

489001

**FINAL REPORT
EXPLORATION LICENCE 4/61
SAVAGE RIVER, TASMANIA**

including the period
28th February, 1989 to 22nd March 1990

BY

C. H. C. SHANNON

7-4-1990

SAVAGE RESOURCES LIMITED
Incorporated in Tasmania

OPEN FILE

90-3127.

009

MICROFILMED

**FINAL REPORT
EXPLORATION LICENCE 4/61
SAVAGE RIVER, TASMANIA**

including the period
28th February, 1989 to 22nd March 1990

90-3027

MINES	
File Ref. E.L.4/61	
14 MAY 1990	
Doc. Ref.	
Action Officer	Initials
Refer to	
Cover Sheet	
7.4.90	
Resubmit to	Date

BY

C.H.C. SHANNON

7-4-1990

OPEN FILE

SAVAGE RESOURCES LIMITED

Incorporated in Tasmania

Contents

Introduction	2
Drilling commentary	4
Conclusion	5
Prospects along strike	6
Bibliography	7
Appendix: Drilling Logs	
Drilling log for SPC 12 DDH continuation from 90.2m	9
Drilling log for SPC 14 DDH continuation from 105.0m	12
Drilling log for SPC 15 DDH	16
Specimen Reef cross section 1 (drillholes <u>SPC 14</u> , SPC 6)	Plate 1
Specimen Reef cross section 2 (drillholes SPC 1, SPC 4, <u>SPC 12</u> , SPC 13, SPC 6)	Plate 1
Specimen Reef cross section 3 (drillholes SPC 2, <u>SPC 15</u> , SPC 3)	Plate 1
Specimen Reef Mine: Workings, Drillholes and Structure Contours	Plate 2
Specimen Reef Location Plan: Geology	Plate 3

Introduction

Most of the program that was proposed in the previous annual report (1989) was changed because of the discovery of the old mine plans; broadly, the new maps indicated that the vein dipped more steeply than had been allowed for so crucial drillholes were short of target. It was essential to rectify this situation rather than to chase prospects further afield. The available rig was another limiting factor since it was a truck mounted machine which could only get to gentle sites and there was a shortage of hose. No activity took place on the Davis Creek prospect.

The revised structure contour model and its implications.

The structure contour model for Specimen Reef was reconstructed using the true relative positions of the three drives taken from the map to fix the dip and strike of the worked vein. It gave a general dip of 56 degrees with an area of 37 degree dip. According to the revised model all three of the holes SPC 6, SPC 12 and SPC 14 were short of target by 20-30m. It was a realistic proposition to deepen the vertical holes 12 and 14 and this was achieved, but the angled hole SPC 6 was not attempted.

The map showed that the historic Clinker Winze ore shoot and also Whites Winze below it were located further SW along the vein system

than previously estimated for on the strength of published texts; this meant that the vein had been productive after a fashion (worth stoping that is) in patches over 150m. But no stoping was recorded for the Number 3 drive. The maps for this level only aspire to show stages in the progress of the drive, and it would be expected that the shoot of White's Winze/ Gullock's Rise would have worked; but it could be that there was just no ore at this level.

Once the mine maps were put together, reduced and transferred to the drillhole map it became apparent that there was some distortion; the maps could be matched either by the adit portals or by the shafts but not both together, but on either match it appeared that the Specimen Reef was below the bottoms of the vertical holes SPC 12 and SPC 14. The shaft based matching also allowed the workings penetrated by SPC 4 to become a section of the main drive off the number 3 adit, instead of a drive along a separate vein. The initial plot used at the start of the drilling used the match by the portals for control and gave a shallower depth to target. The revised structure contour plan is shown in map 2.

The false match of the previous model works in part because there is a secondary vein alignment present on the 37 degree dip. It is actually followed by a portion of Specimen Reef proper. The inferred relationships of the vein system are shown in the three drillhole sections.

Drilling commentary

The hole SPC 12 was deepened from 90.2m to 120.2m. For this hole the preliminary version of the revised structure contour model was used. It is possible that because of this hole SPC 12 is still just short of target. The vein reckoned to be Specimen Reef in this hole is at least anomalous in gold and although poor it is still the highest value found this season. The vein appears to be blocked by a piece of country rock so that the vein material makes up only 2cm or so of the 1m intercept assayed.

