve tonnage is assured in view of the clear cut definition of the geological framework to the mineral reserve. It can be confidently anticipated therefore that a deposit tonnage of at least 3 million tonnes, and as much as 4 million tonnes is available. Additional work will serve to confirm rather than amend the figures, and might be aimed at giving a better reading on the quality of the potential at depth, since this direction offers the latitude for tonnage increase.

18. In consideration of mineral reserve grade, it must be acknowledged that the percussion drill holes are unable to adequately define the short distance grade variability of the Great Pyramid deposit. However, they do demonstrate the consistency of occurrence of Sn mineralization within the 3 reserve blocks.

19. Mineral reserves within the indicated grade range are acceptable, and what needs to be established is whether or not (a) they are at the top or bottom of the range, or (b) they could exceed the upper limit, and if so by how much.

20. There are two lines of investigation which could be followed to improve the projects current perception of grade:

20.1.1 The results of a diamond drilling programme, in which the holes are correctly oriented with regard to geological controls, should, given reasonable core recovery, provide a more definitve reading on grade than would an equivalent percussion drilling programme. This situation appears reversed at Great Pyramid.

20.1.2 Confirmation of the probable mechanism of Sn losses during coring has been noted above.

20.1.3 A further possibility to consider could be that of preferred orientation to the distribution of Sn mineralization in the joints, which the diamond drilling may have missed. This is not very likely and it is recognised that it would be difficult to define.

20.1.4 For discussion purposes it may be worth assuming that the distribution of Sn mineralization on a single joint is fairly general, with some allowance for variability. Each joint plane and the mineralization that it contains, might then be seen as a unique "shoot" of large planar extent, but minimal thickness. It is necessary to maximise on the planar dimension to approach representative grade and obtain the optimum sample. This builds up to the critical size for sample definition, beyond which it does not matter. If this assertion has any validity it is then clear that the percussion drill holes, on both diameter and inclination attitude to joint planes, take a substantially larger sample of a mass of "shoots" than do the diamond drill holes.

20.1.5 The diamond drill holes tend to lose Sn from core in open fractures - but there can also be gravitationally inspired or open fracture losses of Sn in percussion holes. The volumetric aspect of sample definition, and the Sn recovery problem might be advantageously studied further.

20.2 Bulk Sampling

20.2.1 Sample volume will reach maximum potential in bulk samples. Most parties who have examined the Great Pyramid data have suggested that a rationalisation of grade accuracy could be made via bulk sampling. A number of such samples have been taken from adits.

20.2.2 The samples might best be described as "large" rather than "bulk" since the latter term carries a very specific and purposeful correlation. There seems little doubt that their size at Great Pyramid offers the opportunity to define the grade factor, and hence to strengthen this aspect of the mineral reserve estimation.

20.2.3 The most noteworthy bulk samples were taken by BHP and BA, who based their sample sites on the results of their channel sampling in the North, C and ISLL adits. The BHP bulk samples came from the North, C, 2SLL and 2NLL adits, and the first two named give grade comparison with BA channel samples. All bulk samples were taken from sites where additional support can be derived from the results of channel sampling by the Great Pyramid Tin Co. (1909). Although GPTC grades are available only rounded off to the nearest 0.1% Sn, they compare reasonably well with the modern bulks.

20.2.4 The credentials of the bulk samples are queried on the following grounds:

- Their selectivity. The samples seem to have been taken from locations selected to show better than average grades.
- Their precision. The samples were taken with regard to supplying a gross volume of rock, rather than a precise volume of rock cut to clearly defined limits. The method of sample excavation has been necessarily somewhat crude. For these reasons comparison of bulk and channel sample grades may not be justified.

- Their definitive quality. The BA bulk samples were composited prior to grade analysis, and the composite grade cannot be related to its constituent grades. It may be noted that BA's bulk sample was intended for metallurgical requirements, and at the time of its selection average deposit grade, and the upgrading option, was not an issue (see also appendix, item 3).

20.2.5 Comparative grade data, as far as can be assessed for the BA and BHP bulks and channels are as follows:

Source	Adit Sampled	% Sn Channel Sample	% Sn Bulk Sample	Volume
BA	1SLL	0.28		3 drums
	C	0.32		4 "
	North	0.17		4 "
Mean		0.25	0.39	11 "
BHP	C	0.51	0.30	
	North	0.36	0.50	
	2SLL		0.45	
	2NLL		0.35	

20.2.6 The figures suggest that bulk sample grades offer a better and perhaps more definitive result than does the conventional percussion drilling/channel sampling, but they by no means confirm it.

20.2.7 Any error in the precision of bulk sample location, particularly in view of the evident lateral variability of the Sn mineralization, can effect the outcome. The bulk samples give higher than mean mineral reserve estimate grades, due at least in part to selectivity. There remains however a possibility that some form of overall deposit upgrading could be feasible. This presents a promising area for investigation, provided that accurate sampling controls can be applied to any further bulk samples taken.

124

21. The key factor for Great Pyramid is grade, not tonnage. It is suggested that an attempt to demonstrate the upgrading potential of the deposit might be made based on a single mineral reserve block, both to limit logistical problems and to utilise the channel sampling already completed (see also appendix, item 4).

22. South Block might be the preferred area. In it, both C and 1SLL adits have been extensively channel sampled by BA, and the balance of channel sampling could be completed fairly easily. This would be followed up by a channel sampling programme on 2SLL adit.

23. The 3 adits in South Block would require some form of rehabilitation prior to the channel sampling.

24. From the results of the full channel sampling programme, bulk sample sites might be selected to reflect various anticipated grade levels, the most critical of which to the project is that around the mineral reserve grade. Upgrading from the 0.25 - 0.30% Sn range will provide the optimum benefit to the project. Upgrading will keep lower grade low, and make higher grades even higher. Neither will impact significantly on the bulk of the reserve which relates to mean grade.

25. The physical limits of bulk samples in-adit should be clearly set with respect to those of the channels.

26. A measure of the comparative accuracy of percussion drilling and diamond drilling might be made at the same time, with reference to bulk and channel sample grades as may be relevant.

27. The adits will also make ideal sites for underground confirmatory or exploratory diamond drilling.

Attachment

J.W. Platt
MTE/24

id 1579

APPENDIX

M E M O R A N D U M

DATE : 5 November, 1984

FROM : BXHE/1 - BA, MELBOURNE

TO : MTE/2 - BIM

cc : BXP, BXHE

GREAT PYRAMID PROJECT REVIEW

After examining MTE24's well presented Great Pyramid Project Review of 17/10/84, a number of additional points have been raised or need clarification.

1) Diamond drill hole results (section 10 of memo).

Results of all diamond drill holes have been incorporated in the SHLMET print out. Those portions of the holes which satisfy the conditions necessary for them to be included in the mineral reserve calculations, have been treated as the percussion holes and included in the mineral reserve calculations. The holes drilled along the strike of the veins, i.e. at right angles to the sections, appear on the sections as small intercepts covering a zone projected from where the holes enter and leave the area of influence of each section. Where applicable, these intersections have been incorporated in the mineral reserve calculations.

2) Method of Mineral Reserve Estimation (section 15).

The "polygonal/area of influence" method may not be the best description for the method used to calculate the reserves. The BA estimate was based on what could be referred to as the "envelope" principle, at 0.1% Sn cut-off. Mineralised blocks were outlined on the cross sections and transferred to the level plans. The volume was calculated from the level plans by multiplying the area of the 0.1% Sn zone on that level, by the constant 10 m vertical distance between levels.

The grade was calculated as an arithmetical mean of the average grade of each drill hole. Thus, no particular area of influence was given to the individual holes within the reserve block. A trial calculation of grade, using polygonal zones of influence around each hole produce similar results. However, considering the possible nugget effect resulting from the small sample represented by the drill holes, the method used is considered to give a more realistic grade estimation.

3) Bulk Sampling (section 20.2.4)

While it is quite true that the BHP bulk samples were selected from sites with better than average grades, the BA sample was not. The intention of BA was to select a sample which represented the average grade of the deposit. The calculated estimated grade of 0.25% Sn of the bulk, is in line with the average grade of 0.22% Sn for the deposit.

The precision of the sampling is considered to be quite high in two dimensions. Along the adit wall, extreme care was taken to collect the bulk samples over specifically measured distances. The samples were

taken over measured, and marked, previously sampled channels for which the grade was known. The irregularities of the back face indicate that a perfect parallelepiped was not taken. However, the size of the samples (minimum 3 drums or about 1 tonne), should have been sufficient to eliminate any nugget effect caused by these irregularities.

4) Grade (sections 21-25)

BA is in complete agreement that grade is the key factor for Great Pyramid. The programme of bulk sampling, as presented in September, and about to commence will result in 14 samples, of +0.5 tonnes each, being collected from North Block (6 samples), South Block (6 samples and surrounding areas (2 samples). The samples have been selected from the results of previous sampling and cover 0.1-0.65% Sn grades. A variety of rock types have also been selected (Tables 1, 2).

It is felt that the upgrading of results in the 0.1-0.35% Sn range is extremely important and that to concentrate on the 0.25-0.3% Sn range as suggested, may be too restrictive.

D N CARTER

TABLE 1 BULK SAMPLING GREAT PYRAMID (BSS1-16)

No.	Location/Adit	Adit Wall	Distance from Portal (m)	Level (ASL)	Grade % Sn	Lithology	To be Channel Sampled
	Adit Samples						
BSS1	N*	E	14	195	0.5	Qtzite	Yes
BSS2	N	W	54.0-55.8 m	195	0.22	Sst/stt	No
BSS3	N	W	70.0-71.5 m	195	0.145	Sh	No
BSS4	E	N	40.0-42.0 m	185	0.1(?)	Qtzite	Yes
BSS5	F	S	9.0-10.0 m	185	0.15(?)	Sst/sh	Yes
BSS6	C	W	11.0-13.5 m	185	0.32	Sst/sh	No
BSS7	2SLL*	N	40 m	140	0.65	Qtzite	Yes
BSS8	2NLL**	N	54 m	165	0.33	Qtzite	No
BSS9	2NLL*	E	20 m	165	0.35	Qtzite	Yes
BSS10	2NLL	N	82 m BHP PCS17	165	0.23	Sst/sh	No
BSS11	1SLL**	W	48.6-51.2 m	145	0.28	Sst/sh	No
	Surface Samples						
BSS12	400E 175N			175	>0.3	Sst/Qtzite	Yes
BSS13	Nr BPD 10		(360E 155N)	165	<0.1	Sst/Qtzite	Yes
BSS14	Surface (end of MD1)		(315E 285N)	195	>0.1	Qtzite	Yes

* BHP Bulk Sample site.
** Billiton Sample collected not analysed.

Qtzite = quartzite; sst = sandstone; stt = siltstone; sh = shale.

047123

TABLE 2

Grade (%Sn)	No. of Samples
< 0.1%	1
0.1–0.2	3
0.2–0.3	3
0.3–0.4	3
0.4–0.6	1
0.6–0.8	1
Uncertain	2
	14

Lithology	No. of Samples
Qtzite	6
Sst/Qtzite	2
Sst/stt	1
Sst/sh	4
sh	1
	14

130

047125

BILLITON AUSTRALIA, THE METALS DIVISION OF
THE SHELL COMPANY OF AUSTRALIA LIMITED

SCAMANDER, EL 12/78

COMPARISON OF ANALYTICAL DATA FROM BULK AND THEIR EQUIVALENT CHANNEL SAMPLES AT THE GREAT PYRAMID TIN PROSPECT

Author: D.N. Carter
Report No.: 08.2958
Date: August, 1985
Copy No.:

Distribution:
1. BHP, Melbourne
2. Billiton, Fingal
3. Billiton, Melbourne

CONTENTS

SUMMARY

1. INTRODUCTION

2. SAMPLE LOCATIONS

3. SAMPLING PROCEDURES

4. SAMPLE PREPARATION

5. RESULTS

6. CONCLUSIONS

Reference

FIGURES

No.	Title	Scale
1.	Location Plan	1:100,000
2.	Great Pyramid, Bulk Sample Locations	1:1,000

TABLES

1. Historical Metallurgical Tests

2. Bulk Sampling Details

3. Analytical Results (only +8mm portion through roll mill)

4. Analytical Results (entire sample through roll mill)

APPENDIX

I Report on Preparation and Analysis of Samples from Tasmania

SUMMARY

Preliminary work on bulk samples taken at Great Pyramid suggested that the analytical data obtained from channel samples may have resulted in an underestimation of the grade of the deposit.

To investigate this posssibility, fourteen bulk samples (each +500 kgms) were collected, prepared and analysed. Results from three laboratories were compared and contrasted to those obtained from channel samples which were taken at the same sites as the bulks. No significant differences were noted between the two data sets.

1. INTRODUCTION

Since the late 1960s, Aberfoyle, BHP and Shell have jointly or individually been assessing the Great Pyramid tin deposit. Each of these companies recognised that the grade of the deposit was one of the most critical factors in evaluating the economic potential of the resource.

Early efforts by the Mines Department (Table 1) to determine the viability of the project by establishing recovery rates, were done on material with tin grades well above the average (0.22%) calculated by Shell (Hall D.B., 1984).

Aberfoyle, in 1971, and BHP/Shell in 1983, completed basic recovery tests on more representative material. In Aberfoyle's tests, a 72 kgm composite sample of percussion drill chips, assaying 0.296% Sn, achieved a 63.5% recovery in a concentrate containing 47.6% Sn. BHP/Shell obtained a 54.5% recovery of a 53% Sn concentrate from a 546.7 kgm sample assaying 0.22% Sn. However, each of these companies expressed doubt as to what was a truly representative sample from the deposit. Discrepencies were continually noted when comparing analytical data between adjacent percussion and diamond drill holes as well as between a few bulk and their corresponding channel samples. This was highlighted early in 1984 when Shell conducted a series of recovery tests on a bulk sample which, according to earlier geochemical results from channel samples, should have contained 0.25% Sn. However, after analysing all the products of this test, the grade of the initial sample was calculated to be 0.414% Sn. Because the initial split on this sample was carried out on 10 cm material, a grain size well above the liberation size of the cassiterite, some doubts were expressed as to the reliability of the result. Nevertheless, it was considered possible that the smaller $\pm$5 kgm samples, taken as channels or from drill holes, may not have been sufficiently large to indicate the tin grade at any particular location. It was therefore proposed to collect a number of bulk samples (about 500 kgm each) at various sites, and compare the results from those obtained from channel samples taken at the same location.

2. SAMPLE LOCATIONS

Sample sites were selected so that data would be available from areas with a variety of tin grades and rock types (Fig. 2). However, the majority of

samples were taken from areas of predominantly sandstone/quartzite, with tin grades thought to be in the 0.15-0.3% range (Table 2).

3. SAMPLING PROCEDURES

Due to the nature of the sampling (jack hammers underground), Mines Department approval was necessary before any sampling was possible. Most of the adit entrances required some attention, while poor ground conditions in two of the tunnels forced some of the originally selected sites to be abandoned.

Most of the bulk sample sites corresponded to well marked channel sample sites. Where comparative channels were not available, but grades known from drill hole data, the channel and bulk samples were taken consecutively from the same location.

Each bulk sample was collected on a ground sheet and loaded into 200 litre drums for shipment to the laboratory.

4. SAMPLE PREPARATION

In an attempt to avoid any possible nugget effects, the following sample preparation route was requested from the laboratory:

1. Crush jaw crusher.
2. Jaw crusher discharge crush in roll crusher
3. Split roll crusher discharge on 10 way rotary splitter
4. Combine 2x10 way splits (100 kgs)
5. Re-split 10 ways
6. Take 1x10 kg split
7. Crush to -2 mm
8. Re-split 10 ways
9. Assay for Sn in triplicate : 1 Mineral Deposits (AAS)
   1 Comlabs (XRF)
   1 Amdel (XRF)

In addition, a second 100 kgm split (step 4) was collected for three of the samples (numbers 2b, 3b, 6b) and prepared for analysis using the same procedure.

A report on this work (Appendix I) indicates that the agreed sample flowsheet was not initially followed. According to the report, after initial crushing, the -8 mm fraction passed directly to the rotary divider prior to further size reduction by the roll crusher. As a result, the laboratory was required to process all the samples again ensuring that all material passed through the roll crusher prior to splitting and subsequent analysis.

5. RESULTS

Analytical results from the two sets of data are, to all intents and purposes, identical. Table 3 lists the results from the samples not passed through to roll crusher while Table 4 lists the data from those which did pass through the crusher.

While there are some discrepencies, in general the analytical results from the bulks are similar to those of the corresponding channel samples. Samples 1 and 7 are clearly anomalous and the sharp variation from the rest of the data suggests there may have been an original error in sample preparation or in sample location.

The majority of the data indicates that there is no significant difference between results gained from the larger and smaller samples. No indication of any significant assay variation due to nugget effect is indicated, with the three final subsets within each sample giving almost identical analyses within each of the three laboratories. In addition, the 100 kgm subsamples for samples 2, 3 and 6 gave results almost identical to those of the original.

The accuracy of the analyses is considered to be high, since the data from the three laboratories for any given sample are virtually the same.

6. CONCLUSIONS

The data indicates that there is no significant difference in analytical results between the bulk samples (each about 500 kgms) and their equivalent channel samples (each about 5 kgm). As a consequence of this, it can be concluded that a large scale programme of bulk sampling over the deposit would not give significantly different analytical results to those already obtained from the channel and rock sampling.

It is therefore suggested that results from an additional bulk sampling programme are unlikely to significantly alter the average grade figures used in the present ore reserve estimate.

Reference

Hall, D.B., 1984, Great Pyramid, Preliminary Resource Estimates 1983-4 (Shell Rep. 08.2959)

TABLE 1 : HISTORICAL METALLURGICAL TESTS

C. 139

DATE	COMPANY	WORK COMPLETED	RESULTS	RECOVERIES (%)	CONCENTRATE (% Sn)	ORIGINAL GRADE (% Sn)	SAMPLE WEIGHT
1945	Mines Dept.	Size analysis	73% of -3 mm crushing measured -1.7 mm 48% of -3 mm crushing measured -0.5 mm Free SnO_2 in all -0.7 mm fractions.			0.64	
		Gravity concentration	-420 µm :	78.6	22.0		?
			-250 µm :	80.6	27.0		Composite of
			-180 µm :	80.2	27.0		2 samples
1945	Mines Dept.	Size analysis				0.64	as above
		Floatation	2 lbs Cetynal/ton+pine oil	72.8-81.8	6.4-11.1		
			3 lbs Cetynal/ton+pine oil	81.1-85.8	8(?)		
1963	Mines Dept.	Gravity concentration	a) Initial grind	79.26	61.6	2.17	1216 lbs
			Initial grid & regrinding +250 µm tailings	84.55	59.7		
			above and +150 µm tailings	87.05	59.0		
			b) Initial grind	73.81	50.5	0.76	1316 lbs
			above & +250 µm tailings	77.25	48.9		
			above & +150 µm tailings	79.76	46.9		
			c) Initial grind	60.59	46.9	0.47	676 lbs
			above & +250 µm tailings	66.61	43.8		
			above & +150 µm tailings	71.37	41.3		

047134

Table 1 (continued)

DATE	COMPANY	WORK COMPLETED	RESULTS	RECOVERIES (%)	CONCENTRATE (% Sn)	ORIGINAL GRADE (% Sn)	SAMPLE WEIGHT
1971	Aberfoyle	Size analysis	32% Sn in -850+500 μm, 33% in -500+300 μm.			0.29	140 lbs (percussion drill chips)
		Gravity concentration	Various results from work on size fractions.	63.5	47.6		
		Magnetic separation	Removed impurities - "necessary phase of the treatment".				
1983	Shell/BHP	Size analysis	47% Sn in -300+75 μm range Liberation commences in +3.18 mm fraction.			0.22	546.7 kgs
		Heavy liquid tests :	2.95 t/m^3 : 1mm particle size necessary for effective pre-concentration	sink 73.0		1.30	(composite)
			2.7 t/m^3 : as above				
		Cassiterite grain analysis	90% cassiterite suitable for gravity separation.				
		Magnetic separation	High density iron minerals - necessary phase of operation.				
		Gravity concentration	Results from several size fractions.	54.5	52.9	0.22	
1984	Shell	Size Analysis	54% Sn in -300 to +125 μm +20% total Sn liberated at -0.4 mm			0.414	2 tonnes
		Hydrosizing				(calculated)	
		Spiral Tests	Coarse:86% Sn from 22% of original feed Medium:90% Sn from 29% of original feed				
		Gravity concentration	Concentrate, middling, tail results given	43	48		
		Magnetic separation	Results in increased concentrate grade				

04113

TABLE 2 BULK SAMPLING DETAILS

No.	Location/Adit	Distance from Portal (m)	Level (ASL)	Grade % Sn	Lithology
Adit Samples					
BSS 1	N*	14	195	0.5%	Qtz
BSS 2	N#	54.0-55.8	195	0.22%	Sst/stt
BSS 3	N#	70.0-71.5	195	0.145%	Shale
BSS 4	E	40.0-42.0	185	0.1%	Qtz
BSS 5	F	9.0-10.0	185	0.15%	Sst/shale
BSS 6	C#	11.0-13.5	185	0.32%	Sst/shale
BSS 7	2SLL*	40	140	0.65%	Qtz
BSS 8	2NLL	54	165	0.33%	Sst + Qtz
BSS 9	2NLL	22	165	0.3%	Qtz/shale
BSS 10	2NLL	82	165	0.23%	Qtz + shale
BSS 11	1SLL**	48.6-51.2	145	0.28%	Sst/shale
Surface Samples					
BSS 12		390E 185N	175	0.3%	Sst/Qtz
BSS 13	Near BPD 10	360E 155N	165	0.1%	Sst/Qtz
BSS 14		315E 285N	180	0.1%	Qtz

* BHP Bulk sample site.
** Billiton sample from earlier sampling programme.
\# Prepared in duplicate by Mineral Deposits Ltd.

Qtz = quartzite, Sst = sandstone, stt = siltstone

TABLE 3 : ANALYTICAL RESULTS (only +8 mm portion through roll mill)

SAMPLE NUMBER	BHP BULK (%)Sn	COMLABS (%Sn)**				AMDEL (%Sn)**				MINDEPS (%Sn)*				CHANNEL (%Sn)**
		1	2	3	Average	1	2	3	Average	1	2	3	Average	
1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.29
2a	-	0.100	0.105	0.110	0.105	0.114	0.108	0.112	0.111	0.107	0.092	0.096	0.098	0.22
2b	-	0.105	0.105	0.105	0.105	0.114	0.112	0.104	0.110	0.091	0.084	0.083	0.086	-
3a	-	0.018	0.019	0.019	0.019	0.018	0.021	0.018	0.019	0.025	0.015	0.015	0.018	0.145
3b	-	0.018	0.017	0.017	0.018	0.018	0.021	0.018	0.019	0.025	0.015	0.015	0.018	-
4	-	0.185	0.205	0.200	0.197	0.198	0.220	0.204	0.207	0.212	0.182	0.192	0.197	0.13
5	-	0.260	0.260	0.270	0.263	0.298	0.288	0.268	0.285	0.258	0.228	0.236	0.241	0.25
6a	-	0.240	0.240	0.250	0.243	0.254	0.248	0.256	0.253	0.231	0.214	0.225	0.223	0.32
6b	-	0.245	0.240	0.230	0.238	0.260	0.244	0.236	0.247	0.235	0.218	0.219	0.224	-
7	0.65	-	-	-	-	-	-	-	-	-	-	-	-	0.37
8	-	0.315	0.315	0.300	0.310	0.346	0.382	0.346	0.358	0.290	0.251	0.262	0.267	0.33
9	-	0.240	0.250	0.240	0.243	0.242	0.262	0.258	0.254	0.257	0.207	0.224	0.229	0.30
10	-	0.155	0.160	0.160	0.158	0.172	0.180	0.186	0.179	0.178	0.151	0.157	0.162	0.23
11	-	0.360	0.360	0.410	0.377	0.388	0.360	0.354	0.367	0.315	0.298	0.306	0.306	0.28
12	-	0.240	0.225	0.220	0.228	0.280	0.280	0.285	0.282	0.279	0.250	0.250	0.260	0.232
13	-	0.260	0.275	0.260	0.265	0.266	0.268	0.288	0.274	0.243	0.224	0.227	0.231	0.335
14	-	0.009	0.009	0.009	0.009	0.011	0.010	0.010	0.010	0.016	0.016	0.015	0.016	0.0115

* analysis by atomic absorption spectrophotometry

** analysis by x-ray fluorescence

0471371

TABLE 4 : ANALYTICAL RESULTS (entire sample through roll mill)

ASSAYS %SN:

	MDL			AMDEL			COMLABS			MDL	AMDEL	COMLABS
										AVGE	AVGE	AVGE
SAMPLE	1	2	3	1	2	3	1	2	3			
BSS 2A	.101	.097	.090	.108	.112	.110	.110	.100	.105	.096	.110	.105
BSS 2B	.091	.094	.090	.114	.112	.112	.110	.110	.100	.092	.113	.107
BSS 3A	.015	.010	.015	.018	.019	.020	.017	.015	.016	.013	.019	.016
BSS 3B	.010	.010	.010	.018	.020	.020	.017	.017	.015	.010	.019	.016
BSS 4	.194	.189	.188	.220	.208	.222	.205	.205	.195	.190	.217	.202
BSS 5	.295	.278	.275	.284	.308	.282	.260	.280	.270	.283	.291	.270
BSS 6A	.242	.228	.230	.258	.268	.246	.230	.225	.235	.233	.257	.230
BSS 6B	.232	.210	.211	.250	.246	.246	.220	.215	.220	.218	.247	.218
BSS 8	.265	.263	.245	.310	.302	.288	.305	.305	.305	.258	.300	.305
BSS 9	.243	.223	.224	.238	.230	.258	.225	.235	.235	.230	.242	.232
BSS 10	.176	.169	.174	.174	.144	.178	.175	.165	.165	.173	.165	.166
BSS 11	.370	.336	.333	.332	.332	.358	.315	.335	.330	.346	.341	.327
BSS 12	.237	.225	.224	.232	.264	.258	.230	.240	.230	.229	.251	.233
BSS 13	.267	.247	.249	.266	.254	.260	.265	.235	.235	.254	.260	.245
BSS 14	.012	.010	.010	.010	.010	.010	.010	.010	.011	.011	.010	.010

APPENDIX I

Report on Preparation and Analysis of Samples from Tasmania

by Mineral Deposits Limited

047140

145

THE SHELL COMPANY OF AUSTRALIA LIMITED

REPORT NO. 16.020.1/2

REPORT ON PREPARATION AND ANALYSIS OF SAMPLES FROM TASMANIA

MINERAL DEPOSITS LIMITED

MINERAL TECHNOLOGY DIVISION

BUNDALL - QUEENSLAND

AUSTRALIA

047141

CONTENTS

1.0 INTRODUCTION

1.1	Material	1
1.2	Objectives	1
1.3	Terms of Reference	1
1.4	Summary	2
1.5	Conclusions	2

2.0 TEST EQUIPMENT

2.1	Machines	4
2.2	Test Rigs	4
2.3	Analytical Systems	4

3.0 TREATMENT AND PROCEDURES

3.1	Procedures	6
3.2	Results	6
3.3	Discussion	6

147

1.0 INTRODUCTION

1.1 MATERIAL

The samples as received consisted of damp, lump ore in 200 litre drums. Twelve samples, each weighing about 500 kg, were received, labelled BSS 2, BSS 3, BSS 4, BSS 5, BSS 8, BSS 9, BSS 10, BSS 12, BSS 13, BSS 14, C.ADIT and 1 SLL. Samples C.ADIT and 1 SLL were subsequently renumbered BSS 6 and BSS 11 respectively.

1.2 OBJECTIVES

The samples were to be processed to give representative sub-samples for tin assay. Sub-samples were to be analysed by two independent laboratories by X-ray fluorescence (XRF) techniques, and by Mineral Deposits Limited (MDL) by atomic absorption (AA) spectrophotometry.

One hundred kilogram sub-samples of each sample were to be retained for further treatment if required. The full sample treatment flowsheet is given in Section 3.1.

1.3 TERMS OF REFERENCE

1.3.1 Telex from Mr. M. V. Atfield, MDL, to Mr. Derek Carter, Shell - STX 1274/84 of August 28, 1984.

1.3.2 Telex from Mr. Derek Carter, Shell, to Mr. M. V. Atfield, MDL - November 29, 1984.

1.3.3 Telex from Mr. M. V. Atfield, MDL, to Mr. Derek Carter, Shell - STX 3523/84 of December 18, 1984.

1.3.4 Telex from Mr. Derek Carter, Shell, to Mr. Peter Mills, MDL - January 21, 1985.

148

1.4 SUMMARY

Table 1 shows average results from the three laboratories:

TABLE 1: Average % Sn in Sub-Sample

SAMPLE	MDL	AMDEL	COMLABS
BSS 2	0.098	0.111	0.105
BSS 2	0.086	0.110	0.105
BSS 3	0.018	0.019	0.019
BSS 3	0.018	0.019	0.017
BSS 4	0.197	0.207	0.197
BSS 5	0.241	0.285	0.263
BSS 6	0.223	0.253	0.243
BSS 6	0.224	0.247	0.238
BSS 8	0.267	0.358	0.310
BSS 9	0.229	0.254	0.243
BSS 10	0.162	0.179	0.158
BSS 11	0.306	0.367	0.377
BSS 12	0.260	0.282	0.228
BSS 13	0.231	0.274	0.265
BSS 14	0.016	0.010	0.009

1.5 CONCLUSIONS

1.5.1 MDL assays are generally lower than the other two, except for very low concentrations of tin.

1.5.2 In most cases, the difference between MDL and Comlabs assays is comparable with the difference between Comlabs and Amdel assays.

1.5.3 Amdel assays are highest in all but one case.

1.5.4 MDL assays are lowest in all but four cases.

149

1.5.5 Considering the accuracy and reliability of the XRF assays, MDL results can be used to give a conservative estimate of the tin content of the samples.

A. P. MILLS,
SENIOR METALLURGIST,
MINERAL TECHNOLOGY DIVISION,
MINERAL DEPOSITS LIMITED.

M. V. ATFIELD,
MANAGER - TECHNICAL SERVICES,
MINERAL TECHNOLOGY DIVISION,
MINERAL DEPOSITS LIMITED.

Bundall,
April 12, 1985.

150

2.0 TEST EQUIPMENT

2.1 MACHINES

For primary crushing, a jaw crusher was used followed by an 8mm square aperture woven wire screen with screen oversize crushed in a roll crusher.

A special 10-way rotary divider was used to give 50 kg splits of each sample, and 100 kg sub-samples were obtained by combining two 50 kg splits.

A small jaw crusher was used to crush to -2mm, all material being hand-sieved to ensure it passed this size. Oversize was recrushed.

2.2 TEST RIGS

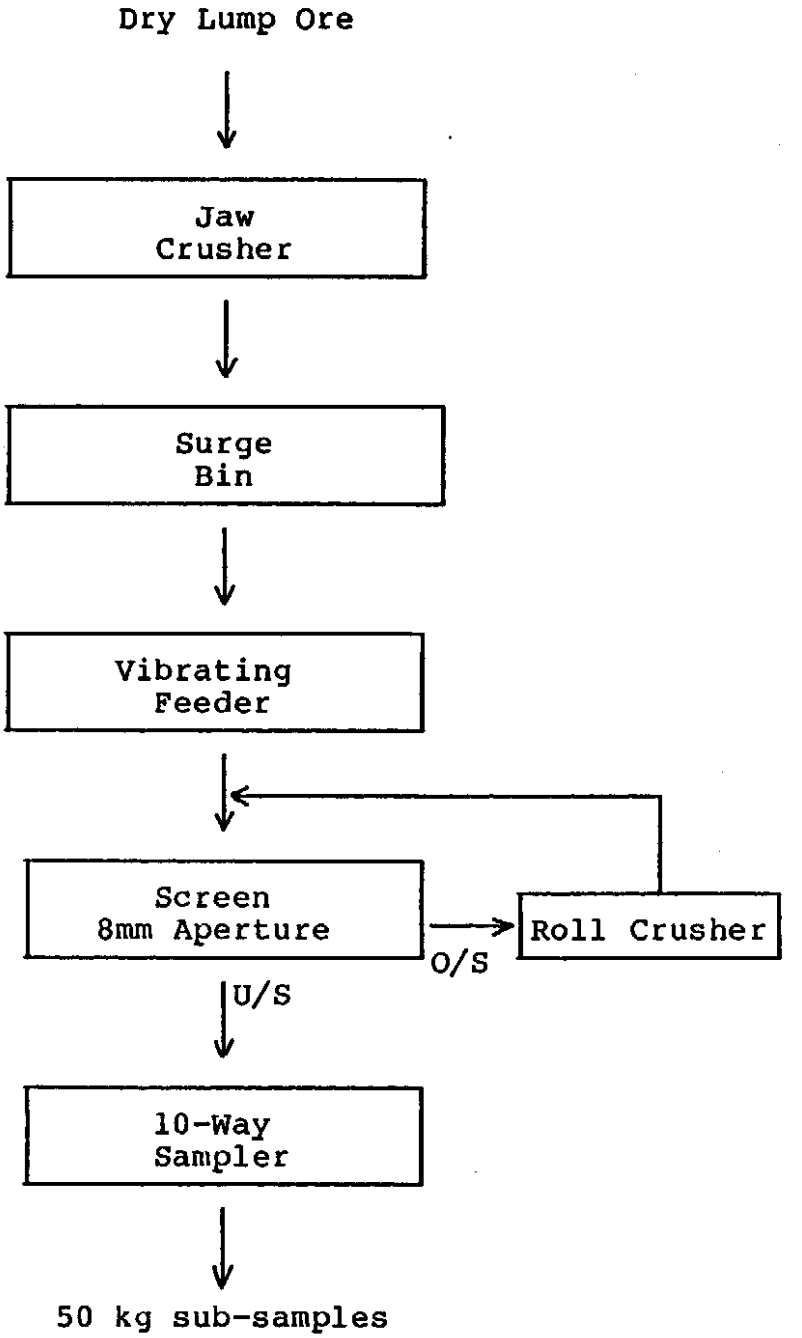
The jaw crusher, screen, roll crusher and 10-way sampler were set up in the circuit shown in Figure 1, and each 500 kg sample processed in turn. The remainder of the sample treatment was handled as a batch operation.

2.3 ANALYTICAL SYSTEMS

A final 1.25 kg sub-sample from each sample was assayed by standard AA spectrophotometry techniques at MDL's laboratory. The method consisted of pulverisation of the sample, then ammonium iodide sublimation followed by dissolution in hydrochloric acid. The spectrophotometer used was a Techtron AA-5.

The two independent laboratories were Australian Mineral Development Laboratories (Amdel) and Comlabs, both of Adelaide, S.A. XRF analyses were performed by the pressed powder method, whereby the sample is pulverised and pressed into a pellet in a carrying medium, for presentation to the X-ray beam.

FIGURE 1: Sample Crushing Flowsheet



3.0 TREATMENT AND PROCEDURES

3.1 PROCEDURES

Figure 2 (following) shows the sample treatment procedure in flowsheet form. At the stage of producing 100 kg splits from the preliminary crushing, samples BSS 2, BSS 3 and BSS 6 were treated in duplicate; i.e. two separate 100 kg splits were taken of each for further treatment.

The final subdivision of the ground sample was carried out to eight ways in a riffle, rather than ten ways as had been done earlier in the sample treatment. The selection of three sub-samples for analysis was done at random. Each sub-sample was analysed in triplicate by the methods mentioned in Section 2.3.

3.2 RESULTS

Table 2 (following) gives the complete set of assay results.

3.3 DISCUSSION

The AA technique used by MDL has an accuracy of $\pm$10% relative. The XRF methods employed by Amdel and Comlabs have an accuracy of $\pm$5% relative. This suggests that the results are reasonably consistent between laboratories, and the results obtained by MDL give a conservative estimate of the grades of tin present in the samples.

153 FIGURE 2: Sample Treatment and Preparation Flowsheet

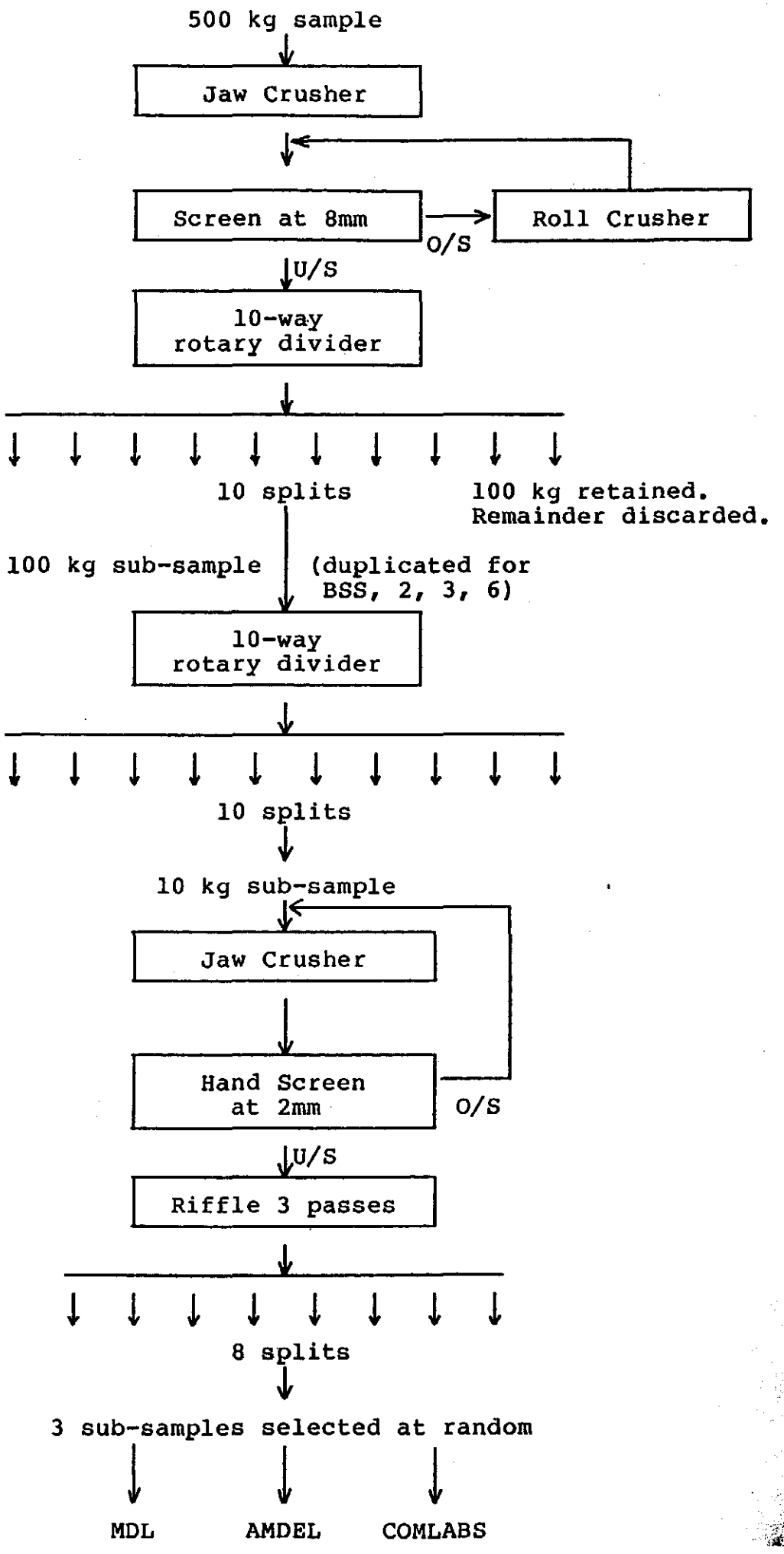


TABLE 2: Combined Results from All Laboratories

ASSAY %SN	MDL - AA				AMDEL - XRF				COMLABS - XRF			
SAMPLE	1	2	3	Avrge	1	2	3	Avrge	1	2	3	Avrge
BSS 2	0.107	0.092	0.096	0.098	0.114	0.108	0.112	0.111	0.100	0.105	0.110	0.105
BSS 2	0.091	0.084	0.083	0.086	0.114	0.112	0.104	0.110	0.105	0.105	0.105	0.105
BSS 3	0.025	0.015	0.015	0.018	0.018	0.021	0.018	0.019	0.018	0.019	0.019	0.019
BSS 3	0.025	0.015	0.015	0.018	0.018	0.021	0.018	0.019	0.018	0.017	0.017	0.017
BSS 4	0.212	0.182	0.196	0.197	0.198	0.220	0.204	0.207	0.185	0.205	0.200	0.197
BSS 5	0.258	0.228	0.236	0.241	0.298	0.288	0.268	0.285	0.260	0.260	0.270	0.263
BSS 6	0.231	0.214	0.225	0.223	0.254	0.248	0.256	0.253	0.240	0.240	0.250	0.243
BSS 6	0.235	0.218	0.219	0.224	0.260	0.244	0.236	0.247	0.245	0.240	0.230	0.238
BSS 8	0.290	0.251	0.262	0.267	0.346	0.382	0.346	0.358	0.315	0.315	0.300	0.310
BSS 9	0.257	0.207	0.224	0.229	0.242	0.262	0.258	0.254	0.240	0.250	0.240	0.243
BSS 10	0.178	0.151	0.157	0.162	0.172	0.180	0.186	0.179	0.155	0.160	0.160	0.158
BSS 11	0.315	0.298	0.306	0.306	0.388	0.360	0.354	0.367	0.360	0.360	0.410	0.377
BSS 12	0.279	0.250	0.250	0.260	0.280	0.280	0.285	0.282	0.240	0.225	0.220	0.228
BSS 13	0.243	0.224	0.227	0.231	0.266	0.268	0.288	0.274	0.260	0.275	0.260	0.265
BSS 14	0.016	0.016	0.015	0.016	0.011	0.010	0.010	0.010	0.009	0.009	0.009	0.009

15A
047149

156

047150

Aberfoyle Limited

INCORPORATED IN VICTORIA
25th Floor, 367 Collins Street, Melbourne Victoria 3000 Australia
Telephone: (03) 61 3661 Telex: AA31020

12 November 1985

Mr J Collins
Shell Company of Australia
Metals Division
P O Box 872K
MELBOURNE VIC 3000

Dear John,

Gt Pyramid Tin Deposit

I have read the reports you lent me and attach a copy of my notes. Additionally, I searched and found some work that we did in 1979 on a small sample. Because of other priorities my time on this job has been inadequate but I attach my thoughts to date.

Metallurgy

The testwork completed did so much but said so little. Neither the Department of Mines nor the Mineral Deposits work is very conclusive. For the weights of sample treated and the obvious expense, Shell has got poor value for money.

Nevertheless, there is confirmation that ore treatment should be regarded as a simple gravity separation exercise.

The Aberfoyle HLS work, in part confirmed by the TDM indicates a liberation from -600um and excellent potential for heavy media cyclone separation. Conventional crushing, grinding and gravity + tin flotation would also work well but would be more expensive. The technical key will be to make the heavy media separation work as well as the laboratory tests indicate. Heavy media cyclones (Renison, Cleveland) work generally well down to about 500um but I feel if "pushed" they could work on this ore down to 250um. Some South African work claims 100-75um separation (P Van Der Walt, Norten Tivedale).

The use of pre-concentration and direct fuming would also be possible if a high grade sink (say >10% Sn) is achieved at high (>85%) recovery but unless normal gravity processes do not work or exceptional circumstances exist, it is probably cheaper on this ore to use tables.

Flowsheets

I have drawn up some rough conceptual flowsheets for consideration but proper development of these will need more thought. At 0.22% Sn any flowsheet will have to be very simple to be economic. I favour the HMS/Cones/Table circuit, Number 1.

Economics

Your file note of 17/10/85 is not too far out but I would drop recovery from 90% to 80-85%, say 83% overall to be safe.

Milling costs of a simple HMS-gravity mill at 500,000 t/y should be much less than $12/tonne (without flotation) and may end up about $8/tonne.

		$/t
i.e.	Crushing	1.00
	Grinding	1.50
	HMS	1.50
	Gravity	1.00
	Other	2.00
	Mill Admin	1.50
		8.50

Ardlethan for instance has milling costs at about $10/t for 250,000 t/y rate which includes a large tin flotation section. Its head grade is currently about 0.25% Sn and we are making a small amount of profit.

The recent trauma in the tin market has left everything uncertain but at prices before the problems, a 0.22% Sn ore was valued at say:

$33/t @ A$15,000/t tin price.

At say A$10,000/t tin price, the value drops to $22/t.

Tin Prices are net of smelting + Transport

Using this price and 83% recovery value you have $18/t revenue to cover your costs and capital.

Assuming your mining cost of $3/t and other overheads, etc of $3/t, overall costs excluding depreciation would be $15/t - a lean show!

Conclusions

- The tin price that emerges from ITC/LME movements in the next few weeks will very quickly tell you whether a project at Gt Pyramid has a hope. At say $10,000/t tin price the project would unlikely to be viable.
- The metallurgical work done to date has not properly pursued the major "hope" for this deposit, that is, innovative use of HMS. Indications from Aberfoyle and Tasmanian Department of Mines work are that a well run, simple HMS-Gravity plant could achieve 80-85% tin recovery at low milling cost, about $8-9/t. More testwork and economic studies may improve this but the tin price will be the major issue.

- The heavy liquid response of the Gt Pyramid ore is somewhat unique in my experience and confirmatory tests (Aberfoyle Metallurgy at Burnie could do this if you wish) on sized fractions from 3mm down to 45um should be done on representative sample. If the response is as good as previously indicated and if the tin price can be held above say A$10,000/t you have a tantalising prospect that I feel should not be dropped.

- Economics of this prospect could be considerably improved by scale (cf Newmonts Grampians Prospect) and if more resources were found to enable doubling or trebling of current size, greater confidence in the viability would result.

Overall, my "gut feeling" says that the prospect is marginal but not hopeless and if full advantage can be made of the ores unique HMS character, a viable project could result.

Yours sincerely,

Kevin A. Foo

Kevin A Foo
Manager - Metallurgical
Development

Attachment

NOTES - GT PYRAMID TESTWORK

Tasmanian Department of Mines (1983)

- Good standard work but their usual difficult to read report.
- Sample seemed good size and representative of grade at 0.22% Sn.
- Sizing and natural grainsize indicate coarse cassiterite (compared with other Tasmanian ores) and ∿90% SnO_2 >30um, 66% +75um. Should be quite amenable to gravity separation.
- Heavy liquid test to +600um showed liberation appreciable at that size. Tail at 0.08% Sn and 98% weight was excellent result. Should have continued work down to 45um.
- Jig tests at lab scale unreliable.
- Larger scale tests - looks like sample was overground and lab separations inefficient.
- 54% recovery was a very poor result - perhaps the "clustering" was a real problem but I doubt it.
- Lack of flowsheet with results is annoying.
- Grind of 400-600um appears suitable if pre-concentration not used but pre-concentration with HM cyclone a distinct possibility.

Mineral Deposits (1984)

- 400um grind size about right.
- Spiral and table testwork indicated good gravity response but lack of good overall flowsheet/balance was annoying (again!)
- Weak conclusions - not quantified.
- Report - hard to follow in parts.
- Balances on flowsheets do not add up, not indicated which are calculated and which are measured weights and assays. AAS Sn assays unreliable.
- Spiral recovery 77-90% Sn to 6.25% Sn grade. From 0.51% feed, a good indication. Tail of 0.11% Sn a bit high for coarse fraction.
- Medium fraction 79% recovery to 3.8% Sn and 0.075% Sn tail good enough.
- Upgrading tests indicated no major problems.

160

Aberfoyle (1979) Technical Note (attached)

- Two samples only 750g and 850g provided.
- Heavy liquid tests and superpanned sinks.
- Veinlets 600-1000um SnO_2.
- Native copper?
- Projected 63≈80% recovery from feeds 0.2-0.6% Sn.
- Small scale tests.
- Table 1 2.96 SG (-600 +45um)

230501	Sink	1.9% Wt	28.6% Sn	86% Distribution
	Float	98.1% Wt	0.09% Sn	14% Distribution
	Feed		0.6% Sn	
230502	Float	97.7% Wt	0.06% Sn	31.3% Distribution
	Sink	2.3% Wt	5.6% Sn	68.7% Distribution
			0.19% Sn	

* HMS looks promising ± gravity precon.

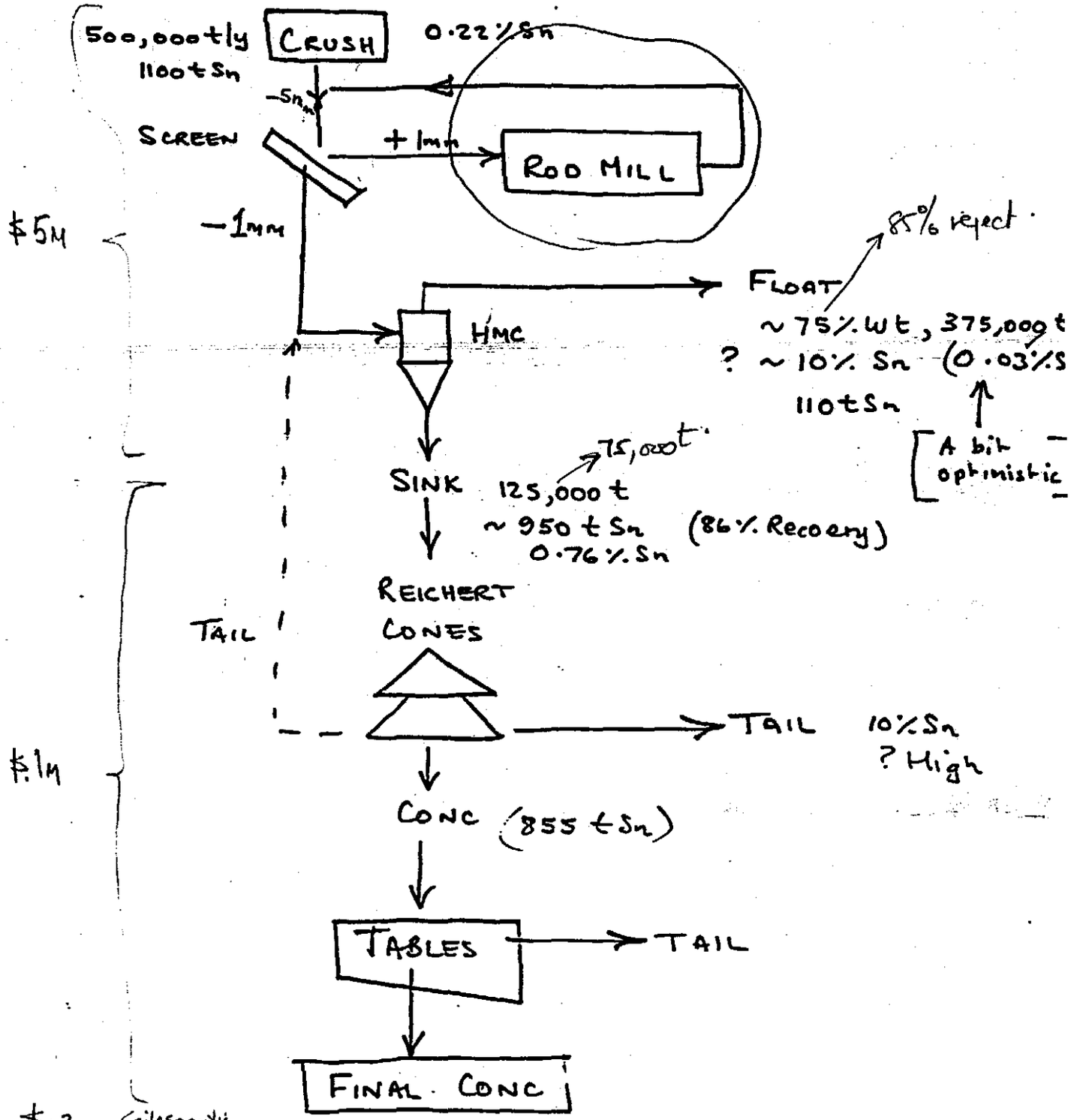
Kevin. A. Foo

Kevin A Foo
12 November 1985

Favoured Lucas

161

GT. PYRAMID – FLOWSHEET 1



74% O/all – should be more?

[Should get > 80% in well run plant]

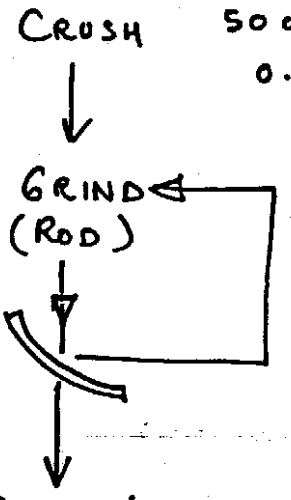
Op. Cost ~$8/t

Mine $4M

Infra $3M

KAF Nov 85

GT. PYRAMID – FLOWSHEET 2



CONES | SPIRAL PLANT

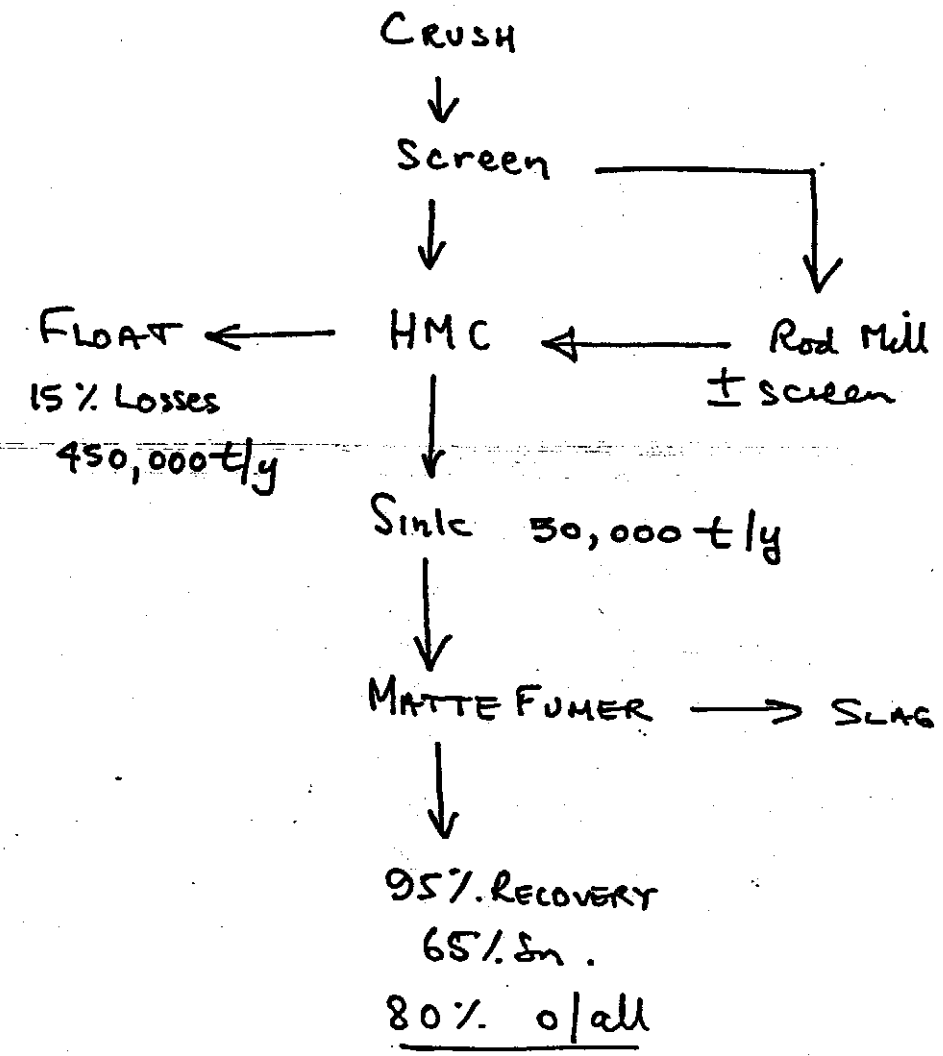
→ TAIL
80% wt 400,000 t
0.06% Sn

Table Upgrade → 240 t Sn (21% Sn)

~ 80% Recovery

Operating Cost ~ $10 | t

GT. PYRAMID – FLOWSHEET 3



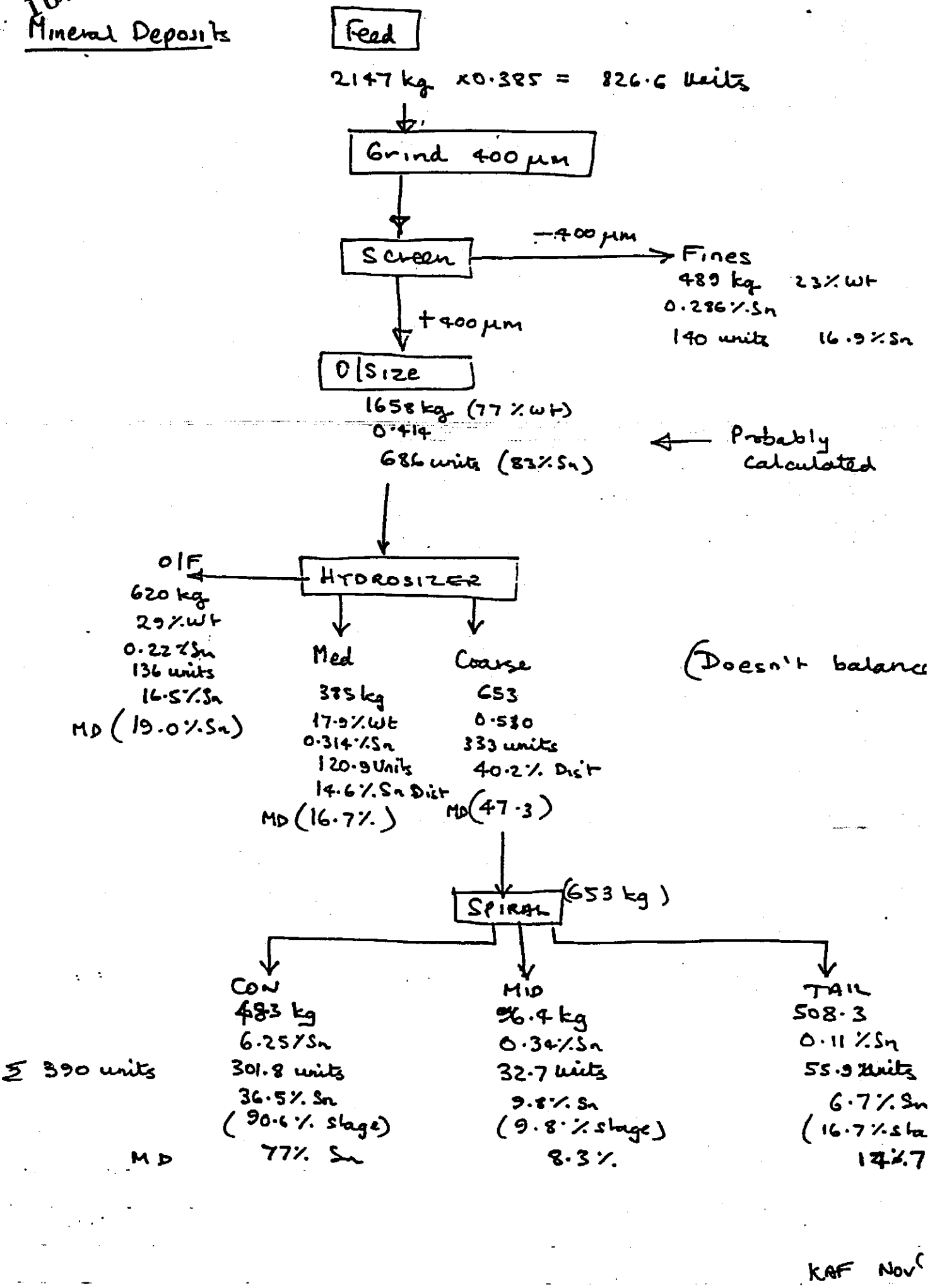
Assume: Excellent HMS separation
Smallish Fumer

Operating Cost ~ $8-10/t

KAF Nov 85

164

Mineral Deposits



KAF Nov(

047159

165

CLEVELAND TIN LIMITED

NEM/KC

Luina, Tasmania 7321, Austra
Telephone: 39 1180 Telex: 585

TECHNICAL NOTE

TO: R.J. ROBINSON

FROM: N.E. MOONY

DATE: 4/10/79

COPIES: C. Young, K. Palmer, S.M. Richards

SUBJECT: CHARACTERISATION OF "GREAT PYRAMID" CORE SAMPLE

SUMMARY

Due to the samples being small a full metallurgical investigation was not possible, but a brief ore characterisation showed the following:-

1) 90% of the cassiterite was finer than 300 micron.