Hole SPC 14 was deepened from 105.0m to 153.7m. The intercept attributed to Specimen Reef is at its target position. It shows no visible gold but was not assayed. Another carbonate vein intercept some 8m higher in the hole contains magnetite but the set is almost vertical and so could not be target.

Hole SPC 15 was drilled on a new site in anticipation of ore development south westwards from the No 3 adit. It intersected well developed alteration over 30m and a more convincing than usual Specimen Reef.

A feature of the Specimen Reef intercepts in SPC 14 and SPC 15 is that that show discontinuous bands of quartz in siderite, which is a feature seen in specimens from the mine dumps. The siderite in the

mine dumps is moderate brown 5YR 4/4 in exposed surfaces, light brown 5YR 5/4 on freshly broken surfaces, much darker than the siderite in the core, greyish orange 10YR 7/2. The core siderite is distinct from the more common "salmon pink" carbonate, technically greyish orange pink 5YR 7/2. It is a pity that no vein even 30cm across (such as was found near the old battery) was seen in any of the core as this might have dispelled lingering doubts as to whether the real vein has been found at all.

Conclusion

The Specimen Reef adjacent to the old mine has been found to be barren at 2 points down dip which would have had to be gold bearing for a deposit of a narrow rich vein character to be any good. All the evidence is against the presence of a bulk minable stockwork. The isolated super-rich gold bearing intercept of the first drillhole SPC 1; 140.85-141.05 is still in a "second vein" in the new structural model but now it is above, not below the actual Specimen Reef; so the "second vein" has probably been penetrated and proved barren in most of the drillholes (see sections).

Perhaps the veins carry gold in their locally steeper portions only. Magnetite is commonly present as bladed crystals at the edge of mainly white carbonate veins. The SPC 1 rich intercept had two "clinkers" of equigranular magnetite central to the vein, surrounded by white dolomite and with greyish orange siderite at the edges. The wall rock

alteration was the less extreme yellowish grey altered schist rather than the light grey feldspathic type. This precise combination of features was not seen again. Wall rock control of mineralization can be neither confirmed nor denied.

Future explorers (if any) should use angled holes pointing NW to secure intersections on the vein system, and carry them far enough to be absolutely sure that the vein has been intersected. But any narrow sporadically rich gold vein system is a risky target, as this work has demonstrated.

Prospects along strike

The soil geochemical work located a gold anomaly that was investigated with percussion drilling, but the concept that this anomaly might reflect an ore shoot in the Specimen Reef itself was not tested. The other geochemistry done did seem to show that fairly strong copper anomaly was linked to the gold. The early soil geochemistry on the Specimen Reef grid shows an anomaly at the final peg on the baseline, 675m S(W), more or less on the trace of Specimen Reef but this area is close to the Savage River Mines lease boundary. Further away still are the McPhee Creek alluvial workings which could have been supplied from another ore shoot in the Specimen Reef.

Bibliography:

1. anon. Plan of Underground Workings Specimen Reef Coy's; (sketch map only, post 1884, pre 1897 (c.1890)
2. R.W. Annett, C.H.C. Shannon and L. Vanzino, Report on Field Investigations within EL 4/61, West Coast, Tasmania, August 1986, Savage Resources Ltd. unpub. report. (1986).
3. R.W. Annett and C.H.C. Shannon, Annual Report on Field Investigations within EL 4/61, West Coast, Tasmania, Vols 1 and 2, September 1986 to June 1987, Savage Resources Ltd. unpub. report. (1987).
4. R.W. Annett and C.H.C. Shannon, Annual Report on Field Investigations within EL 4/61, West Coast, Tasmania, Vol 3, June to December 1987, Savage Resources Ltd. unpub. report. (1987).
5. R.W. Boyle, The geochemistry of gold and its deposits (particularly pp. 416-421); Bulletin 280, Geological Survey of Canada (1979).
6. M.D. Edyvean, Report on Field Investigations, Hall Creek - Specimen Creek area EL 4/61 Tasmania, June 1980. Industrial and Mining Investigations Pty.Ltd. unpub. rep. (1980).
7. M.D. Edyvean, Supplementary Report on the Field Investigation of the Hall Creek - Specimen Creek area EL 4/61 Tasmania, Gold analyses. Industrial and Mining Investigations Pty.Ltd. unpub. rep. (1980).
8. M.D. Edyvean, Six-Monthly Progress Report on field investigations within E.L. 4/61 for the period ended 24th February 1981. Industrial and Mining Investigations Pty.Ltd. unpub. rep. (1981).
9. M.D. Edyvean, Quarterly Report for the period ended 24th November 1981. E.L. 4/61, West Coast, Tasmania. Industrial and Mining Investigations Pty.Ltd. unpub. rep. (1981).
10. M.D. Edyvean, Report on Field Investigations within EL 4/61, West Coast, Tasmania: Summer field season, 1981-82. Part II: Davis Creek - Specimen Creek geochemical surveys, Industrial and Mining Investigations Pty. Ltd. unpub. rep. (1982).
11. A.W. Howland-Rose, Comments on gradient reconnaissance and dipole-dipole electrical induced polarization surveys, Specimen Reef area, EL 4/61 near Savage River, Tasmania, on behalf of Industrial and Mining Investigations Pty. Ltd. February, 1981. Scintrex Pty. Ltd. unpublished report. (1981).
12. D. Jones, Plan of underground workings, London and Tasmanian G.M.Co.N.L. August, 1897. (1897). *Underground Mine Plans, Div. Mines and Mineral Resources.*

13. D. Jones, Plan of New London and Tasmanian G.M.Co., N.L. Specimen Reef, Tasmania No. 3 Tunnel; 5th November 1900. (1900). *Underground Mine Plans, Div. Mines & Mineral Resources.*
14. D. Jones, (extension to No.3 tunnel including work to Jan 1901: title lost ed.) (1901) *Underground Mine Plans, Div. Mines and Mineral Resources.*
15. C.H.C. Shannon, *Continuing tenure application area, Exploration licence 4/61, Savage River, Tasmania: 2. Report on the ochre/talc/silica sand project, the Long Plains clay, the white rocks project and Specimen Reef. Savage Resources Ltd unpublished report (1988).*
16. C.H.C. Shannon, Annual report, Exploration Licence 4/61 Savage River, Tasmania for the period 22-2-1988 to 15-1-1989. Savage Resources Ltd unpublished report (1989).
17. C.H.C. Shannon, Annual report, Exploration Licence 4/61 Savage River, Tasmania for the period 16-1-1989 to 28-2-1989. Savage Resources Ltd unpublished report (1989).
18. C.H.C. Shannon, R.W. Annett, F. Enzmann and L. Vanzino, Report on Field Investigations within EL 4/61, West Coast, Tasmania: 23 Feb 1985 - 22 May 1985, Industrial and Mining Investigations Pty. Ltd. unpub. rep. (1985).
19. J. Harcourt Smith, Report on the mineral district between Corinna and Waratah, Ann. Rep. Sec. Mines. Tas. for 1896-97 (1897).
20. A. Montgomery, A report on the state of the mining industry on the West Coast, "Old Series" report 79, (1880).
21. G. Thureau, Report on Specimen Reef near Mt. Cleveland, Tas. Parliamentary papers 104, (1894)
22. W.H. Twelvetrees, Report on the mineral fields between Waratah and Corinna, Ann. Rep. Sec. Mines. Tas. for 1899-1900 (1900).
23. W.H. Twelvetrees, Report on the mineral fields between Waratah and Long Plains, Publ. Dept. Mines Tas. (1903)
24. J. Woodman, H. Shannon and M. Edyvean, Report on Field Investigations within EL 4/61, West Coast, Tasmania - Summer field season, 1981-82; Part III, Specimen Reef and Main Creek drilling programmes, Industrial and Mining Investigations Pty. Ltd. unpub. rep. (1982).

DRILLING LOG FOR SPC 12 DDH. continuation from 90.2m.

Location: AMG 5216210045, RL 440, T.D. 120.2m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge,
20-23/11/1989, for Savage Resources Ltd.