2) There was less than 5% -5 micron cassiterite.

3) The host rock lends itself readily to pre concentration methods such as cones or trays.

4) The characteristics of this type of ore allow for ease of liberation due to the high concentration of cassiterite in veinlets.

5) Good recoveries were achieved with easily retreatable middlings.

6) Due to the small amount of concentrate, 230502 was difficul to upgrade to more than ½0.0% Sn. The relatively high tailing in the +45 micron fraction could be reduced by regrinding.

Samples have been submitted for mineralogical examination.

1. INTRODUCTION

Two small samples of drill core were received on 18/9/79 from Mr. C. Young at Wynyard. The samples were numbered:-

230501 total weight 750 gm

230502 " " 850 gm

A brief metallurgical analysis was requested with emphasis on pre concentration.

2. TEST PROCEDURE

The core was scanned mineralogically to judge a possible top liberation point, 600 micron was decided upon to allow maximum recovery.

The samples were reduced to 100% passing 600 micron, by passing the samples through a roll crusher until all the sample was reduced. The crushed product was then screened at 45 micron.

The +45 micron fraction was subjected to heavy liquid tests at 2.96 S.G and 3.3 S.G using Tetrabromo Ethane ($CHBr_2.CHBr$ and Di Iodomethane (CH_2I_2) respectively. The di iodomethan sink was superpanned to concentrate the free cassiterite and superpan tail plus tetrabromo ethane sink were combined to give a +45 micron middling product.

The -45 micron fraction was cyclosized and the +15 micron -45 micron fraction was superpanned. The +5 micron -15 micron fraction was reported as fine middlings. This fraction would be readily treated by oxide flotation. (Refer flowsheet attached)

3. DISCUSSION OF RESULTS

3.1 The Heavy Liquid

From a visual and cursory mineralogical examination the samples appeared very oxidised and weathered. Mineralisati occured as thin veinlets in a sandstone host rock. The veinlets were 600 micron to 1000 micron in width, and in some instances contained native copper with sulphides.

As a result of the above it was thought that a liberation point of 600 micron would give an upper limit for free cassiterite to allow maximum recovery. Both samples were reduced to 100% - 600 micron.

167

230501

Summary of Results

	Wt	Sn%	Sn Dist	Project Mill Re at 50%
Combined Concentrates	5.30	(38.13)	63.7	61.0
Coarse Middlings	4.12	16.18	21.0	16.8
-15 micron +5 micron Middlings	24.00	0.13	1.0	0.5
Combined Tailings	450.00	(0.08)	12.2	0.0
Slimes	50.56	0.13	2.1	0.0
Combined Feed	534.00	0.60		78.3

230502

Summary of Results

Combined Concentrates	2.12	(7.9)	13.7	11.6
Combined Middlings	11.90	5.2	50.7	40.6
-15 micron +5 micron Middling	24.00	0.13	2.7	1.4
Combined Tailings	506.00	0.06	24.9	9.4
Slimes	75.00	0.13	8.0	
Combined Feed	620.00	0.20	100.0	63.0

The results in table 1 show excellent separation and indicate that the sample would readily lend itself to pre concentration by cones on spirals. It would be likely that heavy media separation would work on this type of ore but the samples were too small to allow any judgement to be made.

The di iodomethane results have been incorporated in the superpanning and cannot be isolated.

3.2 Gravity Separation

The gravity separation was hindered by the other heavy minerals such as abundant native copper and sulphide, present in both samples. Sulphide removal was not possibl due to the small volume of sample.

230501

The gravity results show that 60% of the cassiterite is liberated above 45 micron with a 600 micron screening. From mineralogical examination, 22% of the cassiterite reporting as middlings at 16.2% Sn would realise at least 40% of the components at +45 micron, and an80% average recovery could be expected from these middlings. The tailings grade of 0.09% could be reduced with a finer grin

The -45 micron concentrate grade was lower than expected, but the recovery was very good at about 80%. The reason for the low concentrate is not clear, but sulphides are present.

The coarse middlings seem to contain abundant native copper.

230502

A final concentrate was not attempted due to the small amo of sample. The most significant point was the large amoun of middlings present which indicates that this material may not liberate as well as 230501 using 600 micron as the liberation point. Sulphides also caused difficulty in concentrating the coarser material and insufficient sample prevented the taking of a -45 micron concentrate.

4. CONCLUSIONS

The samples are too small to draw any definite conclusions but if they are in any way representative, then it could be concluded that the material warrants further investigat

The small amount of middlings present (i.e high grade heav liquid sinks) would enhance any gravity treatment process.

169

230501

+45 micron Gravity Treatment Results

	Wt(gm)	Wt%	Sn%	Sn Di
Concentrate One	1.18	0.22	52.4	19.3
Concentrate Two	2.58	0.48	36.7	29.3
Coarse Middlings	4.12	0.78	16.19	22.0
Coarse Tailings	409.00	76.59	0.09	11.5
-45 micron				
Concentrate One	0.72	0.13	29.00	6.3
Concentrate Two	0.86	0.16	30.40	8.1
-15 micron +5 micron Middlings	44.0	4.49	0.13	1.0
Fine Tailings	41.0	7.68	0.05	0.6
Slimes	50.54	9.47	0.13	2.0
Head Calc	534.00	100.00	0.60	100.0
Assay			0.63	
Summary				
Combined Concentrate	5.30	0.99	38.13	63.1
Combined Middlings	28.12	5.27	2.59	22.8
Combined Tailings	500.58	93.74	0.09	14.1
	534.00	100.00	0.60	100.0

230502

Concentrate One	0.82	0.13	11.4	7.
Concentrate Two	1.30	0.21	5.7	6.(
Coarse Middlings	9.51	1.92	5.2	50.(
-15 micron +5 micron Middlings	25.00	4.03	0.13	20.
Coarse Tailings	472.00	76.13	0.06	22.
Fine Tailings	34.00	5.48	0.11	3.
Slimes	77.37	12.10	0.13	7.
Summary				
Combined Concentrate	2.12	0.34	7.90	13.
Combined Middlings	36.90	5.95	1.76	53.
Combined Tailings	581.00	93.71	0.07	33.
	620.02	100.00	0.20	100.

170

230501

Heavy Liquid Separation T B E Float

-600 micron +45 micron fraction

S.G	Wt%	Sn	Sn Dist
2.96 Sink	1.89	28.60	86.0
Float	98.11	0.09	14.0
Head Calc	100.00	0.63	
Head Assay		0.63	

X45

230502

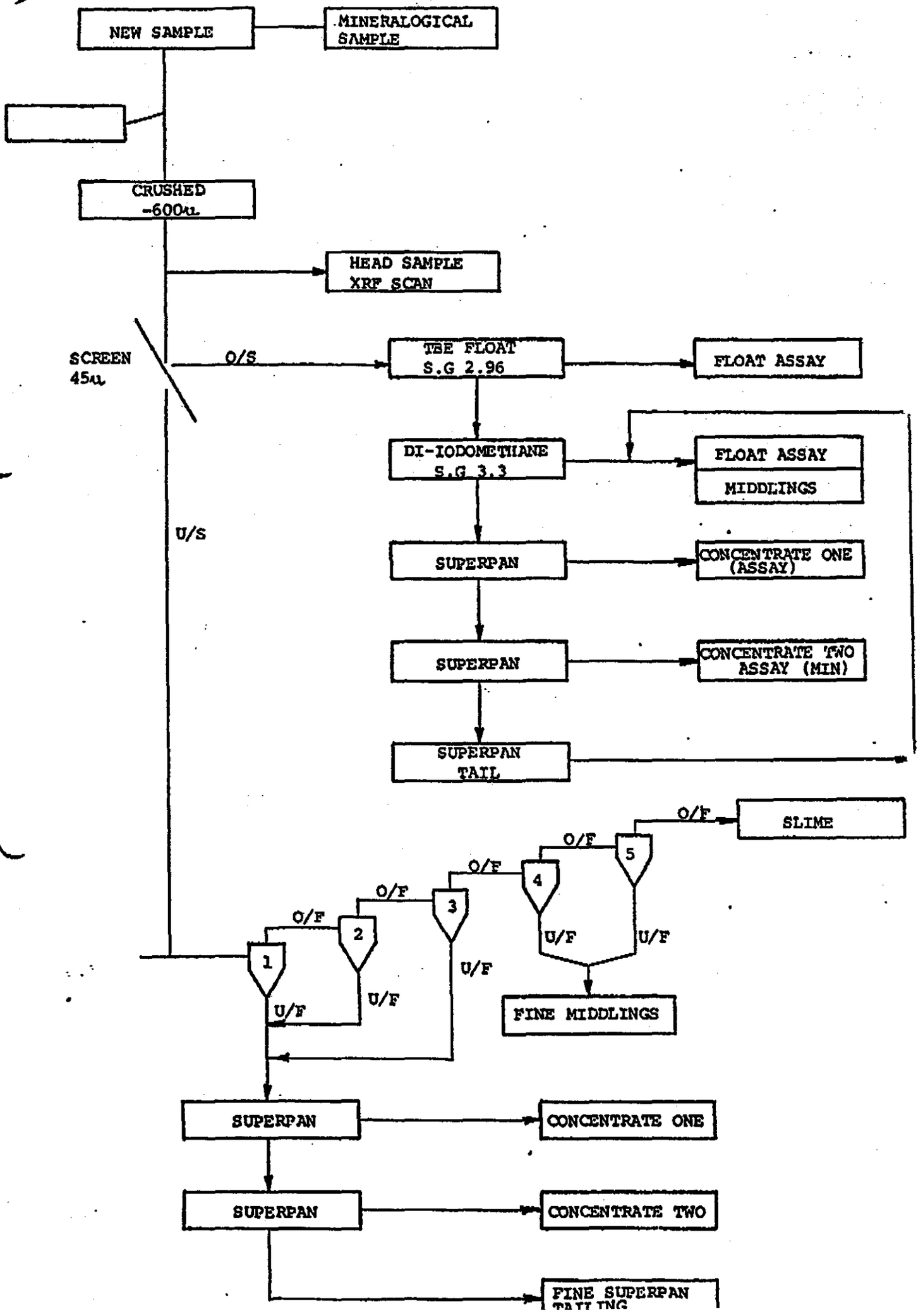
Heavy Liquid Separation T B E Float

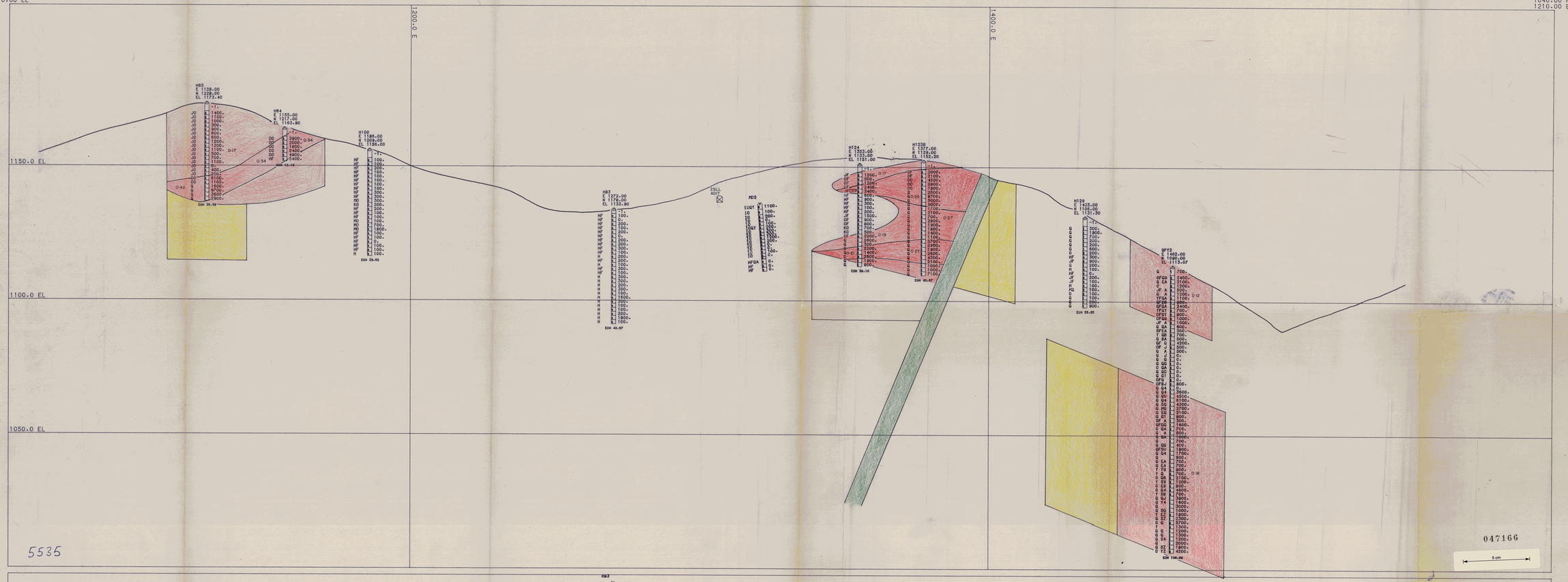
-600 micron +45 micron fraction

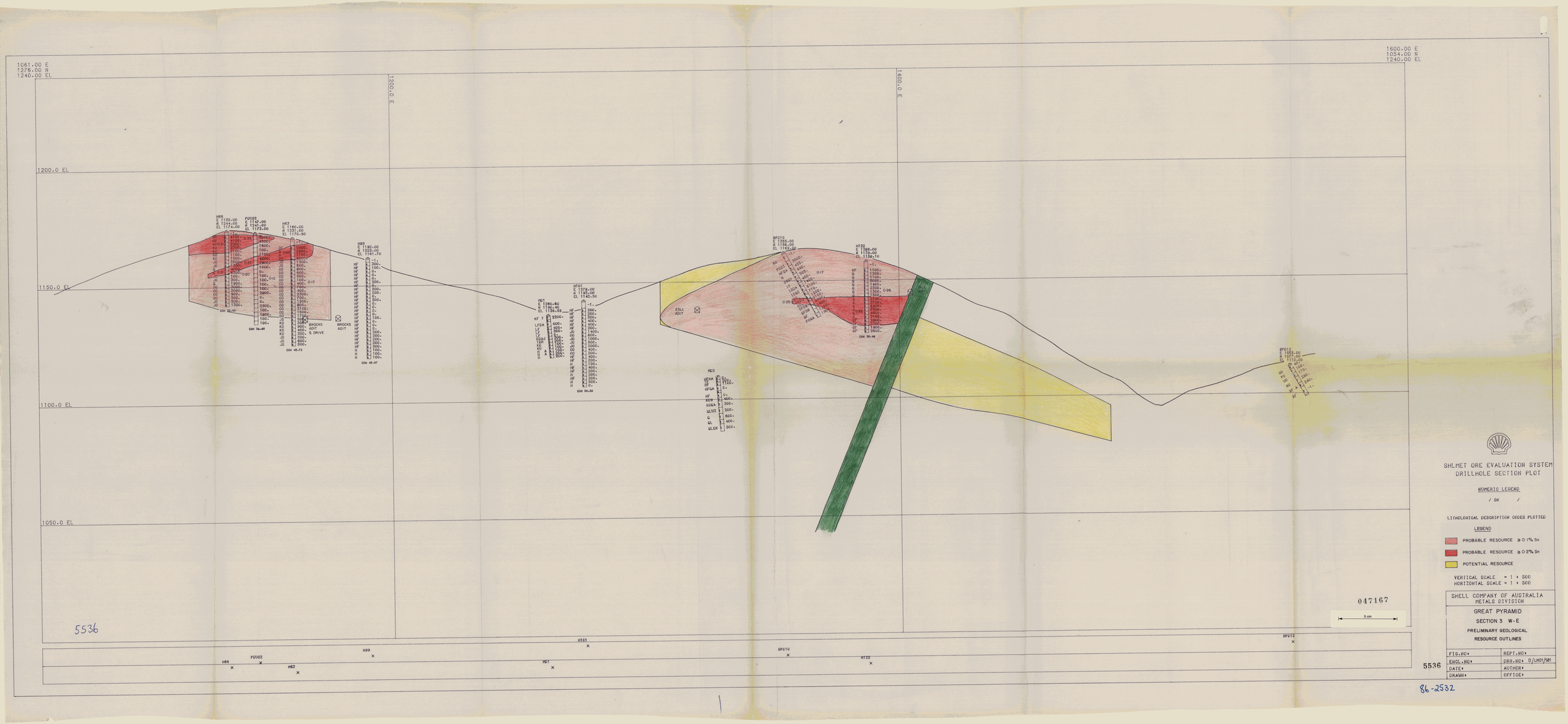
2.96 Sink	2.30	5.6	68.7
Float	97.70	0.06	31.3
Head Calc	100.00	0.19	100.0

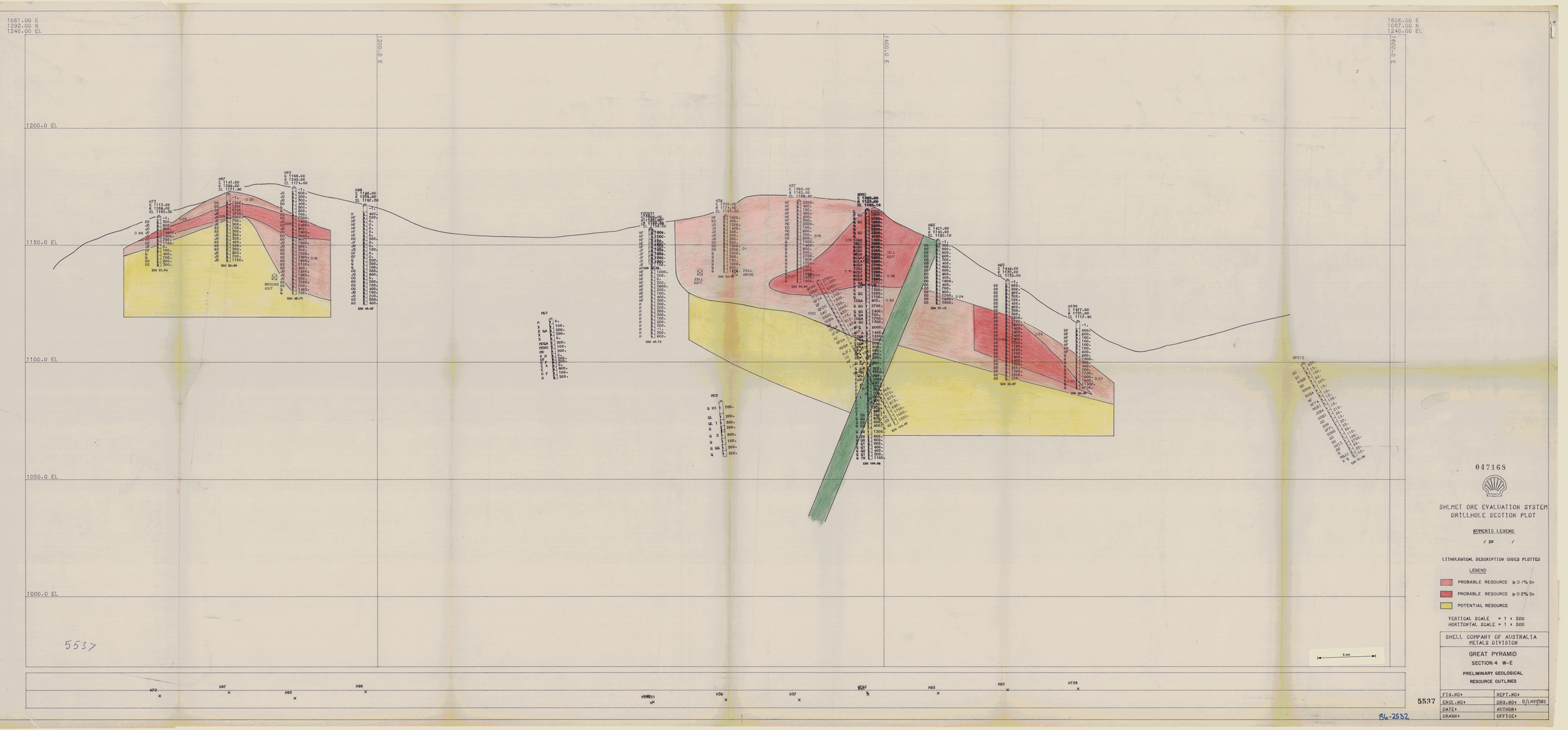
it can be shown to be 5-10% wb Sn } - towards a target
+ 80% recovery

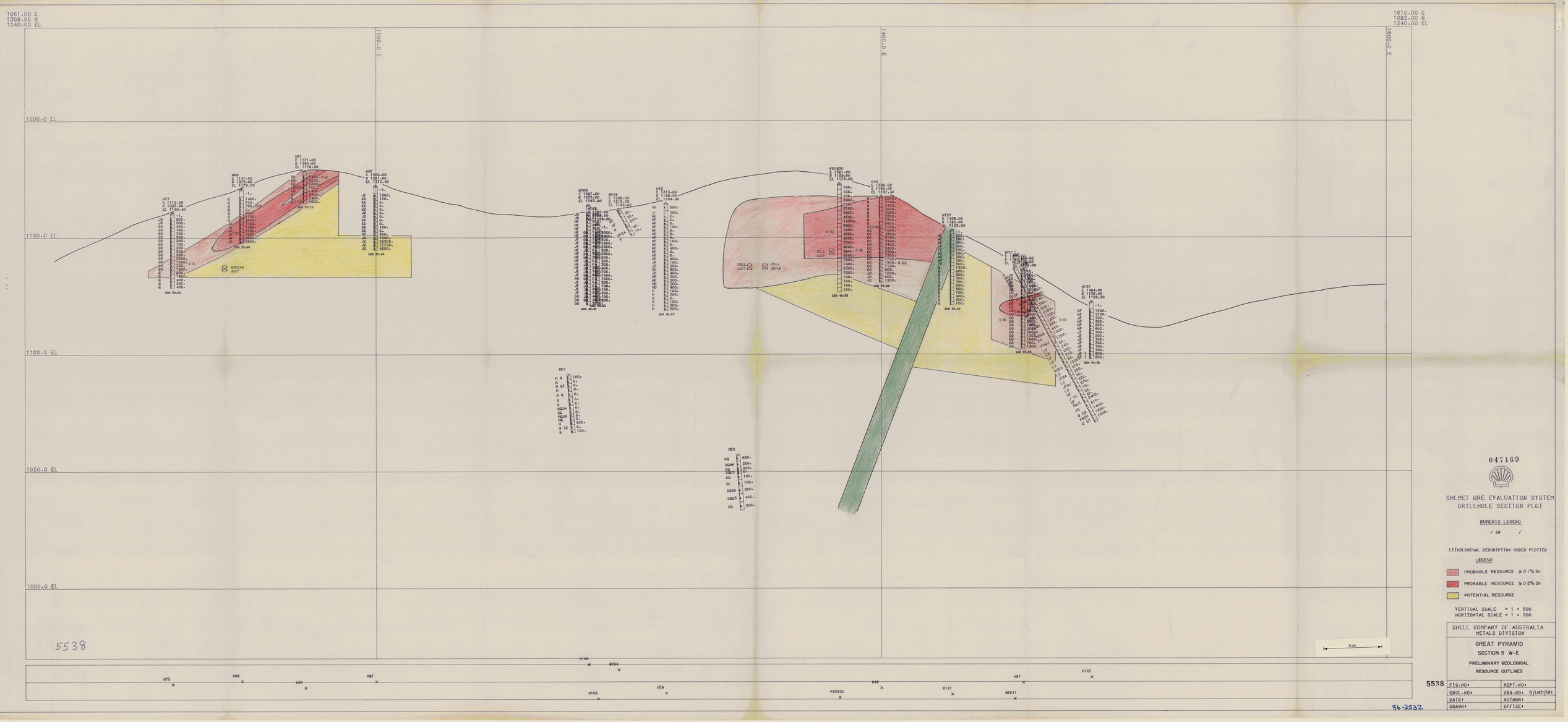
171


NEW SAMPLE
MINERALOGICAL SAMPLE
CRUSHED -600µ
HEAD SAMPLE XRF SCAN
SCREEN 45µ
O/S
TBE FLOAT S.G 2.96
FLOAT ASSAY
DI-IODOMETHANE S.G 3.3
FLOAT ASSAY
MIDDLINGS
U/S
SUPERPAN
CONCENTRATE ONE (ASSAY)
SUPERPAN
CONCENTRATE TWO ASSAY (MIN)
SUPERPAN TAIL
O/F
SLIME
5
4
3
2
1
U/F
FINE MIDDLINGS
SUPERPAN
CONCENTRATE ONE
SUPERPAN
CONCENTRATE TWO
FINE SUPERPAN TAILING


1061.00 E
1260.00 N
1210.00 EL
1595.00 E
1040.00 N
1210.00 EL
1200.0 E
1400.0 E
1150.0 EL
1100.0 EL
1050.0 EL
HB5
E 1128.00
N 1228.00
EL 1173.40
HB4
E 1155.00
N 1217.00
EL 1163.90
H100
E 1186.00
N 1258.00
EL 1196.00
HB3
E 1272.00
N 1178.00
EL 1133.90
2SLL
ADIT
MD2
H124
E 1353.00
N 1133.00
EL 1191.00
H123B
E 1377.00
N 1129.00
EL 1152.20
H129
E 1423.00
N 1105.00
EL 1131.30
GPT2
E 1462.00
N 1090.00
EL 1113.07
5535
047166
5 cm
SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT
NUMERIC LEGEND
/ SN /
LITHOLOGICAL DESCRIPTION CODES PLOTTED
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
SECTION 2 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
FIG.NO:
REPT.NO:
ENCL.NO:
DRG.NO: D/LHDT/580
DATE:
AUTHOR:
DRAWN:
OFFICE:
5535
84-2532


1061.00 E
1276.00 N
1240.00 EL
1200.0 E
1400.0 E
1600.00 E
1054.00 N
1240.00 EL
1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
HS6
E 1135.00
N 1244.00
EL 1174.00
PDHS2
E 1147.00
N 1241.00
EL 1173.00
HS3
E 1160.00
N 1231.00
EL 1170.60
HS9
E 1192.00
N 1229.00
EL 1161.70
BROCKS ADIT
BROCKS ADIT
S. DRIVE
HT01
E 1278.00
N 1193.00
EL 1143.50
MD1
E 1260.60
N 1190.40
EL 1136.69
MD3
BFD10
E 1355.00
N 1156.00
EL 1162.50
HT22
E 1388.00
N 1138.00
EL 1134.10
DSLL ADIT
BFD12
E 1355.00
N 1127.00
EL 1132.00
HS6
PDHS2
HS3
HS9
HT01
MD1
BFD10
HT22
BFD12
047167
5 cm
5536
SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT
NUMERIC LEGEND
/ SN /
LITHOLOGICAL DESCRIPTION CODES PLOTTED
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
SECTION 3 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
FIG.NO:
REPT.NO:
ENGL.NO:
DRG.NO: D/LHOT/SM
DATE:
AUTHOR:
DRAWN:
OFFICE:
5536
86-2532


1061.00 E
1292.00 N
1240.00 EL
1606.00 E
1067.00 N
1240.00 EL
1200.0 E
1400.0 E
1600.0 E
1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
1000.0 EL
HR7
E 1141.00
N 1288.00
EL 1171.90
HR2
E 1166.00
N 1245.00
EL 1174.60
HR3
E 1112.00
N 1288.00
EL 1162.30
HR6
E 1128.00
N 1258.00
EL 1167.70
PDH21
E 1306.00
N 1288.00
EL 1171.90
HR9
E 1365.00
N 1162.00
EL 1168.90
HR8
E 1336.00
N 1174.00
EL 1162.50
HR5
E 1451.00
N 1142.00
EL 1162.10
HR4
E 1469.00
N 1132.00
EL 1136.00
HR1
E 1427.00
N 1131.00
EL 1117.40
BP012
HD1
HD2
ZSLL ADIT
ZSLL DRIVE
BROCKS ADIT
5537
047168
SHELL ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT
NUMERIC LEGEND
/ SN /
LITHOLOGICAL DESCRIPTION CODES PLOTTED
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
SECTION 4 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
FIG.NO:
REPT.NO:
ENGL.NO:
DRG.NO: D/LH01/582
DATE:
AUTHOR:
DRAWN:
OFFICE:
5 cm
5537
86-2532



5538

047169

SHELL ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SW /

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 5 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

5538 FIG.NO:	REPT.NO:
ENGL.NO:	DRG.NO: D/LHO1/583
DATE:	AUTHOR:
DRAWN:	OFFICE:

86-2522

1061.00 E
1325.00 N
1240.00 EL

1615.00 E
1097.00 N
1240.00 EL

1200.0 E

1400.0 E

1600.0 E

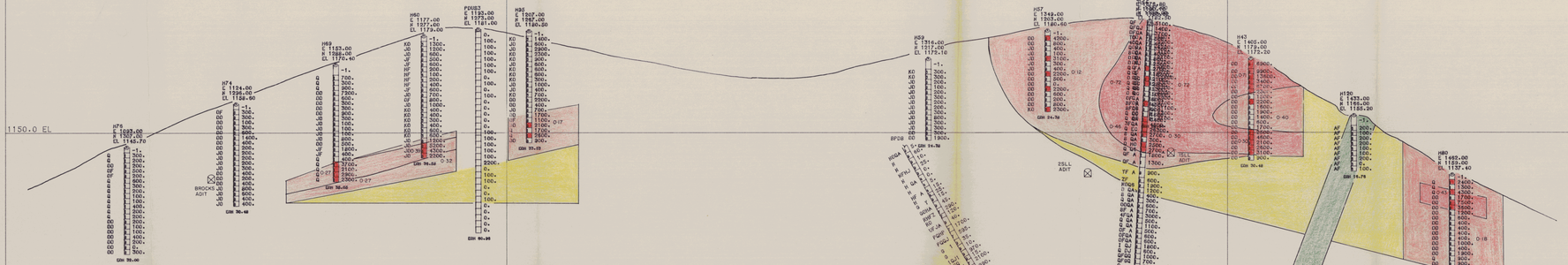
1200.0 EL

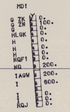
1150.0 EL

1100.0 EL

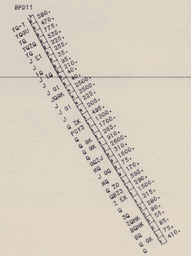
1050.0 EL

1000.0 EL



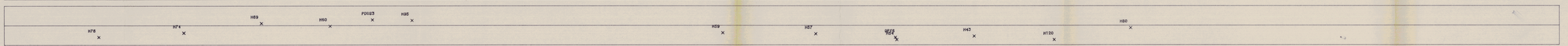






5539

5 cm



96-2532

047170

SHELL

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

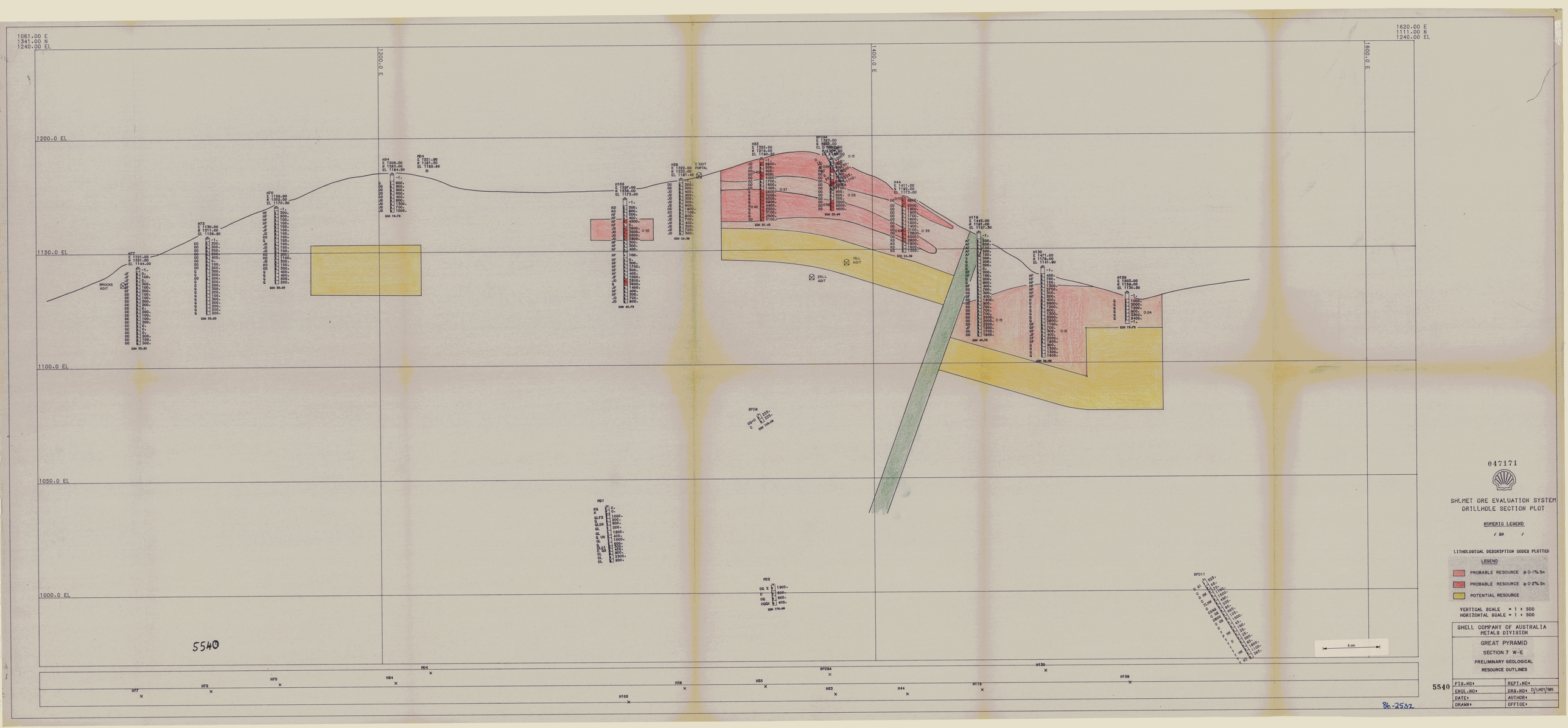
VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 6 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

5539

FIG.NO:	REPT.NO:
ENGL.NO:	DRG.NO: D/LH01/584
DATE:	AUTHOR:
DRAWN:	OFFICE:



047171

SHELL

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SH /

LITHOLOGICAL DESCRIPTION CODES PLOTTED

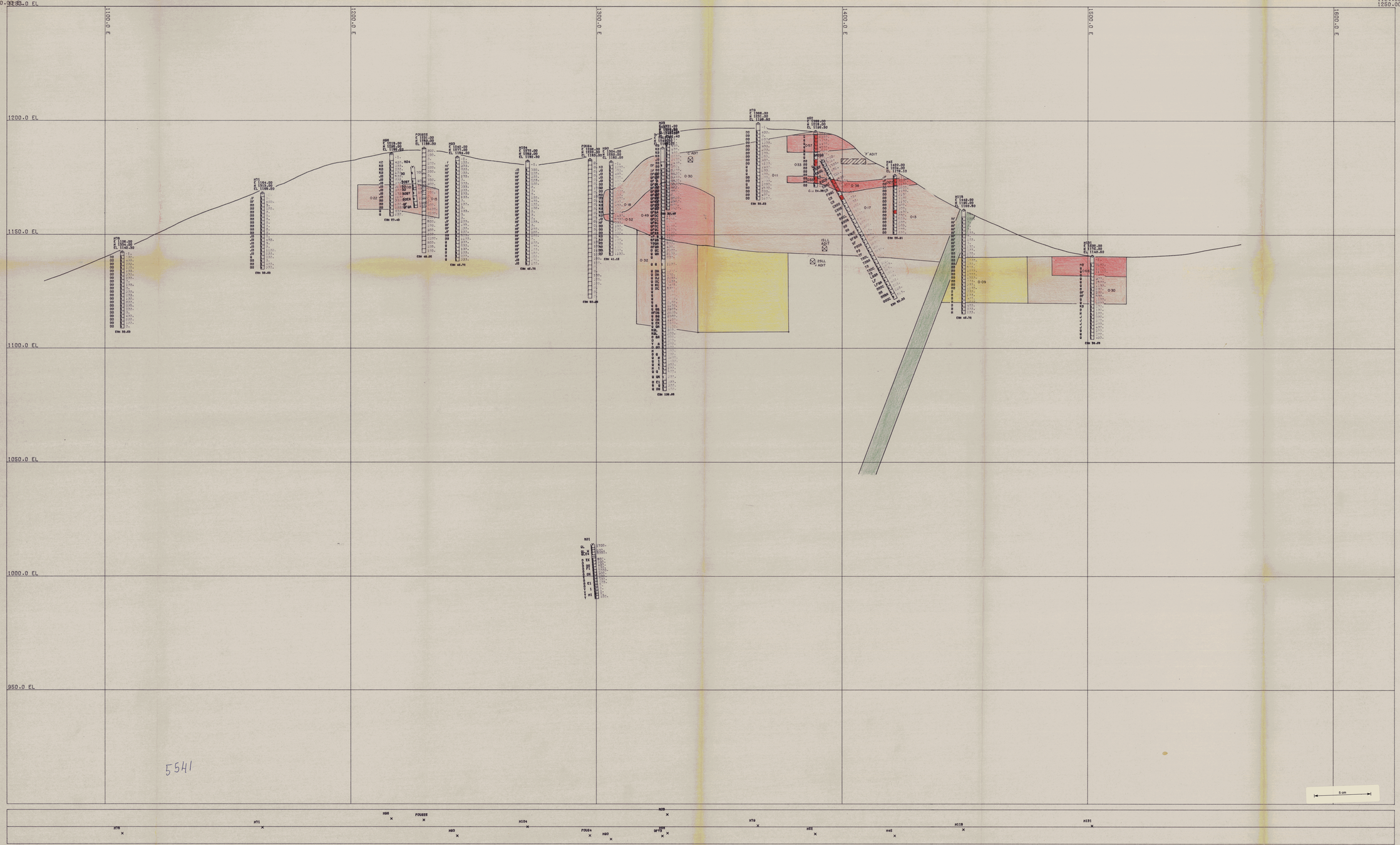
LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA METALS DIVISION	
GREAT PYRAMID	
SECTION 7 W-E	
PRELIMINARY GEOLOGICAL RESOURCE OUTLINES	
5540	
FIG.NO:	REPT.NO:
ENGL.NO:	DRG.NO: D/LHOT/585
DATE:	AUTHOR:
DRAWN:	OFFICE:

86-2532



5541

047172

SHELL ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ DH /

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

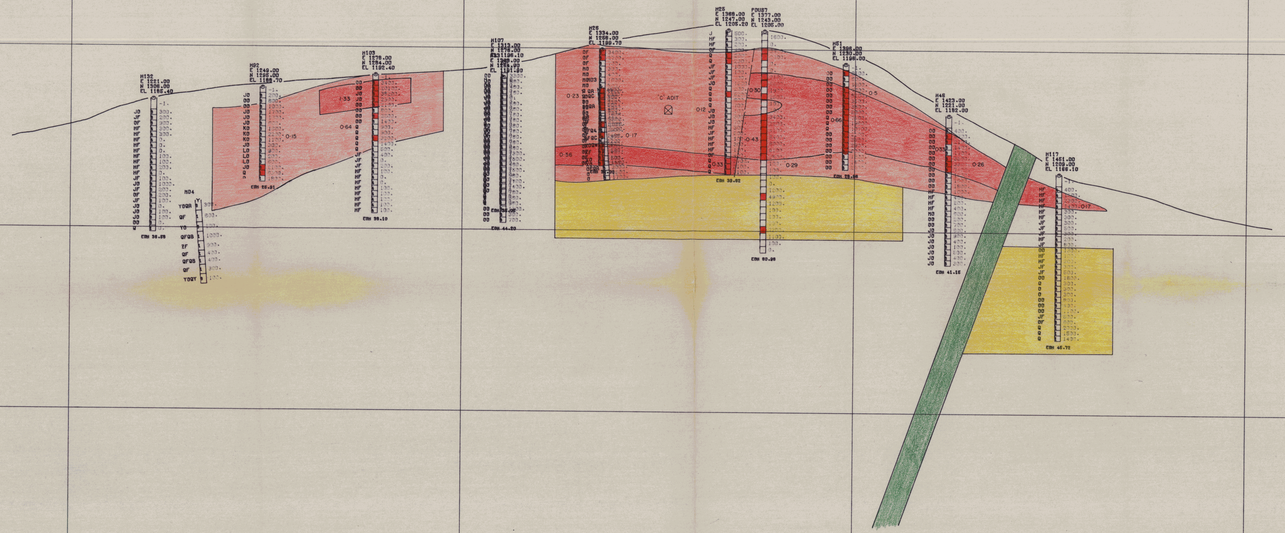
SHELL COMPANY OF AUSTRALIA METALS DIVISION	
GREAT PYRAMID SECTION 8 W-E PRELIMINARY GEOLOGICAL RESOURCE OUTLINES	
FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH05/586
DATE:	AUTHOR:
DRAWN:	OFFICE:

5541

86-2532

1100.0 E
1200.0 E
1300.0 E
1400.0 E
1500.0 E
1600.0 E

1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
1000.0 EL
950.0 EL



5542

H132 H102 H103 H107 H35 FOU37 H51 H40 H117 H33

5 cm

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ DH /

047173

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

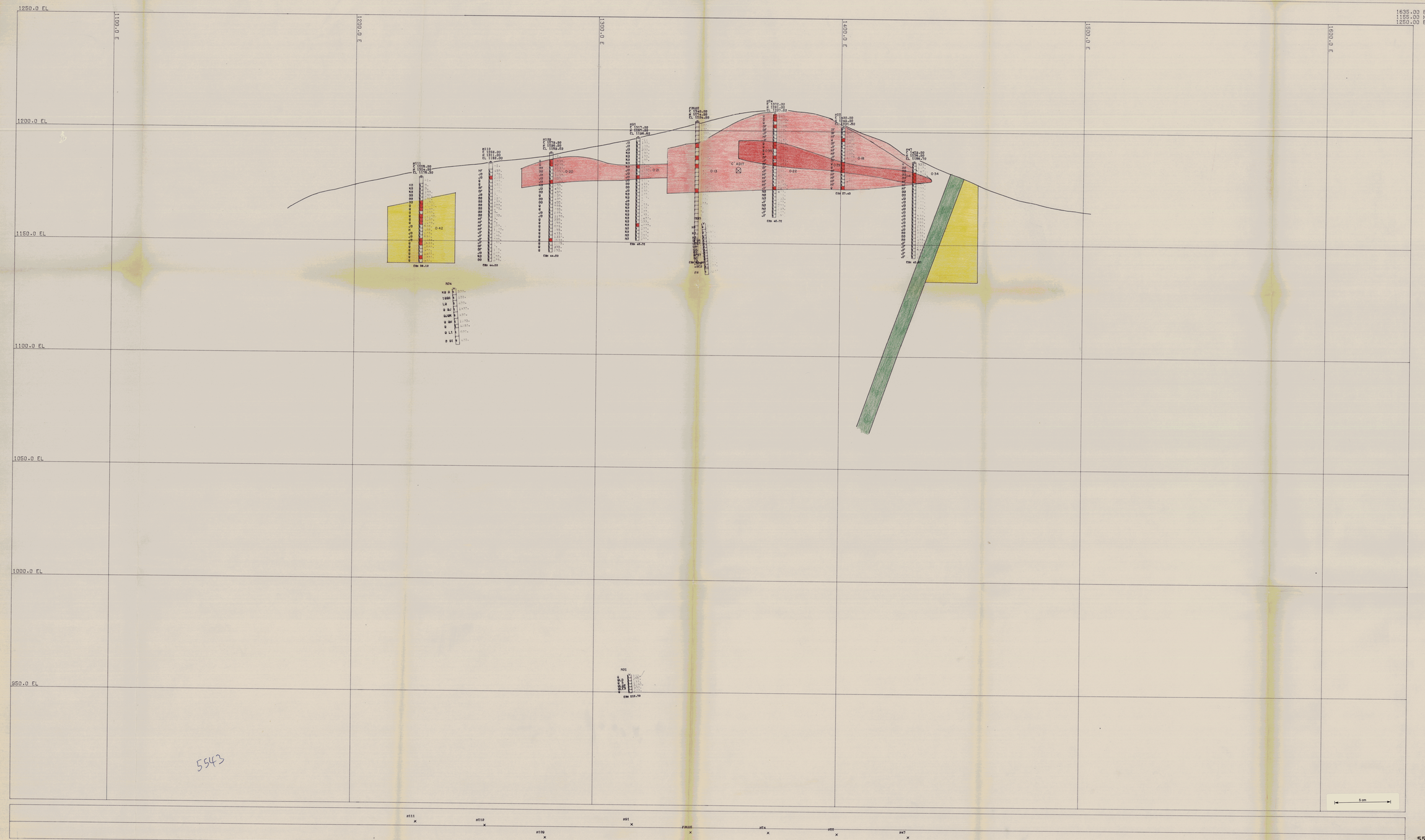
SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 9 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/587
DATE:	AUTHOR:
DRAWN:	OFFICE:

5542

86-2532



5543

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

047174
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA METALS DIVISION	
GREAT PYRAMID SECTION 10 W-E PRELIMINARY GEOLOGICAL RESOURCE OUTLINES	
FIG.NO:	REPT.NO:
ENGL.NO:	DRG.NO: D/LH01/588
DATE:	AUTHOR:
DRAWN:	OFFICE:

5543

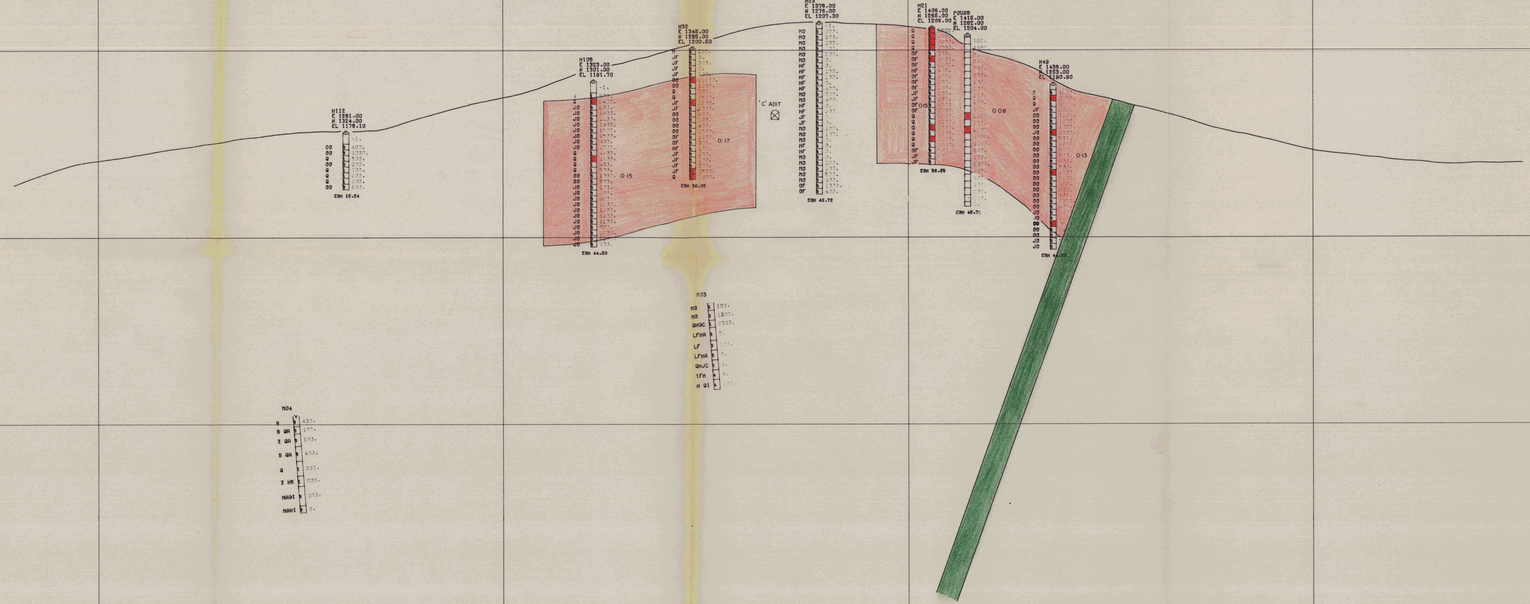
86-2532

1079.00 E
1400.00 N
1250.00 EL

1640.00 E
1168.00 N
1250.00 EL

1100.0 E | 1200.0 E | 1300.0 E | 1400.0 E | 1500.0 E | 1600.0 E

1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
1000.0 EL
950.0 EL



5544

H11E H10E H02 H03 H01 FOUR H09

86-2532

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

047175
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

5 cm

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION II W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

5544

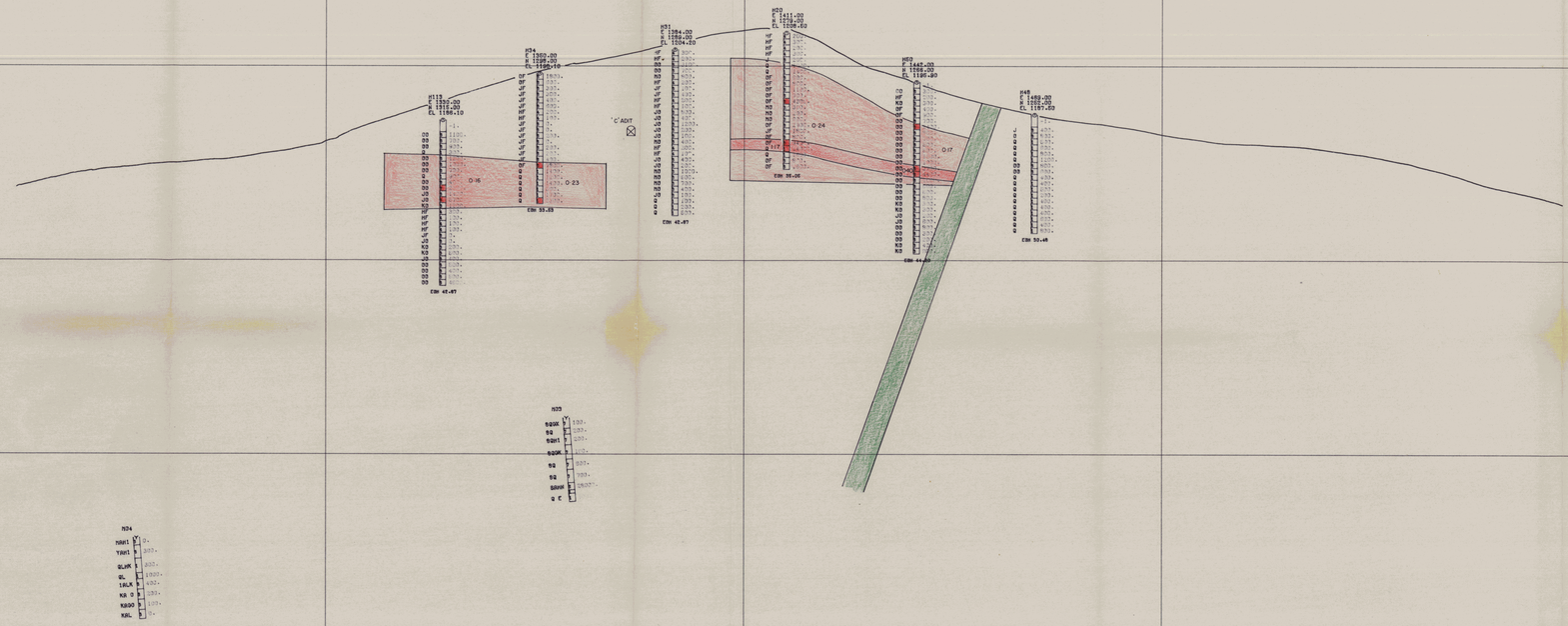
FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/589
DATE:	AUTHOR:
DRAWN:	OFFICE:

1145.00 E
1145.00 N
1250.00 EL

1645.00 E
1182.00 N
1250.00 EL

1200.0 E | 1300.0 E | 1400.0 E | 1500.0 E | 1600.0 E

1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
1000.0 EL
950.0 EL



5545

5 cm

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

047126
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

GREAT PYRAMID
SECTION 12 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LHO1/590
DATE:	AUTHOR:
DRAWN:	OFFICE:

5545

H113 | H34 | H31 | H30 | H50 | H48

86-3532

1135.00 E
1407.00 N
1240.00 EL

1651.00 E
1196.00 N
1240.00 EL

1300.0 E

1400.0 E

1500.0 E

1200.0 EL

1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL

H114
E 1336.00
N 1370.00
EL 1180.50

H35
E 1336.00
N 1313.00
EL 1190.60

H30
E 1396.00
N 1305.00
EL 1200.00

FDUS6

H19
E 1416.00
N 1292.00
EL 1207.00

FDUS18
E 1512.00
N 1253.00
EL 1193.00

B' ADIT

MD3

5 cm

5546

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

047177
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 13 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

5546

FIG.NO:	REPT.NO:
ENGL.NO:	DRG.NO: D/LH01/591
DATE:	AUTHOR:
DRAWN:	OFFICE:

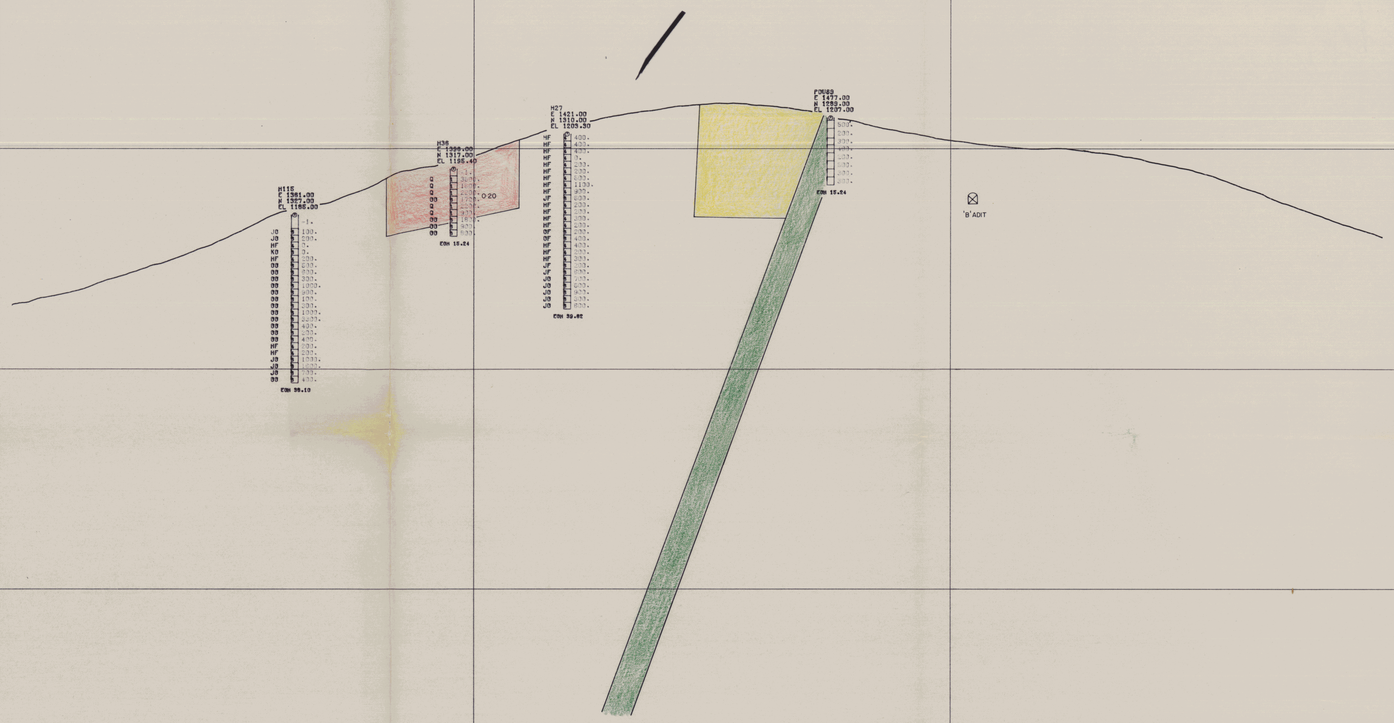
86-2632

1184.00 E
1400.00 N
1250.00 EL

1655.00 E
1209.00 N
1250.00 EL

1200.0 E
1300.0 E
1400.0 E
1500.0 E
1600.0 E

1200.0 EL
1150.0 EL
1100.0 EL
1050.0 EL
1000.0 EL
950.0 EL



H11E
H36
H27
FOU69

5 cm

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /
047178
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

GREAT PYRAMID
SECTION 14 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/592
DATE:	AUTHOR:
DRAWN:	OFFICE:

5547

86-2532

1232.00 E
1400.00 N
1250.00 EL

1661.00 E
1224.00 N
1250.00 EL

1300.0 E

1400.0 E

1500.0 E

1600.0 E

1200.0 EL

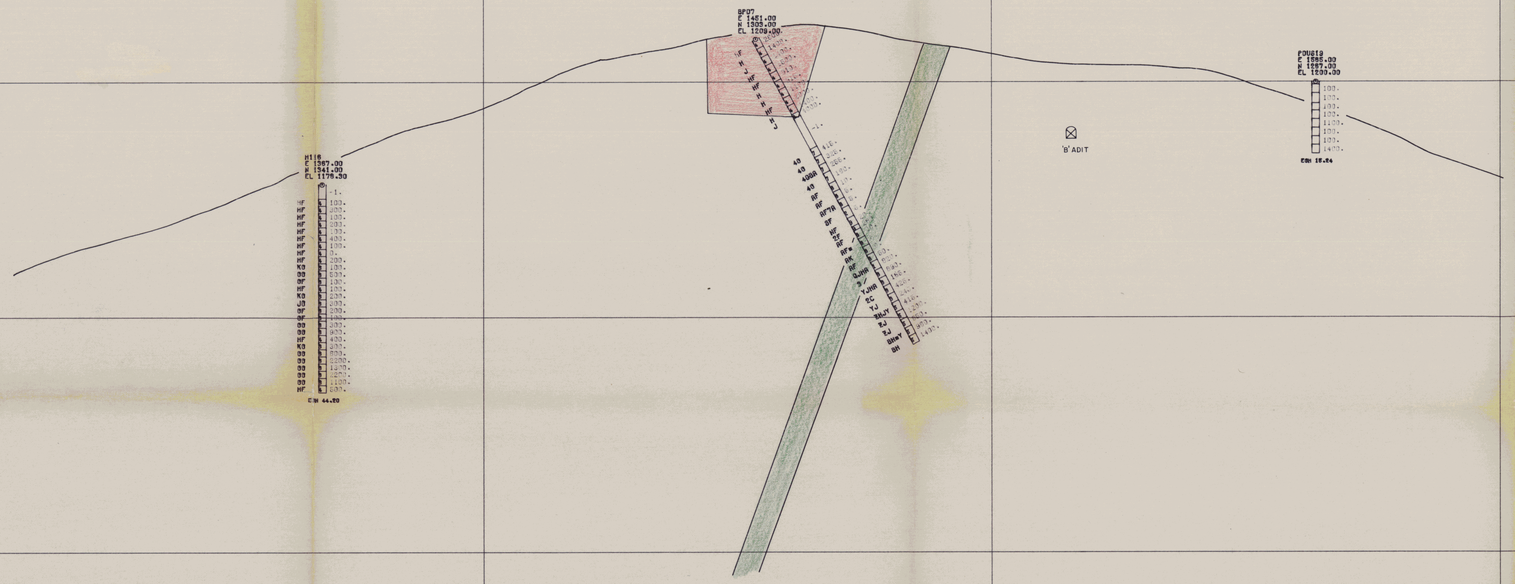
1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL

950.0 EL



5 cm

FDU819
×

H118
×

BF07
×

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ Sn

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

GREAT PYRAMID
SECTION 15 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/593
DATE:	AUTHOR:
DRAWN:	OFFICE:

047179

5548

86-2532

1312.00 E
1400.00 N
1250.00 EL

1675.00 E
1250.00 N
1250.00 EL

1400.0 E

1500.0 E

1600.0 E

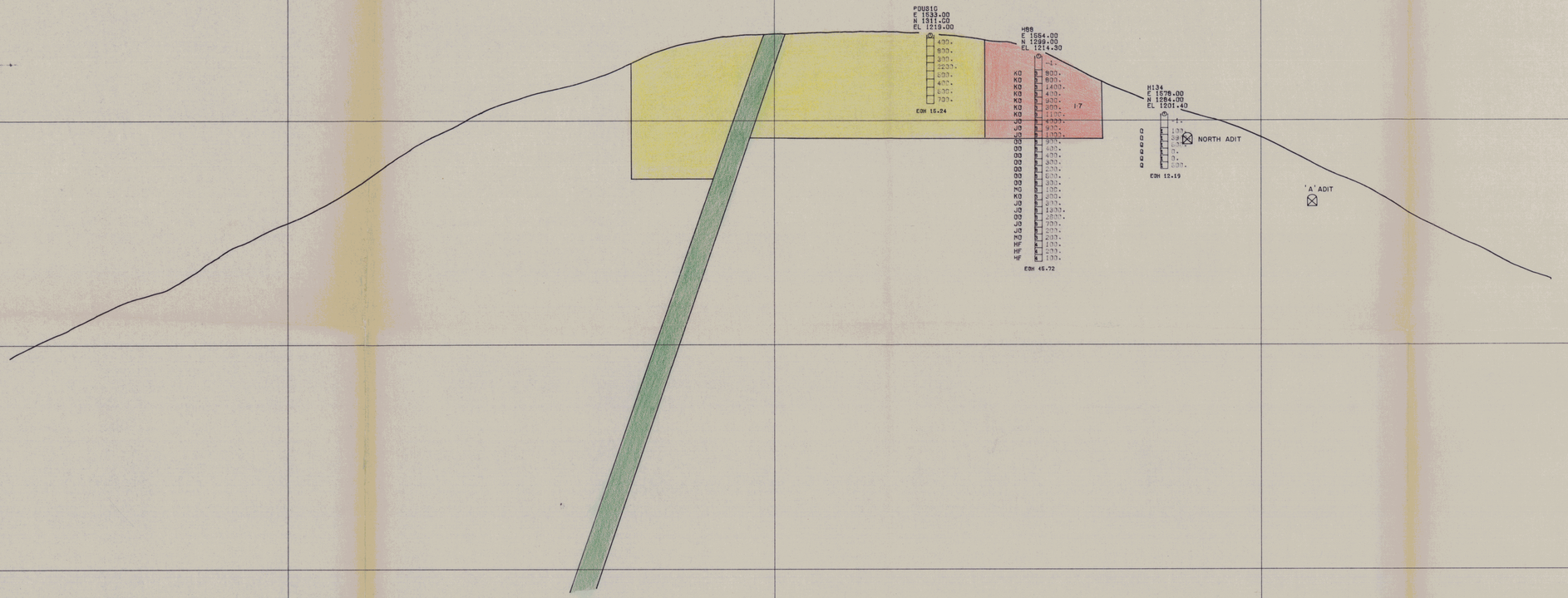
1200.0 EL

1150.0 EL

1100.0 EL

1050.0 E

1000.0 EL



POUS1G
HBB
H134

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047181
LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 17 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	ORG.NO: D/LH01/595
DATE:	AUTHOR:
DRAWN:	OFFICE:

5550

86-2532

1271.00 E
1400.00 N
1250.00 EL

1670.00 E
1236.00 N
1250.00 EL

1300.0 E

1400.0 E

1500.0 E

1600.0 E

1200.0 EL

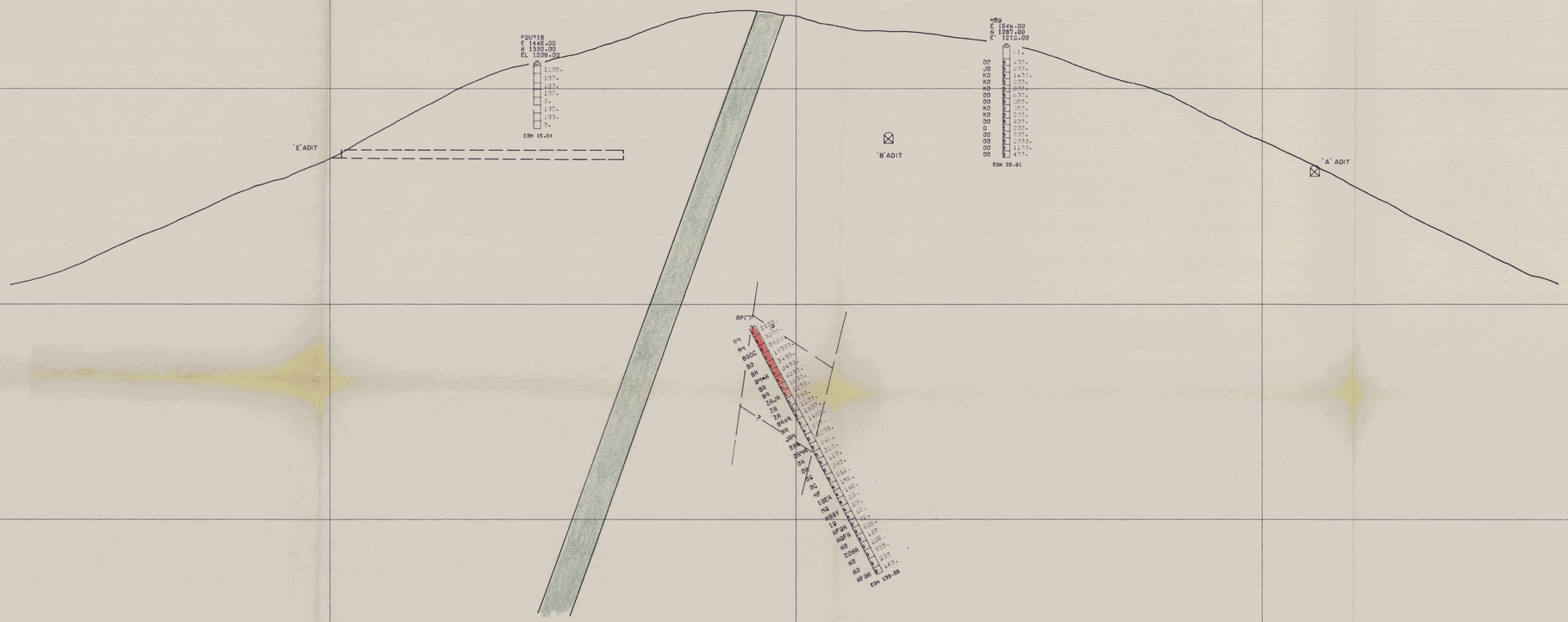
1150.0 E

1100.0 EL

1050.0 EL

1000.0 EL

950.0 EL



5 cm

*CUB16

HBS

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

047180

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 16 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/594
DATE:	AUTHOR:
DRAWN:	OFFICE:

5549

86-2532

1352.00 E
1400.00 N
1250.00 EL

1680.00 E
1264.00 N
1250.00 EL

1400.0 E

1500.0 E

1600.0 E

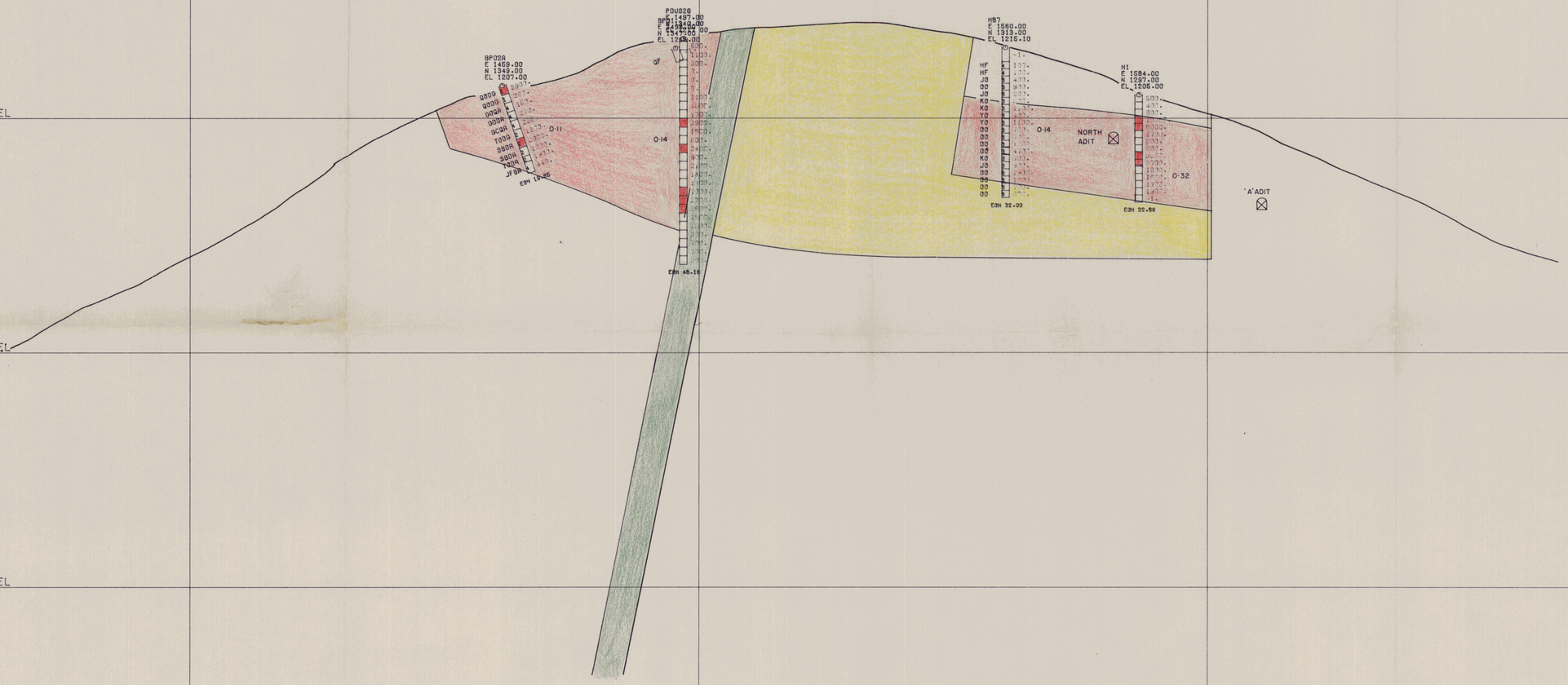
1200.0 EL

1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL



5 cm

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047182

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 18 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/596
DATE:	AUTHOR:
DRAWN:	OFFICE:

5531

86-2532

1365.00 E
1411.00 N
1250.00 EL

1690.00 E
1272.00 N
1250.00 EL

1400.0 E

1500.0 E

1600.0 E

1250.0 EL

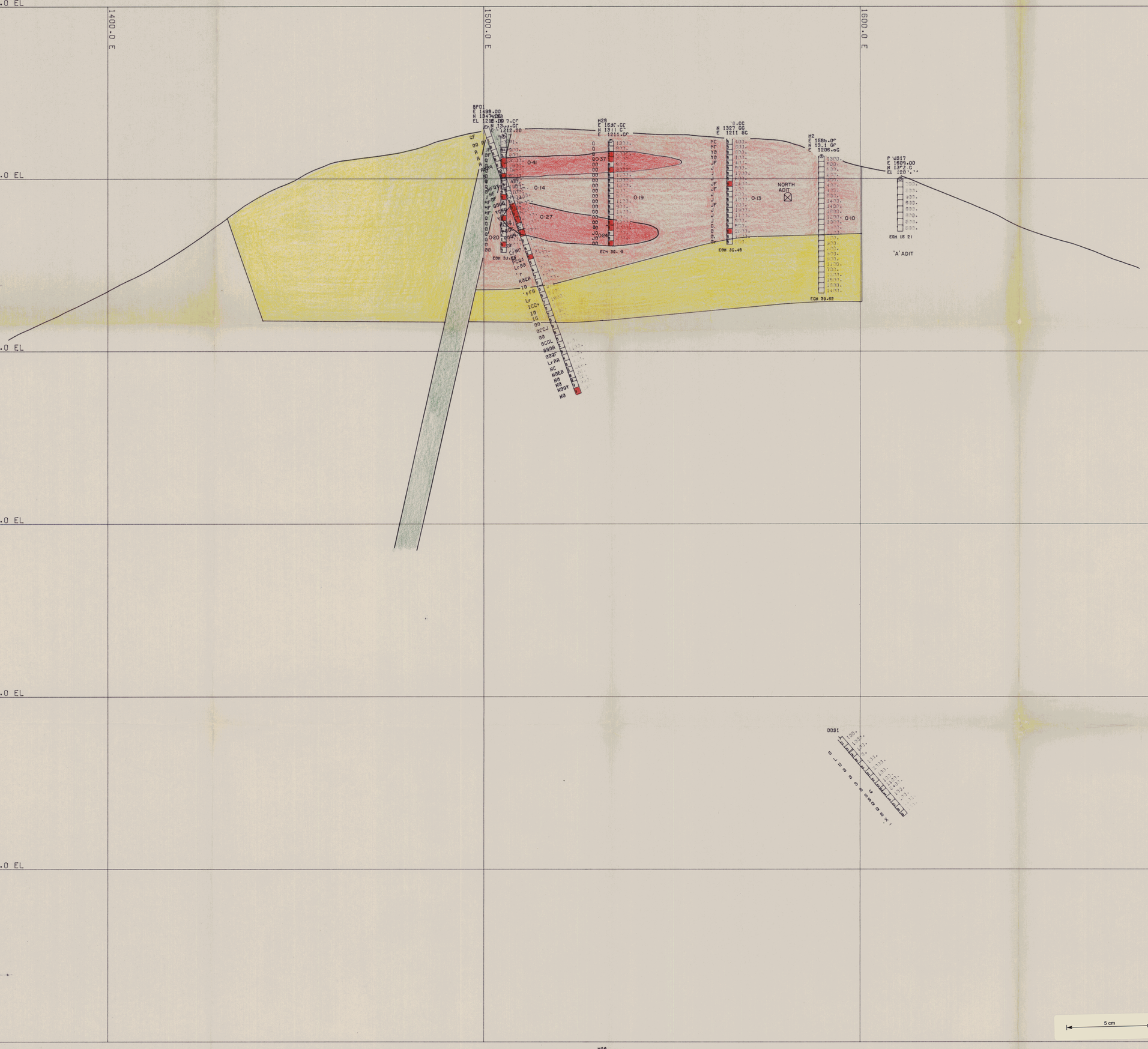
1200.0 EL

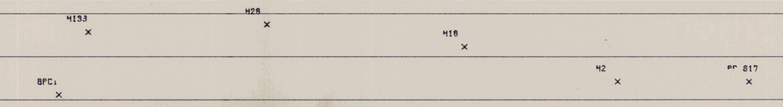
1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL





SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047183

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 19 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/597
DATE:	AUTHOR:
DRAWN.	OFFICE:

5552

86-2532

365.00 E
1426.00 N
1250.00 EL

1695.00 E
1292.00 N
1250.00 EL

1400.0 E

1500.0 E

1600.0 E

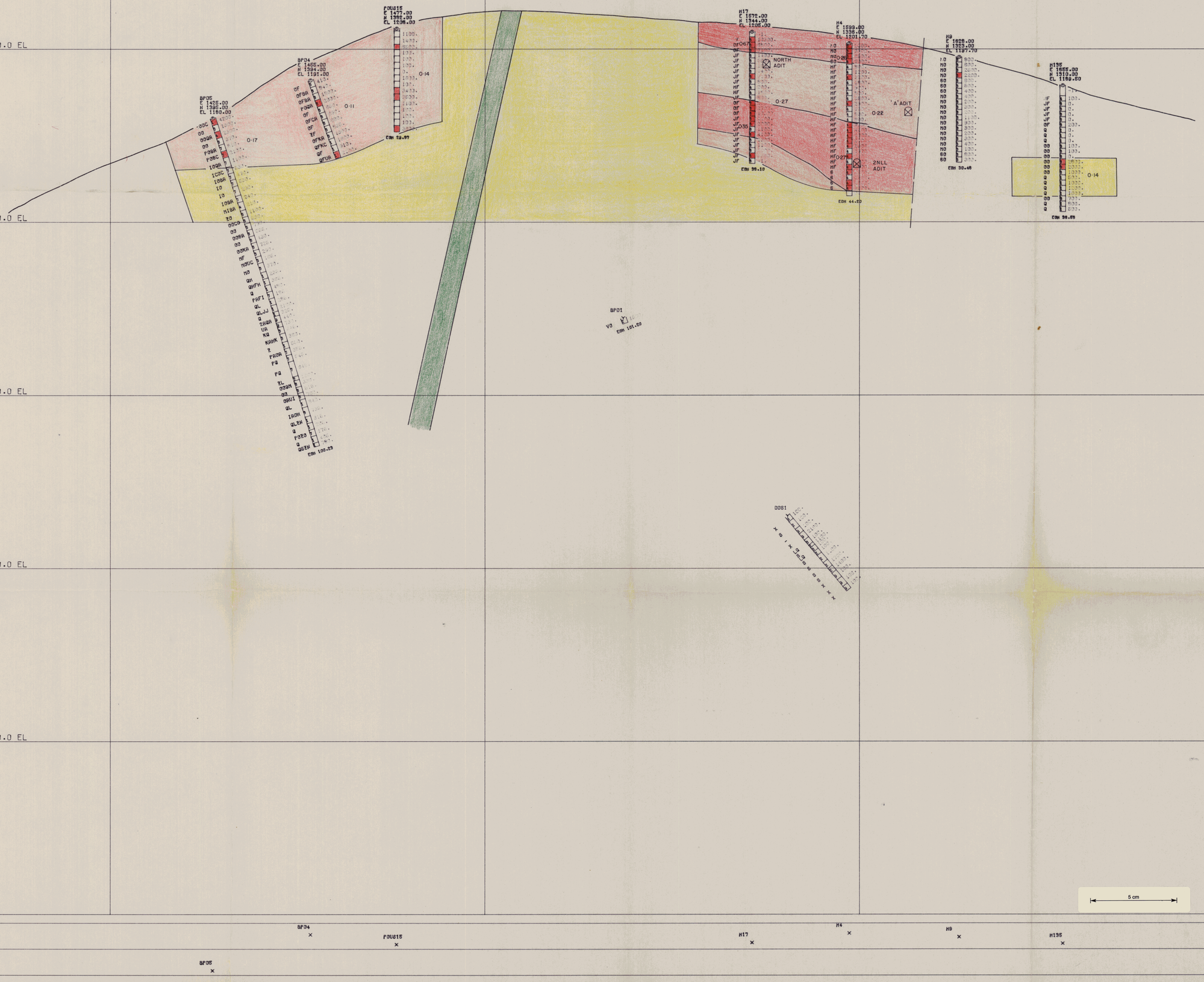
1200.0 EL

1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL



5 cm

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047184

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 20 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	ORG.NO: D/LH01/598
DATE:	AUTHOR:
DRAWN:	OFFICE:

5553

86-2532

1365.00 E
1412.00 N
1250.00 EL

1700.00 E
1364.00 N
1250.00 EL

1400.0 E

1500.0 E

1600.0 E

1200.0 EL

1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL

BPD3
E 1479.00
N 1401.00
EL 1200.00

BPD4

BPD5
EOH 100.23

BPD6
EOH 125.55

H29
E 1543.00
N 1363.00
EL 1203.20
EOH 46.72

H8
E 1548.00
N 1375.00
EL 1196.20

NORTH ADIT

0·46

0·26

0·12

2NLL W.DRIVE

H7
E 1570.00
N 1369.00
EL 1196.40
EOH 45.72

0·41

0·16

2NLLCHLN

0·25

H6
E 1800.00
N 1342.00
EL 1197.20
EOH 49.72

0·18

2NLL ADIT

0·45

H5
E 1534.00
N 1338.00
EL 1193.10
EOH 45 72

0·56

H13B
E 1683.00
N 1325.00
EL 1189.80
EOH 38.68

FDU812
E 1678.00
N 1321.00
EL 1187.00
EOH 15.24

DDS1

5 cm

BPD3 H8 H7 H6 H5 H13B FDU812 2NLLCHLS H29

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047185

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 21 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/599
DATE:	AUTHOR:
DRAWN:	OFFICE:

5554

86-2532

1387.00 E
1450.00 N
1240.00 EL

1706.00 E
1319.00 N
1240.00 EL

1400.0 E

1600.0 E

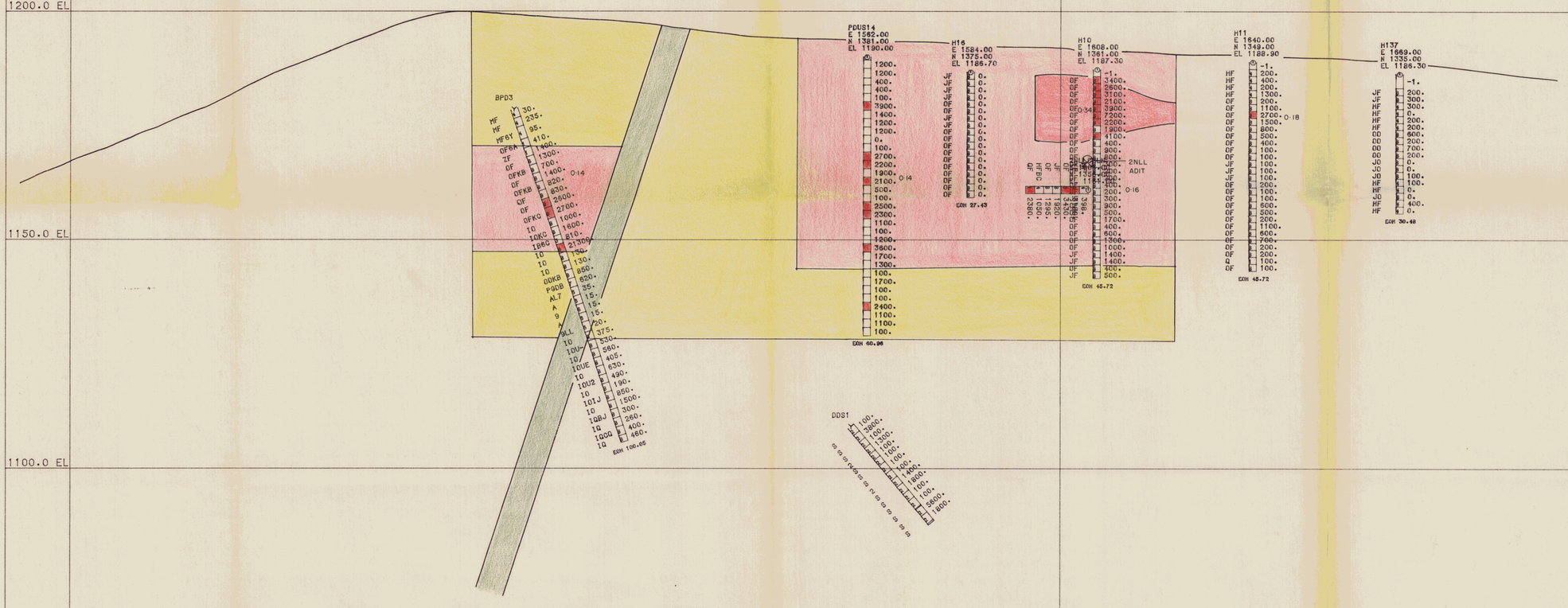
1200.0 EL

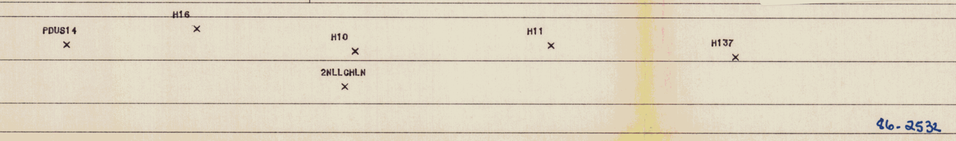
1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL





5 cm

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

047186

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID
SECTION 22 W-E
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: 600
DATE:	AUTHOR:
DRAWN:	OFFICE:

5555

86-253

1428.00 E
1450.00 N
1250.00 EL

1710.00 E
1332.00 N
1250.00 EL

1500.0 E

1600.0 E

1700.0 E

1250.0 EL

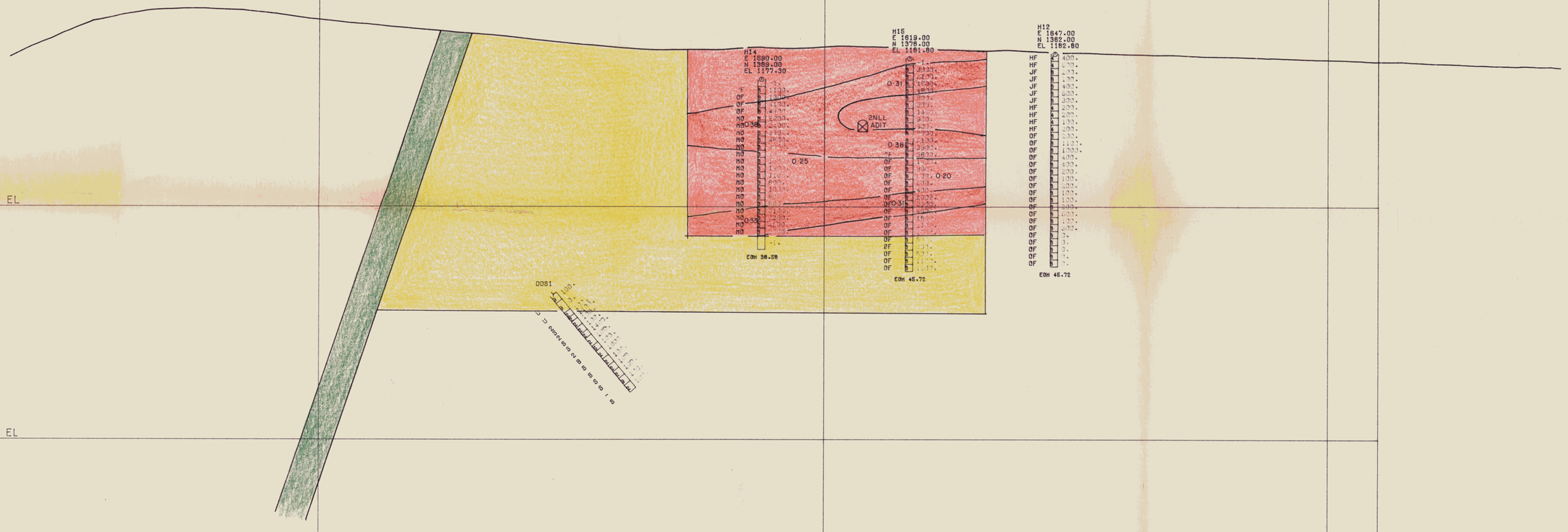
1200.0 EL

1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL



5 cm

H14 H15 H12

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN

047187

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID

SECTION 23 W-E

PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/601
DATE:	AUTHOR:
DRAWN:	OFFICE:

5556

86-2532

1467.00 E
1450.00 N
1240.00 EL

1717.00 E
1347.00 N
1240.00 EL

1600.0 E

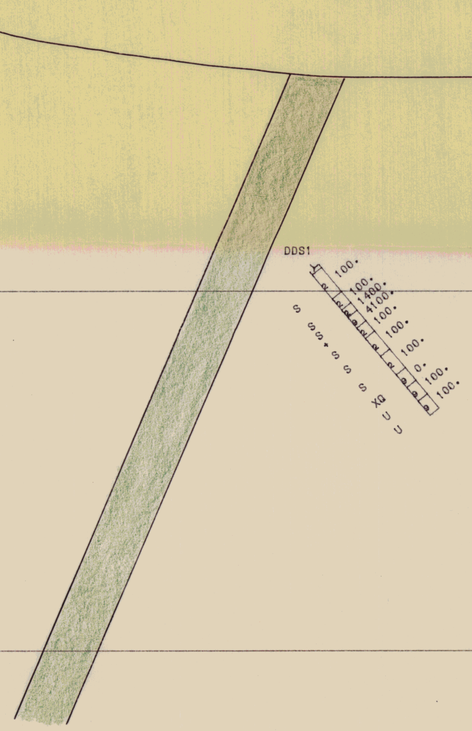
1200.0 EL

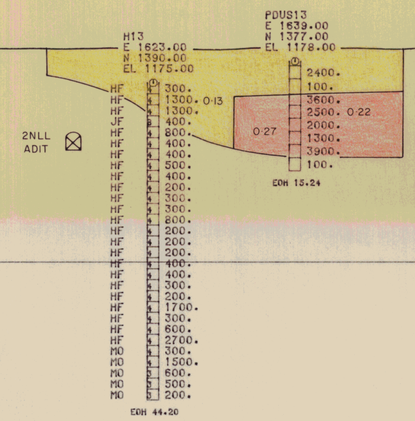
1150.0 EL

1100.0 EL

1050.0 EL

1000.0 EL





5 cm

H13
PDUS13

SHLMET ORE EVALUATION SYSTEM
DRILLHOLE SECTION PLOT

NUMERIC LEGEND

/ SN /

047188

LITHOLOGICAL DESCRIPTION CODES PLOTTED

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

VERTICAL SCALE = 1 : 500
HORIZONTAL SCALE = 1 : 500

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

GREAT PYRAMID

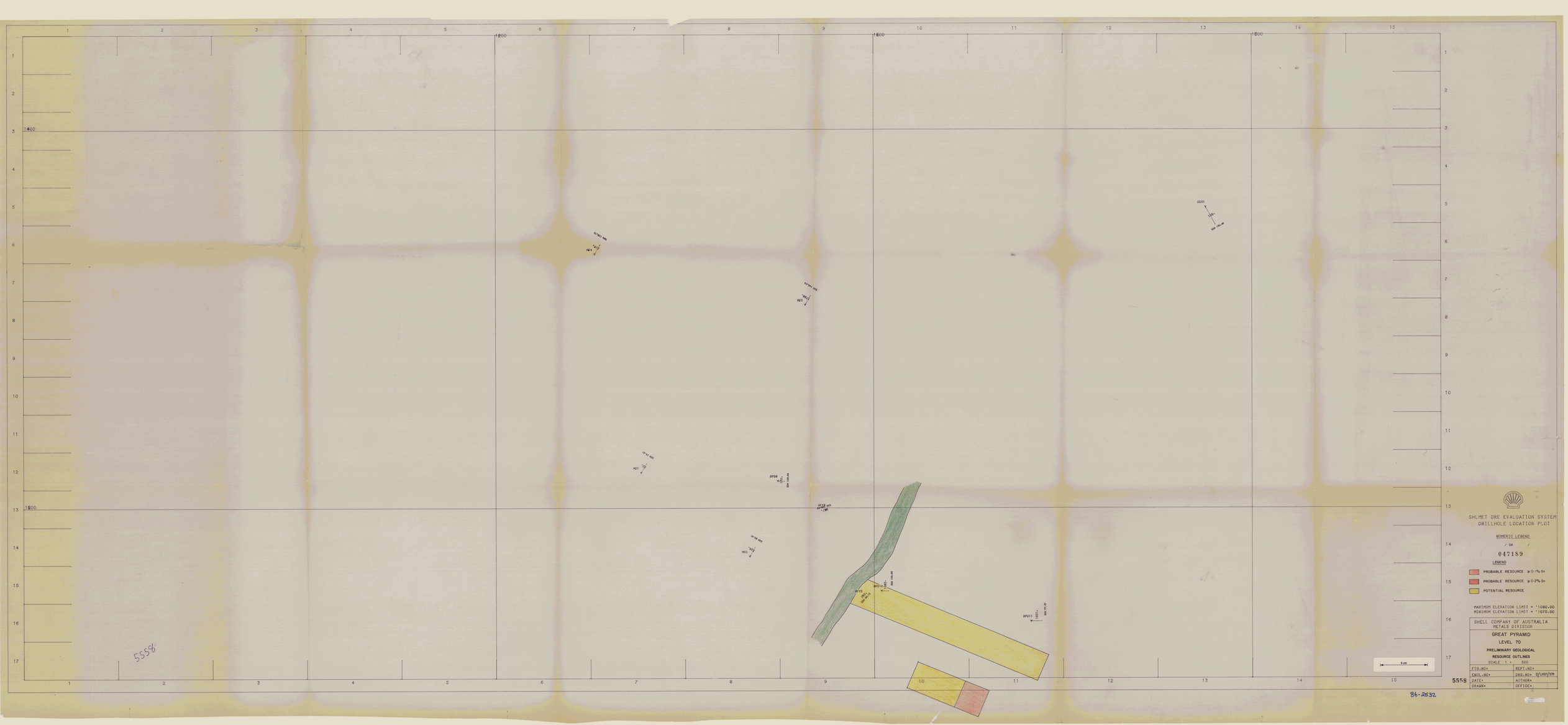
SECTION 24 W-E

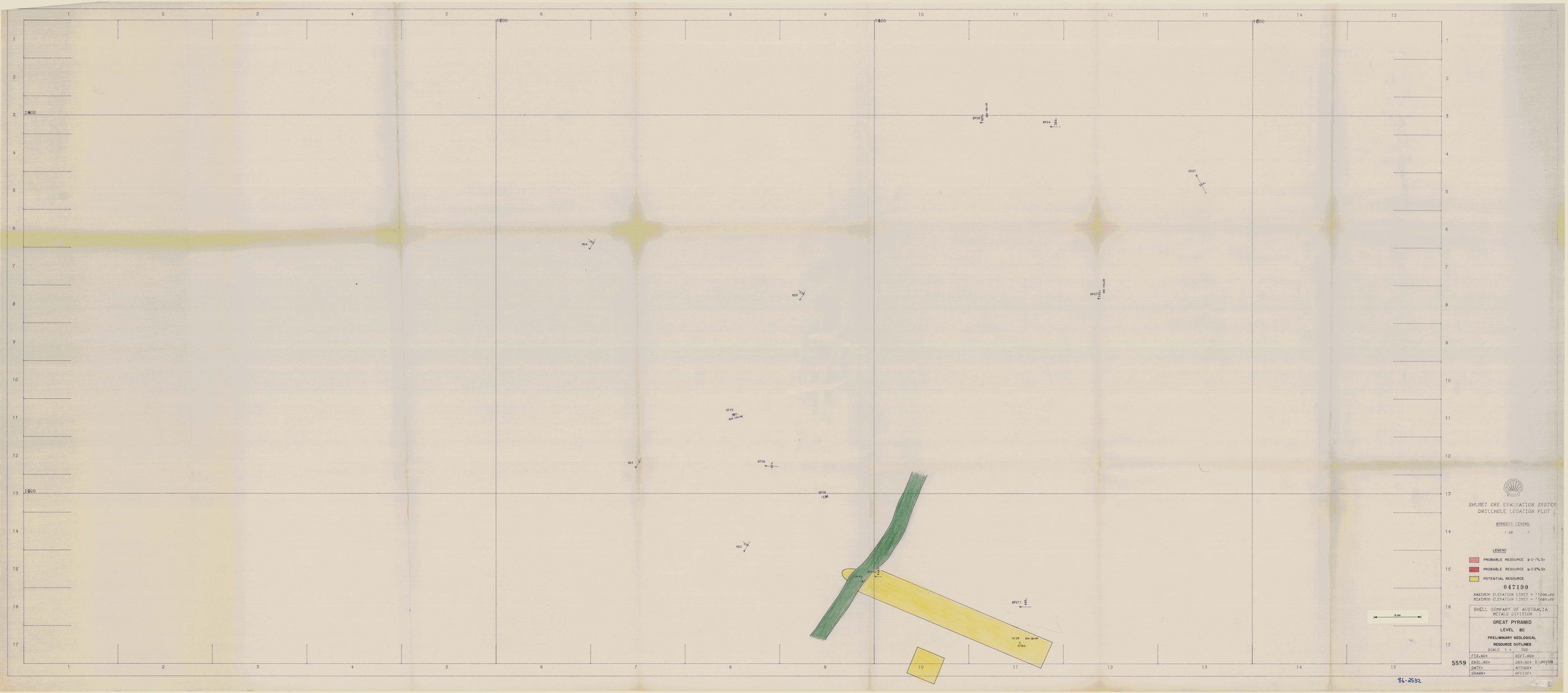
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

FIG.NO:	REPT.NO:
ENCL.NO:	DRG.NO: D/LH01/602
DATE:	AUTHOR:
DRAWN:	OFFICE:

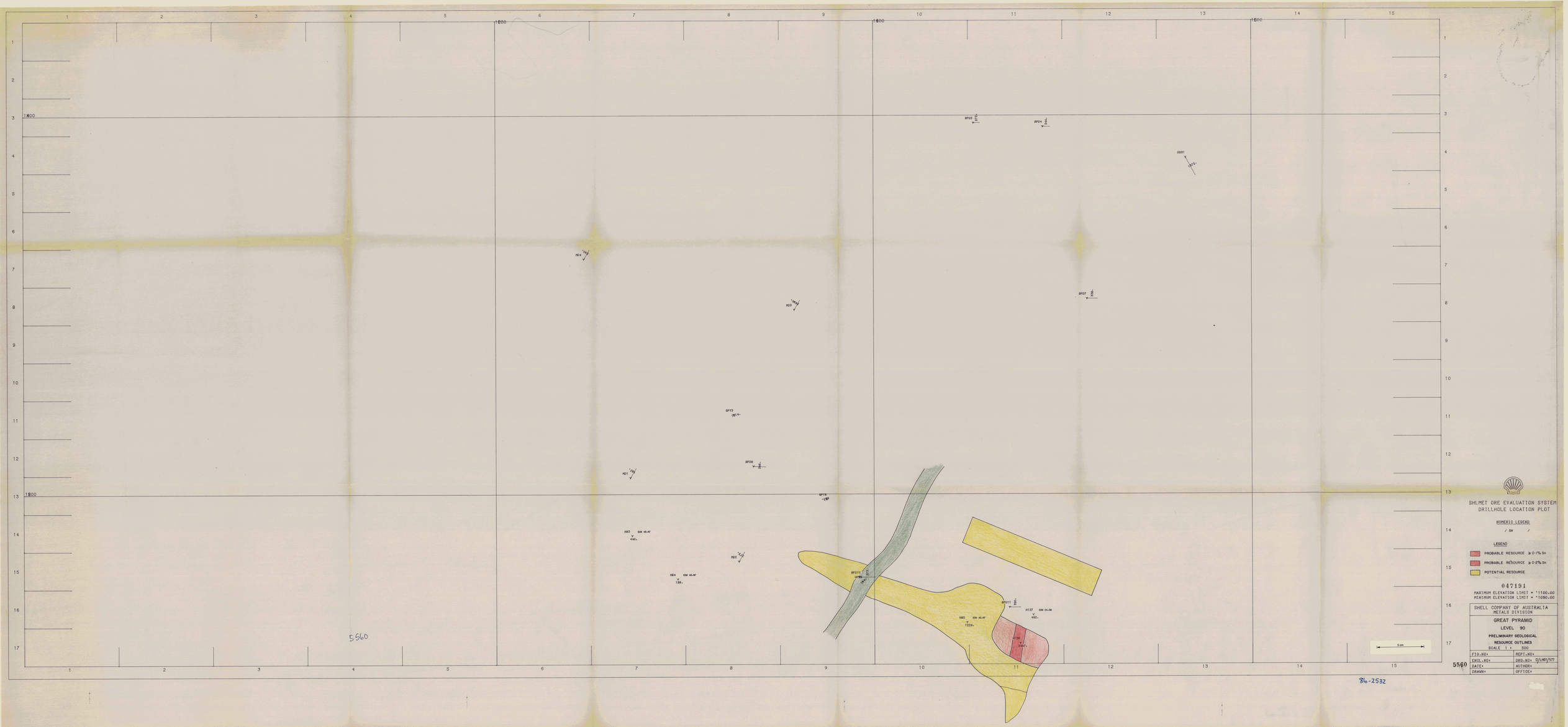
5557

86-2532


1200
1400
1600
1800
PC4
PC3
PC1
PC2
BP01
BP02
BP03
BP04
BP05
BP06
BP07
BP08
BP09
BP10
BP11
BP12
BP13
BP14
BP15
BP16
BP17
BP18
BP19
BP20
BP21
BP22
BP23
BP24
BP25
BP26
BP27
BP28
BP29
BP30
BP31
BP32
BP33
BP34
BP35
BP36
BP37
BP38
BP39
BP40
BP41
BP42
BP43
BP44
BP45
BP46
BP47
BP48
BP49
BP50
BP51
BP52
BP53
BP54
BP55
BP56
BP57
BP58
BP59
BP60
BP61
BP62
BP63
BP64
BP65
BP66
BP67
BP68
BP69
BP70
BP71
BP72
BP73
BP74
BP75
BP76
BP77
BP78
BP79
BP80
BP81
BP82
BP83
BP84
BP85
BP86
BP87
BP88
BP89
BP90
BP91
BP92
BP93
BP94
BP95
BP96
BP97
BP98
BP99
BP100
BP101
BP102
BP103
BP104
BP105
BP106
BP107
BP108
BP109
BP110
BP111
BP112
BP113
BP114
BP115
BP116
BP117
BP118
BP119
BP120
BP121
BP122
BP123
BP124
BP125
BP126
BP127
BP128
BP129
BP130
BP131
BP132
BP133
BP134
BP135
BP136
BP137
BP138
BP139
BP140
BP141
BP142
BP143
BP144
BP145
BP146
BP147
BP148
BP149
BP150
BP151
BP152
BP153
BP154
BP155
BP156
BP157
BP158
BP159
BP160
BP161
BP162
BP163
BP164
BP165
BP166
BP167
BP168
BP169
BP170
BP171
BP172
BP173
BP174
BP175
BP176
BP177
BP178
BP179
BP180
BP181
BP182
BP183
BP184
BP185
BP186
BP187
BP188
BP189
BP190
BP191
BP192
BP193
BP194
BP195
BP196
BP197
BP198
BP199
BP200
BP201
BP202
BP203
BP204
BP205
BP206
BP207
BP208
BP209
BP210
BP211
BP212
BP213
BP214
BP215
BP216
BP217
BP218
BP219
BP220
BP221
BP222
BP223
BP224
BP225
BP226
BP227
BP228
BP229
BP230
BP231
BP232
BP233
BP234
BP235
BP236
BP237
BP238
BP239
BP240
BP241
BP242
BP243
BP244
BP245
BP246
BP247
BP248
BP249
BP250
BP251
BP252
BP253
BP254
BP255
BP256
BP257
BP258
BP259
BP260
BP261
BP262
BP263
BP264
BP265
BP266
BP267
BP268
BP269
BP270
BP271
BP272
BP273
BP274
BP275
BP276
BP277
BP278
BP279
BP280
BP281
BP282
BP283
BP284
BP285
BP286
BP287
BP288
BP289
BP290
BP291
BP292
BP293
BP294
BP295
BP296
BP297
BP298
BP299
BP300
BP301
BP302
BP303
BP304
BP305
BP306
BP307
BP308
BP309
BP310
BP311
BP312
BP313
BP314
BP315
BP316
BP317
BP318
BP319
BP320
BP321
BP322
BP323
BP324
BP325
BP326
BP327
BP328
BP329
BP330
BP331
BP332
BP333
BP334
BP335
BP336
BP337
BP338
BP339
BP340
BP341
BP342
BP343
BP344
BP345
BP346
BP347
BP348
BP349
BP350
BP351
BP352
BP353
BP354
BP355
BP356
BP357
BP358
BP359
BP360
BP361
BP362
BP363
BP364
BP365
BP366
BP367
BP368
BP369
BP370
BP371
BP372
BP373
BP374
BP375
BP376
BP377
BP378
BP379
BP380
BP381
BP382
BP383
BP384
BP385
BP386
BP387
BP388
BP389
BP390
BP391
BP392
BP393
BP394
BP395
BP396
BP397
BP398
BP399
BP400
BP401
BP402
BP403
BP404
BP405
BP406
BP407
BP408
BP409
BP410
BP411
BP412
BP413
BP414
BP415
BP416
BP417
BP418
BP419
BP420
BP421
BP422
BP423
BP424
BP425
BP426
BP427
BP428
BP429
BP430
BP431
BP432
BP433
BP434
BP435
BP436
BP437
BP438
BP439
BP440
BP441
BP442
BP443
BP444
BP445
BP446
BP447
BP448
BP449
BP450
BP451
BP452
BP453
BP454
BP455
BP456
BP457
BP458
BP459
BP460
BP461
BP462
BP463
BP464
BP465
BP466
BP467
BP468
BP469
BP470
BP471
BP472
BP473
BP474
BP475
BP476
BP477
BP478
BP479
BP480
BP481
BP482
BP483
BP484
BP485
BP486
BP487
BP488
BP489
BP490
BP491
BP492
BP493
BP494
BP495
BP496
BP497
BP498
BP499
BP500
BP501
BP502
BP503
BP504
BP505
BP506
BP507
BP508
BP509
BP510
BP511
BP512
BP513
BP514
BP515
BP516
BP517
BP518
BP519
BP520
BP521
BP522
BP523
BP524
BP525
BP526
BP527
BP528
BP529
BP530
BP531
BP532
BP533
BP534
BP535
BP536
BP537
BP538
BP539
BP540
BP541
BP542
BP543
BP544
BP545
BP546
BP547
BP548
BP549
BP550
BP551
BP552
BP553
BP554
BP555
BP556
BP557
BP558
BP559
BP560
BP561
BP562
BP563
BP564
BP565
BP566
BP567
BP568
BP569
BP570
BP571
BP572
BP573
BP574
BP575
BP576
BP577
BP578
BP579
BP580
BP581
BP582
BP583
BP584
BP585
BP586
BP587
BP588
BP589
BP590
BP591
BP592
BP593
BP594
BP595
BP596
BP597
BP598
BP599
BP600
BP601
BP602
BP603
BP604
BP605
BP606
BP607
BP608
BP609
BP610
BP611
BP612
BP613
BP614
BP615
BP616
BP617
BP618
BP619
BP620
BP621
BP622
BP623
BP624
BP625
BP626
BP627
BP628
BP629
BP630
BP631
BP632
BP633
BP634
BP635
BP636
BP637
BP638
BP639
BP640
BP641
BP642
BP643
BP644
BP645
BP646
BP647
BP648
BP649
BP650
BP651
BP652
BP653
BP654
BP655
BP656
BP657
BP658
BP659
BP660
BP661
BP662
BP663
BP664
BP665
BP666
BP667
BP668
BP669
BP670
BP671
BP672
BP673
BP674
BP675
BP676
BP677
BP678
BP679
BP680
BP681
BP682
BP683
BP684
BP685
BP686
BP687
BP688
BP689
BP690
BP691
BP692
BP693
BP694
BP695
BP696
BP697
BP698
BP699
BP700
BP701
BP702
BP703
BP704
BP705
BP706
BP707
BP708
BP709
BP710
BP711
BP712
BP713
BP714
BP715
BP716
BP717
BP718
BP719
BP720
BP721
BP722
BP723
BP724
BP725
BP726
BP727
BP728
BP729
BP730
BP731
BP732
BP733
BP734
BP735
BP736
BP737
BP738
BP739
BP740
BP741
BP742
BP743
BP744
BP745
BP746
BP747
BP748
BP749
BP750
BP751
BP752
BP753
BP754
BP755
BP756
BP757
BP758
BP759
BP760
BP761
BP762
BP763
BP764
BP765
BP766
BP767
BP768
BP769
BP770
BP771
BP772
BP773
BP774
BP775
BP776
BP777
BP778
BP779
BP780
BP781
BP782
BP783
BP784
BP785
BP786
BP787
BP788
BP789
BP790
BP791
BP792
BP793
BP794
BP795
BP796
BP797
BP798
BP799
BP800
BP801
BP802
BP803
BP804
BP805
BP806
BP807
BP808
BP809
BP810
BP811
BP812
BP813
BP814
BP815
BP816
BP817
BP818
BP819
BP820
BP821
BP822
BP823
BP824
BP825
BP826
BP827
BP828
BP829
BP830
BP831
BP832
BP833
BP834
BP835
BP836
BP837
BP838
BP839
BP840
BP841
BP842
BP843
BP844
BP845
BP846
BP847
BP848
BP849
BP850
BP851
BP852
BP853
BP854
BP855
BP856
BP857
BP858
BP859
BP860
BP861
BP862
BP863
BP864
BP865
BP866
BP867
BP868
BP869
BP870
BP871
BP872
BP873
BP874
BP875
BP876
BP877
BP878
BP879
BP880
BP881
BP882
BP883
BP884
BP885
BP886
BP887
BP888
BP889
BP890
BP891
BP892
BP893
BP894
BP895
BP896
BP897
BP898
BP899
BP900
BP901
BP902
BP903
BP904
BP905
BP906
BP907
BP908
BP909
BP910
BP911
BP912
BP913
BP914
BP915
BP916
BP917
BP918
BP919
BP920
BP921
BP922
BP923
BP924
BP925
BP926
BP927
BP928
BP929
BP930
BP931
BP932
BP933
BP934
BP935
BP936
BP937
BP938
BP939
BP940
BP941
BP942
BP943
BP944
BP945
BP946
BP947
BP948
BP949
BP950
BP951
BP952
BP953
BP954
BP955
BP956
BP957
BP958
BP959
BP960
BP961
BP962
BP963
BP964
BP965
BP966
BP967
BP968
BP969
BP970
BP971
BP972
BP973
BP974
BP975
BP976
BP977
BP978
BP979
BP980
BP981
BP982
BP983
BP984
BP985
BP986
BP987
BP988
BP989
BP990
BP991
BP992
BP993
BP994
BP995
BP996
BP997
BP998
BP999
BP1000
BP1001
BP1002
BP1003
BP1004
BP1005
BP1006
BP1007
BP1008
BP1009
BP1010
BP1011
BP1012
BP1013
BP1014
BP1015
BP1016
BP1017
BP1018
BP1019
BP1020
BP1021
BP1022
BP1023
BP1024
BP1025
BP1026
BP1027
BP1028
BP1029
BP1030
BP1031
BP1032
BP1033
BP1034
BP1035
BP1036
BP1037
BP1038
BP1039
BP1040
BP1041
BP1042
BP1043
BP1044
BP1045
BP1046
BP1047
BP1048
BP1049
BP1050
BP1051
BP1052
BP1053
BP1054
BP1055
BP1056
BP1057
BP1058
BP1059
BP1060
BP1061
BP1062
BP1063
BP1064
BP1065
BP1066
BP1067
BP1068
BP1069
BP1070
BP1071
BP1072
BP1073
BP1074
BP1075
BP1076
BP1077
BP1078
BP1079
BP1080
BP1081
BP1082
BP1083
BP1084
BP1085
BP1086
BP1087
BP1088
BP1089
BP1090
BP1091
BP1092
BP1093
BP1094
BP1095
BP1096
BP1097
BP1098
BP1099
BP1100
BP1101
BP1102
BP1103
BP1104
BP1105
BP1106
BP1107
BP1108
BP1109
BP1110
BP1111
BP1112
BP1113
BP1114
BP1115
BP1116
BP1117
BP1118
BP1119
BP1120
BP1121
BP1122
BP1123
BP1124
BP1125
BP1126
BP1127
BP1128
BP1129
BP1130
BP1131
BP1132
BP1133
BP1134
BP1135
BP1136
BP1137
BP1138
BP1139
BP1140
BP1141
BP1142
BP1143
BP1144
BP1145
BP1146
BP1147
BP1148
BP1149
BP1150
BP1151
BP1152
BP1153
BP1154
BP1155
BP1156
BP1157
BP1158
BP1159
BP1160
BP1161
BP1162
BP1163
BP1164
BP1165
BP1166
BP1167
BP1168
BP1169
BP1170
BP1171
BP1172
BP1173
BP1174
BP1175
BP1176
BP1177
BP1178
BP1179
BP1180
BP1181
BP1182
BP1183
BP1184
BP1185
BP1186
BP1187
BP1188
BP1189
BP1190
BP1191
BP1192
BP1193
BP1194
BP1195
BP1196
BP1197
BP1198
BP1199
BP1200
BP1201
BP1202
BP1203
BP1204
BP1205
BP1206
BP1207
BP1208
BP1209
BP1210
BP1211
BP1212
BP1213
BP1214
BP1215
BP1216
BP1217
BP1218
BP1219
BP1220
BP1221
BP1222
BP1223
BP1224
BP1225
BP1226
BP1227
BP1228
BP1229
BP1230
BP1231
BP1232
BP1233
BP1234
BP1235
BP1236
BP1237
BP1238
BP1239
BP1240
BP1241
BP1242
BP1243
BP1244
BP1245
BP1246
BP1247
BP1248
BP1249
BP1250
BP1251
BP1252
BP1253
BP1254
BP1255
BP1256
BP1257
BP1258
BP1259
BP1260
BP1261
BP1262
BP1263
BP1264
BP1265
BP1266
BP1267
BP1268
BP1269
BP1270
BP1271
BP1272
BP1273
BP1274
BP1275
BP1276
BP1277
BP1278
BP1279
BP1280
BP1281
BP1282
BP1283
BP1284
BP1285
BP1286
BP1287
BP1288
BP1289
BP1290
BP1291
BP1292
BP1293
BP1294
BP1295
BP1296
BP1297
BP1298
BP1299
BP1300
BP1301
BP1302
BP1303
BP1304
BP1305
BP1306
BP1307
BP1308
BP1309
BP1310
BP1311
BP1312
BP1313
BP1314
BP1315
BP1316
BP1317
BP1318
BP1319
BP1320
BP1321
BP1322
BP1323
BP1324
BP1325
BP1326
BP1327
BP1328
BP1329
BP1330
BP1331
BP1332
BP1333
BP1334
BP1335
BP1336
BP1337
BP1338
BP1339
BP1340
BP1341
BP1342
BP1343
BP1344
BP1345
BP1346
BP1347
BP1348
BP1349
BP1350
BP1351
BP1352
BP1353
BP1354
BP1355
BP1356
BP1357
BP1358
BP1359
BP1360
BP1361
BP1362
BP1363
BP1364
BP1365
BP1366
BP1367
BP1368
BP1369
BP1370
BP1371
BP1372
BP1373
BP1374
BP1375
BP1376
BP1377
BP1378
BP1379
BP1380
BP1381
BP1382
BP1383
BP1384
BP1385
BP1386
BP1387
BP1388
BP1389
BP1390
BP1391
BP1392
BP1393
BP1394
BP1395
BP1396
BP1397
BP1398
BP1399
BP1400
BP1401
BP1402
BP1403
BP1404
BP1405
BP1406
BP1407
BP1408
BP1409
BP1410
BP1411
BP1412
BP1413
BP1414
BP1415
BP1416
BP1417
BP1418
BP1419
BP1420
BP1421
BP1422
BP1423
BP1424
BP1425
BP1426
BP1427
BP1428
BP1429
BP1430
BP1431
BP1432
BP1433
BP1434
BP1435
BP1436
BP1437
BP1438
BP1439
BP1440
BP1441
BP1442
BP1443
BP1444
BP1445
BP1446
BP1447
BP1448
BP1449
BP1450
BP1451
BP1452
BP1453
BP1454
BP1455
BP1456
BP1457
BP1458
BP1459
BP1460
BP1461
BP1462
BP1463
BP1464
BP1465
BP1466
BP1467
BP1468
BP1469
BP1470
BP1471
BP1472
BP1473
BP1474
BP1475
BP1476
BP1477
BP1478
BP1479
BP1480
BP1481
BP1482
BP1483
BP1484
BP1485
BP1486
BP1487
BP1488
BP1489
BP1490
BP1491
BP1492
BP1493
BP1494
BP1495
BP1496
BP1497
BP1498
BP1499
BP1500
BP1501
BP1502
BP1503
BP1504
BP1505
BP1506
BP1507
BP1508
BP1509
BP1510
BP1511
BP1512
BP1513
BP1514
BP1515
BP1516
BP1517
BP1518
BP1519
BP1520
BP1521
BP1522
BP1523
BP1524
BP1525
BP1526
BP1527
BP1528
BP1529
BP1530
BP1531
BP1532
BP1533
BP1534
BP1535
BP1536
BP1537
BP1538
BP1539
BP1540
BP1541
BP1542
BP1543
BP1544
BP1545
BP1546
BP1547
BP1548
BP1549
BP1550
BP1551
BP1552
BP1553
BP1554
BP1555
BP1556
BP1557
BP1558
BP1559
BP1560
BP1561
BP1562
BP1563
BP1564
BP1565
BP1566
BP1567
BP1568
BP1569
BP1570
BP1571
BP1572
BP1573
BP1574
BP1575
BP1576
BP1577
BP1578
BP1579
BP1580
BP1581
BP1582
BP1583
BP1584
BP1585
BP1586
BP1587
BP1588
BP1589
BP1590
BP1591
BP1592
BP1593
BP1594
BP1595
BP1596
BP1597
BP1598
BP1599
BP1600
BP1601
BP1602
BP1603
BP1604
BP1605
BP1606
BP1607
BP1608
BP1609
BP1610
BP1611
BP1612
BP1613
BP1614
BP1615
BP1616
BP1617
BP1618
BP1619
BP1620
BP1621
BP1622
BP1623
BP1624
BP1625
BP1626
BP1627
BP1628
BP1629
BP1630
BP1631
BP1632
BP1633
BP1634
BP1635
BP1636
BP1637
BP1638
BP1639
BP1640
BP1641
BP1642
BP1643
BP1644
BP1645
BP1646
BP1647
BP1648
BP1649
BP1650
BP1651
BP1652
BP1653
BP1654
BP1655
BP1656
BP1657
BP1658
BP1659
BP1660
BP1661
BP1662
BP1663
BP1664
BP1665
BP1666
BP1667
BP1668
BP1669
BP1670
BP1671
BP1672
BP1673
BP1674
BP1675
BP1676
BP1677
BP1678
BP1679
BP1680
BP1681
BP1682
BP1683
BP1684
BP1685
BP1686
BP1687
BP1688
BP1689
BP1690
BP1691
BP1692
BP1693
BP1694
BP1695
BP1696
BP1697
BP1698
BP1699
BP1700
BP1701
BP1702
BP1703
BP1704
BP1705
BP1706
BP1707
BP1708
BP1709
BP1710
BP1711
BP1712
BP1713
BP1714
BP1715
BP1716
BP1717
BP1718
BP1719
BP1720
BP1721
BP1722
BP1723
BP1724
BP1725
BP1726
BP1727
BP1728
BP1729
BP1730
BP1731
BP1732
BP1733
BP1734
BP1735
BP1736
BP1737
BP1738
BP1739
BP1740
BP1741
BP1742
BP1743
BP1744
BP1745
BP1746
BP1747
BP1748
BP1749
BP1750
BP1751
BP1752
BP1753
BP1754
BP1755
BP1756
BP1757
BP1758
BP1759
BP1760
BP1761
BP1762
BP1763
BP1764
BP1765
BP1766
BP1767
BP1768
BP1769
BP1770
BP1771
BP1772
BP1773
BP1774
BP1775
BP1776
BP1777
BP1778
BP1779
BP1780
BP1781
BP1782
BP1783
BP1784
BP1785
BP1786
BP1787
BP1788
BP1789
BP1790
BP1791
BP1792
BP1793
BP1794
BP1795
BP1796
BP1797
BP1798
BP1799
BP1800
BP1801
BP1802
BP1803
BP1804
BP1805
BP1806
BP1807
BP1808
BP1809
BP1810
BP1811
BP1812
BP1813
BP1814
BP1815
BP1816
BP1817
BP1818
BP1819
BP1820
BP1821
BP1822
BP1823
BP1824
BP1825
BP1826
BP1827
BP1828
BP1829
BP1830
BP1831
BP1832
BP1833
BP1834
BP1835
BP1836
BP1837
BP1838
BP1839
BP1840
BP1841
BP1842
BP1843
BP1844
BP1845
BP1846
BP1847
BP1848
BP1849
BP1850
BP1851
BP1852
BP1853
BP1854
BP1855
BP1856
BP1857
BP1858
BP1859
BP1860
BP1861
BP1862
BP1863
BP1864
BP1865
BP1866
BP1867
BP1868
BP1869
BP1870
BP1871
BP1872
BP1873
BP1874
BP1875
BP1876
BP1877
BP1878
BP1879
BP1880
BP1881
BP1882
BP1883
BP1884
BP1885
BP1886
BP1887
BP1888
BP1889
BP1890
BP1891
BP1892
BP1893
BP1894
BP1895
BP1896
BP1897
BP1898
BP1899
BP1900
BP1901
BP1902
BP1903
BP1904
BP1905
BP1906
BP1907
BP1908
BP1909
BP1910
BP1911
BP1912
BP1913
BP1914
BP1915
BP1916
BP1917
BP1918
BP1919
BP1920
BP1921
BP1922
BP1923
BP1924
BP1925
BP1926
BP1927
BP1928
BP1929
BP1930
BP1931
BP1932
BP1933
BP1934
BP1935
BP1936
BP1937
BP1938
BP1939
BP1940
BP1941
BP1942
BP1943
BP1944
BP1945
BP1946
BP1947
BP1948
BP1949
BP1950
BP1951
BP1952
BP1953
BP1954
BP1955
BP1956
BP1957
BP1958
BP1959
BP1960
BP1961
BP1962
BP1963
BP1964
BP1965
BP1966
BP1967
BP1968
BP1969
BP1970
BP1971
BP1972
BP1973
BP1974
BP1975
BP1976
BP1977
BP1978
BP1979
BP1980
BP1981
BP1982
BP1983
BP1984
BP1985
BP1986
BP1987
BP1988
BP1989
BP1990
BP1991
BP1992
BP1993
BP1994
BP1995
BP1996
BP1997
BP1998
BP1999
BP2000
BP2001
BP2002
BP2003
BP2004
BP2005
BP2006
BP2007
BP2008
BP2009
BP2010
BP2011
BP2012
BP2013
BP2014
BP2015
BP2016
BP2017
BP2018
BP2019
BP2020
BP2021
BP2022
BP2023
BP2024
BP2025
BP2026
BP2027
BP2028
BP2029
BP2030
BP2031
BP2032
BP2033
BP2034
BP2035
BP2036
BP2037
BP2038
BP2039
BP2040
BP2041
BP2042
BP2043
BP2044
BP2045
BP2046
BP2047
BP2048
BP2049
BP2050
BP2051
BP2052
BP2053
BP2054
BP2055
BP2056
BP2057
BP2058
BP2059
BP2060
BP2061
BP2062
BP2063
BP2064
BP2065
BP2066
BP2067
BP2068
BP2069
BP2070
BP2071
BP2072
BP2073
BP2074
BP2075
BP2076
BP2077
BP2078
BP2079
BP2080
BP2081
BP2082
BP2083
BP2084
BP2085
BP2086
BP2087
BP2088
BP2089
BP2090
BP2091
BP2092
BP2093
BP2094
BP2095
BP2096
BP2097
BP2098
BP2099
BP2100
BP2101
BP2102
BP2103
BP2104
BP2105
BP2106
BP2107
BP2108
BP2109
BP2110
BP2111
BP2112
BP2113
BP2114
BP2115
BP2116
BP2117
BP2118
BP2119
BP2120
BP2121
BP2122
BP2123
BP2124
BP2125
BP2126
BP2127
BP2128
BP2129
BP2130
BP2131
BP2132
BP2133
BP2134
BP2135
BP2136
BP2137
BP2138
BP2139
BP2140
BP2141
BP2142
BP2143
BP2144
BP2145
BP2146
BP2147
BP2148
BP2149
BP2150
BP2151
BP2152
BP2153
BP2154
BP2155
BP2156
BP2157
BP2158
BP2159
BP2160
BP2161
BP2162
BP2163
BP2164
BP2165
BP2166
BP2167
BP2168
BP2169
BP2170
BP2171
BP2172
BP2173
BP2174
BP2175
BP2176
BP2177
BP2178
BP2179
BP2180
BP2181
BP2182
BP2183
BP2184
BP2185
BP2186
BP2187
BP2188
BP2189
BP2190
BP2191
BP2192
BP2193
BP2194
BP2195
BP2196
BP2197
BP2198
BP2199
BP2200
BP2201
BP2202
BP2203
BP2204
BP2205
BP2206
BP2207
BP2208
BP2209
BP2210
BP2211
BP2212
BP2213
BP2214
BP2215
BP2216
BP2217
BP2218
BP2219
BP2220
BP2221
BP2222
BP2223
BP2224
BP2225
BP2226
BP2227
BP2228
BP2229
BP2230
BP2231
BP2232
BP2233
BP2234
BP2235
BP2236
BP2237
BP2238
BP2239
BP2240
BP2241
BP2242
BP2243
BP2244
BP2245
BP2246
BP2247
BP2248
BP2249
BP2250
BP2251
BP2252
BP2253
BP2254
BP2255
BP2256
BP2257
BP2258
BP2259
BP2260
BP2261
BP2262
BP2263
BP2264
BP2265
BP2266
BP2267
BP2268
BP2269
BP2270
BP2271
BP2272
BP2273
BP2274
BP2275
BP2276
BP2277
BP2278
BP2279
BP2280
BP2281
BP2282
BP2283
BP2284
BP2285
BP2286
BP2287
BP2288
BP2289
BP2290
BP2291
BP2292
BP2293
BP2294
BP2295
BP2296
BP2297
BP2298
BP2299
BP2300
BP2301
BP2302
BP2303
BP2304
BP2305
BP2306
BP2307
BP2308
BP2309
BP2310
BP2311
BP2312
BP2313
BP2314
BP2315
BP2316
BP2317
BP2318
BP2319
BP2320
BP2321
BP2322
BP2323
BP2324
BP2325
BP2326
BP2327
BP2328
BP2329
BP2330
BP2331
BP2332
BP2333
BP2334
BP2335
BP2336
BP2337
BP2338
BP2339
BP2340
BP2341
BP2342
BP2343
BP2344
BP2345
BP2346
BP2347
BP2348
BP2349
BP2350
BP2351
BP2352
BP2353
BP2354
BP2355
BP2356
BP2357
BP2358
BP2359
BP2360
BP2361
BP2362
BP2363
BP2364
BP2365
BP2366
BP2367
BP2368
BP2369
BP2370
BP2371
BP2372
BP2373
BP2374
BP2375
BP2376
BP2377
BP2378
BP2379
BP2380
BP2381
BP2382
BP2383
BP2384
BP2385
BP2386
BP2387
BP2388
BP2389
BP2390
BP2391
BP2392
BP2393
BP2394
BP2395
BP2396
BP2397
BP2398
BP2399
BP2400
BP2401
BP2402
BP2403
BP2404
BP2405
BP2406
BP2407
BP2408
BP2409
BP2410
BP2411
BP2412
BP2413
BP2414
BP2415
BP2416
BP2417
BP2418
BP2419
BP2420
BP2421
BP2422
BP2423
BP2424
BP2425
BP2426
BP2427
BP2428
BP2429
BP2430
BP2431
BP2432
BP2433
BP2434
BP2435
BP2436
BP2437
BP2438
BP2439
BP2440
BP2441
BP2442
BP2443
BP2444
BP2445
BP2446
BP2447
BP2448
BP2449
BP2450
BP2451
BP2452
BP2453
BP2454
BP2455
BP2456
BP2457
BP2458
BP2459
BP2460
BP2461
BP2462
BP2463
BP2464
BP2465
BP2466
BP2467
BP2468
BP2469
BP2470
BP2471
BP2472
BP2473
BP2474
BP2475
BP2476
BP2477
BP2478
BP2479
BP2480
BP2481
BP2482
BP2483
BP2484
BP2485
BP2486
BP2487
BP2488
BP2489
BP2490
BP2491
BP2492
BP2493
BP2494
BP2495
BP2496
BP2497
BP2498
BP2499
BP2500
BP2501
BP2502
BP2503
BP2504
BP2505
BP2506
BP2507
BP2508
BP2509
BP2510
BP2511
BP2512
BP2513
BP2514
BP2515
BP2516
BP2517
BP2518
BP2519
BP2520
BP2521
BP2522
BP2523
BP2524
BP2525
BP2526
BP2527
BP2528
BP2529
BP2530
BP2531
BP2532
BP2533
BP2534
BP2535
BP2536
BP2537
BP2538
BP2539
BP2540
BP2541
BP2542
BP2543
BP2544
BP2545
BP2546
BP2547
BP2548
BP2549
BP2550
BP2551
BP2552
BP2553
BP2554
BP2555
BP2556
BP2557
BP2558
BP2559
BP2560
BP2561
BP2562
BP2563
BP2564
BP2565
BP2566
BP2567
BP2568
BP2569
BP2570
BP2571
BP2572
BP2573
BP2574
BP2575
BP2576
BP2577
BP2578
BP2579
BP2580
BP2581
BP2582
BP2583
BP2584
BP2585
BP2586
BP2587
BP2588
BP2589
BP2590
BP2591
BP2592
BP2593
BP2594
BP2595
BP2596
BP2597
BP2598
BP2599
BP2600
BP2601
BP2602
BP2603
BP2604
BP2605
BP2606
BP2607
BP2608
BP2609
BP2610
BP2611
BP2612
BP2613
BP2614
BP2615
BP2616
BP2617
BP2618
BP2619
BP2620
BP2621
BP2622
BP2623
BP2624
BP2625
BP2626
BP2627
BP2628
BP2629
BP2630
BP2631
BP2632
BP2633
BP2634
BP2635
BP2636
BP2637
BP2638
BP2639
BP2640
BP2641
BP2642
BP2643
BP2644
BP2645
BP2646
BP2647
BP2648
BP2649
BP2650
BP2651
BP2652
BP2653
BP2654
BP2655
BP2656
BP2657
BP2658
BP2659
BP2660
BP2661
BP2662
BP2663
BP2664
BP2665
BP2666
BP2667
BP2668
BP2669
BP2670
BP2671
BP2672
BP2673
BP2674
BP2675
BP2676
BP2677
BP2678
BP2679
BP2680
BP2681
BP2682
BP2683
BP2684
BP2685
BP2686
BP2687
BP2688
BP2689
BP2690
BP2691
BP2692
BP2693
BP2694
BP2695
BP2696
BP2697
BP2698
BP2699
BP2700
BP2701
BP2702
BP2703
BP2704
BP2705
BP2706
BP2707
BP2708
BP2709
BP2710
BP2711
BP2712
BP2713
BP2714
BP2715
BP2716
BP2717
BP2718
BP2719
BP2720
BP2721
BP2722
BP2723
BP2724
BP2725
BP2726
BP2727
BP2728
BP2729
BP2730
BP2731
BP2732
BP2733
BP2734
BP2735
BP2736
BP2737
BP2738
BP2739
BP2740
BP2741
BP2742
BP2743
BP2744
BP2745
BP2746
BP2747
BP2748
BP2749
BP2750
BP2751
BP2752
BP2753
BP2754
BP2755
BP2756
BP2757
BP2758
BP2759
BP2760
BP2761
BP2762
BP2763
BP2764
BP2765
BP2766
BP2767
BP2768
BP2769
BP2770
BP2771
BP2772
BP2773
BP2774
BP2775
BP2776
BP2777
BP2778
BP2779
BP2780
BP2781
BP2782
BP2783
BP2784
BP2785
BP2786
BP2787
BP2788
BP2789
BP2790
BP2791
BP2792
BP2793
BP2794
BP2795
BP2796
BP2797
BP2798
BP2799
BP2800
BP2801
BP2802
BP2803
BP2804
BP2805
BP2806
BP2807
BP2808
BP2809
BP2810
BP2811
BP2812
BP2813
BP2814
BP2815
BP2816
BP2817
BP2818
BP2819
BP2820
BP2821
BP2822
BP2823
BP2824
BP2825
BP2826
BP2827
BP2828
BP2829
BP2830
BP2831
BP2832
BP2833
BP2834
BP2835
BP2836
BP2837
BP2838
BP2839
BP2840
BP2841
BP2842
BP2843
BP2844
BP2845
BP2846
BP2847
BP2848
BP2849
BP2850
BP2851
BP2852
BP2853
BP2854
BP2855
BP2856
BP2857
BP2858
BP2859
BP2860
BP2861
BP2862
BP2863
BP2864
BP2865
BP2866
BP2867
BP2868
BP2869
BP2870
BP2871
BP2872
BP2873
BP2874
BP2875
BP2876
BP2877
BP2878
BP2879
BP2880
BP2881
BP2882
BP2883
BP2884
BP2885
BP2886
BP2887
BP2888
BP2889
BP2890
BP2891
BP2892
BP2893
BP2894
BP2895
BP2896
BP2897
BP2898
BP2899
BP2900
BP2901
BP2902
BP2903
BP2904
BP2905
BP2906
BP2907
BP2908
BP2909
BP2910
BP2911
BP2912
BP2913
BP2914
BP2915
BP2916
BP2917
BP2918
BP2919
BP2920
BP2921
BP2922
BP2923
BP2924
BP2925
BP2926
BP2927
BP2928
BP2929
BP2930
BP2931
BP2932
BP2933
BP2934
BP2935
BP2936
BP2937
BP2938
BP2939
BP2940
BP2941
BP2942
BP2943
BP2944
BP2945
BP2946
BP2947
BP2948
BP2949
BP2950
BP2951
BP2952
BP2953
BP2954
BP2955
BP2956
BP2957
BP2958
BP2959
BP2960
BP2961
BP2962
BP2963
BP2964
BP2965
BP2966
BP2967
BP2968
BP2969
BP2970
BP2971
BP2972
BP2973
BP2974
BP2975
BP2976
BP2977
BP2978
BP2979
BP2980
BP2981
BP2982
BP2983
BP2984
BP2985
BP2986
BP2987
BP2988
BP2989
BP2990
BP2991
BP2992
BP2993
BP2994
BP2995
BP2996
BP2997
BP2998
BP2999
BP3000
BP3001
BP3002
BP3003
BP3004
BP3005
BP3006
BP3007
BP3008
BP3009
BP3010
BP3011
BP3012
BP3013
BP3014
BP3015
BP3016
BP3017
BP3018
BP3019
BP3020
BP3021
BP3022
BP3023
BP3024
BP3025
BP3026
BP3027
BP3028
BP3029
BP3030
BP3031
BP3032
BP3033
BP3034
BP3035
BP3036
BP3037
BP3038
BP3039
BP3040
BP3041
BP3042
BP3043
BP3044
BP3045
BP3046
BP3047
BP3048
BP3049
BP3050
BP3051
BP3052
BP3053
BP3054
BP3055
BP3056
BP3057
BP3058
BP3059
BP3060
BP3061
BP3062
BP3063
BP3064
BP3065
BP3066
BP3067
BP3068
BP3069
BP3070
BP3071
BP3072
BP3073
BP3074
BP3075
BP3076
BP3077
BP3078
BP3079
BP3080
BP3081
BP3082
BP3083
BP3084
BP3085
BP3086
BP3087
BP3088
BP3089
BP3090
BP3091
BP3092
BP3093
BP3094
BP3095
BP3096
BP3097
BP3098
BP3099
BP3100
BP3101
BP3102
BP3103
BP3104
BP3105
BP3106
BP3107
BP3108
BP3109
BP3110
BP3111
BP3112
BP3113
BP3114
BP3115
BP3116
BP3117
BP3118
BP3119
BP3120
BP3121
BP3122
BP3123
BP3124
BP3125
BP3126
BP3127
BP3128
BP3129
BP3130
BP3131
BP3132
BP3133
BP3134
BP3135
BP3136
BP3137
BP3138
BP3139
BP3140
BP3141
BP3142
BP3143
BP3144
BP3145
BP3146
BP3147
BP3148
BP3149
BP3150
BP3151
BP3152
BP3153
BP3154
BP3155
BP3156
BP3157
BP3158
BP3159
BP3160
BP3161
BP3162
BP3163
BP3164
BP3165
BP3166
BP3167
BP3168
BP3169
BP3170
BP3171
BP3172
BP3173
BP3174
BP3175
BP3176
BP3177
BP3178
BP3179
BP3180
BP3181
BP3182
BP3183
BP3184
BP3185
BP3186
BP3187
BP3188
BP3189
BP3190
BP3191
BP3192
BP3193
BP3194
BP3195
BP3196
BP3197
BP3198
BP3199
BP3200
BP3201
BP3202
BP3203
BP3204
BP3205
BP3206
BP3207
BP3208
BP3209
BP3210
BP3211
BP3212
BP3213
BP3214
BP3215
BP3216
BP3217
BP3218
BP3219
BP3220
BP3221
BP3222
BP3223
BP3224
BP3225
BP3226
BP3227
BP3228
BP3229
BP3230
BP3231
BP3232
BP3233
BP3234
BP3235
BP3236
BP3237
BP3238
BP3239
BP3240
BP3241
BP3242
BP3243
BP3244
BP3245
BP3246
BP3247
BP3248
BP3249
BP3250
BP3251
BP3252
BP3253
BP3254
BP3255
BP3256
BP3257
BP3258
BP3259
BP3260
BP3261
BP3262
BP3263
BP3264
BP3265
BP3266
BP3267
BP3268
BP3269
BP3270
BP3271
BP3272
BP3273
BP3274
BP3275
BP3276
BP3277
BP3278
BP3279
BP3280
BP3281
BP3282
BP3283
BP3284
BP3285
BP3286
BP3287
BP3288
BP3289
BP3290
BP3291
BP3292
BP3293
BP3294
BP3295
BP3296
BP3297
BP3298
BP3299
BP3300
BP3301
BP3302
BP3303
BP3304
BP3305
BP3306
BP3307
BP3308
BP3309
BP3310
BP3311
BP3312
BP3313
BP3314
BP3315
BP3316
BP3317
BP3318
BP3319
BP3320
BP3321
BP3322
BP3323
BP3324
BP3325
BP3326
BP3327
BP3328
BP3329
BP3330
BP3331
BP3332
BP3333
BP3334
BP3335
BP3336
BP3337
BP3338
BP3339
BP3340
BP3341
BP3342
BP3343
BP3344
BP3345
BP3346
BP3347
BP3348
BP3349
BP3350
BP3351
BP3352
BP3353
BP3354
BP3355
BP3356
BP3357
BP3358
BP3359
BP3360
BP3361
BP3362
BP3363
BP3364
BP3365
BP3366
BP3367
BP3368
BP3369
BP3370
BP3371
BP3372
BP3373
BP3374
BP3375
BP3376
BP3377
BP3378
BP3379
BP3380
BP3381
BP3382
BP3383
B


1200
1400
1600
RC4
RC3
RC1
RC2
DPT3
DPT5
DPT6
DPT7
DPT8
DPT11
DPT4
DDST
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
LEVEL 80
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
SCALE 1 : 500
5559
PROBABLE RESOURCE ≥ 0.1% Sn
PROBABLE RESOURCE ≥ 0.2% Sn
POTENTIAL RESOURCE
047190
MAXIMUM ELEVATION LIMIT = 1200.00
MINIMUM ELEVATION LIMIT = 1080.00
SHELMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT
5 cm

86-2532



SHLMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT

NUMERIC LEGEND

/ DH /

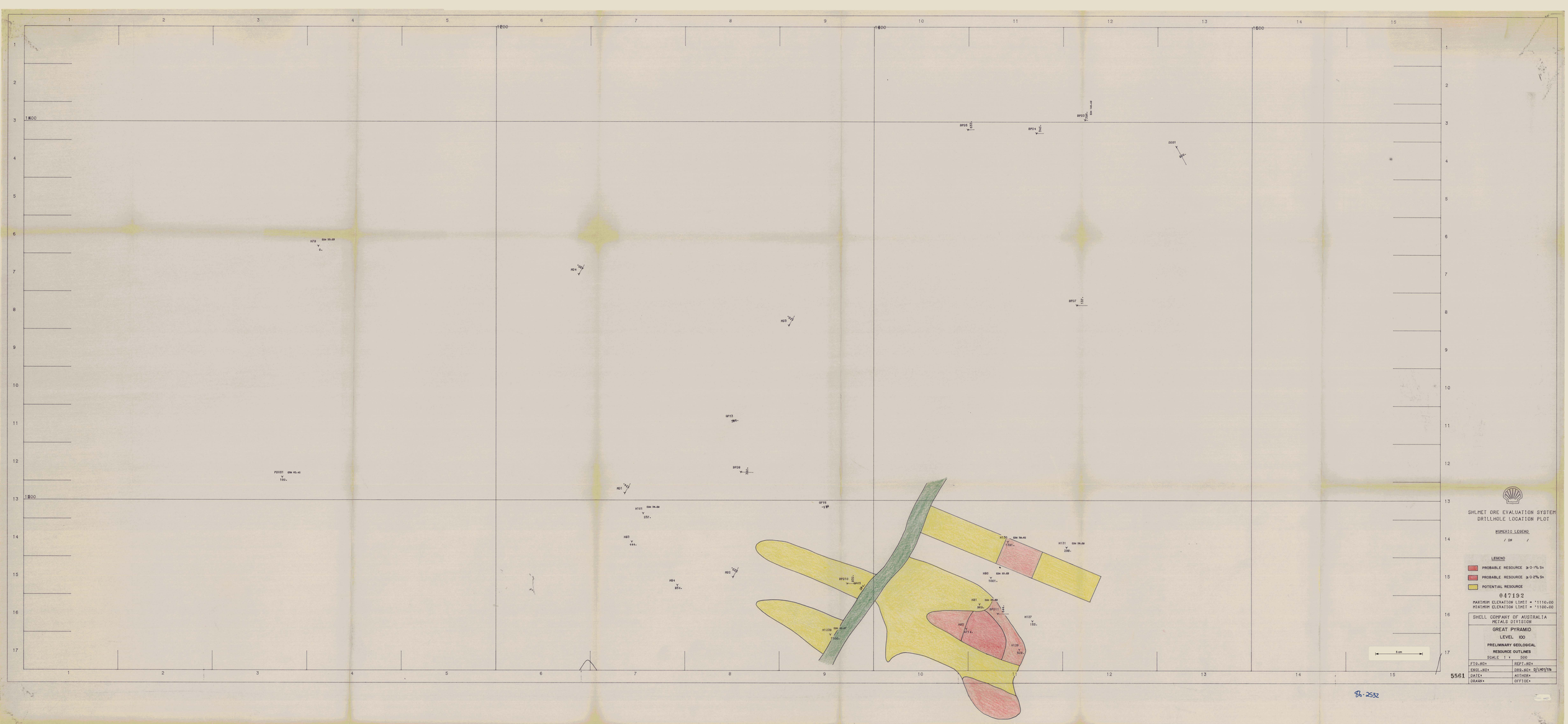
LEGEND

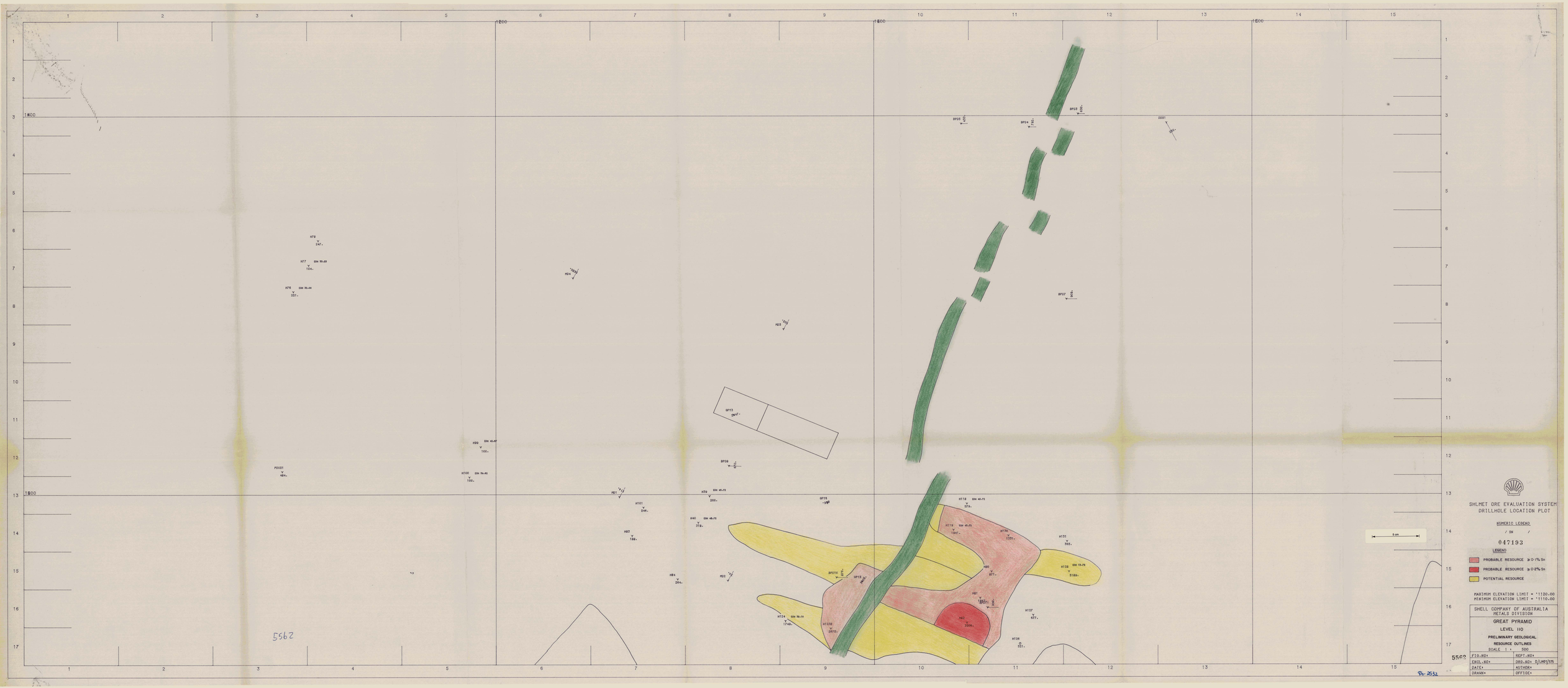
- PROBABLE RESOURCE ≥ 0·1% Sn
- PROBABLE RESOURCE ≥ 0·2% Sn
- POTENTIAL RESOURCE