- | | | |
|-------------|------|--|
| 90.2-90.8 | 0.8m | full rec.: dark greenish grey granular feldspar chlorite schist; minor carbonate and pyrite; CSA 25. At 90.3, quartz with carbonate vein; 90.4 quartz vein CVA 50deg no alteration. |
| 90.8-92.5 | 1.7m | full rec.: grey green pyritic feldspar chlorite schist and granular feldspar chlorite schist. At 91.0, grey brown, pyrite rich band; at 92.3 pyrite blobs and veins. |
| 92.5-93.2 | 0.8m | full rec.: greenish grey granular feldspar chlorite schist. Pyrite bands 1cm at 92.7, 93.1. Silicified 92.9-93.2, minor carbonate veins with quartz and pyrite and alteration rims; CVA 45, VSA 80; other veins with no alteration CVA 30 plus irregular quartz. |
| 93.2-96.5 | 3.3m | full rec.: granular to laminated feldspar chlorite schist with pyrite; pyrite rich 96.3, ptygmatic quartz blobs 95.7, 96.1. |
| 96.5-97.0 | 0.5m | full rec.: light greenish grey quartz rich schist; at 96.8 band tan feldspar chlorite schist, also minor carbonate veins, CVA 40, CSA 30, VSA 80. |
| 97.0-97.9 | 0.9m | full rec.: very dark greenish grey fissile chlorite schist, pyritic, with ptygmatic quartz blobs. |
| 97.9-99.6 | 1.7m | full rec.: very dark brownish/greenish grey granular to weakly schistose feldspar chlorite schist; fissile chlorite schist and quartz blobs at 98.8; pyrite rich bed CBA 20 at 98.9. |
| 99.6-100.1 | 0.5m | full rec.: very dark greenish grey chlorite schist with ptygmatic quartz blobs. |
| 100.1-101.4 | 1.3m | full rec.: dark greenish grey, granular to laminated feldspar chlorite schist, some pyritic grading to brownish from 101.0; minor carbonate veins with light yellowish grey alteration. |

- 101.4-103.6 2.2m full rec.: very dark greenish grey and some brownish chlorite schist; pyritic bands commensal ptymatic quartz blobs. CSA 35; CVA of carbonate veins 40deg. at 102.2 with alteration rims. CVA carbonate vein at 102.6 45deg. no alteration.
- 103.6-104.0 0.4m full rec.: greenish grey and yellowish grey quartz rich granular feldspar chlorite schist.
- 104.0-108.0 4.0m full rec.: dark greenish grey chlorite schist with quartz blobs, CSA 30. Also laminated feldspar chlorite schist, 104.2-105.0; 106.0-106.2, quartz 105.2-105.4; 105.8-106.0, carbonate veins 105.1; 1cm; CVA 60, 106.5; 107.2 CVA 30.
- 108.0-111.1 3.1m full rec.: dark brownish grey and greenish grey laminated micaceous chlorite feldspar schist with carbonate and pyrite. Carbonate rich 108.0-108.3 (pyritic bands 108.2). Carbonate veins 108.4, 109.2, 109.4 with minor alteration; at 110.6 with no alteration. CVA 45, CSA 33, VSA 100. 2cm alteration zone at base, grades to granular from 110.4.
- 111.1-111.22 0.12m full rec.: pyritic "alteration quartzite" (feldspar) with carbonate veins on both boundaries, CVA 55, CSA 30, VSA 90 and gash veins CVA c80. This is interpreted as the SPECIMEN REEF vein unfortunately clogged by a piece of detached country rock. The carbonate vein material contains two carbonates, pyrite and magnetite.
- 111.12-111.65 0.43m full rec.: yellowish grey alteration product of schist with hairline carbonate veins from 111.50.
- 111.65-113.25 1.55m full rec.: dark brownish grey and dark greenish grey micaceous feldspar chlorite schist with carbonate and pyrite; quartz blobs.
- 113.25-113.9 0.65 full rec.: greenish grey granular quartz rich feldspar chlorite schist.
- 113.9-120.2 6.3m full rec.: dark brownish grey and brownish grey micaceous chlorite schist with pyrite, quartz blobs and carbonate veins without alteration; 115.7, 116.5, 116.8, 119.0.