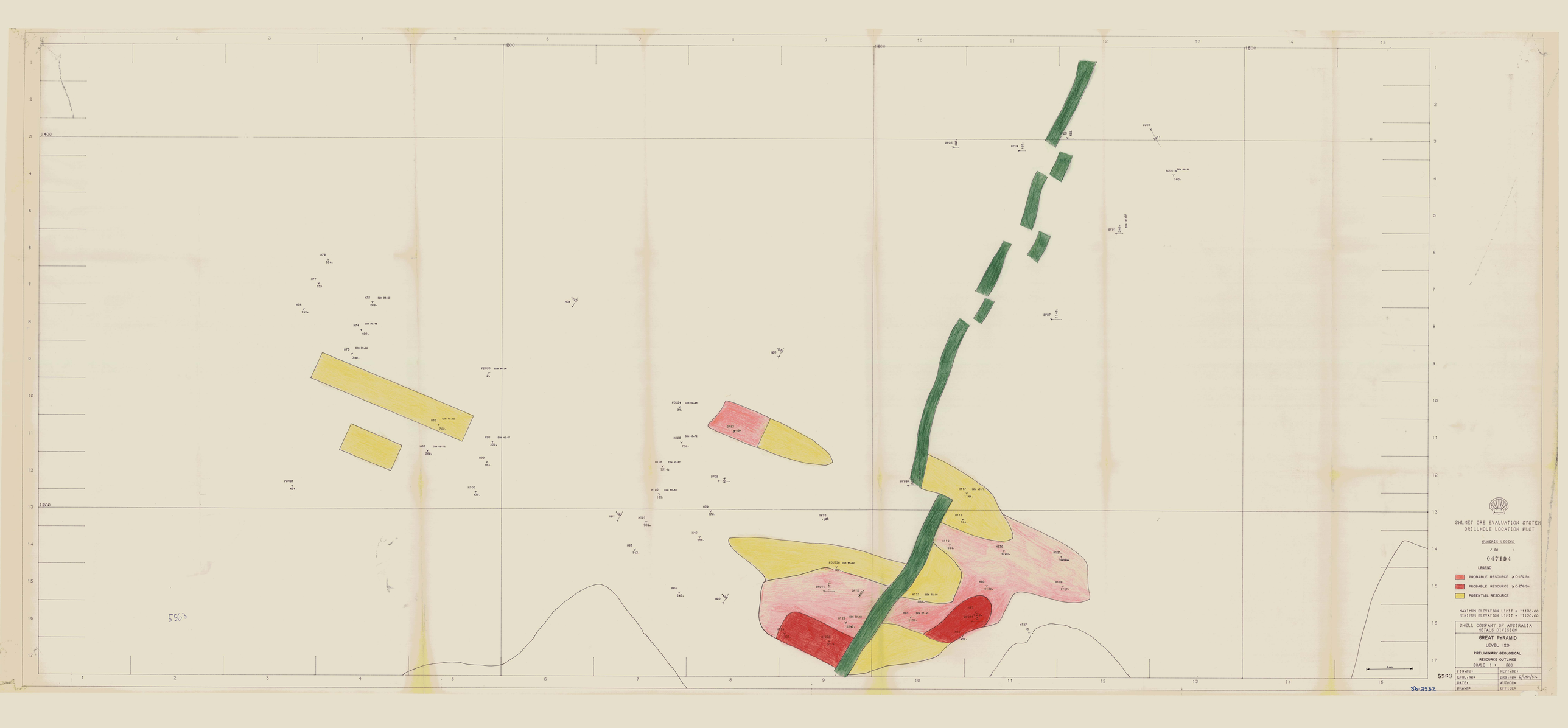
047191

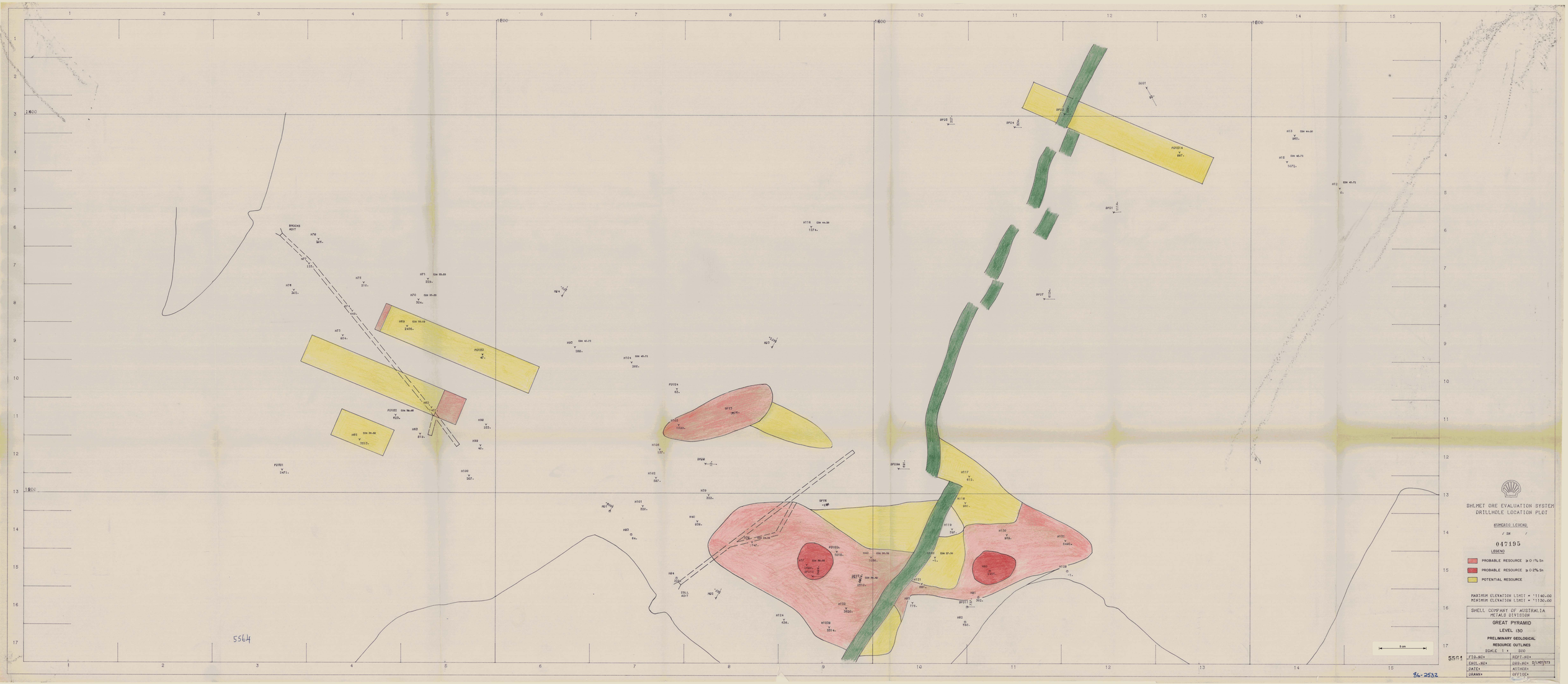
MAXIMUM ELEVATION LIMIT = 1100.00
MINIMUM ELEVATION LIMIT = 1060.00

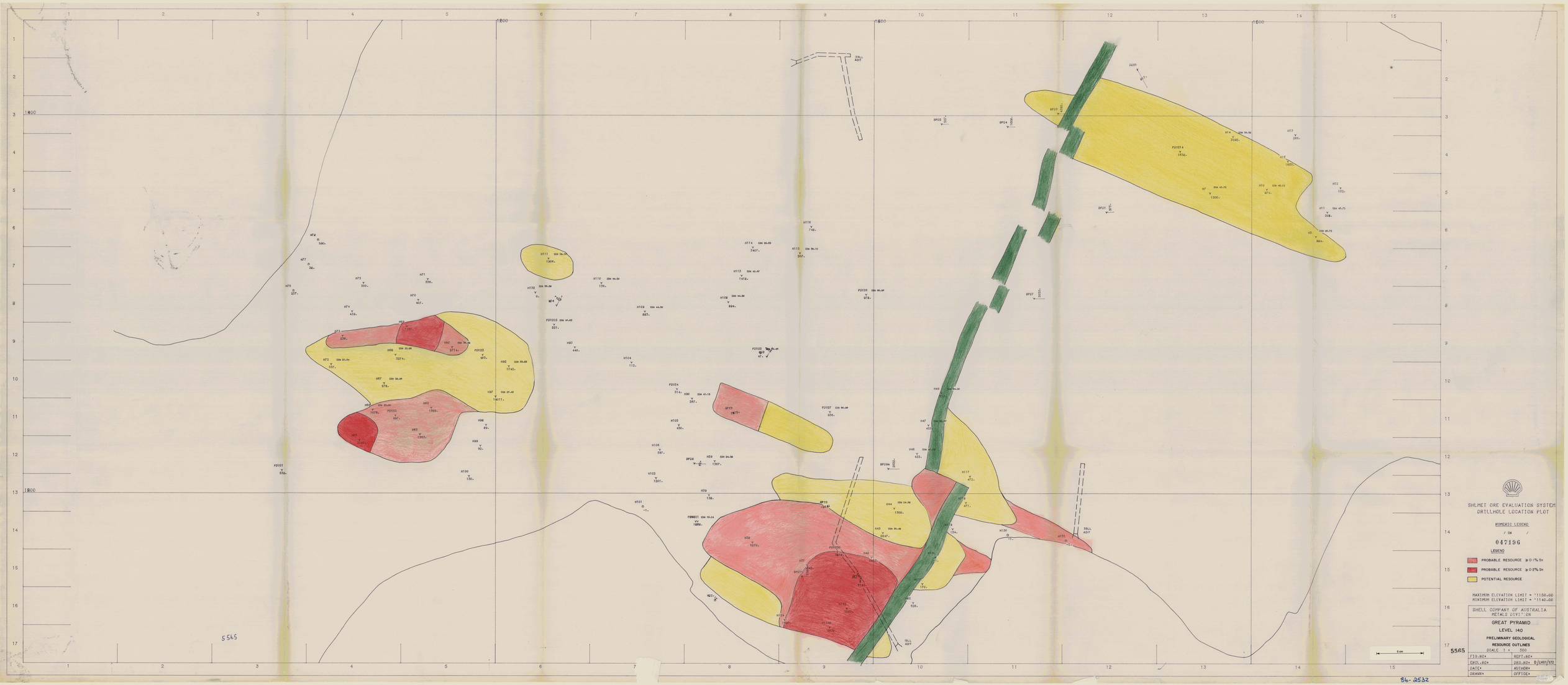
FIG.NO=	REPT.NO=
ENGL.NO=	DRG.NO= D/LH01/577
DATE=	AUTHOR=
DRAWN=	OFFICE=

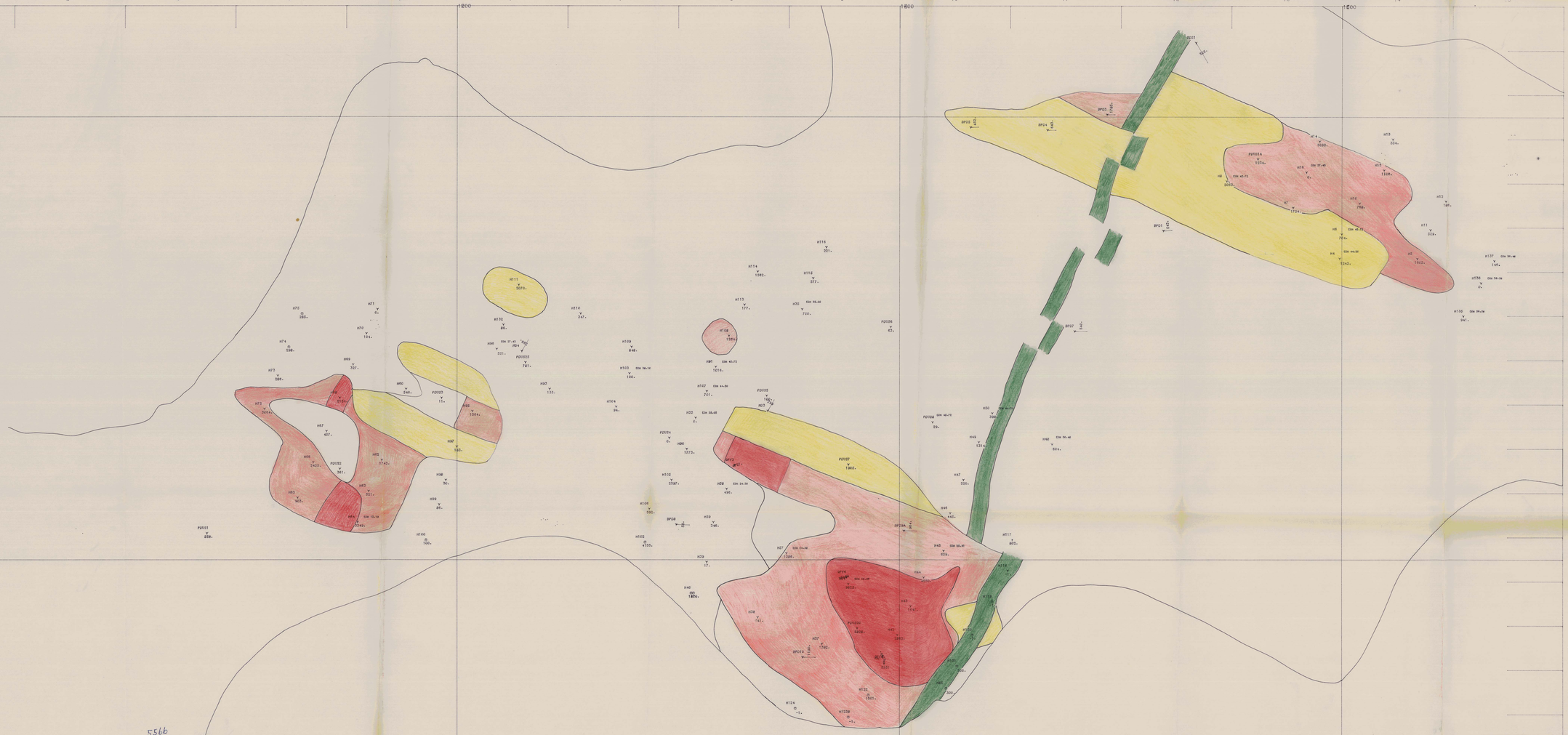

1200
1400
1600
1800
1000
1100
1200
1300
1400
1500
1600
1700
H78 EDH 35.69
0.
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PD8
PD9
PD10
PD11
PD12
PD13
PD14
PD15
PD16
PD17
PD18
PD19
PD20
PD21
PD22
PD23
PD24
PD25
PD26
PD27
PD28
PD29
PD30
PD31
PD32
PD33
PD34
PD35
PD36
PD37
PD38
PD39
PD40
PD41
PD42
PD43
PD44
PD45
PD46
PD47
PD48
PD49
PD50
PD51
PD52
PD53
PD54
PD55
PD56
PD57
PD58
PD59
PD60
PD61
PD62
PD63
PD64
PD65
PD66
PD67
PD68
PD69
PD70
PD71
PD72
PD73
PD74
PD75
PD76
PD77
PD78
PD79
PD80
PD81
PD82
PD83
PD84
PD85
PD86
PD87
PD88
PD89
PD90
PD91
PD92
PD93
PD94
PD95
PD96
PD97
PD98
PD99
PD100
PD101
PD102
PD103
PD104
PD105
PD106
PD107
PD108
PD109
PD110
PD111
PD112
PD113
PD114
PD115
PD116
PD117
PD118
PD119
PD120
PD121
PD122
PD123
PD124
PD125
PD126
PD127
PD128
PD129
PD130
PD131
PD132
PD133
PD134
PD135
PD136
PD137
PD138
PD139
PD140
PD141
PD142
PD143
PD144
PD145
PD146
PD147
PD148
PD149
PD150
PD151
PD152
PD153
PD154
PD155
PD156
PD157
PD158
PD159
PD160
PD161
PD162
PD163
PD164
PD165
PD166
PD167
PD168
PD169
PD170
PD171
PD172
PD173
PD174
PD175
PD176
PD177
PD178
PD179
PD180
PD181
PD182
PD183
PD184
PD185
PD186
PD187
PD188
PD189
PD190
PD191
PD192
PD193
PD194
PD195
PD196
PD197
PD198
PD199
PD200
PD201
PD202
PD203
PD204
PD205
PD206
PD207
PD208
PD209
PD210
PD211
PD212
PD213
PD214
PD215
PD216
PD217
PD218
PD219
PD220
PD221
PD222
PD223
PD224
PD225
PD226
PD227
PD228
PD229
PD230
PD231
PD232
PD233
PD234
PD235
PD236
PD237
PD238
PD239
PD240
PD241
PD242
PD243
PD244
PD245
PD246
PD247
PD248
PD249
PD250
PD251
PD252
PD253
PD254
PD255
PD256
PD257
PD258
PD259
PD260
PD261
PD262
PD263
PD264
PD265
PD266
PD267
PD268
PD269
PD270
PD271
PD272
PD273
PD274
PD275
PD276
PD277
PD278
PD279
PD280
PD281
PD282
PD283
PD284
PD285
PD286
PD287
PD288
PD289
PD290
PD291
PD292
PD293
PD294
PD295
PD296
PD297
PD298
PD299
PD300
PD301
PD302
PD303
PD304
PD305
PD306
PD307
PD308
PD309
PD310
PD311
PD312
PD313
PD314
PD315
PD316
PD317
PD318
PD319
PD320
PD321
PD322
PD323
PD324
PD325
PD326
PD327
PD328
PD329
PD330
PD331
PD332
PD333
PD334
PD335
PD336
PD337
PD338
PD339
PD340
PD341
PD342
PD343
PD344
PD345
PD346
PD347
PD348
PD349
PD350
PD351
PD352
PD353
PD354
PD355
PD356
PD357
PD358
PD359
PD360
PD361
PD362
PD363
PD364
PD365
PD366
PD367
PD368
PD369
PD370
PD371
PD372
PD373
PD374
PD375
PD376
PD377
PD378
PD379
PD380
PD381
PD382
PD383
PD384
PD385
PD386
PD387
PD388
PD389
PD390
PD391
PD392
PD393
PD394
PD395
PD396
PD397
PD398
PD399
PD400
PD401
PD402
PD403
PD404
PD405
PD406
PD407
PD408
PD409
PD410
PD411
PD412
PD413
PD414
PD415
PD416
PD417
PD418
PD419
PD420
PD421
PD422
PD423
PD424
PD425
PD426
PD427
PD428
PD429
PD430
PD431
PD432
PD433
PD434
PD435
PD436
PD437
PD438
PD439
PD440
PD441
PD442
PD443
PD444
PD445
PD446
PD447
PD448
PD449
PD450
PD451
PD452
PD453
PD454
PD455
PD456
PD457
PD458
PD459
PD460
PD461
PD462
PD463
PD464
PD465
PD466
PD467
PD468
PD469
PD470
PD471
PD472
PD473
PD474
PD475
PD476
PD477
PD478
PD479
PD480
PD481
PD482
PD483
PD484
PD485
PD486
PD487
PD488
PD489
PD490
PD491
PD492
PD493
PD494
PD495
PD496
PD497
PD498
PD499
PD500
PD501
PD502
PD503
PD504
PD505
PD506
PD507
PD508
PD509
PD510
PD511
PD512
PD513
PD514
PD515
PD516
PD517
PD518
PD519
PD520
PD521
PD522
PD523
PD524
PD525
PD526
PD527
PD528
PD529
PD530
PD531
PD532
PD533
PD534
PD535
PD536
PD537
PD538
PD539
PD540
PD541
PD542
PD543
PD544
PD545
PD546
PD547
PD548
PD549
PD550
PD551
PD552
PD553
PD554
PD555
PD556
PD557
PD558
PD559
PD560
PD561
PD562
PD563
PD564
PD565
PD566
PD567
PD568
PD569
PD570
PD571
PD572
PD573
PD574
PD575
PD576
PD577
PD578
PD579
PD580
PD581
PD582
PD583
PD584
PD585
PD586
PD587
PD588
PD589
PD590
PD591
PD592
PD593
PD594
PD595
PD596
PD597
PD598
PD599
PD600
PD601
PD602
PD603
PD604
PD605
PD606
PD607
PD608
PD609
PD610
PD611
PD612
PD613
PD614
PD615
PD616
PD617
PD618
PD619
PD620
PD621
PD622
PD623
PD624
PD625
PD626
PD627
PD628
PD629
PD630
PD631
PD632
PD633
PD634
PD635
PD636
PD637
PD638
PD639
PD640
PD641
PD642
PD643
PD644
PD645
PD646
PD647
PD648
PD649
PD650
PD651
PD652
PD653
PD654
PD655
PD656
PD657
PD658
PD659
PD660
PD661
PD662
PD663
PD664
PD665
PD666
PD667
PD668
PD669
PD670
PD671
PD672
PD673
PD674
PD675
PD676
PD677
PD678
PD679
PD680
PD681
PD682
PD683
PD684
PD685
PD686
PD687
PD688
PD689
PD690
PD691
PD692
PD693
PD694
PD695
PD696
PD697
PD698
PD699
PD700
PD701
PD702
PD703
PD704
PD705
PD706
PD707
PD708
PD709
PD710
PD711
PD712
PD713
PD714
PD715
PD716
PD717
PD718
PD719
PD720
PD721
PD722
PD723
PD724
PD725
PD726
PD727
PD728
PD729
PD730
PD731
PD732
PD733
PD734
PD735
PD736
PD737
PD738
PD739
PD740
PD741
PD742
PD743
PD744
PD745
PD746
PD747
PD748
PD749
PD750
PD751
PD752
PD753
PD754
PD755
PD756
PD757
PD758
PD759
PD760
PD761
PD762
PD763
PD764
PD765
PD766
PD767
PD768
PD769
PD770
PD771
PD772
PD773
PD774
PD775
PD776
PD777
PD778
PD779
PD780
PD781
PD782
PD783
PD784
PD785
PD786
PD787
PD788
PD789
PD790
PD791
PD792
PD793
PD794
PD795
PD796
PD797
PD798
PD799
PD800
PD801
PD802
PD803
PD804
PD805
PD806
PD807
PD808
PD809
PD810
PD811
PD812
PD813
PD814
PD815
PD816
PD817
PD818
PD819
PD820
PD821
PD822
PD823
PD824
PD825
PD826
PD827
PD828
PD829
PD830
PD831
PD832
PD833
PD834
PD835
PD836
PD837
PD838
PD839
PD840
PD841
PD842
PD843
PD844
PD845
PD846
PD847
PD848
PD849
PD850
PD851
PD852
PD853
PD854
PD855
PD856
PD857
PD858
PD859
PD860
PD861
PD862
PD863
PD864
PD865
PD866
PD867
PD868
PD869
PD870
PD871
PD872
PD873
PD874
PD875
PD876
PD877
PD878
PD879
PD880
PD881
PD882
PD883
PD884
PD885
PD886
PD887
PD888
PD889
PD890
PD891
PD892
PD893
PD894
PD895
PD896
PD897
PD898
PD899
PD900
PD901
PD902
PD903
PD904
PD905
PD906
PD907
PD908
PD909
PD910
PD911
PD912
PD913
PD914
PD915
PD916
PD917
PD918
PD919
PD920
PD921
PD922
PD923
PD924
PD925
PD926
PD927
PD928
PD929
PD930
PD931
PD932
PD933
PD934
PD935
PD936
PD937
PD938
PD939
PD940
PD941
PD942
PD943
PD944
PD945
PD946
PD947
PD948
PD949
PD950
PD951
PD952
PD953
PD954
PD955
PD956
PD957
PD958
PD959
PD960
PD961
PD962
PD963
PD964
PD965
PD966
PD967
PD968
PD969
PD970
PD971
PD972
PD973
PD974
PD975
PD976
PD977
PD978
PD979
PD980
PD981
PD982
PD983
PD984
PD985
PD986
PD987
PD988
PD989
PD990
PD991
PD992
PD993
PD994
PD995
PD996
PD997
PD998
PD999
PD1000
PD1001
PD1002
PD1003
PD1004
PD1005
PD1006
PD1007
PD1008
PD1009
PD1010
PD1011
PD1012
PD1013
PD1014
PD1015
PD1016
PD1017
PD1018
PD1019
PD1020
PD1021
PD1022
PD1023
PD1024
PD1025
PD1026
PD1027
PD1028
PD1029
PD1030
PD1031
PD1032
PD1033
PD1034
PD1035
PD1036
PD1037
PD1038
PD1039
PD1040
PD1041
PD1042
PD1043
PD1044
PD1045
PD1046
PD1047
PD1048
PD1049
PD1050
PD1051
PD1052
PD1053
PD1054
PD1055
PD1056
PD1057
PD1058
PD1059
PD1060
PD1061
PD1062
PD1063
PD1064
PD1065
PD1066
PD1067
PD1068
PD1069
PD1070
PD1071
PD1072
PD1073
PD1074
PD1075
PD1076
PD1077
PD1078
PD1079
PD1080
PD1081
PD1082
PD1083
PD1084
PD1085
PD1086
PD1087
PD1088
PD1089
PD1090
PD1091
PD1092
PD1093
PD1094
PD1095
PD1096
PD1097
PD1098
PD1099
PD1100
PD1101
PD1102
PD1103
PD1104
PD1105
PD1106
PD1107
PD1108
PD1109
PD1110
PD1111
PD1112
PD1113
PD1114
PD1115
PD1116
PD1117
PD1118
PD1119
PD1120
PD1121
PD1122
PD1123
PD1124
PD1125
PD1126
PD1127
PD1128
PD1129
PD1130
PD1131
PD1132
PD1133
PD1134
PD1135
PD1136
PD1137
PD1138
PD1139
PD1140
PD1141
PD1142
PD1143
PD1144
PD1145
PD1146
PD1147
PD1148
PD1149
PD1150
PD1151
PD1152
PD1153
PD1154
PD1155
PD1156
PD1157
PD1158
PD1159
PD1160
PD1161
PD1162
PD1163
PD1164
PD1165
PD1166
PD1167
PD1168
PD1169
PD1170
PD1171
PD1172
PD1173
PD1174
PD1175
PD1176
PD1177
PD1178
PD1179
PD1180
PD1181
PD1182
PD1183
PD1184
PD1185
PD1186
PD1187
PD1188
PD1189
PD1190
PD1191
PD1192
PD1193
PD1194
PD1195
PD1196
PD1197
PD1198
PD1199
PD1200
PD1201
PD1202
PD1203
PD1204
PD1205
PD1206
PD1207
PD1208
PD1209
PD1210
PD1211
PD1212
PD1213
PD1214
PD1215
PD1216
PD1217
PD1218
PD1219
PD1220
PD1221
PD1222
PD1223
PD1224
PD1225
PD1226
PD1227
PD1228
PD1229
PD1230
PD1231
PD1232
PD1233
PD1234
PD1235
PD1236
PD1237
PD1238
PD1239
PD1240
PD1241
PD1242
PD1243
PD1244
PD1245
PD1246
PD1247
PD1248
PD1249
PD1250
PD1251
PD1252
PD1253
PD1254
PD1255
PD1256
PD1257
PD1258
PD1259
PD1260
PD1261
PD1262
PD1263
PD1264
PD1265
PD1266
PD1267
PD1268
PD1269
PD1270
PD1271
PD1272
PD1273
PD1274
PD1275
PD1276
PD1277
PD1278
PD1279
PD1280
PD1281
PD1282
PD1283
PD1284
PD1285
PD1286
PD1287
PD1288
PD1289
PD1290
PD1291
PD1292
PD1293
PD1294
PD1295
PD1296
PD1297
PD1298
PD1299
PD1300
PD1301
PD1302
PD1303
PD1304
PD1305
PD1306
PD1307
PD1308
PD1309
PD1310
PD1311
PD1312
PD1313
PD1314
PD1315
PD1316
PD1317
PD1318
PD1319
PD1320
PD1321
PD1322
PD1323
PD1324
PD1325
PD1326
PD1327
PD1328
PD1329
PD1330
PD1331
PD1332
PD1333
PD1334
PD1335
PD1336
PD1337
PD1338
PD1339
PD1340
PD1341
PD1342
PD1343
PD1344
PD1345
PD1346
PD1347
PD1348
PD1349
PD1350
PD1351
PD1352
PD1353
PD1354
PD1355
PD1356
PD1357
PD1358
PD1359
PD1360
PD1361
PD1362
PD1363
PD1364
PD1365
PD1366
PD1367
PD1368
PD1369
PD1370
PD1371
PD1372
PD1373
PD1374
PD1375
PD1376
PD1377
PD1378
PD1379
PD1380
PD1381
PD1382
PD1383
PD1384
PD1385
PD1386
PD1387
PD1388
PD1389
PD1390
PD1391
PD1392
PD1393
PD1394
PD1395
PD1396
PD1397
PD1398
PD1399
PD1400
PD1401
PD1402
PD1403
PD1404
PD1405
PD1406
PD1407
PD1408
PD1409
PD1410
PD1411
PD1412
PD1413
PD1414
PD1415
PD1416
PD1417
PD1418
PD1419
PD1420
PD1421
PD1422
PD1423
PD1424
PD1425
PD1426
PD1427
PD1428
PD1429
PD1430
PD1431
PD1432
PD1433
PD1434
PD1435
PD1436
PD1437
PD1438
PD1439
PD1440
PD1441
PD1442
PD1443
PD1444
PD1445
PD1446
PD1447
PD1448
PD1449
PD1450
PD1451
PD1452
PD1453
PD1454
PD1455
PD1456
PD1457
PD1458
PD1459
PD1460
PD1461
PD1462
PD1463
PD1464
PD1465
PD1466
PD1467
PD1468
PD1469
PD1470
PD1471
PD1472
PD1473
PD1474
PD1475
PD1476
PD1477
PD1478
PD1479
PD1480
PD1481
PD1482
PD1483
PD1484
PD1485
PD1486
PD1487
PD1488
PD1489
PD1490
PD1491
PD1492
PD1493
PD1494
PD1495
PD1496
PD1497
PD1498
PD1499
PD1500
PD1501
PD1502
PD1503
PD1504
PD1505
PD1506
PD1507
PD1508
PD1509
PD1510
PD1511
PD1512
PD1513
PD1514
PD1515
PD1516
PD1517
PD1518
PD1519
PD1520
PD1521
PD1522
PD1523
PD1524
PD1525
PD1526
PD1527
PD1528
PD1529
PD1530
PD1531
PD1532
PD1533
PD1534
PD1535
PD1536
PD1537
PD1538
PD1539
PD1540
PD1541
PD1542
PD1543
PD1544
PD1545
PD1546
PD1547
PD1548
PD1549
PD1550
PD1551
PD1552
PD1553
PD1554
PD1555
PD1556
PD1557
PD1558
PD1559
PD1560
PD1561
PD1562
PD1563
PD1564
PD1565
PD1566
PD1567
PD1568
PD1569
PD1570
PD1571
PD1572
PD1573
PD1574
PD1575
PD1576
PD1577
PD1578
PD1579
PD1580
PD1581
PD1582
PD1583
PD1584
PD1585
PD1586
PD1587
PD1588
PD1589
PD1590
PD1591
PD1592
PD1593
PD1594
PD1595
PD1596
PD1597
PD1598
PD1599
PD1600
PD1601
PD1602
PD1603
PD1604
PD1605
PD1606
PD1607
PD1608
PD1609
PD1610
PD1611
PD1612
PD1613
PD1614
PD1615
PD1616
PD1617
PD1618
PD1619
PD1620
PD1621
PD1622
PD1623
PD1624
PD1625
PD1626
PD1627
PD1628
PD1629
PD1630
PD1631
PD1632
PD1633
PD1634
PD1635
PD1636
PD1637
PD1638
PD1639
PD1640
PD1641
PD1642
PD1643
PD1644
PD1645
PD1646
PD1647
PD1648
PD1649
PD1650
PD1651
PD1652
PD1653
PD1654
PD1655
PD1656
PD1657
PD1658
PD1659
PD1660
PD1661
PD1662
PD1663
PD1664
PD1665
PD1666
PD1667
PD1668
PD1669
PD1670
PD1671
PD1672
PD1673
PD1674
PD1675
PD1676
PD1677
PD1678
PD1679
PD1680
PD1681
PD1682
PD1683
PD1684
PD1685
PD1686
PD1687
PD1688
PD1689
PD1690
PD1691
PD1692
PD1693
PD1694
PD1695
PD1696
PD1697
PD1698
PD1699
PD1700
PD1701
PD1702
PD1703
PD1704
PD1705
PD1706
PD1707
PD1708
PD1709
PD1710
PD1711
PD1712
PD1713
PD1714
PD1715
PD1716
PD1717
PD1718
PD1719
PD1720
PD1721
PD1722
PD1723
PD1724
PD1725
PD1726
PD1727
PD1728
PD1729
PD1730
PD1731
PD1732
PD1733
PD1734
PD1735
PD1736
PD1737
PD1738
PD1739
PD1740
PD1741
PD1742
PD1743
PD1744
PD1745
PD1746
PD1747
PD1748
PD1749
PD1750
PD1751
PD1752
PD1753
PD1754
PD1755
PD1756
PD1757
PD1758
PD1759
PD1760
PD1761
PD1762
PD1763
PD1764
PD1765
PD1766
PD1767
PD1768
PD1769
PD1770
PD1771
PD1772
PD1773
PD1774
PD1775
PD1776
PD1777
PD1778
PD1779
PD1780
PD1781
PD1782
PD1783
PD1784
PD1785
PD1786
PD1787
PD1788
PD1789
PD1790
PD1791
PD1792
PD1793
PD1794
PD1795
PD1796
PD1797
PD1798
PD1799
PD1800
PD1801
PD1802
PD1803
PD1804
PD1805
PD1806
PD1807
PD1808
PD1809
PD1810
PD1811
PD1812
PD1813
PD1814
PD1815
PD1816
PD1817
PD1818
PD1819
PD1820
PD1821
PD1822
PD1823
PD1824
PD1825
PD1826
PD1827
PD1828
PD1829
PD1830
PD1831
PD1832
PD1833
PD1834
PD1835
PD1836
PD1837
PD1838
PD1839
PD1840
PD1841
PD1842
PD1843
PD1844
PD1845
PD1846
PD1847
PD1848
PD1849
PD1850
PD1851
PD1852
PD1853
PD1854
PD1855
PD1856
PD1857
PD1858
PD1859
PD1860
PD1861
PD1862
PD1863
PD1864
PD1865
PD1866
PD1867
PD1868
PD1869
PD1870
PD1871
PD1872
PD1873
PD1874
PD1875
PD1876
PD1877
PD1878
PD1879
PD1880
PD1881
PD1882
PD1883
PD1884
PD1885
PD1886
PD1887
PD1888
PD1889
PD1890
PD1891
PD1892
PD1893
PD1894
PD1895
PD1896
PD1897
PD1898
PD1899
PD1900
PD1901
PD1902
PD1903
PD1904
PD1905
PD1906
PD1907
PD1908
PD1909
PD1910
PD1911
PD1912
PD1913
PD1914
PD1915
PD1916
PD1917
PD1918
PD1919
PD1920
PD1921
PD1922
PD1923
PD1924
PD1925
PD1926
PD1927
PD1928
PD1929
PD1930
PD1931
PD1932
PD1933
PD1934
PD1935
PD1936
PD1937
PD1938
PD1939
PD1940
PD1941
PD1942
PD1943
PD1944
PD1945
PD1946
PD1947
PD1948
PD1949
PD1950
PD1951
PD1952
PD1953
PD1954
PD1955
PD1956
PD1957
PD1958
PD1959
PD1960
PD1961
PD1962
PD1963
PD1964
PD1965
PD1966
PD1967
PD1968
PD1969
PD1970
PD1971
PD1972
PD1973
PD1974
PD1975
PD1976
PD1977
PD1978
PD1979
PD1980
PD1981
PD1982
PD1983
PD1984
PD1985
PD1986
PD1987
PD1988
PD1989
PD1990
PD1991
PD1992
PD1993
PD1994
PD1995
PD1996
PD1997
PD1998
PD1999
PD2000
PD2001
PD2002
PD2003
PD2004
PD2005
PD2006
PD2007
PD2008
PD2009
PD2010
PD2011
PD2012
PD2013
PD2014
PD2015
PD2016
PD2017
PD2018
PD2019
PD2020
PD2021
PD2022
PD2023
PD2024
PD2025
PD2026
PD2027
PD2028
PD2029
PD2030
PD2031
PD2032
PD2033
PD2034
PD2035
PD2036
PD2037
PD2038
PD2039
PD2040
PD2041
PD2042
PD2043
PD2044
PD2045
PD2046
PD2047
PD2048
PD2049
PD2050
PD2051
PD2052
PD2053
PD2054
PD2055
PD2056
PD2057
PD2058
PD2059
PD2060
PD2061
PD2062
PD2063
PD2064
PD2065
PD2066
PD2067
PD2068
PD2069
PD2070
PD2071
PD2072
PD2073
PD2074
PD2075
PD2076
PD2077
PD2078
PD2079
PD2080
PD2081
PD2082
PD2083
PD2084
PD2085
PD2086
PD2087
PD2088
PD2089
PD2090
PD2091
PD2092
PD2093
PD2094
PD2095
PD2096
PD2097
PD2098
PD2099
PD2100
PD2101
PD2102
PD2103
PD2104
PD2105
PD2106
PD2107
PD2108
PD2109
PD2110
PD2111
PD2112
PD2113
PD2114
PD2115
PD2116
PD2117
PD2118
PD2119
PD2120
PD2121
PD2122
PD2123
PD2124
PD2125
PD2126
PD2127
PD2128
PD2129
PD2130
PD2131
PD2132
PD2133
PD2134
PD2135
PD2136
PD2137
PD2138
PD2139
PD2140
PD2141
PD2142
PD2143
PD2144
PD2145
PD2146
PD2147
PD2148
PD2149
PD2150
PD2151
PD2152
PD2153
PD2154
PD2155
PD2156
PD2157
PD2158
PD2159
PD2160
PD2161
PD2162
PD2163
PD2164
PD2165
PD2166
PD2167
PD2168
PD2169
PD2170
PD2171
PD2172
PD2173
PD2174
PD2175
PD2176
PD2177
PD2178
PD2179
PD2180
PD2181
PD2182
PD2183
PD2184
PD2185
PD2186
PD2187
PD2188
PD2189
PD2190
PD2191
PD2192
PD2193
PD2194
PD2195
PD2196
PD2197
PD2198
PD2199
PD2200
PD2201
PD2202
PD2203
PD2204
PD2205
PD2206
PD2207
PD2208
PD2209
PD2210
PD2211
PD2212
PD2213
PD2214
PD2215
PD2216
PD2217
PD2218
PD2219
PD2220
PD2221
PD2222
PD2223
PD2224
PD2225
PD2226
PD2227
PD2228
PD2229
PD2230
PD2231
PD2232
PD2233
PD2234
PD2235
PD2236
PD2237
PD2238
PD2239
PD2240
PD2241
PD2242
PD2243
PD2244
PD2245
PD2246
PD2247
PD2248
PD2249
PD2250
PD2251
PD2252
PD2253
PD2254
PD2255
PD2256
PD2257
PD2258
PD2259
PD2260
PD2261
PD2262
PD2263
PD2264
PD2265
PD2266
PD2267
PD2268
PD2269
PD2270
PD2271
PD2272
PD2273
PD2274
PD2275
PD2276
PD2277
PD2278
PD2279
PD2280
PD2281
PD2282
PD2283
PD2284
PD2285
PD2286
PD2287
PD2288
PD2289
PD2290
PD2291
PD2292
PD2293
PD2294
PD2295
PD2296
PD2297
PD2298
PD2299
PD2300
PD2301
PD2302
PD2303
PD2304
PD2305
PD2306
PD2307
PD2308
PD2309
PD2310
PD2311
PD2312
PD2313
PD2314
PD2315
PD2316
PD2317
PD2318
PD2319
PD2320
PD2321
PD2322
PD2323
PD2324
PD2325
PD2326
PD2327
PD2328
PD2329
PD2330
PD2331
PD2332
PD2333
PD2334
PD2335
PD2336
PD2337
PD2338
PD2339
PD2340
PD2341
PD2342
PD2343
PD2344
PD2345
PD2346
PD2347
PD2348
PD2349
PD2350
PD2351
PD2352
PD2353
PD2354
PD2355
PD2356
PD2357
PD2358
PD2359
PD2360
PD2361
PD2362
PD2363
PD2364
PD2365
PD2366
PD2367
PD2368
PD2369
PD2370
PD2371
PD2372
PD2373
PD2374
PD2375
PD2376
PD2377
PD2378
PD2379
PD2380
PD2381
PD2382
PD2383
PD2384
PD2385
PD2386
PD2387
PD2388
PD2389
PD2390
PD2391
PD2392
PD2393
PD2394
PD2395
PD2396
PD2397
PD2398
PD2399
PD2400
PD2401
PD2402
PD2403
PD2404
PD2405
PD2406
PD2407
PD2408
PD2409
PD2410
PD2411
PD2412
PD2413
PD2414
PD2415
PD2416
PD2417
PD2418
PD2419
PD2420
PD2421
PD2422
PD2423
PD2424
PD2425
PD2426
PD2427
PD2428
PD2429
PD2430
PD2431
PD2432
PD2433
PD2434
PD2435
PD2436
PD2437
PD2438
PD2439
PD2440
PD2441
PD2442
PD2443
PD2444
PD2445
PD2446
PD2447
PD2448
PD2449
PD2450
PD2451
PD2452
PD2453
PD2454
PD2455
PD2456
PD2457
PD2458
PD2459
PD2460
PD2461
PD2462
PD2463
PD2464
PD2465
PD2466
PD2467
PD2468
PD2469
PD2470
PD2471
PD2472
PD2473
PD2474
PD2475
PD2476
PD2477
PD2478
PD2479
PD2480
PD2481
PD2482
PD2483
PD2484
PD2485
PD2486
PD2487
PD2488
PD2489
PD2490
PD2491
PD2492
PD2493
PD2494
PD2495
PD2496
PD2497
PD2498
PD2499
PD2500
PD2501
PD2502
PD2503
PD2504
PD2505
PD2506
PD2507
PD2508
PD2509
PD2510
PD2511
PD2512
PD2513
PD2514
PD2515
PD2516
PD2517
PD2518
PD2519
PD2520
PD2521
PD2522
PD2523
PD2524
PD2525
PD2526
PD2527
PD2528
PD2529
PD2530
PD2531
PD2532
PD2533
PD2534
PD2535
PD2536
PD2537
PD2538
PD2539
PD2540
PD2541
PD2542
PD2543
PD2544
PD2545
PD2546
PD2547
PD2548
PD2549
PD2550
PD2551
PD2552
PD2553
PD2554
PD2555
PD2556
PD2557
PD2558
PD2559
PD2560
PD2561
PD2562
PD2563
PD2564
PD2565
PD2566
PD2567
PD2568
PD2569
PD2570
PD2571
PD2572
PD2573
PD2574
PD2575
PD2576
PD2577
PD2578
PD2579
PD2580
PD2581
PD2582
PD2583
PD2584
PD2585
PD2586
PD2587
PD2588
PD2589
PD2590
PD2591
PD2592
PD2593
PD2594
PD2595
PD2596
PD2597
PD2598
PD2599
PD2600
PD2601
PD2602
PD2603
PD2604
PD2605
PD2606
PD2607
PD2608
PD2609
PD2610
PD2611
PD2612
PD2613
PD2614
PD2615
PD2616
PD2617
PD2618
PD2619
PD2620
PD2621
PD2622
PD2623
PD2624
PD2625
PD2626
PD2627
PD2628
PD2629
PD2630
PD2631
PD2632
PD2633
PD2634
PD2635
PD2636
PD2637
PD2638
PD2639
PD2640
PD2641
PD2642
PD2643
PD2644
PD2645
PD2646
PD2647
PD2648
PD2649
PD2650
PD2651
PD2652
PD2653
PD2654
PD2655
PD2656
PD2657
PD2658
PD2659
PD2660
PD2661
PD2662
PD2663
PD2664
PD2665
PD2666
PD2667
PD2668
PD2669
PD2670
PD2671
PD2672
PD2673
PD2674
PD2675
PD2676
PD2677
PD2678
PD2679
PD2680
PD2681
PD2682
PD2683
PD2684
PD2685
PD2686
PD2687
PD2688
PD2689
PD2690
PD2691
PD2692
PD2693
PD2694
PD2695
PD2696
PD2697
PD2698
PD2699
PD2700
PD2701
PD2702
PD2703
PD2704
PD2705
PD2706
PD2707
PD2708
PD2709
PD2710
PD2711
PD2712
PD2713
PD2714
PD2715
PD2716
PD2717
PD2718
PD2719
PD2720
PD2721
PD2722
PD2723
PD2724
PD2725
PD2726
PD2727
PD2728
PD2729
PD2730
PD2731
PD2732
PD2733
PD2734
PD2735
PD2736
PD2737
PD2738
PD2739
PD2740
PD2741
PD2742
PD2743
PD2744
PD2745
PD2746
PD2747
PD2748
PD2749
PD2750
PD2751
PD2752
PD2753
PD2754
PD2755
PD2756
PD2757
PD2758
PD2759
PD2760
PD2761
PD2762
PD2763
PD2764
PD2765
PD2766
PD2767
PD2768
PD2769
PD2770
PD2771
PD2772
PD2773
PD2774
PD2775
PD2776
PD2777
PD2778
PD2779
PD2780
PD2781
PD2782
PD2783
PD2784
PD2785
PD2786
PD2787
PD2788
PD2789
PD2790
PD2791
PD2792
PD2793
PD2794
PD2795
PD2796
PD2797
PD2798
PD2799
PD2800
PD2801
PD2802
PD2803
PD2804
PD2805
PD2806
PD2807
PD2808
PD2809
PD2810
PD2811
PD2812
PD2813
PD2814
PD2815
PD2816
PD2817
PD2818
PD2819
PD2820
PD2821
PD2822
PD2823
PD2824
PD2825
PD2826
PD2827
PD2828
PD2829
PD2830
PD2831
PD2832
PD2833
PD2834
PD2835
PD2836
PD2837
PD2838
PD2839
PD2840
PD2841
PD2842
PD2843
PD2844
PD2845
PD2846
PD2847
PD2848
PD2849
PD2850
PD2851
PD2852
PD2853
PD2854
PD2855
PD2856
PD2857
PD2858
PD2859
PD2860
PD2861
PD2862
PD2863
PD2864
PD2865
PD2866
PD2867
PD2868
PD2869
PD2870
PD2871
PD2872
PD2873
PD2874
PD2875
PD2876
PD2877
PD2878
PD2879
PD2880
PD2881
PD2882
PD2883
PD2884
PD2885
PD2886
PD2887
PD2888
PD2889
PD2890
PD2891
PD2892
PD2893
PD2894
PD2895
PD2896
PD2897
PD2898
PD2899
PD2900
PD2901
PD2902
PD2903
PD2904
PD2905
PD2906
PD2907
PD2908
PD2909
PD2910
PD2911
PD2912
PD2913
PD2914
PD2915
PD2916
PD2917
PD2918
PD2919
PD2920
PD2921
PD2922
PD2923
PD2924
PD2925
PD2926
PD2927
PD2928
PD2929
PD2930
PD2931
PD2932
PD2933
PD2934
PD2935
PD2936
PD2937
PD2938
PD2939
PD2940
PD2941
PD2942
PD2943
PD2944
PD2945
PD2946
PD2947
PD2948
PD2949
PD2950
PD2951
PD2952
PD2953
PD2954
PD2955
PD2956
PD2957
PD2958
PD2959
PD2960
PD2961
PD2962
PD2963
PD2964
PD2965
PD2966
PD2967
PD2968
PD2969
PD2970
PD2971
PD2972
PD2973
PD2974
PD2975
PD2976
PD2977
PD2978
PD2979
PD2980
PD2981
PD2982
PD2983
PD2984
PD2985
PD2986
PD2987
PD2988
PD2989
PD2990
PD2991
PD2992
PD2993
PD2994
PD2995
PD2996
PD2997
PD2998
PD2999
PD3000
PD3001
PD3002
PD3003
PD3004
PD3005
PD3006
PD3007
PD3008
PD3009
PD3010
PD3011
PD3012
PD3013
PD3014
PD3015
PD3016
PD3017
PD3018
PD3019
PD3020
PD3021
PD3022
PD3023
PD3024
PD3025
PD3026
PD3027
PD3028
PD3029
PD3030
PD3031
PD3032
PD3033
PD3034
PD3035
PD3036
PD3037
PD3038
PD3039
PD3040
PD3041
PD3042
PD3043
PD3044
PD3045
PD3046
PD3047
PD3048
PD3049
PD3050
PD3051
PD3052
PD3053
PD3054
PD3055
PD3056
PD3057
PD3058
PD3059
PD3060
PD3061
PD3062
PD3063
PD3064
PD3065
PD3066
PD3067
PD3068
PD3069
PD3070
PD3071
PD3072
PD3073
PD3074
PD3075
PD3076
PD3077
PD3078
PD3079
PD3080
PD3081
PD3082
PD3083
PD3084
PD3085
PD3086
PD3087
PD3088
PD3089
PD3090
PD3091
PD3092
PD3093
PD3094
PD3095
PD3096
PD3097
PD3098
PD3099
PD3100
PD3101
PD3102
PD3103
PD3104
PD3105
PD3106
PD3107
PD3108
PD3109
PD3110
PD3111
PD3112
PD3113
PD3114
PD3115
PD3116
PD3117
PD3118
PD3119
PD3120
PD3121
PD3122
PD3123
PD3124
PD3125
PD3126
PD3127
PD3128
PD3129
PD3130
PD3131
PD3132
PD3133
PD3134
PD3135
PD3136
PD3137
PD3138
PD3139
PD3140
PD3141
PD3142
PD3143
PD3144
PD3145
PD3146
PD3147
PD3148
PD3149
PD3150
PD3151
PD3152
PD3153
PD3154
PD3155
PD3156
PD3157
PD3158
PD3159
PD3160
PD3161
PD3162
PD3163
PD3164
PD3165
PD3166
PD3167
PD3168
PD3169
PD3170
PD3171
PD3172
PD3173
PD3174
PD3175
PD3176
PD3177
PD3178
PD3179
PD3180
PD3181
PD3182
PD3183
PD3184
PD3185
PD3186
PD3187
PD3188
PD3189
PD3190
PD3191
PD3192
PD3193
PD3194
PD3195
PD3196
PD3197
PD3198
PD3199
PD3200
PD3201
PD3202
PD3203
PD3204
PD3205
PD3206
PD3207
PD3208
PD3209
PD3210
PD3211
PD3212
PD3213
PD3214
PD3215
PD3216
PD3217
PD3218
PD3219
PD3220
PD3221
PD3222
PD3223
PD3224
PD3225
PD3226
PD3227
PD3228
PD3229
PD3230
PD3231
PD3232
PD3233
PD3234
PD3235
PD3236
PD3237
PD3238
PD3239
PD3240
PD3241
PD3242
PD3243
PD3244
PD3245
PD3246
PD3247
PD3248
PD3249
PD3250
PD3251
PD3252
PD3253
PD3254
PD3255
PD3256
PD3257
PD3258
PD3259
PD3260
PD3261
PD3262
PD3263
PD3264
PD3265
PD3266
PD3267
PD3268
PD3269
PD3270
PD3271
PD3272
PD3273
PD3274
PD3275
PD3276
PD3277
PD3278
PD3279
PD3280
PD3281
PD3282
PD3283
PD3284
PD3285
PD3286
PD3287
PD3288
PD3289
PD3290
PD3291
PD3292
PD3293
PD3294
PD3295
PD3296
PD3297
PD3298
PD3299
PD3300
PD3301
PD3302
PD3303
PD3304
PD3305
PD3306
PD3307
PD3308
PD3309
PD3310
PD3311
PD3312
PD3313
PD3314
PD3315
PD3316
PD3317
PD3318
PD3319
PD3320
PD3321
PD3322
PD3323
PD3324
PD3325
PD3326
PD3327
PD3328
PD3329
PD3330
PD3331
PD3332
PD3333
PD3334
PD3335
PD3336
PD3337
PD3338
PD3339
PD3340
PD3341
PD3342
PD3343
PD3344
PD3345
PD3346
PD3347
PD3348
PD3349
PD3350
PD3351
PD3352
PD3353
PD3354
PD3355
PD3356
PD3357
PD3358
PD3359
PD3360
PD3361
PD3362
PD3363
PD3364
PD3365
PD3366
PD3367
PD3368
PD3369
PD3370
PD3371
PD3372
PD3373
PD3374
PD3375
PD3376
PD3377
PD3378
PD3379


1800
1400
H78 247.
H77 DDH 93-03 124.
H76 DDH 93-04 251.
PD24
PD23
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PD8
PD9
PD10
PD11
PD12
PD13
PD14
PD15
PD16
PD17
PD18
PD19
PD20
PD21
PD22
PD101
H99 DDH 45-67 100.
H100 DDH 94-03 100.
H101 246.
H39 DDH 45-72 200.
H40 DDH 45-73 318.
H83 188.
H84 264.
GPT3 0647.
GPT8 -198
BPD8
BPD1
BPD2
BPD3 230.
BPD4 DDH 45-71 BPD5 DDH 45-72
BPD6 DDH 45-73
BPD7 DDH 45-74 BPD8
BPD9 DDH 45-75 BPD10 DDH 45-76
BPD11 DDH 45-77
BPD12 DDH 45-78
BPD13 DDH 45-79
BPD14 DDH 45-80
BPD15 DDH 45-81
BPD16 DDH 45-82
BPD17 DDH 45-83
BPD18 DDH 45-84
BPD19 DDH 45-85
BPD20 DDH 45-86
BPD21 DDH 45-87
BPD22 DDH 45-88
BPD23 DDH 45-89
BPD24 DDH 45-90
BPD25 DDH 45-91
BPD26 DDH 45-92
BPD27 DDH 45-93
BPD28 DDH 45-94
BPD29 DDH 45-95
BPD30 DDH 45-96
BPD31 DDH 45-97
BPD32 DDH 45-98
BPD33 DDH 45-99
BPD34 DDH 45-100
BPD35 DDH 45-101
BPD36 DDH 45-102
BPD37 DDH 45-103
BPD38 DDH 45-104
BPD39 DDH 45-105
BPD40 DDH 45-106
BPD41 DDH 45-107
BPD42 DDH 45-108
BPD43 DDH 45-109
BPD44 DDH 45-110
BPD45 DDH 45-111
BPD46 DDH 45-112
BPD47 DDH 45-113
BPD48 DDH 45-114
BPD49 DDH 45-115
BPD50 DDH 45-116
BPD51 DDH 45-117
BPD52 DDH 45-118
BPD53 DDH 45-119
BPD54 DDH 45-120
BPD55 DDH 45-121
BPD56 DDH 45-122
BPD57 DDH 45-123
BPD58 DDH 45-124
BPD59 DDH 45-125
BPD60 DDH 45-126
BPD61 DDH 45-127
BPD62 DDH 45-128
BPD63 DDH 45-129
BPD64 DDH 45-130
BPD65 DDH 45-131
BPD66 DDH 45-132
BPD67 DDH 45-133
BPD68 DDH 45-134
BPD69 DDH 45-135
BPD70 DDH 45-136
BPD71 DDH 45-137
BPD72 DDH 45-138
BPD73 DDH 45-139
BPD74 DDH 45-140
BPD75 DDH 45-141
BPD76 DDH 45-142
BPD77 DDH 45-143
BPD78 DDH 45-144
BPD79 DDH 45-145
BPD80 DDH 45-146
BPD81 DDH 45-147
BPD82 DDH 45-148
BPD83 DDH 45-149
BPD84 DDH 45-150
BPD85 DDH 45-151
BPD86 DDH 45-152
BPD87 DDH 45-153
BPD88 DDH 45-154
BPD89 DDH 45-155
BPD90 DDH 45-156
BPD91 DDH 45-157
BPD92 DDH 45-158
BPD93 DDH 45-159
BPD94 DDH 45-160
BPD95 DDH 45-161
BPD96 DDH 45-162
BPD97 DDH 45-163
BPD98 DDH 45-164
BPD99 DDH 45-165
BPD100 DDH 45-166
BPD101 DDH 45-167
BPD102 DDH 45-168
BPD103 DDH 45-169
BPD104 DDH 45-170
BPD105 DDH 45-171
BPD106 DDH 45-172
BPD107 DDH 45-173
BPD108 DDH 45-174
BPD109 DDH 45-175
BPD110 DDH 45-176
BPD111 DDH 45-177
BPD112 DDH 45-178
BPD113 DDH 45-179
BPD114 DDH 45-180
BPD115 DDH 45-181
BPD116 DDH 45-182
BPD117 DDH 45-183
BPD118 DDH 45-184
BPD119 DDH 45-185
BPD120 DDH 45-186
BPD121 DDH 45-187
BPD122 DDH 45-188
BPD123 DDH 45-189
BPD124 DDH 45-190
BPD125 DDH 45-191
BPD126 DDH 45-192
BPD127 DDH 45-193
BPD128 DDH 45-194
BPD129 DDH 45-195
BPD130 DDH 45-196
BPD131 DDH 45-197
BPD132 DDH 45-198
BPD133 DDH 45-199
BPD134 DDH 45-200
BPD135 DDH 45-201
BPD136 DDH 45-202
BPD137 DDH 45-203
BPD138 DDH 45-204
BPD139 DDH 45-205
BPD140 DDH 45-206
BPD141 DDH 45-207
BPD142 DDH 45-208
BPD143 DDH 45-209
BPD144 DDH 45-210
BPD145 DDH 45-211
BPD146 DDH 45-212
BPD147 DDH 45-213
BPD148 DDH 45-214
BPD149 DDH 45-215
BPD150 DDH 45-216
BPD151 DDH 45-217
BPD152 DDH 45-218
BPD153 DDH 45-219
BPD154 DDH 45-220
BPD155 DDH 45-221
BPD156 DDH 45-222
BPD157 DDH 45-223
BPD158 DDH 45-224
BPD159 DDH 45-225
BPD160 DDH 45-226
BPD161 DDH 45-227
BPD162 DDH 45-228
BPD163 DDH 45-229
BPD164 DDH 45-230
BPD165 DDH 45-231
BPD166 DDH 45-232
BPD167 DDH 45-233
BPD168 DDH 45-234
BPD169 DDH 45-235
BPD170 DDH 45-236
BPD171 DDH 45-237
BPD172 DDH 45-238
BPD173 DDH 45-239
BPD174 DDH 45-240
BPD175 DDH 45-241
BPD176 DDH 45-242
BPD177 DDH 45-243
BPD178 DDH 45-244
BPD179 DDH 45-245
BPD180 DDH 45-246
BPD181 DDH 45-247
BPD182 DDH 45-248
BPD183 DDH 45-249
BPD184 DDH 45-250
BPD185 DDH 45-251
BPD186 DDH 45-252
BPD187 DDH 45-253
BPD188 DDH 45-254
BPD189 DDH 45-255
BPD190 DDH 45-256
BPD191 DDH 45-257
BPD192 DDH 45-258
BPD193 DDH 45-259
BPD194 DDH 45-260
BPD195 DDH 45-261
BPD196 DDH 45-262
BPD197 DDH 45-263
BPD198 DDH 45-264
BPD199 DDH 45-265
BPD200 DDH 45-266
BPD201 DDH 45-267
BPD202 DDH 45-268
BPD203 DDH 45-269
BPD204 DDH 45-270
BPD205 DDH 45-271
BPD206 DDH 45-272
BPD207 DDH 45-273
BPD208 DDH 45-274
BPD209 DDH 45-275
BPD210 DDH 45-276
BPD211 DDH 45-277
BPD212 DDH 45-278
BPD213 DDH 45-279
BPD214 DDH 45-280
BPD215 DDH 45-281
BPD216 DDH 45-282
BPD217 DDH 45-283
BPD218 DDH 45-284
BPD219 DDH 45-285
BPD220 DDH 45-286
BPD221 DDH 45-287
BPD222 DDH 45-288
BPD223 DDH 45-289
BPD224 DDH 45-290
BPD225 DDH 45-291
BPD226 DDH 45-292
BPD227 DDH 45-293
BPD228 DDH 45-294
BPD229 DDH 45-295
BPD230 DDH 45-296
BPD231 DDH 45-297
BPD232 DDH 45-298
BPD233 DDH 45-299
BPD234 DDH 45-300
BPD235 DDH 45-301
BPD236 DDH 45-302
BPD237 DDH 45-303
BPD238 DDH 45-304
BPD239 DDH 45-305
BPD240 DDH 45-306
BPD241 DDH 45-307
BPD242 DDH 45-308
BPD243 DDH 45-309
BPD244 DDH 45-310
BPD245 DDH 45-311
BPD246 DDH 45-312
BPD247 DDH 45-313
BPD248 DDH 45-314
BPD249 DDH 45-315
BPD250 DDH 45-316
BPD251 DDH 45-317
BPD252 DDH 45-318
BPD253 DDH 45-319
BPD254 DDH 45-320
BPD255 DDH 45-321
BPD256 DDH 45-322
BPD257 DDH 45-323
BPD258 DDH 45-324
BPD259 DDH 45-325
BPD260 DDH 45-326
BPD261 DDH 45-327
BPD262 DDH 45-328
BPD263 DDH 45-329
BPD264 DDH 45-330
BPD265 DDH 45-331
BPD266 DDH 45-332
BPD267 DDH 45-333
BPD268 DDH 45-334
BPD269 DDH 45-335
BPD270 DDH 45-336
BPD271 DDH 45-337
BPD272 DDH 45-338
BPD273 DDH 45-339
BPD274 DDH 45-340
BPD275 DDH 45-341
BPD276 DDH 45-342
BPD277 DDH 45-343
BPD278 DDH 45-344
BPD279 DDH 45-345
BPD280 DDH 45-346
BPD281 DDH 45-347
BPD282 DDH 45-348
BPD283 DDH 45-349
BPD284 DDH 45-350
BPD285 DDH 45-351
BPD286 DDH 45-352
BPD287 DDH 45-353
BPD288 DDH 45-354
BPD289 DDH 45-355
BPD290 DDH 45-356
BPD291 DDH 45-357
BPD292 DDH 45-358
BPD293 DDH 45-359
BPD294 DDH 45-360
BPD295 DDH 45-361
BPD296 DDH 45-362
BPD297 DDH 45-363
BPD298 DDH 45-364
BPD299 DDH 45-365
BPD300 DDH 45-366
BPD301 DDH 45-367
BPD302 DDH 45-368
BPD303 DDH 45-369
BPD304 DDH 45-370
BPD305 DDH 45-371
BPD306 DDH 45-372
BPD307 DDH 45-373
BPD308 DDH 45-374
BPD309 DDH 45-375
BPD310 DDH 45-376
BPD311 DDH 45-377
BPD312 DDH 45-378
BPD313 DDH 45-379
BPD314 DDH 45-380
BPD315 DDH 45-381
BPD316 DDH 45-382
BPD317 DDH 45-383
BPD318 DDH 45-384
BPD319 DDH 45-385
BPD320 DDH 45-386
BPD321 DDH 45-387
BPD322 DDH 45-388
BPD323 DDH 45-389
BPD324 DDH 45-390
BPD325 DDH 45-391
BPD326 DDH 45-392
BPD327 DDH 45-393
BPD328 DDH 45-394
BPD329 DDH 45-395
BPD330 DDH 45-396
BPD331 DDH 45-397
BPD332 DDH 45-398
BPD333 DDH 45-399
BPD334 DDH 45-400
BPD335 DDH 45-401
BPD336 DDH 45-402
BPD337 DDH 45-403
BPD338 DDH 45-404
BPD339 DDH 45-405
BPD340 DDH 45-406
BPD341 DDH 45-407
BPD342 DDH 45-408
BPD343 DDH 45-409
BPD344 DDH 45-410
BPD345 DDH 45-411
BPD346 DDH 45-412
BPD347 DDH 45-413
BPD348 DDH 45-414
BPD349 DDH 45-415
BPD350 DDH 45-416
BPD351 DDH 45-417
BPD352 DDH 45-418
BPD353 DDH 45-419
BPD354 DDH 45-420
BPD355 DDH 45-421
BPD356 DDH 45-422
BPD357 DDH 45-423
BPD358 DDH 45-424
BPD359 DDH 45-425
BPD360 DDH 45-426
BPD361 DDH 45-427
BPD362 DDH 45-428
BPD363 DDH 45-429
BPD364 DDH 45-430
BPD365 DDH 45-431
BPD366 DDH 45-432
BPD367 DDH 45-433
BPD368 DDH 45-434
BPD369 DDH 45-435
BPD370 DDH 45-436
BPD371 DDH 45-437
BPD372 DDH 45-438
BPD373 DDH 45-439
BPD374 DDH 45-440
BPD375 DDH 45-441
BPD376 DDH 45-442
BPD377 DDH 45-443
BPD378 DDH 45-444
BPD379 DDH 45-445
BPD380 DDH 45-446
BPD381 DDH 45-447
BPD382 DDH 45-448
BPD383 DDH 45-449
BPD384 DDH 45-450
BPD385 DDH 45-451
BPD386 DDH 45-452
BPD387 DDH 45-453
BPD388 DDH 45-454
BPD389 DDH 45-455
BPD390 DDH 45-456
BPD391 DDH 45-457
BPD392 DDH 45-458
BPD393 DDH 45-459
BPD394 DDH 45-460
BPD395 DDH 45-461
BPD396 DDH 45-462
BPD397 DDH 45-463
BPD398 DDH 45-464
BPD399 DDH 45-465
BPD400 DDH 45-466
BPD401 DDH 45-467
BPD402 DDH 45-468
BPD403 DDH 45-469
BPD404 DDH 45-470
BPD405 DDH 45-471
BPD406 DDH 45-472
BPD407 DDH 45-473
BPD408 DDH 45-474
BPD409 DDH 45-475
BPD410 DDH 45-476
BPD411 DDH 45-477
BPD412 DDH 45-478
BPD413 DDH 45-479
BPD414 DDH 45-480
BPD415 DDH 45-481
BPD416 DDH 45-482
BPD417 DDH 45-483
BPD418 DDH 45-484
BPD419 DDH 45-485
BPD420 DDH 45-486
BPD421 DDH 45-487
BPD422 DDH 45-488
BPD423 DDH 45-489
BPD424 DDH 45-490
BPD425 DDH 45-491
BPD426 DDH 45-492
BPD427 DDH 45-493
BPD428 DDH 45-494
BPD429 DDH 45-495
BPD430 DDH 45-496
BPD431 DDH 45-497
BPD432 DDH 45-498
BPD433 DDH 45-499
BPD434 DDH 45-500
BPD435 DDH 45-501
BPD436 DDH 45-502
BPD437 DDH 45-503
BPD438 DDH 45-504
BPD439 DDH 45-505
BPD440 DDH 45-506
BPD441 DDH 45-507
BPD442 DDH 45-508
BPD443 DDH 45-509
BPD444 DDH 45-510
BPD445 DDH 45-511
BPD446 DDH 45-512
BPD447 DDH 45-513
BPD448 DDH 45-514
BPD449 DDH 45-515
BPD450 DDH 45-516
BPD451 DDH 45-517
BPD452 DDH 45-518
BPD453 DDH 45-519
BPD454 DDH 45-520
BPD455 DDH 45-521
BPD456 DDH 45-522
BPD457 DDH 45-523
BPD458 DDH 45-524
BPD459 DDH 45-525
BPD460 DDH 45-526
BPD461 DDH 45-527
BPD462 DDH 45-528
BPD463 DDH 45-529
BPD464 DDH 45-530
BPD465 DDH 45-531
BPD466 DDH 45-532
BPD467 DDH 45-533
BPD468 DDH 45-534
BPD469 DDH 45-535
BPD470 DDH 45-536
BPD471 DDH 45-537
BPD472 DDH 45-538
BPD473 DDH 45-539
BPD474 DDH 45-540
BPD475 DDH 45-541
BPD476 DDH 45-542
BPD477 DDH 45-543
BPD478 DDH 45-544
BPD479 DDH 45-545
BPD480 DDH 45-546
BPD481 DDH 45-547
BPD482 DDH 45-548
BPD483 DDH 45-549
BPD484 DDH 45-550
BPD485 DDH 45-551
BPD486 DDH 45-552
BPD487 DDH 45-553
BPD488 DDH 45-554
BPD489 DDH 45-555
BPD490 DDH 45-556
BPD491 DDH 45-557
BPD492 DDH 45-558
BPD493 DDH 45-559
BPD494 DDH 45-560
BPD495 DDH 45-561
BPD496 DDH 45-562
BPD497 DDH 45-563
BPD498 DDH 45-564
BPD499 DDH 45-565
BPD500 DDH 45-566
BPD501 DDH 45-567
BPD502 DDH 45-568
BPD503 DDH 45-569
BPD504 DDH 45-570
BPD505 DDH 45-571
BPD506 DDH 45-572
BPD507 DDH 45-573
BPD508 DDH 45-574
BPD509 DDH 45-575
BPD510 DDH 45-576
BPD511 DDH 45-577
BPD512 DDH 45-578
BPD513 DDH 45-579
BPD514 DDH 45-580
BPD515 DDH 45-581
BPD516 DDH 45-582
BPD517 DDH 45-583
BPD518 DDH 45-584
BPD519 DDH 45-585
BPD520 DDH 45-586
BPD521 DDH 45-587
BPD522 DDH 45-588
BPD523 DDH 45-589
BPD524 DDH 45-590
BPD525 DDH 45-591
BPD526 DDH 45-592
BPD527 DDH 45-593
BPD528 DDH 45-594
BPD529 DDH 45-595
BPD530 DDH 45-596
BPD531 DDH 45-597
BPD532 DDH 45-598
BPD533 DDH 45-599
BPD534 DDH 45-600
BPD535 DDH 45-601
BPD536 DDH 45-602
BPD537 DDH 45-603
BPD538 DDH 45-604
BPD539 DDH 45-605
BPD540 DDH 45-606
BPD541 DDH 45-607
BPD542 DDH 45-608
BPD543 DDH 45-609
BPD544 DDH 45-610
BPD545 DDH 45-611
BPD546 DDH 45-612
BPD547 DDH 45-613
BPD548 DDH 45-614
BPD549 DDH 45-615
BPD550 DDH 45-616
BPD551 DDH 45-617
BPD552 DDH 45-618
BPD553 DDH 45-619
BPD554 DDH 45-620
BPD555 DDH 45-621
BPD556 DDH 45-622
BPD557 DDH 45-623
BPD558 DDH 45-624
BPD559 DDH 45-625
BPD560 DDH 45-626
BPD561 DDH 45-627
BPD562 DDH 45-628
BPD563 DDH 45-629
BPD564 DDH 45-630
BPD565 DDH 45-631
BPD566 DDH 45-632
BPD567 DDH 45-633
BPD568 DDH 45-634
BPD569 DDH 45-635
BPD570 DDH 45-636
BPD571 DDH 45-637
BPD572 DDH 45-638
BPD573 DDH 45-639
BPD574 DDH 45-640
BPD575 DDH 45-641
BPD576 DDH 45-642
BPD577 DDH 45-643
BPD578 DDH 45-644
BPD579 DDH 45-645
BPD580 DDH 45-646
BPD581 DDH 45-647
BPD582 DDH 45-648
BPD583 DDH 45-649
BPD584 DDH 45-650
BPD585 DDH 45-651
BPD586 DDH 45-652
BPD587 DDH 45-653
BPD588 DDH 45-654
BPD589 DDH 45-655
BPD590 DDH 45-656
BPD591 DDH 45-657
BPD592 DDH 45-658
BPD593 DDH 45-659
BPD594 DDH 45-660
BPD595 DDH 45-661
BPD596 DDH 45-662
BPD597 DDH 45-663
BPD598 DDH 45-664
BPD599 DDH 45-665
BPD600 DDH 45-666
BPD601 DDH 45-667
BPD602 DDH 45-668
BPD603 DDH 45-669
BPD604 DDH 45-670
BPD605 DDH 45-671
BPD606 DDH 45-672
BPD607 DDH 45-673
BPD608 DDH 45-674
BPD609 DDH 45-675
BPD610 DDH 45-676
BPD611 DDH 45-677
BPD612 DDH 45-678
BPD613 DDH 45-679
BPD614 DDH 45-680
BPD615 DDH 45-681
BPD616 DDH 45-682
BPD617 DDH 45-683
BPD618 DDH 45-684
BPD619 DDH 45-685
BPD620 DDH 45-686
BPD621 DDH 45-687
BPD622 DDH 45-688
BPD623 DDH 45-689
BPD624 DDH 45-690
BPD625 DDH 45-691
BPD626 DDH 45-692
BPD627 DDH 45-693
BPD628 DDH 45-694
BPD629 DDH 45-695
BPD630 DDH 45-696
BPD631 DDH 45-697
BPD632 DDH 45-698
BPD633 DDH 45-699
BPD634 DDH 45-700
BPD635 DDH 45-701
BPD636 DDH 45-702
BPD637 DDH 45-703
BPD638 DDH 45-704
BPD639 DDH 45-705
BPD640 DDH 45-706
BPD641 DDH 45-707
BPD642 DDH 45-708
BPD643 DDH 45-709
BPD644 DDH 45-710
BPD645 DDH 45-711
BPD646 DDH 45-712
BPD647 DDH 45-713
BPD648 DDH 45-714
BPD649 DDH 45-715
BPD650 DDH 45-716
BPD651 DDH 45-717
BPD652 DDH 45-718
BPD653 DDH 45-719
BPD654 DDH 45-720
BPD655 DDH 45-721
BPD656 DDH 45-722
BPD657 DDH 45-723
BPD658 DDH 45-724
BPD659 DDH 45-725
BPD660 DDH 45-726
BPD661 DDH 45-727
BPD662 DDH 45-728
BPD663 DDH 45-729
BPD664 DDH 45-730
BPD665 DDH 45-731
BPD666 DDH 45-732
BPD667 DDH 45-733
BPD668 DDH 45-734
BPD669 DDH 45-735
BPD670 DDH 45-736
BPD671 DDH 45-737
BPD672 DDH 45-738
BPD673 DDH 45-739
BPD674 DDH 45-740
BPD675 DDH 45-741
BPD676 DDH 45-742
BPD677 DDH 45-743
BPD678 DDH 45-744
BPD679 DDH 45-745
BPD680 DDH 45-746
BPD681 DDH 45-747
BPD682 DDH 45-748
BPD683 DDH 45-749
BPD684 DDH 45-750
BPD685 DDH 45-751
BPD686 DDH 45-752
BPD687 DDH 45-753
BPD688 DDH 45-754
BPD689 DDH 45-755
BPD690 DDH 45-756
BPD691 DDH 45-757
BPD692 DDH 45-758
BPD693 DDH 45-759
BPD694 DDH 45-760
BPD695 DDH 45-761
BPD696 DDH 45-762
BPD697 DDH 45-763
BPD698 DDH 45-764
BPD699 DDH 45-765
BPD700 DDH 45-766
BPD701 DDH 45-767
BPD702 DDH 45-768
BPD703 DDH 45-769
BPD704 DDH 45-770
BPD705 DDH 45-771
BPD706 DDH 45-772
BPD707 DDH 45-773
BPD708 DDH 45-774
BPD709 DDH 45-775
BPD710 DDH 45-776
BPD711 DDH 45-777
BPD712 DDH 45-778
BPD713 DDH 45-779
BPD714 DDH 45-780
BPD715 DDH 45-781
BPD716 DDH 45-782
BPD717 DDH 45-783
BPD718 DDH 45-784
BPD719 DDH 45-785
BPD720 DDH 45-786
BPD721 DDH 45-787
BPD722 DDH 45-788
BPD723 DDH 45-789
BPD724 DDH 45-790
BPD725 DDH 45-791
BPD726 DDH 45-792
BPD727 DDH 45-793
BPD728 DDH 45-794
BPD729 DDH 45-795
BPD730 DDH 45-796
BPD731 DDH 45-797
BPD732 DDH 45-798
BPD733 DDH 45-799
BPD734 DDH 45-800
BPD735 DDH 45-801
BPD736 DDH 45-802
BPD737 DDH 45-803
BPD738 DDH 45-804
BPD739 DDH 45-805
BPD740 DDH 45-806
BPD741 DDH 45-807
BPD742 DDH 45-808
BPD743 DDH 45-809
BPD744 DDH 45-810
BPD745 DDH 45-811
BPD746 DDH 45-812
BPD747 DDH 45-813
BPD748 DDH 45-814
BPD749 DDH 45-815
BPD750 DDH 45-816
BPD751 DDH 45-817
BPD752 DDH 45-818
BPD753 DDH 45-819
BPD754 DDH 45-820
BPD755 DDH 45-821
BPD756 DDH 45-822
BPD757 DDH 45-823
BPD758 DDH 45-824
BPD759 DDH 45-825
BPD760 DDH 45-826
BPD761 DDH 45-827
BPD762 DDH 45-828
BPD763 DDH 45-829
BPD764 DDH 45-830
BPD765 DDH 45-831
BPD766 DDH 45-832
BPD767 DDH 45-833
BPD768 DDH 45-834
BPD769 DDH 45-835
BPD770 DDH 45-836
BPD771 DDH 45-837
BPD772 DDH 45-838
BPD773 DDH 45-839
BPD774 DDH 45-840
BPD775 DDH 45-841
BPD776 DDH 45-842
BPD777 DDH 45-843
BPD778 DDH 45-844
BPD779 DDH 45-845
BPD780 DDH 45-846
BPD781 DDH 45-847
BPD782 DDH 45-848
BPD783 DDH 45-849
BPD784 DDH 45-850
BPD785 DDH 45-851
BPD786 DDH 45-852
BPD787 DDH 45-853
BPD788 DDH 45-854
BPD789 DDH 45-855
BPD790 DDH 45-856
BPD791 DDH 45-857
BPD792 DDH 45-858
BPD793 DDH 45-859
BPD794 DDH 45-860
BPD795 DDH 45-861
BPD796 DDH 45-862
BPD797 DDH 45-863
BPD798 DDH 45-864
BPD799 DDH 45-865
BPD800 DDH 45-866
BPD801 DDH 45-867
BPD802 DDH 45-868
BPD803 DDH 45-869
BPD804 DDH 45-870
BPD805 DDH 45-871
BPD806 DDH 45-872
BPD807 DDH 45-873
BPD808 DDH 45-874
BPD809 DDH 45-875
BPD810 DDH 45-876
BPD811 DDH 45-877
BPD812 DDH 45-878
BPD813 DDH 45-879
BPD814 DDH 45-880
BPD815 DDH 45-881
BPD816 DDH 45-882
BPD817 DDH 45-883
BPD818 DDH 45-884
BPD819 DDH 45-885
BPD820 DDH 45-886
BPD821 DDH 45-887
BPD822 DDH 45-888
BPD823 DDH 45-889
BPD824 DDH 45-890
BPD825 DDH 45-891
BPD826 DDH 45-892
BPD827 DDH 45-893
BPD828 DDH 45-894
BPD829 DDH 45-895
BPD830 DDH 45-896
BPD831 DDH 45-897
BPD832 DDH 45-898
BPD833 DDH 45-899
BPD834 DDH 45-900
BPD835 DDH 45-901
BPD836 DDH 45-902
BPD837 DDH 45-903
BPD838 DDH 45-904
BPD839 DDH 45-905
BPD840 DDH 45-906
BPD841 DDH 45-907
BPD842 DDH 45-908
BPD843 DDH 45-909
BPD844 DDH 45-910
BPD845 DDH 45-911
BPD846 DDH 45-912
BPD847 DDH 45-913
BPD848 DDH 45-914
BPD849 DDH 45-915
BPD850 DDH 45-916
BPD851 DDH 45-917
BPD852 DDH 45-918
BPD853 DDH 45-919
BPD854 DDH 45-920
BPD855 DDH 45-921
BPD856 DDH 45-922
BPD857 DDH 45-923
BPD858 DDH 45-924
BPD859 DDH 45-925
BPD860 DDH 45-926
BPD861 DDH 45-927
BPD862 DDH 45-928
BPD863 DDH 45-929
BPD864 DDH 45-930
BPD865 DDH 45-931
BPD866 DDH 45-932
BPD867 DDH 45-933
BPD868 DDH 45-934
BPD869 DDH 45-935
BPD870 DDH 45-936
BPD871 DDH 45-937
BPD872 DDH 45-938
BPD873 DDH 45-939
BPD874 DDH 45-940
BPD875 DDH 45-941
BPD876 DDH 45-942
BPD877 DDH 45-943
BPD878 DDH 45-944
BPD879 DDH 45-945
BPD880 DDH 45-946
BPD881 DDH 45-947
BPD882 DDH 45-948
BPD883 DDH 45-949
BPD884 DDH 45-950
BPD885 DDH 45-951
BPD886 DDH 45-952
BPD887 DDH 45-953
BPD888 DDH 45-954
BPD889 DDH 45-955
BPD890 DDH 45-956
BPD891 DDH 45-957
BPD892 DDH 45-958
BPD893 DDH 45-959
BPD894 DDH 45-960
BPD895 DDH 45-961
BPD896 DDH 45-962
BPD897 DDH 45-963
BPD898 DDH 45-964
BPD899 DDH 45-965
BPD900 DDH 45-966
BPD901 DDH 45-967
BPD902 DDH 45-968
BPD903 DDH 45-969
BPD904 DDH 45-970
BPD905 DDH 45-971
BPD906 DDH 45-972
BPD907 DDH 45-973
BPD908 DDH 45-974
BPD909 DDH 45-975
BPD910 DDH 45-976
BPD911 DDH 45-977
BPD912 DDH 45-978
BPD913 DDH 45-979
BPD914 DDH 45-980
BPD915 DDH 45-981
BPD916 DDH 45-982
BPD917 DDH 45-983
BPD918 DDH 45-984
BPD919 DDH 45-985
BPD920 DDH 45-986
BPD921 DDH 45-987
BPD922 DDH 45-988
BPD923 DDH 45-989
BPD924 DDH 45-990
BPD925 DDH 45-991
BPD926 DDH 45-992
BPD927 DDH 45-993
BPD928 DDH 45-994
BPD929 DDH 45-995
BPD930 DDH 45-996
BPD931 DDH 45-997
BPD932 DDH 45-998
BPD933 DDH 45-999
BPD934 DDH 45-1000
BPD935 DDH 45-1001
BPD936 DDH 45-1002
BPD937 DDH 45-1003
BPD938 DDH 45-1004
BPD939 DDH 45-1005
BPD940 DDH 45-1006
BPD941 DDH 45-1007
BPD942 DDH 45-1008
BPD943 DDH 45-1009
BPD944 DDH 45-1010
BPD945 DDH 45-1011
BPD946 DDH 45-1012
BPD947 DDH 45-1013
BPD948 DDH 45-1014
BPD949 DDH 45-1015
BPD950 DDH 45-1016
BPD951 DDH 45-1017
BPD952 DDH 45-1018
BPD953 DDH 45-1019
BPD954 DDH 45-1020
BPD955 DDH 45-1021
BPD956 DDH 45-1022
BPD957 DDH 45-1023
BPD958 DDH 45-1024
BPD959 DDH 45-1025
BPD960 DDH 45-1026
BPD961 DDH 45-1027
BPD962 DDH 45-1028
BPD963 DDH 45-1029
BPD964 DDH 45-1030
BPD965 DDH 45-1031
BPD966 DDH 45-1032
BPD967 DDH 45-1033
BPD968 DDH 45-1034
BPD969 DDH 45-1035
BPD970 DDH 45-1036
BPD971 DDH 45-1037
BPD972 DDH 45-1038
BPD973 DDH 45-1039
BPD974 DDH 45-1040
BPD975 DDH 45-1041
BPD976 DDH 45-1042
BPD977 DDH 45-1043
BPD978 DDH 45-1044
BPD979 DDH 45-1045
BPD980 DDH 45-1046
BPD981 DDH 45-1047
BPD982 DDH 45-1048
BPD983 DDH 45-1049
BPD984 DDH 45-1050
BPD985 DDH 45-1051
BPD986 DDH 45-1052
BPD987 DDH 45-1053
BPD988 DDH 45-1054
BPD989 DDH 45-1055
BPD990 DDH 45-1056
BPD991 DDH 45-1057
BPD992 DDH 45-1058
BPD993 DDH 45-1059
BPD994 DDH 45-1060
BPD995 DDH 45-1061
BPD996 DDH 45-1062
BPD997 DDH 45-1063
BPD998 DDH 45-1064
BPD999 DDH 45-1065
BPD1000 DDH 45-1066
BPD1001 DDH 45-1067
BPD1002 DDH 45-1068
BPD1003 DDH 45-1069
BPD1004 DDH 45-1070
BPD1005 DDH 45-1071
BPD1006 DDH 45-1072
BPD1007 DDH 45-1073
BPD1008 DDH 45-1074
BPD1009 DDH 45-1075
BPD1010 DDH 45-1076
BPD1011 DDH 45-1077
BPD1012 DDH 45-1078
BPD1013 DDH 45-1079
BPD1014 DDH 45-1080
BPD1015 DDH 45-1081
BPD1016 DDH 45-1082
BPD1017 DDH 45-1083
BPD1018 DDH 45-1084
BPD1019 DDH 45-1085
BPD1020 DDH 45-1086
BPD1021 DDH 45-1087
BPD1022 DDH 45-1088
BPD1023 DDH 45-1089
BPD1024 DDH 45-1090
BPD1025 DDH 45-1091
BPD1026 DDH 45-1092
BPD1027 DDH 45-1093
BPD1028 DDH 45-1094
BPD1029 DDH 45-1095
BPD1030 DDH 45-1096
BPD1031 DDH 45-1097
BPD1032 DDH 45-1098
BPD1033 DDH 45-1099
BPD1034 DDH 45-1100
BPD1035 DDH 45-1101
BPD1036 DDH 45-1102
BPD1037 DDH 45-1103
BPD1038 DDH 45-1104
BPD1039 DDH 45-1105
BPD1040 DDH 45-1106
BPD1041 DDH 45-1107
BPD1042 DDH 45-1108
BPD1043 DDH 45-1109
BPD1044 DDH 45-1110
BPD1045 DDH 45-1111
BPD1046 DDH 45-1112
BPD1047 DDH 45-1113
BPD1048 DDH 45-1114
BPD1049 DDH 45-1115
BPD1050 DDH 45-1116
BPD1051 DDH 45-1117
BPD1052 DDH 45-1118
BPD1053 DDH 45-1119
BPD1054 DDH 45-1120
BPD1055 DDH 45-1121
BPD1056 DDH 45-1122
BPD1057 DDH 45-1123
BPD1058 DDH 45-1124
BPD1059 DDH 45-1125
BPD1060 DDH 45-1126
BPD1061 DDH 45-1127
BPD1062 DDH 45-1128
BPD1063 DDH 45-1129
BPD1064 DDH 45-1130
BPD1065 DDH 45-1131
BPD1066 DDH 45-1132
BPD1067 DDH 45-1133
BPD1068 DDH 45-1134
BPD1069 DDH 45-1135
BPD1070 DDH 45-1136
BPD1071 DDH 45-1137
BPD1072 DDH 45-1138
BPD1073 DDH 45-1139
BPD1074 DDH 45-1140
BPD1075 DDH 45-1141
BPD1076 DDH 45-1142
BPD1077 DDH 45-1143
BPD1078 DDH 45-1144
BPD1079 DDH 45-1145
BPD1080 DDH 45-1146
BPD1081 DDH 45-1147
BPD1082 DDH 45-1148
BPD1083 DDH 45-1149
BPD1084 DDH 45-1150
BPD1085 DDH 45-1151
BPD1086 DDH 45-1152
BPD1087 DDH 45-1153
BPD1088 DDH 45-1154
BPD1089 DDH 45-1155
BPD1090 DDH 45-1156
BPD1091 DDH 45-1157
BPD1092 DDH 45-1158
BPD1093 DDH 45-1159
BPD1094 DDH 45-1160
BPD1095 DDH 45-1161
BPD1096 DDH 45-1162
BPD1097 DDH 45-1163
BPD1098 DDH 45-1164
BPD1099 DDH 45-1165
BPD1100 DDH 45-1166
BPD1101 DDH 45-1167
BPD1102 DDH 45-1168
BPD1103 DDH 45-1169
BPD1104 DDH 45-1170
BPD1105 DDH 45-1171
BPD1106 DDH 45-1172
BPD1107 DDH 45-1173
BPD1108 DDH 45-1174
BPD1109 DDH 45-1175
BPD1110 DDH 45-1176
BPD1111 DDH 45-1177
BPD1112 DDH 45-1178
BPD1113 DDH 45-1179
BPD1114 DDH 45-1180
BPD1115 DDH 45-1181
BPD1116 DDH 45-1182
BPD1117 DDH 45-1183
BPD1118 DDH 45-1184
BPD1119 DDH 45-1185
BPD1120 DDH 45-1186
BPD1121 DDH 45-1187
BPD1122 DDH 45-1188
BPD1123 DDH 45-1189
BPD1124 DDH 45-1190
BPD1125 DDH 45-1191
BPD1126 DDH 45-1192
BPD1127 DDH 45-1193
BPD1128 DDH 45-1194
BPD1129 DDH 45-1195
BPD1130 DDH 45-1196
BPD1131 DDH 45-1197
BPD1132 DDH 45-1198
BPD1133 DDH 45-1199
BPD1134 DDH 45-1200
BPD1135 DDH 45-1201
BPD1136 DDH 45-1202
BPD1137 DDH 45-1203
BPD1138 DDH 45-1204
BPD1139 DDH 45-1205
BPD1140 DDH 45-1206
BPD1141 DDH 45-1207
BPD1142 DDH 45-1208
BPD1143 DDH 45-1209
BPD1144 DDH 45-1210
BPD1145 DDH 45-1211
BPD1146 DDH 45-1212
BPD1147 DDH 45-1213
BPD1148 DDH 45-1214
BPD1149 DDH 45-1215
BPD1150 DDH 45-1216
BPD1151 DDH 45-1217
BPD1152 DDH 45-1218
BPD1153 DDH 45-1219
BPD1154 DDH 45-1220
BPD1155 DDH 45-1221
BPD1156 DDH 45-1222
BPD1157 DDH 45-1223
BPD1158 DDH 45-1224
BPD1159 DDH 45-1225
BPD1160 DDH 45-1226
BPD1161 DDH 45-1227
BPD1162 DDH 45-1228
BPD1163 DDH 45-1229
BPD1164 DDH 45-1230
BPD1165 DDH 45-1231
BPD1166 DDH 45-1232
BPD1167 DDH 45-1233
BPD1168 DDH 45-1234
BPD1169 DDH 45-1235
BPD1170 DDH 45-1236
BPD1171 DDH 45-1237
BPD1172 DDH 45-1238
BPD1173 DDH 45-1239
BPD1174 DDH 45-1240
BPD1175 DDH 45-1241
BPD1176 DDH 45-1242
BPD1177 DDH 45-1243
BPD1178 DDH 45-1244


SHLMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT
NUMERIC LEGEND
/ DH /
047194
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
MAXIMUM ELEVATION LIMIT = 1130.00
MINIMUM ELEVATION LIMIT = 1120.00
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
LEVEL 120
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
SCALE 1 : 200
FIG.NO:-
REF.NO:-
ENGR.NO:-
DRG.NO: D/LM0/93%
DATE:-
AUTHOR:-
DRAWN:-
OFFICE:-
5563
86-2532


SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
LEVEL 130
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
SCALE 1 : 200
SHELMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT
NUMERIC LEGEND
047195
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
MAXIMUM ELEVATION LIMIT = 1140.00
MINIMUM ELEVATION LIMIT = 1130.00
5564
5501
26-2532


SHELL ADIT
BPD1
BPD2
BPD3
BPD4
BPD5
BPD6
BPD7
BPD8
BPD9
BPD10
BPD11
BPD12
BPD13
FDU01
FDU02
FDU03
FDU04
FDU05
FDU06
FDU07
FDU08
FDU09
FDU10
FDU11
FDU12
FDU13
FDU14
FDU15
FDU16
FDU17
FDU18
FDU19
FDU20
FDU21
FDU22
FDU23
FDU24
FDU25
FDU26
FDU27
FDU28
FDU29
FDU30
FDU31
FDU32
FDU33
FDU34
FDU35
FDU36
FDU37
FDU38
FDU39
FDU40
FDU41
FDU42
FDU43
FDU44
FDU45
FDU46
FDU47
FDU48
FDU49
FDU50
FDU51
FDU52
FDU53
FDU54
FDU55
FDU56
FDU57
FDU58
FDU59
FDU60
FDU61
FDU62
FDU63
FDU64
FDU65
FDU66
FDU67
FDU68
FDU69
FDU70
FDU71
FDU72
FDU73
FDU74
FDU75
FDU76
FDU77
FDU78
FDU79
FDU80
FDU81
FDU82
FDU83
FDU84
FDU85
FDU86
FDU87
FDU88
FDU89
FDU90
FDU91
FDU92
FDU93
FDU94
FDU95
FDU96
FDU97
FDU98
FDU99
FDU100
FDU101
FDU102
FDU103
FDU104
FDU105
FDU106
FDU107
FDU108
FDU109
FDU110
FDU111
FDU112
FDU113
FDU114
FDU115
FDU116
FDU117
FDU118
FDU119
FDU120
FDU121
FDU122
FDU123
FDU124
FDU125
FDU126
FDU127
FDU128
FDU129
FDU130
FDU131
FDU132
FDU133
FDU134
FDU135
FDU136
FDU137
FDU138
FDU139
FDU140
FDU141
FDU142
FDU143
FDU144
FDU145
FDU146
FDU147
FDU148
FDU149
FDU150
FDU151
FDU152
FDU153
FDU154
FDU155
FDU156
FDU157
FDU158
FDU159
FDU160
FDU161
FDU162
FDU163
FDU164
FDU165
FDU166
FDU167
FDU168
FDU169
FDU170
FDU171
FDU172
FDU173
FDU174
FDU175
FDU176
FDU177
FDU178
FDU179
FDU180
FDU181
FDU182
FDU183
FDU184
FDU185
FDU186
FDU187
FDU188
FDU189
FDU190
FDU191
FDU192
FDU193
FDU194
FDU195
FDU196
FDU197
FDU198
FDU199
FDU200
FDU201
FDU202
FDU203
FDU204
FDU205
FDU206
FDU207
FDU208
FDU209
FDU210
FDU211
FDU212
FDU213
FDU214
FDU215
FDU216
FDU217
FDU218
FDU219
FDU220
FDU221
FDU222
FDU223
FDU224
FDU225
FDU226
FDU227
FDU228
FDU229
FDU230
FDU231
FDU232
FDU233
FDU234
FDU235
FDU236
FDU237
FDU238
FDU239
FDU240
FDU241
FDU242
FDU243
FDU244
FDU245
FDU246
FDU247
FDU248
FDU249
FDU250
FDU251
FDU252
FDU253
FDU254
FDU255
FDU256
FDU257
FDU258
FDU259
FDU260
FDU261
FDU262
FDU263
FDU264
FDU265
FDU266
FDU267
FDU268
FDU269
FDU270
FDU271
FDU272
FDU273
FDU274
FDU275
FDU276
FDU277
FDU278
FDU279
FDU280
FDU281
FDU282
FDU283
FDU284
FDU285
FDU286
FDU287
FDU288
FDU289
FDU290
FDU291
FDU292
FDU293
FDU294
FDU295
FDU296
FDU297
FDU298
FDU299
FDU300
FDU301
FDU302
FDU303
FDU304
FDU305
FDU306
FDU307
FDU308
FDU309
FDU310
FDU311
FDU312
FDU313
FDU314
FDU315
FDU316
FDU317
FDU318
FDU319
FDU320
FDU321
FDU322
FDU323
FDU324
FDU325
FDU326
FDU327
FDU328
FDU329
FDU330
FDU331
FDU332
FDU333
FDU334
FDU335
FDU336
FDU337
FDU338
FDU339
FDU340
FDU341
FDU342
FDU343
FDU344
FDU345
FDU346
FDU347
FDU348
FDU349
FDU350
FDU351
FDU352
FDU353
FDU354
FDU355
FDU356
FDU357
FDU358
FDU359
FDU360
FDU361
FDU362
FDU363
FDU364
FDU365
FDU366
FDU367
FDU368
FDU369
FDU370
FDU371
FDU372
FDU373
FDU374
FDU375
FDU376
FDU377
FDU378
FDU379
FDU380
FDU381
FDU382
FDU383
FDU384
FDU385
FDU386
FDU387
FDU388
FDU389
FDU390
FDU391
FDU392
FDU393
FDU394
FDU395
FDU396
FDU397
FDU398
FDU399
FDU400
FDU401
FDU402
FDU403
FDU404
FDU405
FDU406
FDU407
FDU408
FDU409
FDU410
FDU411
FDU412
FDU413
FDU414
FDU415
FDU416
FDU417
FDU418
FDU419
FDU420
FDU421
FDU422
FDU423
FDU424
FDU425
FDU426
FDU427
FDU428
FDU429
FDU430
FDU431
FDU432
FDU433
FDU434
FDU435
FDU436
FDU437
FDU438
FDU439
FDU440
FDU441
FDU442
FDU443
FDU444
FDU445
FDU446
FDU447
FDU448
FDU449
FDU450
FDU451
FDU452
FDU453
FDU454
FDU455
FDU456
FDU457
FDU458
FDU459
FDU460
FDU461
FDU462
FDU463
FDU464
FDU465
FDU466
FDU467
FDU468
FDU469
FDU470
FDU471
FDU472
FDU473
FDU474
FDU475
FDU476
FDU477
FDU478
FDU479
FDU480
FDU481
FDU482
FDU483
FDU484
FDU485
FDU486
FDU487
FDU488
FDU489
FDU490
FDU491
FDU492
FDU493
FDU494
FDU495
FDU496
FDU497
FDU498
FDU499
FDU500
FDU501
FDU502
FDU503
FDU504
FDU505
FDU506
FDU507
FDU508
FDU509
FDU510
FDU511
FDU512
FDU513
FDU514
FDU515
FDU516
FDU517
FDU518
FDU519
FDU520
FDU521
FDU522
FDU523
FDU524
FDU525
FDU526
FDU527
FDU528
FDU529
FDU530
FDU531
FDU532
FDU533
FDU534
FDU535
FDU536
FDU537
FDU538
FDU539
FDU540
FDU541
FDU542
FDU543
FDU544
FDU545
FDU546
FDU547
FDU548
FDU549
FDU550
FDU551
FDU552
FDU553
FDU554
FDU555
FDU556
FDU557
FDU558
FDU559
FDU560
FDU561
FDU562
FDU563
FDU564
FDU565
FDU566
FDU567
FDU568
FDU569
FDU570
FDU571
FDU572
FDU573
FDU574
FDU575
FDU576
FDU577
FDU578
FDU579
FDU580
FDU581
FDU582
FDU583
FDU584
FDU585
FDU586
FDU587
FDU588
FDU589
FDU590
FDU591
FDU592
FDU593
FDU594
FDU595
FDU596
FDU597
FDU598
FDU599
FDU600
FDU601
FDU602
FDU603
FDU604
FDU605
FDU606
FDU607
FDU608
FDU609
FDU610
FDU611
FDU612
FDU613
FDU614
FDU615
FDU616
FDU617
FDU618
FDU619
FDU620
FDU621
FDU622
FDU623
FDU624
FDU625
FDU626
FDU627
FDU628
FDU629
FDU630
FDU631
FDU632
FDU633
FDU634
FDU635
FDU636
FDU637
FDU638
FDU639
FDU640
FDU641
FDU642
FDU643
FDU644
FDU645
FDU646
FDU647
FDU648
FDU649
FDU650
FDU651
FDU652
FDU653
FDU654
FDU655
FDU656
FDU657
FDU658
FDU659
FDU660
FDU661
FDU662
FDU663
FDU664
FDU665
FDU666
FDU667
FDU668
FDU669
FDU670
FDU671
FDU672
FDU673
FDU674
FDU675
FDU676
FDU677
FDU678
FDU679
FDU680
FDU681
FDU682
FDU683
FDU684
FDU685
FDU686
FDU687
FDU688
FDU689
FDU690
FDU691
FDU692
FDU693
FDU694
FDU695
FDU696
FDU697
FDU698
FDU699
FDU700
FDU701
FDU702
FDU703
FDU704
FDU705
FDU706
FDU707
FDU708
FDU709
FDU710
FDU711
FDU712
FDU713
FDU714
FDU715
FDU716
FDU717
FDU718
FDU719
FDU720
FDU721
FDU722
FDU723
FDU724
FDU725
FDU726
FDU727
FDU728
FDU729
FDU730
FDU731
FDU732
FDU733
FDU734
FDU735
FDU736
FDU737
FDU738
FDU739
FDU740
FDU741
FDU742
FDU743
FDU744
FDU745
FDU746
FDU747
FDU748
FDU749
FDU750
FDU751
FDU752
FDU753
FDU754
FDU755
FDU756
FDU757
FDU758
FDU759
FDU760
FDU761
FDU762
FDU763
FDU764
FDU765
FDU766
FDU767
FDU768
FDU769
FDU770
FDU771
FDU772
FDU773
FDU774
FDU775
FDU776
FDU777
FDU778
FDU779
FDU780
FDU781
FDU782
FDU783
FDU784
FDU785
FDU786
FDU787
FDU788
FDU789
FDU790
FDU791
FDU792
FDU793
FDU794
FDU795
FDU796
FDU797
FDU798
FDU799
FDU800
FDU801
FDU802
FDU803
FDU804
FDU805
FDU806
FDU807
FDU808
FDU809
FDU810
FDU811
FDU812
FDU813
FDU814
FDU815
FDU816
FDU817
FDU818
FDU819
FDU820
FDU821
FDU822
FDU823
FDU824
FDU825
FDU826
FDU827
FDU828
FDU829
FDU830
FDU831
FDU832
FDU833
FDU834
FDU835
FDU836
FDU837
FDU838
FDU839
FDU840
FDU841
FDU842
FDU843
FDU844
FDU845
FDU846
FDU847
FDU848
FDU849
FDU850
FDU851
FDU852
FDU853
FDU854
FDU855
FDU856
FDU857
FDU858
FDU859
FDU860
FDU861
FDU862
FDU863
FDU864
FDU865
FDU866
FDU867
FDU868
FDU869
FDU870
FDU871
FDU872
FDU873
FDU874
FDU875
FDU876
FDU877
FDU878
FDU879
FDU880
FDU881
FDU882
FDU883
FDU884
FDU885
FDU886
FDU887
FDU888
FDU889
FDU890
FDU891
FDU892
FDU893
FDU894
FDU895
FDU896
FDU897
FDU898
FDU899
FDU900
FDU901
FDU902
FDU903
FDU904
FDU905
FDU906
FDU907
FDU908
FDU909
FDU910
FDU911
FDU912
FDU913
FDU914
FDU915
FDU916
FDU917
FDU918
FDU919
FDU920
FDU921
FDU922
FDU923
FDU924
FDU925
FDU926
FDU927
FDU928
FDU929
FDU930
FDU931
FDU932
FDU933
FDU934
FDU935
FDU936
FDU937
FDU938
FDU939
FDU940
FDU941
FDU942
FDU943
FDU944
FDU945
FDU946
FDU947
FDU948
FDU949
FDU950
FDU951
FDU952
FDU953
FDU954
FDU955
FDU956
FDU957
FDU958
FDU959
FDU960
FDU961
FDU962
FDU963
FDU964
FDU965
FDU966
FDU967
FDU968
FDU969
FDU970
FDU971
FDU972
FDU973
FDU974
FDU975
FDU976
FDU977
FDU978
FDU979
FDU980
FDU981
FDU982
FDU983
FDU984
FDU985
FDU986
FDU987
FDU988
FDU989
FDU990
FDU991
FDU992
FDU993
FDU994
FDU995
FDU996
FDU997
FDU998
FDU999
FDU1000
FDU1001
FDU1002
FDU1003
FDU1004
FDU1005
FDU1006
FDU1007
FDU1008
FDU1009
FDU1010
FDU1011
FDU1012
FDU1013
FDU1014
FDU1015
FDU1016
FDU1017
FDU1018
FDU1019
FDU1020
FDU1021
FDU1022
FDU1023
FDU1024
FDU1025
FDU1026
FDU1027
FDU1028
FDU1029
FDU1030
FDU1031
FDU1032
FDU1033
FDU1034
FDU1035
FDU1036
FDU1037
FDU1038
FDU1039
FDU1040
FDU1041
FDU1042
FDU1043
FDU1044
FDU1045
FDU1046
FDU1047
FDU1048
FDU1049
FDU1050
FDU1051
FDU1052
FDU1053
FDU1054
FDU1055
FDU1056
FDU1057
FDU1058
FDU1059
FDU1060
FDU1061
FDU1062
FDU1063
FDU1064
FDU1065
FDU1066
FDU1067
FDU1068
FDU1069
FDU1070
FDU1071
FDU1072
FDU1073
FDU1074
FDU1075
FDU1076
FDU1077
FDU1078
FDU1079
FDU1080
FDU1081
FDU1082
FDU1083
FDU1084
FDU1085
FDU1086
FDU1087
FDU1088
FDU1089
FDU1090
FDU1091
FDU1092
FDU1093
FDU1094
FDU1095
FDU1096
FDU1097
FDU1098
FDU1099
FDU1100
FDU1101
FDU1102
FDU1103
FDU1104
FDU1105
FDU1106
FDU1107
FDU1108
FDU1109
FDU1110
FDU1111
FDU1112
FDU1113
FDU1114
FDU1115
FDU1116
FDU1117
FDU1118
FDU1119
FDU1120
FDU1121
FDU1122
FDU1123
FDU1124
FDU1125
FDU1126
FDU1127
FDU1128
FDU1129
FDU1130
FDU1131
FDU1132
FDU1133
FDU1134
FDU1135
FDU1136
FDU1137
FDU1138
FDU1139
FDU1140
FDU1141
FDU1142
FDU1143
FDU1144
FDU1145
FDU1146
FDU1147
FDU1148
FDU1149
FDU1150
FDU1151
FDU1152
FDU1153
FDU1154
FDU1155
FDU1156
FDU1157
FDU1158
FDU1159
FDU1160
FDU1161
FDU1162
FDU1163
FDU1164
FDU1165
FDU1166
FDU1167
FDU1168
FDU1169
FDU1170
FDU1171
FDU1172
FDU1173
FDU1174
FDU1175
FDU1176
FDU1177
FDU1178
FDU1179
FDU1180
FDU1181
FDU1182
FDU1183
FDU1184
FDU1185
FDU1186
FDU1187
FDU1188
FDU1189
FDU1190
FDU1191
FDU1192
FDU1193
FDU1194
FDU1195
FDU1196
FDU1197
FDU1198
FDU1199
FDU1200
FDU1201
FDU1202
FDU1203
FDU1204
FDU1205
FDU1206
FDU1207
FDU1208
FDU1209
FDU1210
FDU1211
FDU1212
FDU1213
FDU1214
FDU1215
FDU1216
FDU1217
FDU1218
FDU1219
FDU1220
FDU1221
FDU1222
FDU1223
FDU1224
FDU1225
FDU1226
FDU1227
FDU1228
FDU1229
FDU1230
FDU1231
FDU1232
FDU1233
FDU1234
FDU1235
FDU1236
FDU1237
FDU1238
FDU1239
FDU1240
FDU1241
FDU1242
FDU1243
FDU1244
FDU1245
FDU1246
FDU1247
FDU1248
FDU1249
FDU1250
FDU1251
FDU1252
FDU1253
FDU1254
FDU1255
FDU1256
FDU1257
FDU1258
FDU1259
FDU1260
FDU1261
FDU1262
FDU1263
FDU1264
FDU1265
FDU1266
FDU1267
FDU1268
FDU1269
FDU1270
FDU1271
FDU1272
FDU1273
FDU1274
FDU1275
FDU1276
FDU1277
FDU1278
FDU1279
FDU1280
FDU1281
FDU1282
FDU1283
FDU1284
FDU1285
FDU1286
FDU1287
FDU1288
FDU1289
FDU1290
FDU1291
FDU1292
FDU1293
FDU1294
FDU1295
FDU1296
FDU1297
FDU1298
FDU1299
FDU1300
FDU1301
FDU1302
FDU1303
FDU1304
FDU1305
FDU1306
FDU1307
FDU1308
FDU1309
FDU1310
FDU1311
FDU1312
FDU1313
FDU1314
FDU1315
FDU1316
FDU1317
FDU1318
FDU1319
FDU1320
FDU1321
FDU1322
FDU1323
FDU1324
FDU1325
FDU1326
FDU1327
FDU1328
FDU1329
FDU1330
FDU1331
FDU1332
FDU1333
FDU1334
FDU1335
FDU1336
FDU1337
FDU1338
FDU1339
FDU1340
FDU1341
FDU1342
FDU1343
FDU1344
FDU1345
FDU1346
FDU1347
FDU1348
FDU1349
FDU1350
FDU1351
FDU1352
FDU1353
FDU1354
FDU1355
FDU1356
FDU1357
FDU1358
FDU1359
FDU1360
FDU1361
FDU1362
FDU1363
FDU1364
FDU1365
FDU1366
FDU1367
FDU1368
FDU1369
FDU1370
FDU1371
FDU1372
FDU1373
FDU1374
FDU1375
FDU1376
FDU1377
FDU1378
FDU1379
FDU1380
FDU1381
FDU1382
FDU1383
FDU1384
FDU1385
FDU1386
FDU1387
FDU1388
FDU1389
FDU1390
FDU1391
FDU1392
FDU1393
FDU1394
FDU1395
FDU1396
FDU1397
FDU1398
FDU1399
FDU1400
FDU1401
FDU1402
FDU1403
FDU1404
FDU1405
FDU1406
FDU1407
FDU1408
FDU1409
FDU1410
FDU1411
FDU1412
FDU1413
FDU1414
FDU1415
FDU1416
FDU1417
FDU1418
FDU1419
FDU1420
FDU1421
FDU1422
FDU1423
FDU1424
FDU1425
FDU1426
FDU1427
FDU1428
FDU1429
FDU1430
FDU1431
FDU1432
FDU1433
FDU1434
FDU1435
FDU1436
FDU1437
FDU1438
FDU1439
FDU1440
FDU1441
FDU1442
FDU1443
FDU1444
FDU1445
FDU1446
FDU1447
FDU1448
FDU1449
FDU1450
FDU1451
FDU1452
FDU1453
FDU1454
FDU1455
FDU1456
FDU1457
FDU1458
FDU1459
FDU1460
FDU1461
FDU1462
FDU1463
FDU1464
FDU1465
FDU1466
FDU1467
FDU1468
FDU1469
FDU1470
FDU1471
FDU1472
FDU1473
FDU1474
FDU1475
FDU1476
FDU1477
FDU1478
FDU1479
FDU1480
FDU1481
FDU1482
FDU1483
FDU1484
FDU1485
FDU1486
FDU1487
FDU1488
FDU1489
FDU1490
FDU1491
FDU1492
FDU1493
FDU1494
FDU1495
FDU1496
FDU1497
FDU1498
FDU1499
FDU1500
FDU1501
FDU1502
FDU1503
FDU1504
FDU1505
FDU1506
FDU1507
FDU1508
FDU1509
FDU1510
FDU1511
FDU1512
FDU1513
FDU1514
FDU1515
FDU1516
FDU1517
FDU1518
FDU1519
FDU1520
FDU1521
FDU1522
FDU1523
FDU1524
FDU1525
FDU1526
FDU1527
FDU1528
FDU1529
FDU1530
FDU1531
FDU1532
FDU1533
FDU1534
FDU1535
FDU1536
FDU1537
FDU1538
FDU1539
FDU1540
FDU1541
FDU1542
FDU1543
FDU1544
FDU1545
FDU1546
FDU1547
FDU1548
FDU1549
FDU1550
FDU1551
FDU1552
FDU1553
FDU1554
FDU1555
FDU1556
FDU1557
FDU1558
FDU1559
FDU1560
FDU1561
FDU1562
FDU1563
FDU1564
FDU1565
FDU1566
FDU1567
FDU1568
FDU1569
FDU1570
FDU1571
FDU1572
FDU1573
FDU1574
FDU1575
FDU1576
FDU1577
FDU1578
FDU1579
FDU1580
FDU1581
FDU1582
FDU1583
FDU1584
FDU1585
FDU1586
FDU1587
FDU1588
FDU1589
FDU1590
FDU1591
FDU1592
FDU1593
FDU1594
FDU1595
FDU1596
FDU1597
FDU1598
FDU1599
FDU1600
FDU1601
FDU1602
FDU1603
FDU1604
FDU1605
FDU1606
FDU1607
FDU1608
FDU1609
FDU1610
FDU1611
FDU1612
FDU1613
FDU1614
FDU1615
FDU1616
FDU1617
FDU1618
FDU1619
FDU1620
FDU1621
FDU1622
FDU1623
FDU1624
FDU1625
FDU1626
FDU1627
FDU1628
FDU1629
FDU1630
FDU1631
FDU1632
FDU1633
FDU1634
FDU1635
FDU1636
FDU1637
FDU1638
FDU1639
FDU1640
FDU1641
FDU1642
FDU1643
FDU1644
FDU1645
FDU1646
FDU1647
FDU1648
FDU1649
FDU1650
FDU1651
FDU1652
FDU1653
FDU1654
FDU1655
FDU1656
FDU1657
FDU1658
FDU1659
FDU1660
FDU1661
FDU1662
FDU1663
FDU1664
FDU1665
FDU1666
FDU1667
FDU1668
FDU1669
FDU1670
FDU1671
FDU1672
FDU1673
FDU1674
FDU1675
FDU1676
FDU1677
FDU1678
FDU1679
FDU1680
FDU1681
FDU1682
FDU1683
FDU1684
FDU1685
FDU1686
FDU1687
FDU1688
FDU1689
FDU1690
FDU1691
FDU1692
FDU1693
FDU1694
FDU1695
FDU1696
FDU1697
FDU1698
FDU1699
FDU1700
FDU1701
FDU1702
FDU1703
FDU1704
FDU1705
FDU1706
FDU1707
FDU1708
FDU1709
FDU1710
FDU1711
FDU1712
FDU1713
FDU1714
FDU1715
FDU1716
FDU1717
FDU1718
FDU1719
FDU1720
FDU1721
FDU1722
FDU1723
FDU1724
FDU1725
FDU1726
FDU1727
FDU1728
FDU1729
FDU1730
FDU1731
FDU1732
FDU1733
FDU1734
FDU1735
FDU1736
FDU1737
FDU1738
FDU1739
FDU1740
FDU1741
FDU1742
FDU1743
FDU1744
FDU1745
FDU1746
FDU1747
FDU1748
FDU1749
FDU1750
FDU1751
FDU1752
FDU1753
FDU1754
FDU1755
FDU1756
FDU1757
FDU1758
FDU1759
FDU1760
FDU1761
FDU1762
FDU1763
FDU1764
FDU1765
FDU1766
FDU1767
FDU1768
FDU1769
FDU1770
FDU1771
FDU1772
FDU1773
FDU1774
FDU1775
FDU1776
FDU1777
FDU1778
FDU1779
FDU1780
FDU1781
FDU1782
FDU1783
FDU1784
FDU1785
FDU1786
FDU1787
FDU1788
FDU1789
FDU1790
FDU1791
FDU1792
FDU1793
FDU1794
FDU1795
FDU1796
FDU1797
FDU1798
FDU1799
FDU1800
FDU1801
FDU1802
FDU1803
FDU1804
FDU1805
FDU1806
FDU1807
FDU1808
FDU1809
FDU1810
FDU1811
FDU1812
FDU1813
FDU1814
FDU1815
FDU1816
FDU1817
FDU1818
FDU1819
FDU1820
FDU1821
FDU1822
FDU1823
FDU1824
FDU1825
FDU1826
FDU1827
FDU1828
FDU1829
FDU1830
FDU1831
FDU1832
FDU1833
FDU1834
FDU1835
FDU1836
FDU1837
FDU1838
FDU1839
FDU1840
FDU1841
FDU1842
FDU1843
FDU1844
FDU1845
FDU1846
FDU1847
FDU1848
FDU1849
FDU1850
FDU1851
FDU1852
FDU1853
FDU1854
FDU1855
FDU1856
FDU1857
FDU1858
FDU1859
FDU1860
FDU1861
FDU1862
FDU1863
FDU1864
FDU1865
FDU1866
FDU1867
FDU1868
FDU1869
FDU1870
FDU1871
FDU1872
FDU1873
FDU1874
FDU1875
FDU1876
FDU1877
FDU1878
FDU1879
FDU1880
FDU1881
FDU1882
FDU1883
FDU1884
FDU1885
FDU1886
FDU1887
FDU1888
FDU1889
FDU1890
FDU1891
FDU1892
FDU1893
FDU1894
FDU1895
FDU1896
FDU1897
FDU1898
FDU1899
FDU1900
FDU1901
FDU1902
FDU1903
FDU1904
FDU1905
FDU1906
FDU1907
FDU1908
FDU1909
FDU1910
FDU1911
FDU1912
FDU1913
FDU1914
FDU1915
FDU1916
FDU1917
FDU1918
FDU1919
FDU1920
FDU1921
FDU1922
FDU1923
FDU1924
FDU1925
FDU1926
FDU1927
FDU1928
FDU1929
FDU1930
FDU1931
FDU1932
FDU1933
FDU1934
FDU1935
FDU1936
FDU1937
FDU1938
FDU1939
FDU1940
FDU1941
FDU1942
FDU1943
FDU1944
FDU1945
FDU1946
FDU1947
FDU1948
FDU1949
FDU1950
FDU1951
FDU1952
FDU1953
FDU1954
FDU1955
FDU1956
FDU1957
FDU1958
FDU1959
FDU1960
FDU1961
FDU1962
FDU1963
FDU1964
FDU1965
FDU1966
FDU1967
FDU1968
FDU1969
FDU1970
FDU1971
FDU1972
FDU1973
FDU1974
FDU1975
FDU1976
FDU1977
FDU1978
FDU1979
FDU1980
FDU1981
FDU1982
FDU1983
FDU1984
FDU1985
FDU1986
FDU1987
FDU1988
FDU1989
FDU1990
FDU1991
FDU1992
FDU1993
FDU1994
FDU1995
FDU1996
FDU1997
FDU1998
FDU1999
FDU2000
FDU2001
FDU2002
FDU2003
FDU2004
FDU2005
FDU2006
FDU2007
FDU2008
FDU2009
FDU2010
FDU2011
FDU2012
FDU2013
FDU2014
FDU2015
FDU2016
FDU2017
FDU2018
FDU2019
FDU2020
FDU2021
FDU2022
FDU2023
FDU2024
FDU2025
FDU2026
FDU2027
FDU2028
FDU2029
FDU2030
FDU2031
FDU2032
FDU2033
FDU2034
FDU2035
FDU2036
FDU2037
FDU2038
FDU2039
FDU2040
FDU2041
FDU2042
FDU2043
FDU2044
FDU2045
FDU2046
FDU2047
FDU2048
FDU2049
FDU2050
FDU2051
FDU2052
FDU2053
FDU2054
FDU2055
FDU2056
FDU2057
FDU2058
FDU2059
FDU2060
FDU2061
FDU2062
FDU2063
FDU2064
FDU2065
FDU2066
FDU2067
FDU2068
FDU2069
FDU2070
FDU2071
FDU2072
FDU2073
FDU2074
FDU2075
FDU2076
FDU2077
FDU2078
FDU2079
FDU2080
FDU2081
FDU2082
FDU2083
FDU2084
FDU2085
FDU2086
FDU2087
FDU2088
FDU2089
FDU2090
FDU2091
FDU2092
FDU2093
FDU2094
FDU2095
FDU2096
FDU2097
FDU2098
FDU2099
FDU2100
FDU2101
FDU2102
FDU2103
FDU2104
FDU2105
FDU2106
FDU2107
FDU2108
FDU2109
FDU2110
FDU2111
FDU2112
FDU2113
FDU2114
FDU2115
FDU2116
FDU2117
FDU2118
FDU2119
FDU2120
FDU2121
FDU2122
FDU2123
FDU2124
FDU2125
FDU2126
FDU2127
FDU2128
FDU2129
FDU2130
FDU2131
FDU2132
FDU2133
FDU2134
FDU2135
FDU2136
FDU2137
FDU2138
FDU2139
FDU2140
FDU2141
FDU2142
FDU2143
FDU2144
FDU2145
FDU2146
FDU2147
FDU2148
FDU2149
FDU2150
FDU2151
FDU2152
FDU2153
FDU2154
FDU2155
FDU2156
FDU2157
FDU2158
FDU2159
FDU2160
FDU2161
FDU2162
FDU2163
FDU2164
FDU2165
FDU2166
FDU2167
FDU2168
FDU2169
FDU2170
FDU2171
FDU2172
FDU2173
FDU2174
FDU2175
FDU2176
FDU2177
FDU2178
FDU2179
FDU2180
FDU2181
FDU2182
FDU2183
FDU2184
FDU2185
FDU2186
FDU2187
FDU2188
FDU2189
FDU2190
FDU2191
FDU2192
FDU2193
FDU2194
FDU2195
FDU2196
FDU2197
FDU2198
FDU2199
FDU2200
FDU2201
FDU2202
FDU2203
FDU2204
FDU2205
FDU2206
FDU2207
FDU2208
FDU2209
FDU2210
FDU2211
FDU2212
FDU2213
FDU2214
FDU2215
FDU2216
FDU2217
FDU2218
FDU2219
FDU2220
FDU2221
FDU2222
FDU2223
FDU2224
FDU2225
FDU2226
FDU2227
FDU2228
FDU2229
FDU2230
FDU2231
FDU2232
FDU2233
FDU2234
FDU2235
FDU2236
FDU2237
FDU2238
FDU2239
FDU2240
FDU2241
FDU2242
FDU2243
FDU2244
FDU2245
FDU2246
FDU2247
FDU2248
FDU2249
FDU2250
FDU2251
FDU2252
FDU2253
FDU2254
FDU2255
FDU2256
FDU2257
FDU2258
FDU2259
FDU2260
FDU2261
FDU2262
FDU2263
FDU2264
FDU2265
FDU2266
FDU2267
FDU2268
FDU2269
FDU2270
FDU2271
FDU2272
FDU2273
FDU2274
FDU2275
FDU2276
FDU2277
FDU2278
FDU2279
FDU2280
FDU2281
FDU2282
FDU2283
FDU2284
FDU2285
FDU2286
FDU2287
FDU2288
FDU2289
FDU2290
FDU2291
FDU2292
FDU2293
FDU2294
FDU2295
FDU2296
FDU2297
FDU2298
FDU2299
FDU2300
FDU2301
FDU2302
FDU2303
FDU2304
FDU2305
FDU2306
FDU2307
FDU2308
FDU2309
FDU2310
FDU2311
FDU2312
FDU2313
FDU2314
FDU2315
FDU2316
FDU2317
FDU2318
FDU2319
FDU2320
FDU2321
FDU2322
FDU2323
FDU2324
FDU2325
FDU2326
FDU2327
FDU2328
FDU2329
FDU2330
FDU2331
FDU2332
FDU2333
FDU2334
FDU2335
FDU2336
FDU2337
FDU2338
FDU2339
FDU2340
FDU2341
FDU2342
FDU2343
FDU2344
FDU2345
FDU2346
FDU2347
FDU2348
FDU2349
FDU2350
FDU2351
FDU2352
FDU2353
FDU2354
FDU2355
FDU2356
FDU2357
FDU2358
FDU2359
FDU2360
FDU2361
FDU2362
FDU2363
FDU2364
FDU2365
FDU2366
FDU2367
FDU2368
FDU2369
FDU2370
FDU2371
FDU2372
FDU2373
FDU2374
FDU2375
FDU2376
FDU2377
FDU2378
FDU2379
FDU2380
FDU2381
FDU2382
FDU2383
FDU2384
FDU2385
FDU2386
FDU2387
FDU2388
FDU2389
FDU2390
FDU2391
FDU2392
FDU2393
FDU2394
FDU2395
FDU2396
FDU2397
FDU2398
FDU2399
FDU2400
FDU2401
FDU2402
FDU2403
FDU2404
FDU2405
FDU2406
FDU2407
FDU2408
FDU2409
FDU2410
FDU2411
FDU2412
FDU2413
FDU2414
FDU2415
FDU2416
FDU2417
FDU2418
FDU2419
FDU2420
FDU2421
FDU2422
FDU2423
FDU2424
FDU2425
FDU2426
FDU2427
FDU2428
FDU2429
FDU2430
FDU2431
FDU2432
FDU2433
FDU2434
FDU2435
FDU2436
FDU2437
FDU2438
FDU2439
FDU2440
FDU2441
FDU2442
FDU2443
FDU2444
FDU2445
FDU2446
FDU2447
FDU2448
FDU2449
FDU2450
FDU2451
FDU2452
FDU2453
FDU2454
FDU2455
FDU2456
FDU2457
FDU2458
FDU2459
FDU2460
FDU2461
FDU2462
FDU2463
FDU2464
FDU2465
FDU2466
FDU2467
FDU2468
FDU2469
FDU2470
FDU2471
FDU2472
FDU2473
FDU2474
FDU2475
FDU2476
FDU2477
FDU2478
FDU2479
FDU2480
FDU2481
FDU2482
FDU2483
FDU2484
FDU2485
FDU2486
FDU2487
FDU2488
FDU2489
FDU2490
FDU2491
FDU2492
FDU2493
FDU2494
FDU2495
FDU2496
FDU2497
FDU2498
FDU2499
FDU2500
FDU2501
FDU2502
FDU2503
FDU2504
FDU2505
FDU2506
FDU2507
FDU2508
FDU2509
FDU2510
FDU2511
FDU2512
FDU2513
FDU2514
FDU2515
FDU2516
FDU2517
FDU2518
FDU2519
FDU2520
FDU2521
FDU2522
FDU2523
FDU2524
FDU2525
FDU2526
FDU2527
FDU2528
FDU2529
FDU2530
FDU2531
FDU2532
FDU2533
FDU2534
FDU2535
FDU2536
FDU2537
FDU2538
FDU2539
FDU2540
FDU2541
FDU2542
FDU2543
FDU2544
FDU2545
FDU2546
FDU2547
FDU2548
FDU2549
FDU2550
FDU2551
FDU2552
FDU2553
FDU2554
FDU2555
FDU2556
FDU2557
FDU2558
FDU2559
FDU2560
FDU2561
FDU2562
FDU2563
FDU2564
FDU2565
FDU2566
FDU2567
FDU2568
FDU2569
FDU2570
FDU2571
FDU2572
FDU2573
FDU2574
FDU2575
FDU2576
FDU2577
FDU2578
FDU2579
FDU2580
FDU2581
FDU2582
FDU2583
FDU2584
FDU2585
FDU2586
FDU2587
FDU2588
FDU2589
FDU2590
FDU2591
FDU2592
FDU2593
FDU2594
FDU2595
FDU2596
FDU2597
FDU2598
FDU2599
FDU2600
FDU2601
FDU2602
FDU2603
FDU2604
FDU2605
FDU2606
FDU2607
FDU2608
FDU2609
FDU2610
FDU2611
FDU2612
FDU2613
FDU2614
FDU2615
FDU2616
FDU2617
FDU2618
FDU2619
FDU2620
FDU2621
FDU2622
FDU2623
FDU2624
FDU2625
FDU2626
FDU2627
FDU2628
FDU2629
FDU2630
FDU2631
FDU2632
FDU2633
FDU2634
FDU2635
FDU2636
FDU2637
FDU2638
FDU2639
FDU2640
FDU2641
FDU2642
FDU2643
FDU2644
FDU2645
FDU2646
FDU2647
FDU2648
FDU2649
FDU2650
FDU2651
FDU2652
FDU2653
FDU2654
FDU2655
FDU2656
FDU2657
FDU2658
FDU2659
FDU2660
FDU2661
FDU2662
FDU2663
FDU2664
FDU2665
FDU2666
FDU2667
FDU2668
FDU2669
FDU2670
FDU2671
FDU2672
FDU2673
FDU2674
FDU2675
FDU2676
FDU2677
FDU2678
FDU2679
FDU2680
FDU2681
FDU2682
FDU2683
FDU2684
FDU2685
FDU2686
FDU2687
FDU2688
FDU2689
FDU2690
FDU2691
FDU2692
FDU2693
FDU2694
FDU2695
FDU2696
FDU2697
FDU2698
FDU2699
FDU2700
FDU2701
FDU2702
FDU2703
FDU2704
FDU2705
FDU2706
FDU2707
FDU2708
FDU2709
FDU2710
FDU2711
FDU2712
FDU2713
FDU2714
FDU2715
FDU2716
FDU2717
FDU2718
FDU2719
FDU2720
FDU2721
FDU2722
FDU2723
FDU2724
FDU2725
FDU2726
FDU2727
FDU2728
FDU2729
FDU2730
FDU2731
FDU2732
FDU2733
FDU2734
FDU2735
FDU2736
FDU2737
FDU2738
FDU2739
FDU2740
FDU2741
FDU2742
FDU2743
FDU2744
FDU2745
FDU2746
FDU2747
FDU2748
FDU2749
FDU2750
FDU2751
FDU2752
FDU2753
FDU2754
FDU2755
FDU2756
FDU2757
FDU2758
FDU2759
FDU2760
FDU2761
FDU2762
FDU2763
FDU2764
FDU2765
FDU2766
FDU2767
FDU2768
FDU2769
FDU2770
FDU2771
FDU2772
FDU2773
FDU2774
FDU2775
FDU2776
FDU2777
FDU2778
FDU2779
FDU2780
FDU2781
FDU2782
FDU2783
FDU2784
FDU2785
FDU2786
FDU2787
FDU2788
FDU2789
FDU2790
FDU2791
FDU2792
FDU2793
FDU2794
FDU2795
FDU2796
FDU2797
FDU2798
FDU2799
FDU2800
FDU2801
FDU2802
FDU2803
FDU2804
FDU2805
FDU2806
FDU2807
FDU2808
FDU2809
FDU2810
FDU2811
FDU2



SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT

MINCAD LEGEND

/ DM /

047197

LEGEND

- PROBABLE RESOURCE @ 0·1% Sn
- PROBABLE RESOURCE @ 0·2% Sn
- POTENTIAL RESOURCE

MAXIMUM ELEVATION LIMIT = 1160.00
MINIMUM ELEVATION LIMIT = 1150.00

GREAT PYRAMID

LEVEL 150

PRELIMINARY GEOLOGICAL RESOURCE OUTLINES

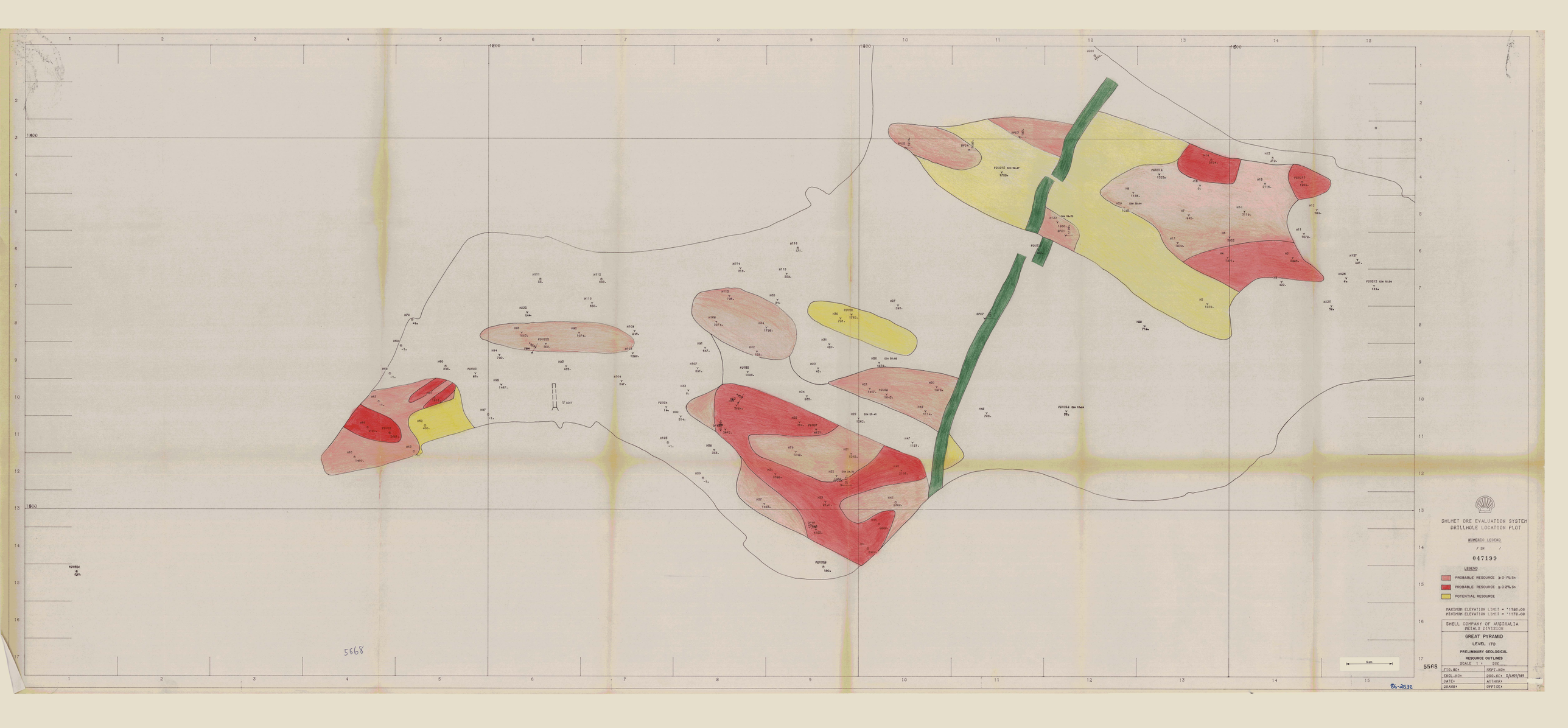
SCALE 1 = 500

FILE:	REF.:
EXCL.:	DWG. NO.: 5/MD/321
DATE:	AUTHOR:
DRAWN:	OFFICE:

5566

86-2532


1800
1600
SHELL ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT
NUMERIC LEGEND
/ DH /
047198
LEGEND
PROBABLE RESOURCE ≥ 0·1% Sn
PROBABLE RESOURCE ≥ 0·2% Sn
POTENTIAL RESOURCE
MAXIMUM ELEVATION LIMIT = 1170.00
MINIMUM ELEVATION LIMIT = 1160.00
SHELL COMPANY OF AUSTRALIA
METALS DIVISION
GREAT PYRAMID
LEVEL 160
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES
SCALE 1 : 500
FIG:RD+
REPT:RD+
CRCL:RD+
DRG:RD+ D/LH61/59
DATE+
AUTHOR+
DRAWN+
OFFICE+
5567
5 cm
5567
86-2537