End Hole.

011

489013

11

Assays for SPC 12 hole cont.

Source: Analabs report 236.1.08.06748, 12-12-89.

Sample/depth	Au	Au check results in p.p.m.
SPC 12 88.0-89.0	0.011	0.012
SPC 12 90.8-91.8	<0.008	
SPC 12 111.1-112.0	0.021	

DRILLING LOG FOR SPC 14 DDH: CONTINUATION FROM 105.0M.

Location: AMG 5219011066, RL 443, hole is vertical; T.D. 153.7m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge, 24-27/11/1989, for Savage Resources Ltd.

From - to	Int.	recovery/description
105.0-109.6	6.45m	full recovery: bluish grey to greenish grey (5G 4/1 to 5B 5/1) feldspar chlorite schist, some banding, pyritic. At 105.85 2-carbonate vein with alteration rim, other minor veins. Quartz blobs at 109.0, 109.5.
109.6-111.2	1.2m	full rec.: bluish grey spindle laminated feldspathic schist, few minor veins.
111.2-112.6	1.4m	full rec.: bluish to greenish grey feldspar chlorite schist with occasional chlorite schist beds; CBA 70. Quartz blobs e.g. at 113.5, 114.5.
112.6-115.8	3.2m	full rec.: spindle laminated to banded feldspar chlorite schist with occasional chlorite schist beds; CBA 70 at 113.5. Rare quartz blobs e.g. 114.5.
115.8-116.4	0.6m	full rec? but broken core: dark greenish grey 5G 4/1 chloritic carbonated? schist, speckled to spindle laminated with abundant quartz blobs.
116.4-117.9	1.5m	full rec? but broken core: light olive grey 5Y 6/1 altered schist. At 116.8, 2-carbonate vein; carbonate A greyish orange pink 5YR 7/1; carbonate B white N9. Some minor micaceous material.
117.9-119.0	1.1m	full rec.: spindle laminated and some banded feldspar chlorite schist, CBA 65-80. At 118.7 more chloritic feldspar chlorite schist with quartz blobs.
119.0-119.25	0.25m	full rec.: altered schist, light olive grey 5Y 6/1 with quartz blobs. At 119.17 1.2cm carbonate vein; greyish orange pink with minor-trace magnetite.

- 119.25-120.6 1.35m full rec.: chlorite schist with quartz blobs and spindle laminated to banded feldspar chlorite schist. Some pinkish alteration material with magnetite adjacent to the quartz.
- 120.6-121.3 0.6m full rec.: alteration feldspar quartz rock, some with pyrite and magnetite; pinkish brown 5YR 6/2 associated with carbonate and carbonate/quartz veins and relict unaltered schist, greenish grey 5G 5/1.
- 121.3-122.8 1.5m full rec.: (two veins intersect the core at a very low angle); (a), CVA 0, width 5cm, white and greyish orange pink and white vein carbonates with bladed magnetite margins. (b), CVA 15, 1.5cm, 2-carbonate vein also with bladed magnetite margins. Also wall rock of pinkish brown alteration of schist with pyrite and magnetite.
- 122.8-124.0 1.2m full rec.: feldspathic alteration of schist with relicts of greenish grey (more chloritic) schist. Minor greyish orange pink carbonate vein at 123m. Disseminated pyrite and some magnetite.
- 124.0-124.4 0.4m full rec.: speckled feldspar chlorite schist and minor beds chlorite schist with minimal alteration; CBA 60.
- 124.4-124.7 0.3m full rec.: pinkish grey feldspathic alteration of schist and associated carbonate veins; disseminated magnetite.
- 124.7-125.0 1.3m full rec.: speckled feldspar chlorite schist and banded chlorite schist with quartz blobs and minimal alteration. Greyish orange pink carbonate vein with no alteration rim at 124.85.
- 125.0-125.5 0.5m full rec.: alteration zone and carbonate veins. At top and bottom altered schist, light olive grey 5Y 6/1, the rest alteration feldspar quartz rock, pinkish/brownish grey 5YR 7/1, about carbonate veins, principally at 125.3m, 2cm with probably 3 carbonates plus quartz and minor equant magnetite. More magnetite occurs in the adjacent alteration rock.

- 125.5-128.3 2.8m full rec.: greenish grey 5G 5/1 speckled schist, minor veins without alteration margins. From 126.8-128.1 mostly quartz blobs in chlorite schist.
- 128.3-129.0 0.7m full rec.: alteration zone; 128.3-128.6 light olive grey, remainder pinkish grey 5YR 8/1 with trace disseminated magnetite about shear/vein with carbonates at 128.8.
- 129.0-129.25 0.25m full rec.: greenish grey spindle laminated schist with minor veins and alteration.
- 129.25-130.6 0.35m full rec.: alteration zone, pinkish grey feldspathized schist and marginal light olive grey sericitized schist about carbonate vein, mostly white carbonate (dolomite?) but including siderite? pale yellowish brown 10YR 6/2 in 2cm vein CVA 50 at 129.9. Other substantial veins of the same set at 129.4; 1.5cm and 129.55; 3cm. SPECIMEN REEF.
- 130.6-130.7 0.1m full rec.: relict of greenish grey 5Y 5/1 spindle laminated schist.
- 130.7-133.5 2.8m full rec.: alteration zone as above. At 131.1 5cm carbonate vein, other alteration associated with stylolites (ex veins?). 3cm carbonates at 132.4, 2cm at 132.55, minor relict schist at 132.65, 132.7.
- 133.5-135.2 1.7m full rec.: alteration zone with relict schist; pinkish grey alteration with disseminated magnetite extends along schistosity, smaller veins with magnetite. Carbonate veins CVA 60. 2-carbonate veins occur at 134.5 and 134.95; quartz blob also at 134.5.
- 135.2-138.5 3.2m full rec.: spindle laminated to speckled massive schist, and minor chlorite schist with quartz blobs. Some carbonate in the quartz at 136.4; big quartz blobs at 136.6, 137.5, 137.9. 5cm alteration at 138.0.
- 138.5-140.2 1.7m full rec.: greenish grey 5Y 5/1 schist altering to light olive grey 5Y 6/1 adjacent to carbonate veins particularly 138.5-138.7 and 139.3-139.7. At 140.2 carbonate-magnetite-pyrite vein with white feldspathic alteration margin. CSA 70, CVA 60.

010

15

- 140.2-146.9 6.7m full rec.: bluish grey 5B 5/1 spindle laminated and banded feldspar chlorite (mica?) schist. At 145.9 10cm light olive grey alteration associated with minor carbonate veins; quartz blob. Minor veins without alteration at quartz blobs.
- 146.9-148.2 1.3m full rec.: dark bluish grey chloritic schist with quartz blobs 147.0-147.2. Minor pyrite magnetite pink feldspathic alteration veins at 147.5, 147.8, 148.0.
- 148.2-150.5 2.3m full rec.: speckled to spindle laminated bluish grey 5B 5/1 feldspar chlorite mica? schist. Minor greyish orange pink carbonate veins.
- 150.5-150.9 0.4m full rec.: alteration zone, yellowish grey 5Y 8/1 marginal to 1cm carbonate quartz magnetite vein at 150.7; CVA 75.
- 150.9-153.7 2.8m full rec.: spindle laminated bluish grey feldspar chlorite mica schist.

End hole.

Assays for SPC 14 hole cont.

Source: Analabs report 236.1.08.06748, 12-12-89; Method 309: fire assay fusion; AAS finish, results in ppm.

Sample/depth	Au
SPC 14 115.0-116.0	<0.008
SPC 14 119.0-119.5	0.010
SPC 14 120.0-121.0	0.010
SPC 14 121.0-122.0	<0.008
SPC 14 122.0-123.0	<0.008
SPC 14 136.0-137.0	<0.008

Note: the probable Specimen Reef intercept 129.4-129.9 was not assayed.

Drilling log for SPC 15 DDH:

Location: AMG³ 52055¹⁵⁴ 10860, RL 434, 68 deg. declination to 310 deg. magnetic = 321 degrees grid; T.D. 134.8m, RL end 310m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge, assisted by J. Walker; 1-5/12/1989, for Savage Resources Ltd.