1800
1600
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
-1000
-1200
-1400
-1600
-1800
-2000
-2200
-2400
-2600
-2800
-3000
-3200
-3400
-3600
-3800
-4000
-4200
-4400
-4600
-4800
-5000
-5200
-5400
-5600
-5800
-6000
-6200
-6400
-6600
-6800
-7000
-7200
-7400
-7600
-7800
-8000
-8200
-8400
-8600
-8800
-9000
-9200
-9400
-9600
-9800
-10000
-10200
-10400
-10600
-10800
-11000
-11200
-11400
-11600
-11800
-12000
-12200
-12400
-12600
-12800
-13000
-13200
-13400
-13600
-13800
-14000
-14200
-14400
-14600
-14800
-15000
-15200
-15400
-15600
-15800
-16000
-16200
-16400
-16600
-16800
-17000
-17200
-17400
-17600
-17800
-18000
-18200
-18400
-18600
-18800
-19000
-19200
-19400
-19600
-19800
-20000
-20200
-20400
-20600
-20800
-21000
-21200
-21400
-21600
-21800
-22000
-22200
-22400
-22600
-22800
-23000
-23200
-23400
-23600
-23800
-24000
-24200
-24400
-24600
-24800
-25000
-25200
-25400
-25600
-25800
-26000
-26200
-26400
-26600
-26800
-27000
-27200
-27400
-27600
-27800
-28000
-28200
-28400
-28600
-28800
-29000
-29200
-29400
-29600
-29800
-30000
-30200
-30400
-30600
-30800
-31000
-31200
-31400
-31600
-31800
-32000
-32200
-32400
-32600
-32800
-33000
-33200
-33400
-33600
-33800
-34000
-34200
-34400
-34600
-34800
-35000
-35200
-35400
-35600
-35800
-36000
-36200
-36400
-36600
-36800
-37000
-37200
-37400
-37600
-37800
-38000
-38200
-38400
-38600
-38800
-39000
-39200
-39400
-39600
-39800
-40000
-40200
-40400
-40600
-40800
-41000
-41200
-41400
-41600
-41800
-42000
-42200
-42400
-42600
-42800
-43000
-43200
-43400
-43600
-43800
-44000
-44200
-44400
-44600
-44800
-45000
-45200
-45400
-45600
-45800
-46000
-46200
-46400
-46600
-46800
-47000
-47200
-47400
-47600
-47800
-48000
-48200
-48400
-48600
-48800
-49000
-49200
-49400
-49600
-49800
-50000
-50200
-50400
-50600
-50800
-51000
-51200
-51400
-51600
-51800
-52000
-52200
-52400
-52600
-52800
-53000
-53200
-53400
-53600
-53800
-54000
-54200
-54400
-54600
-54800
-55000
-55200
-55400
-55600
-55800
-56000
-56200
-56400
-56600
-56800
-57000
-57200
-57400
-57600
-57800
-58000
-58200
-58400
-58600
-58800
-59000
-59200
-59400
-59600
-59800
-60000
-60200
-60400
-60600
-60800
-61000
-61200
-61400
-61600
-61800
-62000
-62200
-62400
-62600
-62800
-63000
-63200
-63400
-63600
-63800
-64000
-64200
-64400
-64600
-64800
-65000
-65200
-65400
-65600
-65800
-66000
-66200
-66400
-66600
-66800
-67000
-67200
-67400
-67600
-67800
-68000
-68200
-68400
-68600
-68800
-69000
-69200
-69400
-69600
-69800
-70000
-70200
-70400
-70600
-70800
-71000
-71200
-71400
-71600
-71800
-72000
-72200
-72400
-72600
-72800
-73000
-73200
-73400
-73600
-73800
-74000
-74200
-74400
-74600
-74800
-75000
-75200
-75400
-75600
-75800
-76000
-76200
-76400
-76600
-76800
-77000
-77200
-77400
-77600
-77800
-78000
-78200
-78400
-78600
-78800
-79000
-79200
-79400
-79600
-79800
-80000
-80200
-80400
-80600
-80800
-81000
-81200
-81400
-81600
-81800
-82000
-82200
-82400
-82600
-82800
-83000
-83200
-83400
-83600
-83800
-84000
-84200
-84400
-84600
-84800
-85000
-85200
-85400
-85600
-85800
-86000
-86200
-86400
-86600
-86800
-87000
-87200
-87400
-87600
-87800
-88000
-88200
-88400
-88600
-88800
-89000
-89200
-89400
-89600
-89800
-90000
-90200
-90400
-90600
-90800
-91000
-91200
-91400
-91600
-91800
-92000
-92200
-92400
-92600
-92800
-93000
-93200
-93400
-93600
-93800
-94000
-94200
-94400
-94600
-94800
-95000
-95200
-95400
-95600
-95800
-96000
-96200
-96400
-96600
-96800
-97000
-97200
-97400
-97600
-97800
-98000
-98200
-98400
-98600
-98800
-99000
-99200
-99400
-99600
-99800
-100000
-100200
-100400
-100600
-100800
-101000
-101200
-101400
-101600
-101800
-102000
-102200
-102400
-102600
-102800
-103000
-103200
-103400
-103600
-103800
-104000
-104200
-104400
-104600
-104800
-105000
-105200
-105400
-105600
-105800
-106000
-106200
-106400
-106600
-106800
-107000
-107200
-107400
-107600
-107800
-108000
-108200
-108400
-108600
-108800
-109000
-109200
-109400
-109600
-109800
-110000
-110200
-110400
-110600
-110800
-111000
-111200
-111400
-111600
-111800
-112000
-112200
-112400
-112600
-112800
-113000
-113200
-113400
-113600
-113800
-114000
-114200
-114400
-114600
-114800
-115000
-115200
-115400
-115600
-115800
-116000
-116200
-116400
-116600
-116800
-117000
-117200
-117400
-117600
-117800
-118000
-118200
-118400
-118600
-118800
-119000
-119200
-119400
-119600
-119800
-120000
-120200
-120400
-120600
-120800
-121000
-121200
-121400
-121600
-121800
-122000
-122200
-122400
-122600
-122800
-123000
-123200
-123400
-123600
-123800
-124000
-124200
-124400
-124600
-124800
-125000
-125200
-125400
-125600
-125800
-126000
-126200
-126400
-126600
-126800
-127000
-127200
-127400
-127600
-127800
-128000
-128200
-128400
-128600
-128800
-129000
-129200
-129400
-129600
-129800
-130000
-130200
-130400
-130600
-130800
-131000
-131200
-131400
-131600
-131800
-132000
-132200
-132400
-132600
-132800
-133000
-133200
-133400
-133600
-133800
-134000
-134200
-134400
-134600
-134800
-135000
-135200
-135400
-135600
-135800
-136000
-136200
-136400
-136600
-136800
-137000
-137200
-137400
-137600
-137800
-138000
-138200
-138400
-138600
-138800
-139000
-139200
-139400
-139600
-139800
-140000
-140200
-140400
-140600
-140800
-141000
-141200
-141400
-141600
-141800
-142000
-142200
-142400
-142600
-142800
-143000
-143200
-143400
-143600
-143800
-144000
-144200
-144400
-144600
-144800
-145000
-145200
-145400
-145600
-145800
-146000
-146200
-146400
-146600
-146800
-147000
-147200
-147400
-147600
-147800
-148000
-148200
-148400
-148600
-148800
-149000
-149200
-149400
-149600
-149800
-150000
-150200
-150400
-150600
-150800
-151000
-151200
-151400
-151600
-151800
-152000
-152200
-152400
-152600
-152800
-153000
-153200
-153400
-153600
-153800
-154000
-154200
-154400
-154600
-154800
-155000
-155200
-155400
-155600
-155800
-156000
-156200
-156400
-156600
-156800
-157000
-157200
-157400
-157600
-157800
-158000
-158200
-158400
-158600
-158800
-159000
-159200
-159400
-159600
-159800
-160000
-160200
-160400
-160600
-160800
-161000
-161200
-161400
-161600
-161800
-162000
-162200
-162400
-162600
-162800
-163000
-163200
-163400
-163600
-163800
-164000
-164200
-164400
-164600
-164800
-165000
-165200
-165400
-165600
-165800
-166000
-166200
-166400
-166600
-166800
-167000
-167200
-167400
-167600
-167800
-168000
-168200
-168400
-168600
-168800
-169000
-169200
-169400
-169600
-169800
-170000
-170200
-170400
-170600
-170800
-171000
-171200
-171400
-171600
-171800
-172000
-172200
-172400
-172600
-172800
-173000
-173200
-173400
-173600
-173800
-174000
-174200
-174400
-174600
-174800
-175000
-175200
-175400
-175600
-175800
-176000
-176200
-176400
-176600
-176800
-177000
-177200
-177400
-177600
-177800
-178000
-178200
-178400
-178600
-178800
-179000
-179200
-179400
-179600
-179800
-180000
-180200
-180400
-180600
-180800
-181000
-181200
-181400
-181600
-181800
-182000
-182200
-182400
-182600
-182800
-183000
-183200
-183400
-183600
-183800
-184000
-184200
-184400
-184600
-184800
-185000
-185200
-185400
-185600
-185800
-186000
-186200
-186400
-186600
-186800
-187000
-187200
-187400
-187600
-187800
-188000
-188200
-188400
-188600
-188800
-189000
-189200
-189400
-189600
-189800
-190000
-190200
-190400
-190600
-190800
-191000
-191200
-191400
-191600
-191800
-192000
-192200
-192400
-192600
-192800
-193000
-193200
-193400
-193600
-193800
-194000
-194200
-194400
-194600
-194800
-195000
-195200
-195400
-195600
-195800
-196000
-196200
-196400
-196600
-196800
-197000
-197200
-197400
-197600
-197800
-198000
-198200
-198400
-198600
-198800
-199000
-199200
-199400
-199600
-199800
-200000
-200200
-200400
-200600
-200800
-201000
-201200
-201400
-201600
-201800
-202000
-202200
-202400
-202600
-202800
-203000
-203200
-203400
-203600
-203800
-204000
-204200
-204400
-204600
-204800
-205000
-205200
-205400
-205600
-205800
-206000
-206200
-206400
-206600
-206800
-207000
-207200
-207400
-207600
-207800
-208000
-208200
-208400
-208600
-208800
-209000
-209200
-209400
-209600
-209800
-210000
-210200
-210400
-210600
-210800
-211000
-211200
-211400
-211600
-211800
-212000
-212200
-212400
-212600
-212800
-213000
-213200
-213400
-213600
-213800
-214000
-214200
-214400
-214600
-214800
-215000
-215200
-215400
-215600
-215800
-216000
-216200
-216400
-216600
-216800
-217000
-217200
-217400
-217600
-217800
-218000
-218200
-218400
-218600
-218800
-219000
-219200
-219400
-219600
-219800
-220000
-220200
-220400
-220600
-220800
-221000
-221200
-221400
-221600
-221800
-222000
-222200
-222400
-222600
-222800
-223000
-223200
-223400
-223600
-223800
-224000
-224200
-224400
-224600
-224800
-225000
-225200
-225400
-225600
-225800
-226000
-226200
-226400
-226600
-226800
-227000
-227200
-227400
-227600
-227800
-228000
-228200
-228400
-228600
-228800
-229000
-229200
-229400
-229600
-229800
-230000
-230200
-230400
-230600
-230800
-231000
-231200
-231400
-231600
-231800
-232000
-232200
-232400
-232600
-232800
-233000
-233200
-233400
-233600
-233800
-234000
-234200
-234400
-234600
-234800
-235000
-235200
-235400
-235600
-235800
-236000
-236200
-236400
-236600
-236800
-237000
-237200
-237400
-237600
-237800
-238000
-238200
-238400
-238600
-238800
-239000
-239200
-239400
-239600
-239800
-240000
-240200
-240400
-240600
-240800
-241000
-241200
-241400
-241600
-241800
-242000
-242200
-242400
-242600
-242800
-243000
-243200
-243400
-243600
-243800
-244000
-244200
-244400
-244600
-244800
-245000
-245200
-245400
-245600
-245800
-246000
-246200
-246400
-246600
-246800
-247000
-247200
-247400
-247600
-247800
-248000
-248200
-248400
-248600
-248800
-249000
-249200
-249400
-249600
-249800
-250000
-250200
-250400
-250600
-250800
-251000
-251200
-251400
-251600
-251800
-252000
-252200
-252400
-252600
-252800
-253000
-253200
-253400
-253600
-253800
-254000
-254200
-254400
-254600
-254800
-255000
-255200
-255400
-255600
-255800
-256000
-256200
-256400
-256600
-256800
-257000
-257200
-257400
-257600
-257800
-258000
-258200
-258400
-258600
-258800
-259000
-259200
-259400
-259600
-259800
-260000
-260200
-260400
-260600
-260800
-261000
-261200
-261400
-261600
-261800
-262000
-262200
-262400
-262600
-262800
-263000
-263200
-263400
-263600
-263800
-264000
-264200
-264400
-264600
-264800
-265000
-265200
-265400
-265600
-265800
-266000
-266200
-266400
-266600
-266800
-267000
-267200
-267400
-267600
-267800
-268000
-268200
-268400
-268600
-268800
-269000
-269200
-269400
-269600
-269800
-270000
-270200
-270400
-270600
-270800
-271000
-271200
-271400
-271600
-271800
-272000
-272200
-272400
-272600
-272800
-273000
-273200
-273400
-273600
-273800
-274000
-274200
-274400
-274600
-274800
-275000
-275200
-275400
-275600
-275800
-276000
-276200
-276400
-276600
-276800
-277000
-277200
-277400
-277600
-277800
-278000
-278200
-278400
-278600
-278800
-279000
-279200
-279400
-279600
-279800
-280000
-280200
-280400
-280600
-280800
-281000
-281200
-281400
-281600
-281800
-282000
-282200
-282400
-282600
-282800
-283000
-283200
-283400
-283600
-283800
-284000
-284200
-284400
-284600
-284800
-285000
-285200
-285400
-285600
-285800
-286000
-286200
-286400
-286600
-286800
-287000
-287200
-287400
-287600
-287800
-288000
-288200
-288400
-288600
-288800
-289000
-289200
-289400
-289600
-289800
-290000
-290200
-290400
-290600
-290800
-291000
-291200
-291400
-291600
-291800
-292000
-292200
-292400
-292600
-292800
-293000
-293200
-293400
-293600
-293800
-294000
-294200
-294400
-294600
-294800
-295000
-295200
-295400
-295600
-295800
-296000
-296200
-296400
-296600
-296800
-297000
-297200
-297400
-297600
-297800
-298000
-298200
-298400
-298600
-298800
-299000
-299200
-299400
-299600
-299800
-300000
-300200
-300400
-300600
-300800
-301000
-301200
-301400
-301600
-301800
-302000
-302200
-302400
-302600
-302800
-303000
-303200
-303400
-303600
-303800
-304000
-304200
-304400
-304600
-304800
-305000
-305200
-305400
-305600
-305800
-306000
-306200
-306400
-306600
-306800
-307000
-307200
-307400
-307600
-307800
-308000
-308200
-308400
-308600
-308800
-309000
-309200
-309400
-309600
-309800
-310000
-310200
-310400
-310600
-310800
-311000
-311200
-311400
-311600
-311800
-312000
-312200
-312400
-312600
-312800
-313000
-313200
-313400
-313600
-313800
-314000
-314200
-314400
-314600
-314800
-315000
-315200
-315400
-315600
-315800
-316000
-316200
-316400
-316600
-316800
-317000
-317200
-317400
-317600
-317800
-318000
-318200
-318400
-318600
-318800
-319000
-319200
-319400
-319600
-319800
-320000
-320200
-320400
-320600
-320800
-321000
-321200
-321400
-321600
-321800
-322000
-322200
-322400
-322600
-322800
-323000
-323200
-323400
-323600
-323800
-324000
-324200
-324400
-324600
-324800
-325000
-325200
-325400
-325600
-325800
-326000
-326200
-326400
-326600
-326800
-327000
-327200
-327400
-327600
-327800
-328000
-328200
-328400
-328600
-328800
-329000
-329200
-329400
-329600
-329800
-330000
-330200
-330400
-330600
-330800
-331000
-331200
-331400
-331600
-331800
-332000
-332200
-332400
-332600
-332800
-333000
-333200
-333400
-333600
-333800
-334000
-334200
-334400
-334600
-334800
-335000
-335200
-335400
-335600
-335800
-336000
-336200
-336400
-336600
-336800
-337000
-337200
-337400
-337600
-337800
-338000
-338200
-338400
-338600
-338800
-339000
-339200
-339400
-339600
-339800
-340000
-340200
-340400
-340600
-340800
-341000
-341200
-341400
-341600
-341800
-342000
-342200
-342400
-342600
-342800
-343000
-343200
-343400
-343600
-343800
-344000
-344200
-344400
-344600
-344800
-345000
-345200
-345400
-345600
-345800
-346000
-346200
-346400
-346600
-346800
-347000
-347200
-347400
-347600
-347800
-348000
-348200
-348400
-348600
-348800
-349000
-349200
-349400
-349600
-349800
-350000
-350200
-350400
-350600
-350800
-351000
-351200
-351400
-351600
-351800
-352000
-352200
-352400
-352600
-352800
-353000
-353200
-353400
-353600
-353800
-354000
-354200
-354400
-354600
-354800
-355000
-355200
-355400
-355600
-355800
-356000
-356200
-356400
-356600
-356800
-357000
-357200
-357400
-357600
-357800
-358000
-358200
-358400
-358600
-358800
-359000
-359200
-359400
-359600
-359800
-360000
-360200
-360400
-360600
-360800
-361000
-361200
-361400
-361600
-361800
-362000
-362200
-362400
-362600
-362800
-363000
-363200
-363400
-363600
-363800
-364000
-364200
-364400
-364600
-364800
-365000
-365200
-365400
-365600
-365800
-366000
-366200
-366400
-366600
-366800
-367000
-367200
-367400
-367600
-367800
-368000
-368200
-368400
-368600
-368800
-369000
-369200
-369400
-369600
-369800
-370000
-370200
-370400
-370600
-370800
-371000
-371200
-371400
-371600
-371800
-372000
-372200
-372400
-372600
-372800
-373000
-373200
-373400
-373600
-373800
-374000
-374200
-374400
-374600
-374800
-375000
-375200
-375400
-375600
-375800
-376000
-376200
-376400
-376600
-376800
-377000
-377200
-377400
-377600
-377800
-378000
-378200
-378400
-378600
-378800
-379000
-379200
-379400
-379600
-379800
-380000
-380200
-380400
-380600
-380800
-381000
-381200
-381400
-381600
-381800
-382000
-382200
-382400
-382600
-382800
-383000
-383200
-383400
-383600
-383800
-384000
-384200
-384400
-384600
-384800
-385000
-385200
-385400
-385600
-385800
-386000
-386200
-386400
-386600
-386800
-387000
-387200
-387400
-387600
-387800
-388000
-388200
-388400
-388600
-388800
-389000
-389200
-389400
-389600
-389800
-390000
-390200
-390400
-390600
-390800
-391000
-391200
-391400
-391600
-391800
-392000
-392200
-392400
-392600
-392800
-393000
-393200
-393400
-393600
-393800
-394000
-394200
-394400
-394600
-394800
-395000
-395200
-395400
-395600
-395800
-396000
-396200
-396400
-396600
-396800
-397000
-397200
-397400
-397600
-397800
-398000
-398200
-398400
-398600
-398800
-399000
-399200
-399400
-399600
-399800
-400000
-400200
-400400
-400600
-400800
-401000
-401200
-401400
-401600
-401800
-402000
-402200
-402400
-402600
-402800
-403000
-403200
-403400
-403600
-403800
-404000
-404200
-404400
-404600
-404800
-405000
-405200
-405400
-405600
-405800
-406000
-406200
-406400
-406600
-406800
-407000
-407200
-407400
-407600
-407800
-408000
-408200
-408400
-408600
-408800
-409000
-409200
-409400
-409600
-409800
-410000
-410200
-410400
-410600
-410800
-411000
-411200
-411400
-411600
-411800
-412000
-412200
-412400
-412600
-412800
-413000
-413200
-413400
-413600
-413800
-414000
-414200
-414400
-414600
-414800
-415000
-415200
-415400
-415600
-415800
-416000
-416200
-416400
-416600
-416800
-417000
-417200
-417400
-417600
-417800
-418000
-418200
-418400
-418600
-418800
-419000
-419200
-419400
-419600
-419800
-420000
-420200
-420400
-420600
-420800
-421000
-421200
-421400
-421600
-421800
-422000
-422200
-422400
-422600
-422800
-423000
-423200
-423400
-423600
-423800
-424000
-424200
-424400
-424600
-424800
-425000
-425200
-425400
-425600
-425800
-426000
-426200
-426400
-426600
-426800
-427000
-427200
-427400
-427600
-427800
-428000
-428200
-428400
-428600
-428800
-429000
-429200
-429400
-429600
-429800
-430000
-430200
-430400
-430600
-430800
-431000
-431200
-431400
-431600
-431800
-432000
-432200
-432400
-432600
-432800
-433000
-433200
-433400
-433600
-433800
-434000
-434200
-434400
-434600
-434800
-435000
-435200
-435400
-435600
-435800
-436000
-436200
-436400
-436600
-436800
-437000
-437200
-437400
-437600
-437800
-438000
-438200
-438400
-438600
-438800
-439000
-439200
-439400
-439600
-439800
-440000
-440200
-440400
-440600
-440800
-441000
-441200
-441400
-441600
-441800
-442000
-442200
-442400
-442600
-442800
-443000
-443200
-443400
-443600
-443800
-444000
-444200
-444400
-444600
-444800
-445000
-445200
-445400
-445600
-445800
-446000
-446200
-446400
-446600
-446800
-447000
-447200
-447400
-447600
-447800
-448000
-448200
-448400
-448600
-448800
-449000
-449200
-449400
-449600
-449800
-450000
-450200
-450400
-450600
-450800
-451000
-451200
-451400
-451600
-451800
-452000
-452200
-452400
-452600
-452800
-453000
-453200
-453400
-453600
-453800
-454000
-454200
-454400
-454600
-454800
-455000
-455200
-455400
-455600
-455800
-456000
-456200
-456400
-456600
-456800
-457000
-457200
-457400
-457600
-457800
-458000
-458200
-458400
-458600
-458800
-459000
-459200
-459400
-459600
-459800
-460000
-460200
-460400
-460600
-460800
-461000
-461200
-461400
-461600
-461800
-462000
-462200
-462400
-462600
-462800
-463000
-463200
-463400
-463600
-463800
-464000
-464200
-464400
-464600
-464800
-465000
-465200
-465400
-465600
-465800
-466000
-466200
-466400
-466600
-466800
-467000
-467200
-467400
-467600
-467800
-468000
-468200
-468400
-468600
-468800
-469000
-469200
-469400
-469600
-469800
-470000
-470200
-470400
-470600
-470800
-471000
-471200
-471400
-471600
-471800
-472000
-472200
-472400
-472600
-472800
-473000
-473200
-473400
-473600
-473800
-474000
-474200
-474400
-474600
-474800
-475000
-475200
-475400
-475600
-475800
-476000
-476200
-476400
-476600
-476800
-477000
-477200
-477400
-477600
-477800
-478000
-478200
-478400
-478600
-478800
-479000
-479200
-479400
-479600
-479800
-480000
-480200
-480400
-480600
-480800
-481000
-481200
-481400
-481600
-481800
-482000
-482200
-482400
-482600
-482800
-483000
-483200
-483400
-483600
-483800
-484000
-484200
-484400
-484600
-484800
-485000
-485200
-485400
-485600
-485800
-486000
-486200
-486400
-486600
-486800
-487000
-487200
-487400
-487600
-487800
-488000
-488200
-488400
-488600
-488800
-489000
-489200
-489400
-489600
-489800
-490000
-490200
-490400
-490600
-490800
-491000
-491200
-491400
-491600
-491800
-492000
-492200
-492400
-492600
-492800
-493000
-493200
-493400
-493600
-493800
-494000
-494200
-494400
-494600
-494800
-495000
-495200
-495400
-495600
-495800
-496000
-496200
-496400
-496600
-496800
-497000
-497200
-497400
-497600
-497800
-498000
-498200
-498400
-498600
-498800
-499000
-499200
-499400
-499600
-499800
-500000
-500200
-500400
-500600
-500800
-501000
-501200
-501400
-501600
-501800
-502000
-502200
-502400
-502600
-502800
-503000
-503200
-503400
-503600
-503800
-504000
-504200
-504400
-504600
-504800
-505000
-505200
-505400
-505600
-505800
-506000
-506200
-506400
-506600
-506800
-507000
-507200
-507400
-507600
-507800
-508000
-508200
-508400
-508600
-508800
-509000
-509200
-509400
-509600
-509800
-510000
-510200
-510400
-510600
-510800
-511000
-511200
-511400
-511600
-511800
-512000
-512200
-512400
-512600
-512800
-513000
-513200
-513400
-513600
-513800
-514000
-514200
-514400
-514600
-514800
-515000
-515200
-515400
-515600
-515800
-516000
-516200
-516400
-516600
-516800
-517000
-517200
-517400
-517600
-517800
-518000
-518200
-518400
-518600
-518800
-519000
-519200
-519400
-519600
-519800
-520000
-520200
-520400
-520600
-520800
-521000
-521200
-521400
-521600
-521800
-522000
-522200
-522400
-522600
-522800
-523000
-523200
-523400
-523600
-523800
-524000
-524200
-524400
-524600
-524800
-525000
-525200
-525400
-525600
-525800
-526000
-526200
-526400
-526600
-526800
-527000
-527200
-527400
-527600
-527800
-528000
-528200
-528400
-528600
-528800
-529000
-529200
-529400
-529600
-529800
-530000
-530200
-530400
-530600
-530800
-531000
-531200
-531400
-531600
-531800
-532000
-532200
-532400
-532600
-532800
-533000
-533200
-533400
-533600
-533800
-534000
-534200
-534400
-534600
-534800
-535000
-535200
-535400
-535600
-535800
-536000
-536200
-536400
-536600
-536800
-537000
-537200
-537400
-537600
-537800
-538000
-538200
-538400
-538600
-538800
-539000
-539200
-539400
-539600
-539800
-540000
-540200
-540400
-540600
-540800
-541000
-541200
-541400
-541600
-541800
-542000
-542200
-542400
-542600
-542800
-543000
-543200
-543400
-543600
-543800
-544000
-544200
-544400
-544600
-544800
-545000
-545200
-545400
-545600
-545800
-546000
-546200
-546400
-546600
-546800
-547000
-547200
-547400
-547600
-547800
-548000
-548200
-548400
-548600
-548800
-549000
-549200
-549400
-549600
-549800
-550000
-550200
-550400
-550600
-550800
-551000
-551200
-551400
-551600
-551800
-552000
-552200
-552400
-552600
-552800
-553000
-553200
-553400
-553600
-553800
-554000
-554200
-554400
-554600
-554800
-555000
-555200
-555400
-555600
-555800
-556000
-556200
-556400
-556600
-556800
-557000
-557200
-557400
-557600
-557800
-558000
-558200
-558400
-558600
-558800
-559000
-559200
-559400
-559600
-559800
-560000
-560200
-560400
-560600
-560800
-561000
-561200
-561400
-561600
-561800
-562000
-562200
-562400
-562600
-562800
-563000
-563200
-563400
-563600
-563800
-564000
-564200
-564400
-564600
-564800
-565000
-565200
-565400
-565600
-565800
-566000
-566200
-566400
-566600
-566800
-567000
-567200
-567400
-567600
-567800
-568000
-568200
-568400
-568600
-568800
-569000
-569200
-569400
-569600
-569800
-570000
-570200
-570400
-570600
-570800
-571000
-571200
-571400
-571600
-571800
-572000
-572200
-572400
-572600
-572800
-573000
-573200
-573400
-573600
-573800
-574000
-574200
-574400
-574600
-574800
-575000
-575200
-575400
-575600
-575800
-576000
-576200
-576400
-576600
-576800
-577000
-577200
-577400
-577600
-577800
-578000
-578200
-578400
-578600
-578800
-579000
-579200
-579400
-579600
-579800
-580000
-580200
-580400
-580600
-580800
-581000
-581200
-581400
-581600
-581800
-582000
-582200
-582400
-582600
-582800
-583000
-583200
-583400
-583600
-583800
-584000
-584200
-584400
-584600
-584800
-585000
-585200
-585400
-585600
-585800
-586000
-586200
-586400
-586600
-586800
-587000
-587200
-587400
-587600
-587800
-588000
-588200
-588400
-588600
-588800
-589000
-589200
-589400
-589600
-589800
-590000
-590200
-590400
-590600
-590800
-591000
-591200
-591400
-591600
-591800
-592000
-592200
-592400
-592600
-592800
-593000
-593200
-593400
-593600
-593800
-594000
-594200
-594400
-594600
-594800
-595000
-595200
-595400
-595600
-595800
-596000
-596200
-596400
-596600
-596800
-597000
-597200
-597400
-597600
-597800
-598000
-598200
-598400
-598600
-598800
-599000
-599200
-599400
-599600
-599800
-600000
-600200
-600400
-600600
-600800
-601000
-601200
-601400
-601600
-601800
-602000
-602200
-602400
-602600
-602800
-603000
-603200
-603400
-603600
-603800
-604000
-604200
-604400
-604600
-604800
-605000
-605200
-605400
-605600
-605800
-606000
-606200
-606400
-606600
-606800
-607000
-607200
-607400
-607600
-607800
-608000
-608200
-608400
-608600
-608800
-609000
-609200
-609400
-609600
-609800
-610000
-610200
-610400
-610600
-610800
-611000
-611200
-611400
-611600
-611800
-612000
-612200
-612400
-612600
-612800
-613000
-613200
-613400
-613600
-613800
-614000
-614200
-614400
-614600
-614800
-615000
-615200
-615400
-615600
-615800
-616000
-616200
-616400
-616600
-616800
-617000
-617200
-617400
-617600
-617800
-618000
-618200
-618400
-618600
-618800
-619000
-619200
-619400
-619600
-619800
-620000
-620200
-620400
-620600
-620800
-621000
-621200
-621400
-621600
-621800
-622000
-622200
-622400
-622600
-622800
-623000
-623200
-623400
-623600
-623800
-624000
-624200
-624400
-624600
-624800
-625000
-625200
-625400
-625600
-625800
-626000
-626200
-626400
-626600
-626800
-627000
-627200
-627400
-627600
-627800
-628000
-628200
-628400
-628600
-628800
-629000
-629200
-629400
-629600
-629800
-630000
-630200
-630400
-630600
-630800
-631000
-631200
-631400
-631600
-631800
-632000
-632200
-632400
-632600
-632800
-633000
-633200
-633400
-633600
-633800
-634000
-634200
-634400
-634600
-634800
-635000
-635200
-635400
-635600
-635800
-636000
-636200
-636400
-636600
-636800
-637000
-637200
-637400
-637600
-637800
-638000
-638200
-638400
-638600
-638800
-639000
-639200
-639400
-639600
-639800
-640000
-640200
-640400
-640600
-640800
-641000
-641200
-641400
-641600
-641800
-642000
-642200
-642400
-642600
-642800
-643000
-643200
-643400
-643600
-643800
-644000
-644200
-644400
-644600
-644800
-645000
-645200
-645400
-645600
-645800
-646000
-646200
-646400
-646600
-646800
-647000
-647200
-647400
-647600
-647800
-648000
-648200
-648400
-648600
-648800
-649000
-649200
-649400
-649600
-649800
-650000
-650200
-650400
-650600
-650800
-651000
-651200
-651400
-651600
-651800
-652000
-652200
-652400
-652600
-652800
-653000
-653200
-653400
-653600
-653800
-654000
-654200
-654400
-654600
-654800
-655000
-655200
-655400
-655600
-655800
-656000
-656200
-656400
-656600
-656800
-657000
-657200
-657400
-657600
-657800
-658000
-658200
-658400
-658600
-658800
-659000
-659200
-659400
-659600
-659800
-660000
-660200
-660400
-660600
-660800
-661000
-661200
-661400
-661600
-661800
-662000
-662200
-662400
-662600
-662800
-663000
-663200
-663400
-663600
-663800
-664000
-664200
-664400
-664600
-664800
-665000
-665200
-665400
-665600
-665800
-666000
-666200
-666400
-666600
-666800
-667000
-667200
-667400
-667600
-667800
-668000
-668200
-668400
-668600
-668800
-669000
-669200
-669400
-669600
-669800
-670000
-670200
-670400
-670600
-670800
-671000
-671200
-671400
-671600
-671800
-672000
-672200
-672400
-672600
-672800
-673000
-673200
-673400
-673600
-673800
-674000
-674200
-674400
-674600
-674800
-675000
-675200
-675400
-675600
-675800
-676000
-676200
-676400
-676600
-676800
-677000
-677200
-677400
-677600
-677800
-678000
-678200
-678400
-678600
-678800
-679000
-679200
-679400
-679600
-679800
-680000
-680200
-680400
-680600
-680800
-681000
-681200
-681400
-681600
-681800
-682000
-682200
-682400
-682600
-682800
-683000
-683200
-683400
-683600
-683800
-684000
-684200
-684400
-684600
-684800
-685000
-685200
-685400
-685600
-685800
-686000
-686200
-686400
-686600
-686800
-687000
-687200
-687400
-687600
-687800
-688000
-688200
-688400
-688600
-688800
-689000
-689200
-689400
-689600
-689800
-690000
-690200
-690400
-690600
-690800
-691000
-691200
-691400
-691600
-691800
-692000
-692200
-692400
-692600
-692800
-693000
-693200
-693400
-693600
-693800
-694000
-694200
-694400
-694600
-694800
-695000
-695200
-695400
-695600
-695800
-696000
-696200
-696400
-696600
-696800
-697000
-697200
-697400
-697600
-697800
-698000
-698200
-698400
-698600
-698800
-699000
-699200
-699400
-699600
-699800
-700000
-700200
-700400
-700600
-700800
-701000
-701200
-701400
-701600
-701800
-702000
-702200
-702400
-702600
-702800
-703000
-703200
-703400
-703600
-703800
-704000
-704200
-704400
-704600
-704800
-705000
-705200
-705400
-705600
-705800
-706000
-706200
-706400
-706600
-706800
-707000
-707200
-707400
-707600
-707800
-708000
-708200
-708400
-708600
-708800
-709000
-709200
-709400
-709600
-709800
-710000
-710200
-710400
-710600
-710800
-711000
-711200
-711400
-711600
-711800
-712000
-712200
-712400
-712600
-712800
-713000
-713200
-713400
-713600
-713800
-714000
-714200
-714400
-714600
-714800
-715000
-715200
-715400
-715600
-715800
-716000
-716200
-716400
-716600
-716800
-717000
-717200
-717400
-717600
-717800
-718000
-718200
-718400
-718600
-718800
-719000
-719200
-719400
-719600
-719800
-720000
-720200
-720400
-720600
-720800
-721000
-721200
-721400
-721600
-721800
-722000
-722200
-722400
-722600
-722800
-723000
-723200
-723400
-723600
-723800
-724000
-724200
-724400
-724600
-724800
-725000
-725200
-725400
-725600
-725800
-726000
-726200
-726400
-726600
-726800
-727000
-727200
-727400
-727600
-727800
-728000
-728200
-728400
-728600
-728800
-729000
-729200
-729400
-729600
-729800
-730000
-730200
-730400
-730600
-730800
-731000
-731200
-731400
-731600
-731800
-732000
-732200
-732400
-732600
-732800
-733000
-733200
-733400
-733600
-733800
-734000
-734200
-734400
-734600
-734800
-735000
-735200
-735400
-735600
-735800
-736000
-736200
-736400
-736600
-736800
-737000
-737200
-737400
-737600
-737800
-738000
-738200
-738400
-738600
-738800
-739000
-739200
-739400
-739600
-739800
-740000
-740200
-740400
-740600
-740800
-741000
-741200
-741400
-741600
-741800
-742000
-742200
-742400
-742600
-742800
-743000
-743200
-743400
-743600
-743800
-744000
-744200
-744400
-744600
-744800
-745000
-745200
-745400
-745600
-745800
-746000
-746200
-746400
-746600
-746800
-747000
-747200
-747400
-747600
-747800
-748000
-748200
-748400
-748600
-748800
-749000
-749200
-749400
-749600
-749800
-750000
-750200
-750400
-750600
-750800
-751000
-751200
-751400
-751600
-751800
-752000
-752200
-752400
-752600
-752800
-753000
-753200
-753400
-753600
-753800
-754000
-754200
-754400
-754600
-754800
-755000
-755200
-755400
-755600
-755800
-756000
-756200
-756400
-756600
-756800
-757000
-757200
-757400
-757600
-757800
-758000
-758200
-758400
-758600
-758800
-759000
-759200
-759400
-759600
-759800
-760000
-760200
-760400
-760600
-760800
-761000
-761200
-761400
-761600
-761800
-762000
-762200
-762400
-762600
-762800
-763000
-763200
-763400
-763600
-763800
-764000
-764200
-764400
-764600
-764800
-765000
-765200
-765400
-765600
-765800
-766000
-766200
-766400
-766600
-766800
-767000
-767200
-767400
-767600
-767800
-768000
-768200
-768400
-768600
-768800
-769000
-769200
-769400
-769600
-769800
-770000
-770200
-770400
-770600
-770800
-771000
-771200
-771400
-771600
-771800
-772000
-772200
-772400
-772600
-772800
-773000
-773200
-773400
-773600
-773800
-774000
-774200
-774400
-774600
-774800
-775000
-775200
-775400
-775600
-775800
-776000
-776200
-776400
-776600
-776800
-777000
-777200
-777400
-777600
-777800
-778000
-778200
-778400
-778600
-778800
-779000
-779200
-779400
-779600
-779800
-780000
-780200
-780400
-780600
-780800
-781000
-781200
-781400
-781600
-781800
-782000
-782200
-782400
-782600
-782800
-783000
-783200
-783400
-783600
-783800
-784000
-784200
-784400
-784600
-784800
-785000
-785200
-785400
-785600
-785800
-786000
-786200
-786400
-786600
-786800
-787000
-787200
-787400
-787600
-787800
-788000
-788200
-788400
-788600
-788800
-789000
-789200
-789400
-789600
-789800
-790000
-790200
-790400
-790600
-790800
-791000
-791200
-791400
-791600
-791800
-792000
-792200
-792400
-792600
-792800
-793000
-793200
-793400
-793600
-793800
-794000
-794200
-794400
-794600
-794800
-795000
-795200
-795400
-795600
-795800
-796000
-796200


1800
1600
1400
'E' ADIT
'C' ADIT
'A' ADIT
'W' ADIT
'V' ADIT
BP03
BP04
BP05
BP06
BP07
BP08
BP09
FDUS14
FDUS15
FDUS16
FDUS17
FDUS18
FDUS19
FDUS12
FDUS24
FDUS23
FDUS22
FDUS21
FDUS20
FDUS08
FDUS07
FDUS06
FDUS04
FDUS03
H1
H2
H3
H4
H5
H6
H7
H8
H9
H10
H11
H12
H13
H14
H15
H16
H17
H18
H19
H20
H21
H22
H23
H24
H25
H26
H27
H28
H29
H30
H31
H32
H33
H34
H35
H36
H37
H38
H39
H40
H41
H42
H43
H44
H45
H46
H47
H48
H49
H50
H51
H52
H53
H54
H55
H56
H57
H58
H59
H60
H61
H62
H63
H64
H65
H66
H67
H68
H69
H70
H71
H72
H73
H74
H75
H76
H77
H78
H79
H80
H81
H82
H83
H84
H85
H86
H87
H88
H89
H90
H91
H92
H93
H94
H95
H96
H97
H98
H99
H100
H101
H102
H103
H104
H105
H106
H107
H108
H109
H110
H111
H112
H113
H114
H115
H116
H117
H118
H119
H120
H121
H122
H123
H124
H125
H126
H127
H128
H129
H130
H131
H132
H133
H134
H135
H136
H137
H138
H139
H140
H141
H142
H143
H144
H145
H146
H147
H148
H149
H150
H151
H152
H153
H154
H155
H156
H157
H158
H159
H160
H161
H162
H163
H164
H165
H166
H167
H168
H169
H170
H171
H172
H173
H174
H175
H176
H177
H178
H179
H180
H181
H182
H183
H184
H185
H186
H187
H188
H189
H190
H191
H192
H193
H194
H195
H196
H197
H198
H199
H200
H201
H202
H203
H204
H205
H206
H207
H208
H209
H210
H211
H212
H213
H214
H215
H216
H217
H218
H219
H220
H221
H222
H223
H224
H225
H226
H227
H228
H229
H230
H231
H232
H233
H234
H235
H236
H237
H238
H239
H240
H241
H242
H243
H244
H245
H246
H247
H248
H249
H250
H251
H252
H253
H254
H255
H256
H257
H258
H259
H260
H261
H262
H263
H264
H265
H266
H267
H268
H269
H270
H271
H272
H273
H274
H275
H276
H277
H278
H279
H280
H281
H282
H283
H284
H285
H286
H287
H288
H289
H290
H291
H292
H293
H294
H295
H296
H297
H298
H299
H300
H301
H302
H303
H304
H305
H306
H307
H308
H309
H310
H311
H312
H313
H314
H315
H316
H317
H318
H319
H320
H321
H322
H323
H324
H325
H326
H327
H328
H329
H330
H331
H332
H333
H334
H335
H336
H337
H338
H339
H340
H341
H342
H343
H344
H345
H346
H347
H348
H349
H350
H351
H352
H353
H354
H355
H356
H357
H358
H359
H360
H361
H362
H363
H364
H365
H366
H367
H368
H369
H370
H371
H372
H373
H374
H375
H376
H377
H378
H379
H380
H381
H382
H383
H384
H385
H386
H387
H388
H389
H390
H391
H392
H393
H394
H395
H396
H397
H398
H399
H400
H401
H402
H403
H404
H405
H406
H407
H408
H409
H410
H411
H412
H413
H414
H415
H416
H417
H418
H419
H420
H421
H422
H423
H424
H425
H426
H427
H428
H429
H430
H431
H432
H433
H434
H435
H436
H437
H438
H439
H440
H441
H442
H443
H444
H445
H446
H447
H448
H449
H450
H451
H452
H453
H454
H455
H456
H457
H458
H459
H460
H461
H462
H463
H464
H465
H466
H467
H468
H469
H470
H471
H472
H473
H474
H475
H476
H477
H478
H479
H480
H481
H482
H483
H484
H485
H486
H487
H488
H489
H490
H491
H492
H493
H494
H495
H496
H497
H498
H499
H500
H501
H502
H503
H504
H505
H506
H507
H508
H509
H510
H511
H512
H513
H514
H515
H516
H517
H518
H519
H520
H521
H522
H523
H524
H525
H526
H527
H528
H529
H530
H531
H532
H533
H534
H535
H536
H537
H538
H539
H540
H541
H542
H543
H544
H545
H546
H547
H548
H549
H550
H551
H552
H553
H554
H555
H556
H557
H558
H559
H560
H561
H562
H563
H564
H565
H566
H567
H568
H569
H570
H571
H572
H573
H574
H575
H576
H577
H578
H579
H580
H581
H582
H583
H584
H585
H586
H587
H588
H589
H590
H591
H592
H593
H594
H595
H596
H597
H598
H599
H600
H601
H602
H603
H604
H605
H606
H607
H608
H609
H610
H611
H612
H613
H614
H615
H616
H617
H618
H619
H620
H621
H622
H623
H624
H625
H626
H627
H628
H629
H630
H631
H632
H633
H634
H635
H636
H637
H638
H639
H640
H641
H642
H643
H644
H645
H646
H647
H648
H649
H650
H651
H652
H653
H654
H655
H656
H657
H658
H659
H660
H661
H662
H663
H664
H665
H666
H667
H668
H669
H670
H671
H672
H673
H674
H675
H676
H677
H678
H679
H680
H681
H682
H683
H684
H685
H686
H687
H688
H689
H690
H691
H692
H693
H694
H695
H696
H697
H698
H699
H700
H701
H702
H703
H704
H705
H706
H707
H708
H709
H710
H711
H712
H713
H714
H715
H716
H717
H718
H719
H720
H721
H722
H723
H724
H725
H726
H727
H728
H729
H730
H731
H732
H733
H734
H735
H736
H737
H738
H739
H740
H741
H742
H743
H744
H745
H746
H747
H748
H749
H750
H751
H752
H753
H754
H755
H756
H757
H758
H759
H760
H761
H762
H763
H764
H765
H766
H767
H768
H769
H770
H771
H772
H773
H774
H775
H776
H777
H778
H779
H780
H781
H782
H783
H784
H785
H786
H787
H788
H789
H790
H791
H792
H793
H794
H795
H796
H797
H798
H799
H800
H801
H802
H803
H804
H805
H806
H807
H808
H809
H810
H811
H812
H813
H814
H815
H816
H817
H818
H819
H820
H821
H822
H823
H824
H825
H826
H827
H828
H829
H830
H831
H832
H833
H834
H835
H836
H837
H838
H839
H840
H841
H842
H843
H844
H845
H846
H847
H848
H849
H850
H851
H852
H853
H854
H855
H856
H857
H858
H859
H860
H861
H862
H863
H864
H865
H866
H867
H868
H869
H870
H871
H872
H873
H874
H875
H876
H877
H878
H879
H880
H881
H882
H883
H884
H885
H886
H887
H888
H889
H890
H891
H892
H893
H894
H895
H896
H897
H898
H899
H900
H901
H902
H903
H904
H905
H906
H907
H908
H909
H910
H911
H912
H913
H914
H915
H916
H917
H918
H919
H920
H921
H922
H923
H924
H925
H926
H927
H928
H929
H930
H931
H932
H933
H934
H935
H936
H937
H938
H939
H940
H941
H942
H943
H944
H945
H946
H947
H948
H949
H950
H951
H952
H953
H954
H955
H956
H957
H958
H959
H960
H961
H962
H963
H964
H965
H966
H967
H968
H969
H970
H971
H972
H973
H974
H975
H976
H977
H978
H979
H980
H981
H982
H983
H984
H985
H986
H987
H988
H989
H990
H991
H992
H993
H994
H995
H996
H997
H998
H999
H1000
H1001
H1002
H1003
H1004
H1005
H1006
H1007
H1008
H1009
H1010
H1011
H1012
H1013
H1014
H1015
H1016
H1017
H1018
H1019
H1020
H1021
H1022
H1023
H1024
H1025
H1026
H1027
H1028
H1029
H1030
H1031
H1032
H1033
H1034
H1035
H1036
H1037
H1038
H1039
H1040
H1041
H1042
H1043
H1044
H1045
H1046
H1047
H1048
H1049
H1050
H1051
H1052
H1053
H1054
H1055
H1056
H1057
H1058
H1059
H1060
H1061
H1062
H1063
H1064
H1065
H1066
H1067
H1068
H1069
H1070
H1071
H1072
H1073
H1074
H1075
H1076
H1077
H1078
H1079
H1080
H1081
H1082
H1083
H1084
H1085
H1086
H1087
H1088
H1089
H1090
H1091
H1092
H1093
H1094
H1095
H1096
H1097
H1098
H1099
H1100
H1101
H1102
H1103
H1104
H1105
H1106
H1107
H1108
H1109
H1110
H1111
H1112
H1113
H1114
H1115
H1116
H1117
H1118
H1119
H1120
H1121
H1122
H1123
H1124
H1125
H1126
H1127
H1128
H1129
H1130
H1131
H1132
H1133
H1134
H1135
H1136
H1137
H1138
H1139
H1140
H1141
H1142
H1143
H1144
H1145
H1146
H1147
H1148
H1149
H1150
H1151
H1152
H1153
H1154
H1155
H1156
H1157
H1158
H1159
H1160
H1161
H1162
H1163
H1164
H1165
H1166
H1167
H1168
H1169
H1170
H1171
H1172
H1173
H1174
H1175
H1176
H1177
H1178
H1179
H1180
H1181
H1182
H1183
H1184
H1185
H1186
H1187
H1188
H1189
H1190
H1191
H1192
H1193
H1194
H1195
H1196
H1197
H1198
H1199
H1200
H1201
H1202
H1203
H1204
H1205
H1206
H1207
H1208
H1209
H1210
H1211
H1212
H1213
H1214
H1215
H1216
H1217
H1218
H1219
H1220
H1221
H1222
H1223
H1224
H1225
H1226
H1227
H1228
H1229
H1230
H1231
H1232
H1233
H1234
H1235
H1236
H1237
H1238
H1239
H1240
H1241
H1242
H1243
H1244
H1245
H1246
H1247
H1248
H1249
H1250
H1251
H1252
H1253
H1254
H1255
H1256
H1257
H1258
H1259
H1260
H1261
H1262
H1263
H1264
H1265
H1266
H1267
H1268
H1269
H1270
H1271
H1272
H1273
H1274
H1275
H1276
H1277
H1278
H1279
H1280
H1281
H1282
H1283
H1284
H1285
H1286
H1287
H1288
H1289
H1290
H1291
H1292
H1293
H1294
H1295
H1296
H1297
H1298
H1299
H1300
H1301
H1302
H1303
H1304
H1305
H1306
H1307
H1308
H1309
H1310
H1311
H1312
H1313
H1314
H1315
H1316
H1317
H1318
H1319
H1320
H1321
H1322
H1323
H1324
H1325
H1326
H1327
H1328
H1329
H1330
H1331
H1332
H1333
H1334
H1335
H1336
H1337
H1338
H1339
H1340
H1341
H1342
H1343
H1344
H1345
H1346
H1347
H1348
H1349
H1350
H1351
H1352
H1353
H1354
H1355
H1356
H1357
H1358
H1359
H1360
H1361
H1362
H1363
H1364
H1365
H1366
H1367
H1368
H1369
H1370
H1371
H1372
H1373
H1374
H1375
H1376
H1377
H1378
H1379
H1380
H1381
H1382
H1383
H1384
H1385
H1386
H1387
H1388
H1389
H1390
H1391
H1392
H1393
H1394
H1395
H1396
H1397
H1398
H1399
H1400
H1401
H1402
H1403
H1404
H1405
H1406
H1407
H1408
H1409
H1410
H1411
H1412
H1413
H1414
H1415
H1416
H1417
H1418
H1419
H1420
H1421
H1422
H1423
H1424
H1425
H1426
H1427
H1428
H1429
H1430
H1431
H1432
H1433
H1434
H1435
H1436
H1437
H1438
H1439
H1440
H1441
H1442
H1443
H1444
H1445
H1446
H1447
H1448
H1449
H1450
H1451
H1452
H1453
H1454
H1455
H1456
H1457
H1458
H1459
H1460
H1461
H1462
H1463
H1464
H1465
H1466
H1467
H1468
H1469
H1470
H1471
H1472
H1473
H1474
H1475
H1476
H1477
H1478
H1479
H1480
H1481
H1482
H1483
H1484
H1485
H1486
H1487
H1488
H1489
H1490
H1491
H1492
H1493
H1494
H1495
H1496
H1497
H1498
H1499
H1500
H1501
H1502
H1503
H1504
H1505
H1506
H1507
H1508
H1509
H1510
H1511
H1512
H1513
H1514
H1515
H1516
H1517
H1518
H1519
H1520
H1521
H1522
H1523
H1524
H1525
H1526
H1527
H1528
H1529
H1530
H1531
H1532
H1533
H1534
H1535
H1536
H1537
H1538
H1539
H1540
H1541
H1542
H1543
H1544
H1545
H1546
H1547
H1548
H1549
H1550
H1551
H1552
H1553
H1554
H1555
H1556
H1557
H1558
H1559
H1560
H1561
H1562
H1563
H1564
H1565
H1566
H1567
H1568
H1569
H1570
H1571
H1572
H1573
H1574
H1575
H1576
H1577
H1578
H1579
H1580
H1581
H1582
H1583
H1584
H1585
H1586
H1587
H1588
H1589
H1590
H1591
H1592
H1593
H1594
H1595
H1596
H1597
H1598
H1599
H1600
H1601
H1602
H1603
H1604
H1605
H1606
H1607
H1608
H1609
H1610
H1611
H1612
H1613
H1614
H1615
H1616
H1617
H1618
H1619
H1620
H1621
H1622
H1623
H1624
H1625
H1626
H1627
H1628
H1629
H1630
H1631
H1632
H1633
H1634
H1635
H1636
H1637
H1638
H1639
H1640
H1641
H1642
H1643
H1644
H1645
H1646
H1647
H1648
H1649
H1650
H1651
H1652
H1653
H1654
H1655
H1656
H1657
H1658
H1659
H1660
H1661
H1662
H1663
H1664
H1665
H1666
H1667
H1668
H1669
H1670
H1671
H1672
H1673
H1674
H1675
H1676
H1677
H1678
H1679
H1680
H1681
H1682
H1683
H1684
H1685
H1686
H1687
H1688
H1689
H1690
H1691
H1692
H1693
H1694
H1695
H1696
H1697
H1698
H1699
H1700
H1701
H1702
H1703
H1704
H1705
H1706
H1707
H1708
H1709
H1710
H1711
H1712
H1713
H1714
H1715
H1716
H1717
H1718
H1719
H1720
H1721
H1722
H1723
H1724
H1725
H1726
H1727
H1728
H1729
H1730
H1731
H1732
H1733
H1734
H1735
H1736
H1737
H1738
H1739
H1740
H1741
H1742
H1743
H1744
H1745
H1746
H1747
H1748
H1749
H1750
H1751
H1752
H1753
H1754
H1755
H1756
H1757
H1758
H1759
H1760
H1761
H1762
H1763
H1764
H1765
H1766
H1767
H1768
H1769
H1770
H1771
H1772
H1773
H1774
H1775
H1776
H1777
H1778
H1779
H1780
H1781
H1782
H1783
H1784
H1785
H1786
H1787
H1788
H1789
H1790
H1791
H1792
H1793
H1794
H1795
H1796
H1797
H1798
H1799
H1800
H1801
H1802
H1803
H1804
H1805
H1806
H1807
H1808
H1809
H1810
H1811
H1812
H1813
H1814
H1815
H1816
H1817
H1818
H1819
H1820
H1821
H1822
H1823
H1824
H1825
H1826
H1827
H1828
H1829
H1830
H1831
H1832
H1833
H1834
H1835
H1836
H1837
H1838
H1839
H1840
H1841
H1842
H1843
H1844
H1845
H1846
H1847
H1848
H1849
H1850
H1851
H1852
H1853
H1854
H1855
H1856
H1857
H1858
H1859
H1860
H1861
H1862
H1863
H1864
H1865
H1866
H1867
H1868
H1869
H1870
H1871
H1872
H1873
H1874
H1875
H1876
H1877
H1878
H1879
H1880
H1881
H1882
H1883
H1884
H1885
H1886
H1887
H1888
H1889
H1890
H1891
H1892
H1893
H1894
H1895
H1896
H1897
H1898
H1899
H1900
H1901
H1902
H1903
H1904
H1905
H1906
H1907
H1908
H1909
H1910
H1911
H1912
H1913
H1914
H1915
H1916
H1917
H1918
H1919
H1920
H1921
H1922
H1923
H1924
H1925
H1926
H1927
H1928
H1929
H1930
H1931
H1932
H1933
H1934
H1935
H1936
H1937
H1938
H1939
H1940
H1941
H1942
H1943
H1944
H1945
H1946
H1947
H1948
H1949
H1950
H1951
H1952
H1953
H1954
H1955
H1956
H1957
H1958
H1959
H1960
H1961
H1962
H1963
H1964
H1965
H1966
H1967
H1968
H1969
H1970
H1971
H1972
H1973
H1974
H1975
H1976
H1977
H1978
H1979
H1980
H1981
H1982
H1983
H1984
H1985
H1986
H1987
H1988
H1989
H1990
H1991
H1992
H1993
H1994
H1995
H1996
H1997
H1998
H1999
H2000
H2001
H2002
H2003
H2004
H2005
H2006
H2007
H2008
H2009
H2010
H2011
H2012
H2013
H2014
H2015
H2016
H2017
H2018
H2019
H2020
H2021
H2022
H2023
H2024
H2025
H2026
H2027
H2028
H2029
H2030
H2031
H2032
H2033
H2034
H2035
H2036
H2037
H2038
H2039
H2040
H2041
H2042
H2043
H2044
H2045
H2046
H2047
H2048
H2049
H2050
H2051
H2052
H2053
H2054
H2055
H2056
H2057
H2058
H2059
H2060
H2061
H2062
H2063
H2064
H2065
H2066
H2067
H2068
H2069
H2070
H2071
H2072
H2073
H2074
H2075
H2076
H2077
H2078
H2079
H2080
H2081
H2082
H2083
H2084
H2085
H2086
H2087
H2088
H2089
H2090
H2091
H2092
H2093
H2094
H2095
H2096
H2097
H2098
H2099
H2100
H2101
H2102
H2103
H2104
H2105
H2106
H2107
H2108
H2109
H2110
H2111
H2112
H2113
H2114
H2115
H2116
H2117
H2118
H2119
H2120
H2121
H2122
H2123
H2124
H2125
H2126
H2127
H2128
H2129
H2130
H2131
H2132
H2133
H2134
H2135
H2136
H2137
H2138
H2139
H2140
H2141
H2142
H2143
H2144
H2145
H2146
H2147
H2148
H2149
H2150
H2151
H2152
H2153
H2154
H2155
H2156
H2157
H2158
H2159
H2160
H2161
H2162
H2163
H2164
H2165
H2166
H2167
H2168
H2169
H2170
H2171
H2172
H2173
H2174
H2175
H2176
H2177
H2178
H2179
H2180
H2181
H2182
H2183
H2184
H2185
H2186
H2187
H2188
H2189
H2190
H2191
H2192
H2193
H2194
H2195
H2196
H2197
H2198
H2199
H2200
H2201
H2202
H2203
H2204
H2205
H2206
H2207
H2208
H2209
H2210
H2211
H2212
H2213
H2214
H2215
H2216
H2217
H2218
H2219
H2220
H2221
H2222
H2223
H2224
H2225
H2226
H2227
H2228
H2229
H2230
H2231
H2232
H2233
H2234
H2235
H2236
H2237
H2238
H2239
H2240
H2241
H2242
H2243
H2244
H2245
H2246
H2247
H2248
H2249
H2250
H2251
H2252
H2253
H2254
H2255
H2256
H2257
H2258
H2259
H2260
H2261
H2262
H2263
H2264
H2265
H2266
H2267
H2268
H2269
H2270
H2271
H2272
H2273
H2274
H2275
H2276
H2277
H2278
H2279
H2280
H2281
H2282
H2283
H2284
H2285
H2286
H2287
H2288
H2289
H2290
H2291
H2292
H2293
H2294
H2295
H2296
H2297
H2298
H2299
H2300
H2301
H2302
H2303
H2304
H2305
H2306
H2307
H2308
H2309
H2310
H2311
H2312
H2313
H2314
H2315
H2316
H2317
H2318
H2319
H2320
H2321
H2322
H2323
H2324
H2325
H2326
H2327
H2328
H2329
H2330
H2331
H2332
H2333
H2334
H2335
H2336
H2337
H2338
H2339
H2340
H2341
H2342
H2343
H2344
H2345
H2346
H2347
H2348
H2349
H2350
H2351
H2352
H2353
H2354
H2355
H2356
H2357
H2358
H2359
H2360
H2361
H2362
H2363
H2364
H2365
H2366
H2367
H2368
H2369
H2370
H2371
H2372
H2373
H2374
H2375
H2376
H2377
H2378
H2379
H2380
H2381
H2382
H2383
H2384
H2385
H2386
H2387
H2388
H2389
H2390
H2391
H2392
H2393
H2394
H2395
H2396
H2397
H2398
H2399
H2400
H2401
H2402
H2403
H2404
H2405
H2406
H2407
H2408
H2409
H2410
H2411
H2412
H2413
H2414
H2415
H2416
H2417
H2418
H2419
H2420
H2421
H2422
H2423
H2424
H2425
H2426
H2427
H2428
H2429
H2430
H2431
H2432
H2433
H2434
H2435
H2436
H2437
H2438
H2439
H2440
H2441
H2442
H2443
H2444
H2445
H2446
H2447
H2448
H2449
H2450
H2451
H2452
H2453
H2454
H2455
H2456
H2457
H2458
H2459
H2460
H2461
H2462
H2463
H2464
H2465
H2466
H2467
H2468
H2469
H2470
H2471
H2472
H2473
H2474
H2475
H2476
H2477
H2478
H2479
H2480
H2481
H2482
H2483
H2484
H2485
H2486
H2487
H2488
H2489
H2490
H2491
H2492
H2493
H2494
H2495
H2496
H2497
H2498
H2499
H2500
H2501
H2502
H2503
H2504
H2505
H2506
H2507
H2508
H2509
H2510
H2511
H2512
H2513
H2514
H2515
H2516
H2517
H2518
H2519
H2520
H2521
H2522
H2523
H2524
H2525
H2526
H2527
H2528
H2529
H2530
H2531
H2532
H2533
H2534
H2535
H2536
H2537
H2538
H2539
H2540
H2541
H2542
H2543
H2544
H2545
H2546
H2547
H2548
H2549
H2550
H2551
H2552
H2553
H2554
H2555
H2556
H2557
H2558
H2559
H2560
H2561
H2562
H2563
H2564
H2565
H2566
H2567
H2568
H2569
H2570
H2571
H2572
H2573
H2574
H2575
H2576
H2577
H2578
H2579
H2580
H2581
H2582
H2583
H2584
H2585
H2586
H2587
H2588
H2589
H2590
H2591
H2592
H2593
H2594
H2595
H2596
H2597
H2598
H2599
H2600
H2601
H2602
H2603
H2604
H2605
H2606
H2607
H2608
H2609
H2610
H2611
H2612
H2613
H2614
H2615
H2616
H2617
H2618
H2619
H2620
H2621
H2622
H2623
H2624
H2625
H2626
H2627
H2628
H2629
H2630
H2631
H2632
H2633
H2634
H2635
H2636
H2637
H2638
H2639
H2640
H2641
H2642
H2643
H2644
H2645
H2646
H2647
H2648
H2649
H2650
H2651
H2652
H2653
H2654
H2655
H2656
H2657
H2658
H2659
H2660
H2661
H2662
H2663
H2664
H2665
H2666
H2667
H2668
H2669
H2670
H2671
H2672
H2673
H2674
H2675
H2676
H2677
H2678
H2679
H2680
H2681
H2682
H2683
H2684
H2685
H2686
H2687
H2688
H2689
H2690
H2691
H2692
H2693
H2694
H2695
H2696
H2697
H2698
H2699
H2700
H2701
H2702
H2703
H2704
H2705
H2706
H2707
H2708
H2709
H2710
H2711
H2712
H2713
H2714
H2715
H2716
H2717
H2718
H2719
H2720
H2721
H2722
H2723
H2724
H2725
H2726
H2727
H2728
H2729
H2730
H2731
H2732
H2733
H2734
H2735
H2736
H2737
H2738
H2739
H2740
H2741
H2742
H2743
H2744
H2745
H2746
H2747
H2748
H2749
H2750
H2751
H2752
H2753
H2754
H2755
H2756
H2757
H2758
H2759
H2760
H2761
H2762
H2763
H2764
H2765
H2766
H2767
H2768
H2769
H2770
H2771
H2772
H2773
H2774
H2775
H2776
H2777
H2778
H2779
H2780
H2781
H2782
H2783
H2784
H2785
H2786
H2787
H2788
H2789
H2790
H2791
H2792
H2793
H2794
H2795
H2796
H2797
H2798
H2799
H2800
H2801
H2802
H2803
H2804
H2805
H2806
H2807
H2808
H2809
H2810
H2811
H2812
H2813
H2814
H2815
H2816
H2817
H2818
H2819
H2820
H2821
H2822
H2823
H2824
H2825
H2826
H2827
H2828
H2829
H2830
H2831
H2832
H2833
H2834
H2835
H2836
H2837
H2838
H2839
H2840
H2841
H2842
H2843
H2844
H2845
H2846
H2847
H2848
H2849
H2850
H2851
H2852
H2853
H2854
H2855
H2856
H2857
H2858
H2859
H2860
H2861
H2862
H2863
H2864
H2865
H2866
H2867
H2868
H2869
H2870
H2871
H2872
H2873
H2874
H2875
H2876
H2877
H2878
H2879
H2880
H2881
H2882
H2883
H2884
H2885
H2886
H2887
H2888
H2889
H2890
H2891
H2892
H2893
H2894
H2895
H2896
H2897
H2898
H2899
H2900
H2901
H2902
H2903
H2904
H2905
H2906
H2907
H2908
H2909
H2910
H2911
H2912
H2913
H2914
H2915
H2916
H2917
H2918
H2919
H2920
H2921
H2922
H2923
H2924
H2925
H2926
H2927
H2928
H2929
H2930
H2931
H2932
H2933
H2934
H2935
H2936
H2937
H2938
H2939
H2940
H2941
H2942
H2943
H2944
H2945
H2946
H2947
H2948
H2949
H2950
H2951
H2952
H2953
H2954
H2955
H2956
H2957
H2958
H2959
H2960
H2961
H2962
H2963
H2964
H2965
H2966
H2967
H2968
H2969
H2970
H2971
H2972
H2973
H2974
H2975
H2976
H2977
H2978
H2979
H2980
H2981
H2982
H2983
H2984
H2985
H2986
H2987
H2988
H2989
H2990
H2991
H2992
H2993
H2994
H2995
H2996
H2997
H2998
H2999
H3000
H3001
H3002
H3003
H3004
H3005
H3006
H3007
H3008
H3009
H3010
H3011
H3012
H3013
H3014
H3015
H3016
H3017
H3018
H3019
H3020
H3021
H3022
H3023
H3024
H3025
H3026
H3027
H3028
H3029
H3030
H3031
H3032
H3033
H3034
H3035
H3036
H3037
H3038
H3039
H3040
H3041
H3042
H3043
H3044
H3045
H3046
H3047
H3048
H3049
H3050
H3051
H3052
H3053
H3054
H3055
H3056
H3057
H3058
H3059
H3060
H3061
H3062
H3063
H3064
H3065
H3066
H3067
H3068
H3069
H3070
H3071
H3072
H3073
H3074
H3075
H3076
H3077
H3078
H3079
H3080
H3081
H3082
H3083
H3084
H3085
H3086
H3087
H3088
H3089
H3090
H3091
H3092
H3093
H3094
H3095
H3096
H3097
H3098
H3099
H3100
H3101
H3102
H3103
H3104
H3105
H3106
H3107
H3108
H3109
H3110
H3111
H3112
H3113
H3114
H3115
H3116
H3117
H3118
H3119
H3120
H3121
H3122
H3123
H3124
H3125
H3126
H3127
H3128
H3129
H3130
H3131
H3132
H3133
H3134
H3135
H3136
H3137
H3138
H3139
H3140
H3141
H3142
H3143
H3144
H3145
H3146
H3147
H3148
H3149
H3150
H3151
H3152
H3153
H3154
H3155
H3156
H3157
H3158
H3159
H3160
H3161
H3162
H3163
H3164
H3165
H3166
H3167
H3168
H3169
H3170
H3171
H3172
H3173
H3174
H3175
H3176
H3177
H3178
H3179
H3180
H3181
H3182
H3183
H3184
H3185
H3186
H3187
H3188
H3189
H3190
H3191
H3192
H3193
H3194
H3195
H3196
H3197
H3198
H3199
H3200
H3201
H3202
H3203
H3204
H3205
H3206
H3207
H3208
H3209
H3210
H3211
H3212
H3213
H3214
H3215
H3216
H3217
H3218
H3219
H3220
H3221
H3222
H3223
H3224
H3225
H3226
H3227
H3228
H3229
H3230
H3231
H3232
H3233
H3234
H3235
H3236
H3237
H3238
H3239
H3240
H3241
H3242
H3243
H3244
H3245
H3246
H3247
H3248
H3249
H3250
H3251
H3252
H3253
H3254
H3255
H3256
H3257
H3258
H3259
H3260
H3261
H3262
H3263
H3264
H3265
H3266
H3267
H3268
H3269
H3270
H3271
H3272
H3273
H3274
H3275
H3276
H3277
H3278
H3279
H3280
H3281
H3282
H3283
H3284
H3285
H3286
H3287
H3288
H3289
H3290
H3291
H3292
H3293
H3294
H3295
H3296
H3297
H3298
H3299
H3300
H3301
H3302
H3303
H3304
H3305
H3306
H3307
H3308
H3309
H3310
H3311
H3312
H3313
H3314
H3315
H3316
H3317
H3318
H3319
H3320
H3321
H3322
H3323
H3324
H3325
H3326
H3327
H3328
H3329
H3330
H3331
H3332
H3333
H3334
H3335
H3336
H3337
H3338
H3339
H3340
H3341
H3342
H3343
H3344
H3345
H3346
H3347
H3348
H3349
H3350
H3351
H3352
H3353
H3354
H3355
H3356
H3357
H3358
H3359
H3360
H3361
H3362
H3363
H3364
H3365
H3366
H3367
H3368
H3369
H3370
H3371
H3372
H3373
H3374
H3375
H3376
H3377
H3378
H3379
H3380
H3381
H3382
H3383
H3384
H3385
H3386
H3387
H3388
H3389
H3390
H3391
H3392
H3393
H3394
H3395
H3396
H3397
H3398
H3399
H3400
H3401
H3402
H3403
H3404
H3405
H3406
H3407
H3408
H3409
H3410
H3411
H3412
H3413
H3414
H3415
H3416
H3417
H3418
H3419
H3420
H3421
H3422
H3423
H3424
H3425
H3426
H3427
H3428
H3429
H3430
H3431
H3432
H3433
H3434
H3435
H3436
H3437
H3438
H3439
H3440
H3441
H3442
H3443
H3444
H3445
H3446
H3447
H3448
H3449
H3450
H3451
H3452
H3453
H3454
H3455
H3456
H3457
H3458
H3459
H3460
H3461
H3462
H3463
H3464
H3465
H3466
H3467
H3468
H3469
H3470
H3471
H3472
H3473
H3474
H3475
H3476
H3477
H3478
H3479
H3480
H3481
H3482
H3483
H3484
H3485
H3486
H3487
H3488
H3489
H3490
H3491
H3492
H3493
H3494
H3495
H3496
H3497
H3498
H3499
H3500
H3501
H3502
H3503
H3504
H3505
H3506
H3507
H3508
H3509
H3510
H3511
H3512
H3513
H3514
H3515
H3516
H3517
H3518
H3519
H3520
H3521
H3522
H3523
H3524
H3525
H3526
H3527
H3528
H3529
H3530
H3531
H3532
H3533
H3534
H3535
H3536
H3537
H3538
H3539
H3540
H3541
H3542
H3543
H3544
H3545
H3546
H3547
H3548
H3549
H3550
H3551
H3552
H3553
H3554
H3555
H3556
H3557
H3558
H3559
H3560
H3561
H3562
H3563
H3564
H3565
H3566
H3567
H3568
H3569
H3570
H3571
H3572
H3573
H3574
H3575
H3576
H3577
H3578
H3579
H3580
H3581
H3582
H3583
H3584
H3585
H3586
H3587
H3588
H3589
H3590
H3591
H3592
H3593
H3594
H3595
H3596
H3597
H3598
H3599
H3600
H3601
H3602
H3603
H3604
H3605
H3606
H3607
H3608
H3609
H3610
H3611
H3612
H3613
H3614
H3615
H3616
H3617
H3618
H3619
H3620
H3621
H3622
H3623
H3624
H3625
H3626
H3627
H3628
H3629
H3630
H3631
H3632
H3633
H3634
H3635
H3636
H3637
H3638
H3639
H3640
H3641
H3642
H3643
H3644
H3645
H3646
H3647
H3648
H3649
H3650
H3651
H3652
H3653
H3654
H3655
H3656
H3657
H3658
H3659
H3660
H3661
H3662
H3663
H3664
H3665
H3666
H3667
H3668
H3669
H3670
H3671
H3672
H3673
H3674
H3675
H3676
H3677
H3678
H3679
H3680
H3681
H3682
H3683
H3684
H3685
H3686
H3687
H3688
H3689
H3690
H3691
H3692
H3693
H3694
H3695
H3696
H3697
H3698
H3699
H3700
H3701
H3702
H3703
H3704
H3705
H3706
H3707
H3708
H3709
H3710
H3711
H3712
H3713
H3714
H3715
H3716
H3717
H3718
H3719
H3720
H3721
H3722
H3723
H3724
H3725
H3726
H3727
H3728
H3729
H3730
H3731
H3732
H3733
H3734
H3735
H3736
H3737
H3738
H3739
H3740
H3741
H3742
H3743
H3744
H3745
H3746
H3747
H3748
H3749
H3750
H3751
H3752
H3753
H3754
H3755
H3756
H3757
H3758
H3759
H3760
H3761
H3762
H3763
H3764
H3765
H3766
H3767
H3768
H3769
H3770
H3771
H3772
H3773
H3774
H3775
H3776
H3777
H3778
H3779
H3780
H3781
H3782
H3783
H3784
H3785
H3786
H3787
H3788
H3789
H3790
H3791
H3792
H3793
H3794
H3795
H3796
H3797
H3798
H3799
H3800
H3801
H3802
H3803
H3804
H3805
H3806
H3807
H3808
H3809
H3810
H3811
H3812
H3813
H3814
H3815
H3816
H3817
H3818
H3819
H3820
H3821
H3822
H3823
H3824
H3825
H3826
H3827
H3828
H3829
H3830
H3831
H3832
H3833
H3834
H3835
H3836
H3837
H3838
H3839
H3840
H3841
H3842
H3843
H3844
H3845
H3846
H3847
H3848
H3849
H3850
H3851
H3852
H3853
H3854
H3855
H3856
H3857
H3858
H3859
H3860
H3861
H3862
H3863
H3864
H3865
H3866
H3867
H3868
H3869
H3870
H3871
H3872
H3873
H3874
H3875
H3876
H3877
H3878
H3879
H3880
H3881
H3882
H3883
H3884
H3885
H3886
H3887
H3888
H3889
H3890
H3891
H3892
H3893
H3894
H3895
H3896
H3897
H3898
H3899
H3900
H3901
H3902
H3903
H3904
H3905
H3906
H3907
H3908
H3909
H3910
H3911
H3912
H3913
H3914
H3915
H3916
H3917
H3918
H3919
H3920
H3921
H3922
H3923
H3924
H3925
H3926
H3927
H3928
H3929
H3930
H3931
H3932
H3933
H3934
H3935
H3936
H3937
H3938
H3939
H3940
H3941
H3942
H3943
H3944
H3945
H3946
H3947
H3948
H3949
H3950
H3951
H3952
H3953
H3954
H3955
H3956
H3957
H3958
H3959
H3960
H3961
H3962
H3963
H3964
H3965
H3966
H3967
H3968
H3969
H3970
H3971
H3972
H3973
H3974
H3975
H3976
H3977
H3978
H3979
H3980
H3981
H3982
H3983
H3984
H3985
H3986
H3987
H3988
H3989
H3990
H3991
H3992
H3993
H3994
H3995
H3996
H3997
H3998
H3999
H4000
H4001
H4002
H4003
H4004
H4005
H4006
H4007
H4008
H4009
H4010
H4011
H4012
H4013
H4014
H4015
H4016
H4017
H4018
H4019
H4020
H4021
H4022
H4023
H4024
H4025
H4026
H4027
H4028
H4029
H4030
H4031
H4032
H4033
H4034
H4035
H4036
H4037
H4038
H4039
H4040
H4041
H4042
H4043
H4044
H4045
H4046
H4047
H4048
H4049
H4050
H4051
H4052
H4053
H4054
H4055
H4056
H4057
H4058
H4059
H4060
H4061
H4062
H4063
H4064
H4065
H4066
H4067
H4068
H4069
H4070
H4071
H4072
H4073
H4074
H4075
H4076
H4077
H4078
H4079
H4080
H4081
H4082
H4083
H4084
H4085
H4086
H4087
H4088
H4089
H4090
H4091
H4092
H4093
H4094
H4095
H4096
H4097
H4098
H4099
H4100
H4101
H4102
H4103
H4104
H4105
H4106
H4107
H4108
H4109
H4110
H4111
H4112
H4113
H4114
H4115
H4116
H4117
H4118
H4119
H4120
H4121
H4122
H4123
H4124
H4125
H4126
H4127
H4128
H4129
H4130
H4131
H4132
H4133
H4134
H4135
H4136
H4137
H4138
H4139
H4140
H4141
H4142
H4143
H4144
H4145
H4146
H4147
H4148
H4149
H4150
H4151
H4152
H4153
H4154
H4155
H4156
H4157
H4158
H4159
H4160
H4161
H4162
H4163
H4164
H4165
H4166
H4167
H4168
H4169
H4170
H4171
H4172
H4173
H4174
H4175
H4176
H4177
H4178
H4179
H4180
H4181
H4182
H4183
H4184
H4185
H4186
H4187
H4188
H4189
H4190
H4191
H