Pecollar drilling:

- 0-2 light orange brown 5YR 5/6 pulp.
- 2-8 moderate brown 5YR 4/4 pulp.
- 8-20 light brown 5YR 6/4 pulp.
- 20-26 light brown 6YR 6/6 pulp.
- 26-34 light brown 6YR 5/6 pulp.
- 34-36 moderate yellowish brown 10YR 5/4 pulp.
- 36-38 dark yellowish orange 10YR 6/4 pulp.
- 38-40 yellowish orange 10YR 7/6 pulp.
- 40-42 greyish orange 10YR 6/4 pulp.
- 42-44 water struck, light brown 5YR 6/4 mud.
- 44-46 greyish orange 10YR 7/4 mud.
- 46-50 more water struck, greyish orange 10YR 6/4 mud.
- 50-64 greyish orange 10YR 6/4 mud.
- 64-68 pale yellowish brown 10YR 6/2 mud with chips.
- 68-80 more water struck, pale yellowish brown mud with chips including schist, medium bluish grey 5B 5/1 and quartz with minor chips of "alteration", light bluish grey 5B 5/1.

Core drilling from 80.9m.

From -to	Int.	recovery/description
80.9-81.83	0.93m	full recovery: dark greenish grey 5G 4/1 2-phase banded feldspar chlorite carbonate schist, CSA -5 to +30 with ptygmatic quartz blobs containing up to 10% carbonate at 81.2, 81.4, 81.8 with minor alteration light olive grey 5Y 6/1 about blobs and thin carbonate veins CVA 70 at 81.5, 81.54, 81.69.
81.83-83.0	1.2m	full rec.: speckled massive to spindle laminated feldspar chlorite carbonate actinolite? schist. pyritic quartz blob at 82.9. Quartz carbonate veins with minor magnetite, CVA 60. (a) 3cm at 82.13; central to 15cm <u>alteration</u> , (b) 6cm at 82.57; central to 25cm <u>alteration</u> . The alteration is pinkish brown tough feldspathic rock speckled with carbonate. From 82.91-83.00 alteration about 2 minor carbonate vein CVA 80 at 82.46, quartz veins with minor carbonate; trace magnetite and no alteration margin at 83.0, 83.45, 83.4.
83.0-83.8	0.8m	full rec.: 2-phase feldspar chlorite carbonate actinolite schist, contorted, relatively rich in carbonate. Ptygmatic quartz/carbonate blobs at 83.02, 83.3, 83.45, 83.7. a few hairline veins only.
83.8-84.15	0.35m	full rec.: yellowish grey 5Y 7/2 <u>alteration</u> zone about minor greyish orange pink carbonate veins CVA 75 where adjacent alteration shades to light grey N7. Stylolite at 83.91; CStA 70.
84.15-84.95	0.8m	full rec.: greenish grey 5G 6/1 speckled and minor 2-phase schist (feldspar chlorite actinolite carbonate) some contorted; CSA 0-60. Quartz carbonate segregation with pyrite at 84.7, carbonate veins with alteration at 84.55, 84.85.
84.95-86.0	1.05m	full rec.: <u>alteration</u> zone, feldspathic speckled with carbonate and minor relicts of schist about veins and stylolites. Veins include quartz carbonate trace magnetite, with marginal stylolites in places. At 85.4 1.5cm, CVA 70 and 85.9, 3.0cm, CVA 70, CSA 80.