1200
1400
1600
1800
BP03
BP02
BP02A
BP07
PDUS12
PDUS13
PDUS14
PDUS16
PDUS17
PDUS18
PDUS19
PDUS20
PDUS21
PDUS22
PDUS23
PDUS24
PDUS25
PDUS26
PDUS27
PDUS28
PDUS29
PDUS30
NORTH ADIT
H1
H2
H3
H4
H5
H6
H7
H8
H9
H10
H20
H21
H22
H23
H24
H25
H26
H27
H28
H29
H30
H31
H32
H33
H34
H35
H36
H37
H38
H39
H40
H41
H42
H43
H44
H45
H46
H47
H48
H49
H50
H51
H52
H53
H54
H55
H56
H57
H58
H59
H60
H61
H62
H63
H64
H65
H66
H67
H68
H69
H70
H71
H72
H73
H74
H75
H76
H77
H78
H79
H80
H81
H82
H83
H84
H85
H86
H87
H88
H89
H90
H91
H92
H93
H94
H95
H96
H97
H98
H99
H100
H101
H102
H103
H104
H105
H106
H107
H108
H109
H110
H111
H112
H113
H114
H115
H116
H117
H118
H119
H120
H121
H122
H123
H124
H125
H126
H127
H128
H129
H130
H131
H132
H133
H134
H135
H136
H137
H138
H139
H140
H141
H142
H143
H144
H145
H146
H147
H148
H149
H150
H151
H152
H153
H154
H155
H156
H157
H158
H159
H160
H161
H162
H163
H164
H165
H166
H167
H168
H169
H170
H171
H172
H173
H174
H175
H176
H177
H178
H179
H180
H181
H182
H183
H184
H185
H186
H187
H188
H189
H190
H191
H192
H193
H194
H195
H196
H197
H198
H199
H200
H201
H202
H203
H204
H205
H206
H207
H208
H209
H210
H211
H212
H213
H214
H215
H216
H217
H218
H219
H220
H221
H222
H223
H224
H225
H226
H227
H228
H229
H230
H231
H232
H233
H234
H235
H236
H237
H238
H239
H240
H241
H242
H243
H244
H245
H246
H247
H248
H249
H250
H251
H252
H253
H254
H255
H256
H257
H258
H259
H260
H261
H262
H263
H264
H265
H266
H267
H268
H269
H270
H271
H272
H273
H274
H275
H276
H277
H278
H279
H280
H281
H282
H283
H284
H285
H286
H287
H288
H289
H290
H291
H292
H293
H294
H295
H296
H297
H298
H299
H300
H301
H302
H303
H304
H305
H306
H307
H308
H309
H310
H311
H312
H313
H314
H315
H316
H317
H318
H319
H320
H321
H322
H323
H324
H325
H326
H327
H328
H329
H330
H331
H332
H333
H334
H335
H336
H337
H338
H339
H340
H341
H342
H343
H344
H345
H346
H347
H348
H349
H350
H351
H352
H353
H354
H355
H356
H357
H358
H359
H360
H361
H362
H363
H364
H365
H366
H367
H368
H369
H370
H371
H372
H373
H374
H375
H376
H377
H378
H379
H380
H381
H382
H383
H384
H385
H386
H387
H388
H389
H390
H391
H392
H393
H394
H395
H396
H397
H398
H399
H400
H401
H402
H403
H404
H405
H406
H407
H408
H409
H410
H411
H412
H413
H414
H415
H416
H417
H418
H419
H420
H421
H422
H423
H424
H425
H426
H427
H428
H429
H430
H431
H432
H433
H434
H435
H436
H437
H438
H439
H440
H441
H442
H443
H444
H445
H446
H447
H448
H449
H450
H451
H452
H453
H454
H455
H456
H457
H458
H459
H460
H461
H462
H463
H464
H465
H466
H467
H468
H469
H470
H471
H472
H473
H474
H475
H476
H477
H478
H479
H480
H481
H482
H483
H484
H485
H486
H487
H488
H489
H490
H491
H492
H493
H494
H495
H496
H497
H498
H499
H500
H501
H502
H503
H504
H505
H506
H507
H508
H509
H510
H511
H512
H513
H514
H515
H516
H517
H518
H519
H520
H521
H522
H523
H524
H525
H526
H527
H528
H529
H530
H531
H532
H533
H534
H535
H536
H537
H538
H539
H540
H541
H542
H543
H544
H545
H546
H547
H548
H549
H550
H551
H552
H553
H554
H555
H556
H557
H558
H559
H560
H561
H562
H563
H564
H565
H566
H567
H568
H569
H570
H571
H572
H573
H574
H575
H576
H577
H578
H579
H580
H581
H582
H583
H584
H585
H586
H587
H588
H589
H590
H591
H592
H593
H594
H595
H596
H597
H598
H599
H600
H601
H602
H603
H604
H605
H606
H607
H608
H609
H610
H611
H612
H613
H614
H615
H616
H617
H618
H619
H620
H621
H622
H623
H624
H625
H626
H627
H628
H629
H630
H631
H632
H633
H634
H635
H636
H637
H638
H639
H640
H641
H642
H643
H644
H645
H646
H647
H648
H649
H650
H651
H652
H653
H654
H655
H656
H657
H658
H659
H660
H661
H662
H663
H664
H665
H666
H667
H668
H669
H670
H671
H672
H673
H674
H675
H676
H677
H678
H679
H680
H681
H682
H683
H684
H685
H686
H687
H688
H689
H690
H691
H692
H693
H694
H695
H696
H697
H698
H699
H700
H701
H702
H703
H704
H705
H706
H707
H708
H709
H710
H711
H712
H713
H714
H715
H716
H717
H718
H719
H720
H721
H722
H723
H724
H725
H726
H727
H728
H729
H730
H731
H732
H733
H734
H735
H736
H737
H738
H739
H740
H741
H742
H743
H744
H745
H746
H747
H748
H749
H750
H751
H752
H753
H754
H755
H756
H757
H758
H759
H760
H761
H762
H763
H764
H765
H766
H767
H768
H769
H770
H771
H772
H773
H774
H775
H776
H777
H778
H779
H780
H781
H782
H783
H784
H785
H786
H787
H788
H789
H790
H791
H792
H793
H794
H795
H796
H797
H798
H799
H800
H801
H802
H803
H804
H805
H806
H807
H808
H809
H810
H811
H812
H813
H814
H815
H816
H817
H818
H819
H820
H821
H822
H823
H824
H825
H826
H827
H828
H829
H830
H831
H832
H833
H834
H835
H836
H837
H838
H839
H840
H841
H842
H843
H844
H845
H846
H847
H848
H849
H850
H851
H852
H853
H854
H855
H856
H857
H858
H859
H860
H861
H862
H863
H864
H865
H866
H867
H868
H869
H870
H871
H872
H873
H874
H875
H876
H877
H878
H879
H880
H881
H882
H883
H884
H885
H886
H887
H888
H889
H890
H891
H892
H893
H894
H895
H896
H897
H898
H899
H900
H901
H902
H903
H904
H905
H906
H907
H908
H909
H910
H911
H912
H913
H914
H915
H916
H917
H918
H919
H920
H921
H922
H923
H924
H925
H926
H927
H928
H929
H930
H931
H932
H933
H934
H935
H936
H937
H938
H939
H940
H941
H942
H943
H944
H945
H946
H947
H948
H949
H950
H951
H952
H953
H954
H955
H956
H957
H958
H959
H960
H961
H962
H963
H964
H965
H966
H967
H968
H969
H970
H971
H972
H973
H974
H975
H976
H977
H978
H979
H980
H981
H982
H983
H984
H985
H986
H987
H988
H989
H990
H991
H992
H993
H994
H995
H996
H997
H998
H999
H1000
H1001
H1002
H1003
H1004
H1005
H1006
H1007
H1008
H1009
H1010
H1011
H1012
H1013
H1014
H1015
H1016
H1017
H1018
H1019
H1020
H1021
H1022
H1023
H1024
H1025
H1026
H1027
H1028
H1029
H1030
H1031
H1032
H1033
H1034
H1035
H1036
H1037
H1038
H1039
H1040
H1041
H1042
H1043
H1044
H1045
H1046
H1047
H1048
H1049
H1050
H1051
H1052
H1053
H1054
H1055
H1056
H1057
H1058
H1059
H1060
H1061
H1062
H1063
H1064
H1065
H1066
H1067
H1068
H1069
H1070
H1071
H1072
H1073
H1074
H1075
H1076
H1077
H1078
H1079
H1080
H1081
H1082
H1083
H1084
H1085
H1086
H1087
H1088
H1089
H1090
H1091
H1092
H1093
H1094
H1095
H1096
H1097
H1098
H1099
H1100
H1101
H1102
H1103
H1104
H1105
H1106
H1107
H1108
H1109
H1110
H1111
H1112
H1113
H1114
H1115
H1116
H1117
H1118
H1119
H1120
H1121
H1122
H1123
H1124
H1125
H1126
H1127
H1128
H1129
H1130
H1131
H1132
H1133
H1134
H1135
H1136
H1137
H1138
H1139
H1140
H1141
H1142
H1143
H1144
H1145
H1146
H1147
H1148
H1149
H1150
H1151
H1152
H1153
H1154
H1155
H1156
H1157
H1158
H1159
H1160
H1161
H1162
H1163
H1164
H1165
H1166
H1167
H1168
H1169
H1170
H1171
H1172
H1173
H1174
H1175
H1176
H1177
H1178
H1179
H1180
H1181
H1182
H1183
H1184
H1185
H1186
H1187
H1188
H1189
H1190
H1191
H1192
H1193
H1194
H1195
H1196
H1197
H1198
H1199
H1200
H1201
H1202
H1203
H1204
H1205
H1206
H1207
H1208
H1209
H1210
H1211
H1212
H1213
H1214
H1215
H1216
H1217
H1218
H1219
H1220
H1221
H1222
H1223
H1224
H1225
H1226
H1227
H1228
H1229
H1230
H1231
H1232
H1233
H1234
H1235
H1236
H1237
H1238
H1239
H1240
H1241
H1242
H1243
H1244
H1245
H1246
H1247
H1248
H1249
H1250
H1251
H1252
H1253
H1254
H1255
H1256
H1257
H1258
H1259
H1260
H1261
H1262
H1263
H1264
H1265
H1266
H1267
H1268
H1269
H1270
H1271
H1272
H1273
H1274
H1275
H1276
H1277
H1278
H1279
H1280
H1281
H1282
H1283
H1284
H1285
H1286
H1287
H1288
H1289
H1290
H1291
H1292
H1293
H1294
H1295
H1296
H1297
H1298
H1299
H1300
H1301
H1302
H1303
H1304
H1305
H1306
H1307
H1308
H1309
H1310
H1311
H1312
H1313
H1314
H1315
H1316
H1317
H1318
H1319
H1320
H1321
H1322
H1323
H1324
H1325
H1326
H1327
H1328
H1329
H1330
H1331
H1332
H1333
H1334
H1335
H1336
H1337
H1338
H1339
H1340
H1341
H1342
H1343
H1344
H1345
H1346
H1347
H1348
H1349
H1350
H1351
H1352
H1353
H1354
H1355
H1356
H1357
H1358
H1359
H1360
H1361
H1362
H1363
H1364
H1365
H1366
H1367
H1368
H1369
H1370
H1371
H1372
H1373
H1374
H1375
H1376
H1377
H1378
H1379
H1380
H1381
H1382
H1383
H1384
H1385
H1386
H1387
H1388
H1389
H1390
H1391
H1392
H1393
H1394
H1395
H1396
H1397
H1398
H1399
H1400
H1401
H1402
H1403
H1404
H1405
H1406
H1407
H1408
H1409
H1410
H1411
H1412
H1413
H1414
H1415
H1416
H1417
H1418
H1419
H1420
H1421
H1422
H1423
H1424
H1425
H1426
H1427
H1428
H1429
H1430
H1431
H1432
H1433
H1434
H1435
H1436
H1437
H1438
H1439
H1440
H1441
H1442
H1443
H1444
H1445
H1446
H1447
H1448
H1449
H1450
H1451
H1452
H1453
H1454
H1455
H1456
H1457
H1458
H1459
H1460
H1461
H1462
H1463
H1464
H1465
H1466
H1467
H1468
H1469
H1470
H1471
H1472
H1473
H1474
H1475
H1476
H1477
H1478
H1479
H1480
H1481
H1482
H1483
H1484
H1485
H1486
H1487
H1488
H1489
H1490
H1491
H1492
H1493
H1494
H1495
H1496
H1497
H1498
H1499
H1500
H1501
H1502
H1503
H1504
H1505
H1506
H1507
H1508
H1509
H1510
H1511
H1512
H1513
H1514
H1515
H1516
H1517
H1518
H1519
H1520
H1521
H1522
H1523
H1524
H1525
H1526
H1527
H1528
H1529
H1530
H1531
H1532
H1533
H1534
H1535
H1536
H1537
H1538
H1539
H1540
H1541
H1542
H1543
H1544
H1545
H1546
H1547
H1548
H1549
H1550
H1551
H1552
H1553
H1554
H1555
H1556
H1557
H1558
H1559
H1560
H1561
H1562
H1563
H1564
H1565
H1566
H1567
H1568
H1569
H1570
H1571
H1572
H1573
H1574
H1575
H1576
H1577
H1578
H1579
H1580
H1581
H1582
H1583
H1584
H1585
H1586
H1587
H1588
H1589
H1590
H1591
H1592
H1593
H1594
H1595
H1596
H1597
H1598
H1599
H1600
H1601
H1602
H1603
H1604
H1605
H1606
H1607
H1608
H1609
H1610
H1611
H1612
H1613
H1614
H1615
H1616
H1617
H1618
H1619
H1620
H1621
H1622
H1623
H1624
H1625
H1626
H1627
H1628
H1629
H1630
H1631
H1632
H1633
H1634
H1635
H1636
H1637
H1638
H1639
H1640
H1641
H1642
H1643
H1644
H1645
H1646
H1647
H1648
H1649
H1650
H1651
H1652
H1653
H1654
H1655
H1656
H1657
H1658
H1659
H1660
H1661
H1662
H1663
H1664
H1665
H1666
H1667
H1668
H1669
H1670
H1671
H1672
H1673
H1674
H1675
H1676
H1677
H1678
H1679
H1680
H1681
H1682
H1683
H1684
H1685
H1686
H1687
H1688
H1689
H1690
H1691
H1692
H1693
H1694
H1695
H1696
H1697
H1698
H1699
H1700
H1701
H1702
H1703
H1704
H1705
H1706
H1707
H1708
H1709
H1710
H1711
H1712
H1713
H1714
H1715
H1716
H1717
H1718
H1719
H1720
H1721
H1722
H1723
H1724
H1725
H1726
H1727
H1728
H1729
H1730
H1731
H1732
H1733
H1734
H1735
H1736
H1737
H1738
H1739
H1740
H1741
H1742
H1743
H1744
H1745
H1746
H1747
H1748
H1749
H1750
H1751
H1752
H1753
H1754
H1755
H1756
H1757
H1758
H1759
H1760
H1761
H1762
H1763
H1764
H1765
H1766
H1767
H1768
H1769
H1770
H1771
H1772
H1773
H1774
H1775
H1776
H1777
H1778
H1779
H1780
H1781
H1782
H1783
H1784
H1785
H1786
H1787
H1788
H1789
H1790
H1791
H1792
H1793
H1794
H1795
H1796
H1797
H1798
H1799
H1800
H1801
H1802
H1803
H1804
H1805
H1806
H1807
H1808
H1809
H1810
H1811
H1812
H1813
H1814
H1815
H1816
H1817
H1818
H1819
H1820
H1821
H1822
H1823
H1824
H1825
H1826
H1827
H1828
H1829
H1830
H1831
H1832
H1833
H1834
H1835
H1836
H1837
H1838
H1839
H1840
H1841
H1842
H1843
H1844
H1845
H1846
H1847
H1848
H1849
H1850
H1851
H1852
H1853
H1854
H1855
H1856
H1857
H1858
H1859
H1860
H1861
H1862
H1863
H1864
H1865
H1866
H1867
H1868
H1869
H1870
H1871
H1872
H1873
H1874
H1875
H1876
H1877
H1878
H1879
H1880
H1881
H1882
H1883
H1884
H1885
H1886
H1887
H1888
H1889
H1890
H1891
H1892
H1893
H1894
H1895
H1896
H1897
H1898
H1899
H1900
H1901
H1902
H1903
H1904
H1905
H1906
H1907
H1908
H1909
H1910
H1911
H1912
H1913
H1914
H1915
H1916
H1917
H1918
H1919
H1920
H1921
H1922
H1923
H1924
H1925
H1926
H1927
H1928
H1929
H1930
H1931
H1932
H1933
H1934
H1935
H1936
H1937
H1938
H1939
H1940
H1941
H1942
H1943
H1944
H1945
H1946
H1947
H1948
H1949
H1950
H1951
H1952
H1953
H1954
H1955
H1956
H1957
H1958
H1959
H1960
H1961
H1962
H1963
H1964
H1965
H1966
H1967
H1968
H1969
H1970
H1971
H1972
H1973
H1974
H1975
H1976
H1977
H1978
H1979
H1980
H1981
H1982
H1983
H1984
H1985
H1986
H1987
H1988
H1989
H1990
H1991
H1992
H1993
H1994
H1995
H1996
H1997
H1998
H1999
H2000
H2001
H2002
H2003
H2004
H2005
H2006
H2007
H2008
H2009
H2010
H2011
H2012
H2013
H2014
H2015
H2016
H2017
H2018
H2019
H2020
H2021
H2022
H2023
H2024
H2025
H2026
H2027
H2028
H2029
H2030
H2031
H2032
H2033
H2034
H2035
H2036
H2037
H2038
H2039
H2040
H2041
H2042
H2043
H2044
H2045
H2046
H2047
H2048
H2049
H2050
H2051
H2052
H2053
H2054
H2055
H2056
H2057
H2058
H2059
H2060
H2061
H2062
H2063
H2064
H2065
H2066
H2067
H2068
H2069
H2070
H2071
H2072
H2073
H2074
H2075
H2076
H2077
H2078
H2079
H2080
H2081
H2082
H2083
H2084
H2085
H2086
H2087
H2088
H2089
H2090
H2091
H2092
H2093
H2094
H2095
H2096
H2097
H2098
H2099
H2100
H2101
H2102
H2103
H2104
H2105
H2106
H2107
H2108
H2109
H2110
H2111
H2112
H2113
H2114
H2115
H2116
H2117
H2118
H2119
H2120
H2121
H2122
H2123
H2124
H2125
H2126
H2127
H2128
H2129
H2130
H2131
H2132
H2133
H2134
H2135
H2136
H2137
H2138
H2139
H2140
H2141
H2142
H2143
H2144
H2145
H2146
H2147
H2148
H2149
H2150
H2151
H2152
H2153
H2154
H2155
H2156
H2157
H2158
H2159
H2160
H2161
H2162
H2163
H2164
H2165
H2166
H2167
H2168
H2169
H2170
H2171
H2172
H2173
H2174
H2175
H2176
H2177
H2178
H2179
H2180
H2181
H2182
H2183
H2184
H2185
H2186
H2187
H2188
H2189
H2190
H2191
H2192
H2193
H2194
H2195
H2196
H2197
H2198
H2199
H2200
H2201
H2202
H2203
H2204
H2205
H2206
H2207
H2208
H2209
H2210
H2211
H2212
H2213
H2214
H2215
H2216
H2217
H2218
H2219
H2220
H2221
H2222
H2223
H2224
H2225
H2226
H2227
H2228
H2229
H2230
H2231
H2232
H2233
H2234
H2235
H2236
H2237
H2238
H2239
H2240
H2241
H2242
H2243
H2244
H2245
H2246
H2247
H2248
H2249
H2250
H2251
H2252
H2253
H2254
H2255
H2256
H2257
H2258
H2259
H2260
H2261
H2262
H2263
H2264
H2265
H2266
H2267
H2268
H2269
H2270
H2271
H2272
H2273
H2274
H2275
H2276
H2277
H2278
H2279
H2280
H2281
H2282
H2283
H2284
H2285
H2286
H2287
H2288
H2289
H2290
H2291
H2292
H2293
H2294
H2295
H2296
H2297
H2298
H2299
H2300
H2301
H2302
H2303
H2304
H2305
H2306
H2307
H2308
H2309
H2310
H2311
H2312
H2313
H2314
H2315
H2316
H2317
H2318
H2319
H2320
H2321
H2322
H2323
H2324
H2325
H2326
H2327
H2328
H2329
H2330
H2331
H2332
H2333
H2334
H2335
H2336
H2337
H2338
H2339
H2340
H2341
H2342
H2343
H2344
H2345
H2346
H2347
H2348
H2349
H2350
H2351
H2352
H2353
H2354
H2355
H2356
H2357
H2358
H2359
H2360
H2361
H2362
H2363
H2364
H2365
H2366
H2367
H2368
H2369
H2370
H2371
H2372
H2373
H2374
H2375
H2376
H2377
H2378
H2379
H2380
H2381
H2382
H2383
H2384
H2385
H2386
H2387
H2388
H2389
H2390
H2391
H2392
H2393
H2394
H2395
H2396
H2397
H2398
H2399
H2400
H2401
H2402
H2403
H2404
H2405
H2406
H2407
H2408
H2409
H2410
H2411
H2412
H2413
H2414
H2415
H2416
H2417
H2418
H2419
H2420
H2421
H2422
H2423
H2424
H2425
H2426
H2427
H2428
H2429
H2430
H2431
H2432
H2433
H2434
H2435
H2436
H2437
H2438
H2439
H2440
H2441
H2442
H2443
H2444
H2445
H2446
H2447
H2448
H2449
H2450
H2451
H2452
H2453
H2454
H2455
H2456
H2457
H2458
H2459
H2460
H2461
H2462
H2463
H2464
H2465
H2466
H2467
H2468
H2469
H2470
H2471
H2472
H2473
H2474
H2475
H2476
H2477
H2478
H2479
H2480
H2481
H2482
H2483
H2484
H2485
H2486
H2487
H2488
H2489
H2490
H2491
H2492
H2493
H2494
H2495
H2496
H2497
H2498
H2499
H2500
H2501
H2502
H2503
H2504
H2505
H2506
H2507
H2508
H2509
H2510
H2511
H2512
H2513
H2514
H2515
H2516
H2517
H2518
H2519
H2520
H2521
H2522
H2523
H2524
H2525
H2526
H2527
H2528
H2529
H2530
H2531
H2532
H2533
H2534
H2535
H2536
H2537
H2538
H2539
H2540
H2541
H2542
H2543
H2544
H2545
H2546
H2547
H2548
H2549
H2550
H2551
H2552
H2553
H2554
H2555
H2556
H2557
H2558
H2559
H2560
H2561
H2562
H2563
H2564
H2565
H2566
H2567
H2568
H2569
H2570
H2571
H2572
H2573
H2574
H2575
H2576
H2577
H2578
H2579
H2580
H2581
H2582
H2583
H2584
H2585
H2586
H2587
H2588
H2589
H2590
H2591
H2592
H2593
H2594
H2595
H2596
H2597
H2598
H2599
H2600
H2601
H2602
H2603
H2604
H2605
H2606
H2607
H2608
H2609
H2610
H2611
H2612
H2613
H2614
H2615
H2616
H2617
H2618
H2619
H2620
H2621
H2622
H2623
H2624
H2625
H2626
H2627
H2628
H2629
H2630
H2631
H2632
H2633
H2634
H2635
H2636
H2637
H2638
H2639
H2640
H2641
H2642
H2643
H2644
H2645
H2646
H2647
H2648
H2649
H2650
H2651
H2652
H2653
H2654
H2655
H2656
H2657
H2658
H2659
H2660
H2661
H2662
H2663
H2664
H2665
H2666
H2667
H2668
H2669
H2670
H2671
H2672
H2673
H2674
H2675
H2676
H2677
H2678
H2679
H2680
H2681
H2682
H2683
H2684
H2685
H2686
H2687
H2688
H2689
H2690
H2691
H2692
H2693
H2694
H2695
H2696
H2697
H2698
H2699
H2700
H2701
H2702
H2703
H2704
H2705
H2706
H2707
H2708
H2709
H2710
H2711
H2712
H2713
H2714
H2715
H2716
H2717
H2718
H2719
H2720
H2721
H2722
H2723
H2724
H2725
H2726
H2727
H2728
H2729
H2730
H2731
H2732
H2733
H2734
H2735
H2736
H2737
H2738
H2739
H2740
H2741
H2742
H2743
H2744
H2745
H2746
H2747
H2748
H2749
H2750
H2751
H2752
H2753
H2754
H2755
H2756
H2757
H2758
H2759
H2760
H2761
H2762
H2763
H2764
H2765
H2766
H2767
H2768
H2769
H2770
H2771
H2772
H2773
H2774
H2775
H2776
H2777
H2778
H2779
H2780
H2781
H2782
H2783
H2784
H2785
H2786
H2787
H2788
H2789
H2790
H2791
H2792
H2793
H2794
H2795
H2796
H2797
H2798
H2799
H2800
H2801
H2802
H2803
H2804
H2805
H2806
H2807
H2808
H2809
H2810
H2811
H2812
H2813
H2814
H2815
H2816
H2817
H2818
H2819
H2820
H2821
H2822
H2823
H2824
H2825
H2826
H2827
H2828
H2829
H2830
H2831
H2832
H2833
H2834
H2835
H2836
H2837
H2838
H2839
H2840
H2841
H2842
H2843
H2844
H2845
H2846
H2847
H2848
H2849
H2850
H2851
H2852
H2853
H2854
H2855
H2856
H2857
H2858
H2859
H2860
H2861
H2862
H2863
H2864
H2865
H2866
H2867
H2868
H2869
H2870
H2871
H2872
H2873
H2874
H2875
H2876
H2877
H2878
H2879
H2880
H2881
H2882
H2883
H2884
H2885
H2886
H2887
H2888
H2889
H2890
H2891
H2892
H2893
H2894
H2895
H2896
H2897
H2898
H2899
H2900
H2901
H2902
H2903
H2904
H2905
H2906
H2907
H2908
H2909
H2910
H2911
H2912
H2913
H2914
H2915
H2916
H2917
H2918
H2919
H2920
H2921
H2922
H2923
H2924
H2925
H2926
H2927
H2928
H2929
H2930
H2931
H2932
H2933
H2934
H2935
H2936
H2937
H2938
H2939
H2940
H2941
H2942
H2943
H2944
H2945
H2946
H2947
H2948
H2949
H2950
H2951
H2952
H2953
H2954
H2955
H2956
H2957
H2958
H2959
H2960
H2961
H2962
H2963
H2964
H2965
H2966
H2967
H2968
H2969
H2970
H2971
H2972
H2973
H2974
H2975
H2976
H2977
H2978
H2979
H2980
H2981
H2982
H2983
H2984
H2985
H2986
H2987
H2988
H2989
H2990
H2991
H2992
H2993
H2994
H2995
H2996
H2997
H2998
H2999
H3000
H3001
H3002
H3003
H3004
H3005
H3006
H3007
H3008
H3009
H3010
H3011
H3012
H3013
H3014
H3015
H3016
H3017
H3018
H3019
H3020
H3021
H3022
H3023
H3024
H3025
H3026
H3027
H3028
H3029
H3030
H3031
H3032
H3033
H3034
H3035
H3036
H3037
H3038
H3039
H3040
H3041
H3042
H3043
H3044
H3045
H3046
H3047
H3048
H3049
H3050
H3051
H3052
H3053
H3054
H3055
H3056
H3057
H3058
H3059
H3060
H3061
H3062
H3063
H3064
H3065
H3066
H3067
H3068
H3069
H3070
H3071
H3072
H3073
H3074
H3075
H3076
H3077
H3078
H3079
H3080
H3081
H3082
H3083
H3084
H3085
H3086
H3087
H3088
H3089
H3090
H3091
H3092
H3093
H3094
H3095
H3096
H3097
H3098
H3099
H3100
H3101
H3102
H3103
H3104
H3105
H3106
H3107
H3108
H3109
H3110
H3111
H3112
H3113
H3114
H3115
H3116
H3117
H3118
H3119
H3120
H3121
H3122
H3123
H3124
H3125
H3126
H3127
H3128
H3129
H3130
H3131
H3132
H3133
H3134
H3135
H3136
H3137
H3138
H3139
H3140
H3141
H3142
H3143
H3144
H3145
H3146
H3147
H3148
H3149
H3150
H3151
H3152
H3153
H3154
H3155
H3156
H3157
H3158
H3159
H3160
H3161
H3162
H3163
H3164
H3165
H3166
H3167
H3168
H3169
H3170
H3171
H3172
H3173
H3174
H3175
H3176
H3177
H3178
H3179
H3180
H3181
H3182
H3183
H3184
H3185
H3186
H3187
H3188
H3189
H3190
H3191
H3192
H3193
H3194
H3195
H3196
H3197
H3198
H3199
H3200
H3201
H3202
H3203
H3204
H3205
H3206
H3207
H3208
H3209
H3210
H3211
H3212
H3213
H3214
H3215
H3216
H3217
H3218
H3219
H3220
H3221
H3222
H3223
H3224
H3225
H3226
H3227
H3228
H3229
H3230
H3231
H3232
H3233
H3234
H3235
H3236
H3237
H3238
H3239
H3240
H3241
H3242
H3243
H3244
H3245
H3246
H3247
H3248
H3249
H3250
H3251
H3252
H3253
H3254
H3255
H3256
H3257
H3258
H3259
H3260
H3261
H3262
H3263
H3264
H3265
H3266
H3267
H3268
H3269
H3270
H3271
H3272
H3273
H3274
H3275
H3276
H3277
H3278
H3279
H3280
H3281
H3282
H3283
H3284
H3285
H3286
H3287
H3288
H3289
H3290
H3291
H3292
H3293
H3294
H3295
H3296
H3297
H3298
H3299
H3300
H3301
H3302
H3303
H3304
H3305
H3306
H3307
H3308
H3309
H3310
H3311
H3312
H3313
H3314
H3315
H3316
H3317
H3318
H3319
H3320
H3321
H3322
H3323
H3324
H3325
H3326
H3327
H3328
H3329
H3330
H3331
H3332
H3333
H3334
H3335
H3336
H3337
H3338
H3339
H3340
H3341
H3342
H3343
H3344
H3345
H3346
H3347
H3348
H3349
H3350
H3351
H3352
H3353
H3354
H3355
H3356
H3357
H3358
H3359
H3360
H3361
H3362
H3363
H3364
H3365
H3366
H3367
H3368
H3369
H3370
H3371
H3372
H3373
H3374
H3375
H3376
H3377
H3378
H3379
H3380
H3381
H3382
H3383
H3384
H3385
H3386
H3387
H3388
H3389
H3390
H3391
H3392
H3393
H3394
H3395
H3396
H3397
H3398
H3399
H3400
H3401
H3402
H3403
H3404
H3405
H3406
H3407
H3408
H3409
H3410
H3411
H3412
H3413
H3414
H3415
H3416
H3417
H3418
H3419
H3420
H3421
H3422
H3423
H3424
H3425
H3426
H3427
H3428
H3429
H3430
H3431
H3432
H3433
H3434
H3435
H3436
H3437
H3438
H3439
H3440
H3441
H3442
H3443
H3444
H3445
H3446
H3447
H3448
H3449
H3450
H3451
H3452
H3453
H3454
H3455
H3456
H3457
H3458
H3459
H3460
H3461
H3462
H3463
H3464
H3465
H3466
H3467
H3468
H3469
H3470
H3471
H3472
H3473
H3474
H3475
H3476
H3477
H3478
H3479
H3480
H3481
H3482
H3483
H3484
H3485
H3486
H3487
H3488
H3489
H3490
H3491
H3492
H3493
H3494
H3495
H3496
H3497
H3498
H3499
H3500
H3501
H3502
H3503
H3504
H3505
H3506
H3507
H3508
H3509
H3510
H3511
H3512
H3513
H3514
H3515
H3516
H3517
H3518
H3519
H3520
H3521
H3522
H3523
H3524
H3525
H3526
H3527
H3528
H3529
H3530
H3531
H3532
H3533
H3534
H3535
H3536
H3537
H3538
H3539
H3540
H3541
H3542
H3543
H3544
H3545
H3546
H3547
H3548
H3549
H3550
H3551
H3552
H3553
H3554
H3555
H3556
H3557
H3558
H3559
H3560
H3561
H3562
H3563
H3564
H3565
H3566
H3567
H3568
H3569
H3570
H3571
H3572
H3573
H3574
H3575
H3576
H3577
H3578
H3579
H3580
H3581
H3582
H3583
H3584
H3585
H3586
H3587
H3588
H3589
H3590
H3591
H3592
H3593
H3594
H3595
H3596
H3597
H3598
H3599
H3600
H3601
H3602
H3603
H3604
H3605
H3606
H3607
H3608
H3609
H3610
H3611
H3612
H3613
H3614
H3615
H3616
H3617
H3618
H3619
H3620
H3621
H3622
H3623
H3624
H3625
H3626
H3627
H3628
H3629
H3630
H3631
H3632
H3633
H3634
H3635
H3636
H3637
H3638
H3639
H3640
H3641
H3642
H3643
H3644
H3645
H3646
H3647
H3648
H3649
H3650
H3651
H3652
H3653
H3654
H3655
H3656
H3657
H3658
H3659
H3660
H3661
H3662
H3663
H3664
H3665
H3666
H3667
H3668
H3669
H3670
H3671
H3672
H3673
H3674
H3675
H3676
H3677
H3678
H3679
H3680
H3681
H3682
H3683
H3684
H3685
H3686
H3687
H3688
H3689
H3690
H3691
H3692
H3693
H3694
H3695
H3696
H3697
H3698
H3699
H3700
H3701
H3702
H3703
H3704
H3705
H3706
H3707
H3708
H3709
H3710
H3711
H3712
H3713
H3714
H3715
H3716
H3717
H3718
H3719
H3720
H3721
H3722
H3723
H3724
H3725
H3726
H3727
H3728
H3729
H3730
H3731
H3732
H3733
H3734
H3735
H3736
H3737
H3738
H3739
H3740
H3741
H3742
H3743
H3744
H3745
H3746
H3747
H3748
H3749
H3750
H3751
H3752
H3753
H3754
H3755
H3756
H3757
H3758
H3759
H3760
H3761
H3762
H3763
H3764
H3765
H3766
H3767
H3768
H3769
H3770
H3771
H3772
H3773
H3774
H3775
H3776
H3777
H3778
H3779
H3780
H3781
H3782
H3783
H3784
H3785
H3786
H3787
H3788
H3789
H3790
H3791
H3792
H3793
H3794
H3795
H3796
H3797
H3798
H3799
H3800
H3801
H3802
H3803
H3804
H3805
H3806
H3807
H3808
H3809
H3810
H3811
H3812
H3813
H3814
H3815
H3816
H3817
H3818
H3819
H3820
H3821
H3822
H3823
H3824
H3825
H3826
H3827
H3828
H3829
H3830
H3831
H3832
H3833
H3834
H3835
H3836
H3837
H3838
H3839
H3840
H3841
H3842
H3843
H3844
H3845
H3846
H3847
H3848
H3849
H3850
H3851
H3852
H3853
H3854
H3855
H3856
H3857
H3858
H3859
H3860
H3861
H3862
H3863
H3864
H3865
H3866
H3867
H3868
H3869
H3870
H3871
H3872
H3873
H3874
H3875
H3876
H3877
H3878
H3879
H3880
H3881
H3882
H3883
H3884
H3885
H3886
H3887
H3888
H3889
H3890
H3891
H3892
H3893
H3894
H3895
H3896
H3897
H3898
H3899
H3900
H3901
H3902
H3903
H3904
H3905
H3906
H3907
H3908
H3909
H3910
H3911
H3912
H3913
H3914
H3915
H3916
H3917
H3918
H3919
H3920
H3921
H3922
H3923
H3924
H3925
H3926
H3927
H3928
H3929
H3930
H3931
H3932
H3933
H3934
H3935
H3936
H3937
H3938
H3939
H3940
H3941
H3942
H3943
H3944
H3945
H3946
H3947
H3948
H3949
H3950
H3951
H3952
H3953
H3954
H3955
H3956
H3957
H3958
H3959
H3960
H3961
H3962
H3963
H3964
H3965
H3966
H3967
H3968
H3969
H3970
H3971
H3972
H3973
H3974
H3975
H3976
H3977
H3978
H3979
H3980
H3981
H3982
H3983
H3984
H3985
H3986
H3987
H3988
H3989
H3990
H3991
H3992
H3993
H3994
H3995
H3996
H3997
H3998
H3999
H4000
H4001
H4002
H4003
H4004
H4005
H4006
H4007
H4008
H4009
H4010
H4011
H4012
H4013
H4014
H4015
H4016
H4017
H4018
H4019
H4020
H4021
H4022
H4023
H4024
H4025
H4026
H4027
H4028
H4029
H4030
H4031
H4032
H4033
H4034
H4035
H4036
H4037
H4038
H4039
H4040
H4041
H4042
H4043
H4044
H4045
H4046
H4047
H4048
H4049
H4050
H4051
H4052
H4053
H4054
H4055
H4056
H4057
H4058
H4059
H4060
H4061
H4062
H4063
H4064
H4065
H4066
H4067
H4068
H4069
H4070
H4071
H4072
H4073
H4074
H4075
H4076
H4077
H4078
H4079
H4080
H4081
H4082
H4083
H4084
H4085
H4086
H4087
H4088
H4089
H4090
H4091
H4092
H4093
H4094
H4095
H4096
H4097
H4098
H4099
H4100
H4101
H4102
H4103
H4104
H4105
H4106
H4107
H4108
H4109
H4110
H4111
H4112
H4113
H4114
H4115
H4116
H4117
H4118
H4119
H4120
H4121
H4122
H4123
H4124
H4125
H4126
H4127
H4128
H4129
H4130
H4131
H4132
H4133
H4134
H4135
H4136
H4137
H4138
H4139
H4140
H4141
H4142
H4143
H4144
H4145
H4146
H4147
H4148
H4149
H4150
H4151
H4152
H4153
H4154
H4155
H4156
H4157
H4158
H4159
H4160
H4161
H4162
H4163
H4164
H4165
H4166
H4167
H4168
H4169
H4170
H4171
H4172
H4173
H4174
H4175
H4176
H4177
H4178
H4179
H4180
H4181
H4182
H4183
H4184
H4185
H4186
H4187
H4188
H4189
H4190
H4191
H4192
H4193
H4194
H4195
H4196
H4197
H4198
H4199
H4200
H4201
H4202
H4203
H4204
H4205
H4206
H



5571

SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT

NUMERIC LEGEND

/ SN /

047202

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

MAXIMUM ELEVATION LIMIT = 1210.00
MINIMUM ELEVATION LIMIT = 1200.00

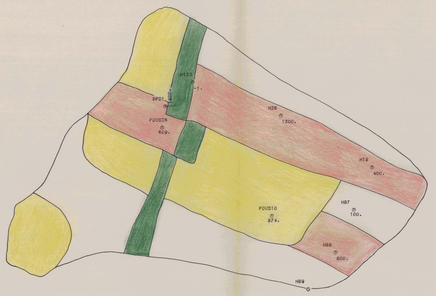
GREAT PYRAMID
LEVEL 200
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

SCALE 1 = 500

FIG.NO=	REPT.NO=
ENGL.NO=	DRG.NO= D/LM01/144
DATE=	AUTHOR=
DRAWN=	OFFICE=

5571

84-2532



SHELL COMPANY OF AUSTRALIA
METALS DIVISION

SHELMET ORE EVALUATION SYSTEM
DRILLHOLE LOCATION PLOT

NUMERIC LEGEND

/ SN /

047203

LEGEND

PROBABLE RESOURCE ≥ 0·1% Sn

PROBABLE RESOURCE ≥ 0·2% Sn

POTENTIAL RESOURCE

MAXIMUM ELEVATION LIMIT = 1220.00
MINIMUM ELEVATION LIMIT = 1210.00

GREAT PYRAMID
LEVEL 210
PRELIMINARY GEOLOGICAL
RESOURCE OUTLINES

SCALE 1 : 500

FIG.NO:	REPT.NO:
ENCL.NO:	DBS.NO: D/LM01/85
DATE:	AUTHOR:
DRAWN:	OFFICE:

5572

5572

86-2532