- 86.0-89.45 3.45m full rec.: dark greenish grey 5GY 3/1 micaceous feldspar chlorite schist with quartz carbonate trace magnetite veins and associated alteration at 86.4, 86.6, 87.4, 88.3, 88.4, 88.45, some with marginal stylolites, also minor quartz, white carbonate and pink carbonate veins without alteration.
- 89.45-91.55 2.1m full rec.: light olive grey 5Y 6/1 and light grey N7 altered schist adjacent to vein complexes; veins include quartz and carbonate, 89.45 to 89.82 and at 89.95; 3cm, 90.7; 4cm, 90.9; 1cm, 91.7. Large stylolite at 90.95, clusters of minor pink carbonate gash veins with light grey N7 alteration 90.6-90.7, 91.05-91.25.
- 91.55-92.45 0.9m full rec.: greenish grey 5G 5/1 schist with minor pink gash veins.
- 92.45-92.75 0.3m full rec.: light olive grey 5Y 6/1 altered? schist grading to sandstone/schist about compound quartz carbonate veins at 92.6 followed by fine grained unaltered schist 92.65-92.75.
- 92.75-95.9 3.15m full rec.: sandstone, medium to dark grey N4-N5 with phyllite, greenish black 5GY 2/1 at 93.1, 94.0-94.1. Minor veins with light grey N3 alteration rims.
- 95.9-96.65 1.75m full rec.: greenish black phyllite with few white carbonate veins, pygmatic quartz vein at base.
- 96.65-96.9 0.25m full rec.: medium grey N5 to light olive grey 5Y 6/1 altered micaceous chlorite schist, contorted about 2-carbonate and minor quartz vein 1-2cm at 96.8.
- 96.9-100.35 3.45m full rec.: schist, medium grey N5; greenish grey 5G 5/1; greenish black 5GY 2/1; olive black 5Y 2/1 with minor veins and quartz blobs. Cherty or feldspathic alteration beds at 97.6; 3cm and (with carbonate margins) at 98.55; 1cm quartz blobs at 98.8, 99.3-100.2.
- 100.35-101.7 1.35m full rec.: light grey to greenish grey 5GY 6/1 sandstone to sandy schist alteration? about 2-carbonate vein: white centre zone with greyish orange pink margins 1-2.5cm at 101.0, also minor vein at 101.4.

- 101.7-103.9 2.2m full rec.: dark greenish grey 5G 5/1 chlorite mica schist CSA approx 65, contorted; with carbonate veins lacking alteration margins, messy pink at 101.7, CVA 40 at 102.0, CVA 80 at 102.7; 0.5cm, other minor veins.
- 103.9-104.3 0.4m full rec.: light grey N7 altered (chlorite) mica schist about 2-carbonate veins; greyish orange pink with some white clustered at 103.95, 104.0, 104.18, 104.22, 104.24
- 104.3-106.9 2.6m full rec.: greenish grey 5G 5/1 chlorite mica schist with minor quartz veins, carbonate gash veins and ptygmatic quartz blobs.
- 106.9-107.4 0.5m full rec.: grey N6 fine grained sandstone/schist with alteration zones N7, pink carbonate veins 106.9-107.0, 107.18-107.26 and other minor carbonate veins.
- 107.4-109.2 1.8m full rec.: chlorite mica schist; dark greenish grey 5GY 4/1, greenish grey 5GY 6/1, brownish grey 5 YR 5/1. Minor alteration to light olive grey 5YR 6/1. Minor veins and quartz blobs, carbonate chlorite veins at 107.5, 108.3. Alteration zone with carbonate, light grey N7 at 107.55-107.7. At 109.1 magnetite quartz carbonate vein without alteration margin. The magnetite is altering to haematite (red) also fine disseminated pyrite.
- 109.2-109.72 0.52m full rec.: altered schist; light olive grey 5Y 6/1, and relict fine grained sandstone/schist, greenish grey 5G 6/1. Minor carbonate veins. Base sharp with vein along minor fault.
- 109.72-110.05 0.33m full rec.: dark greenish grey 5G 4/1 chlorite mica schist, minor carbonate veins.
- 110.05-110.6 0.55m full rec.: alteration zone with large carbonate veins. Predominantly light olive grey fine grained sandstone/schist. From 110.24-110.25 and from 110.3-110.38, SPECIMEN REEF; 2-carbonate veins with quartz and pyrite; the carbonates being siderite? greyish orange 10YR 7/2 and dolomite white N9. The quartz and siderite are banded in a texture observed in "barren vein material" on the old mine dump. From 110.25-110.24 and from 110.25-110.30, medium light grey N6 hard siliceous and/or feldspathic

alteration.

- 110.6-113.1 2.5m full rec.: chlorite mica schist and sandy schist, mainly greenish grey 5G 4/1, with patches of light olive grey alteration and minor quartz and carbonate veins and a magnetite bearing carbonate vein at 111.95. From 111.4-111.9, sedimentary banding including light grey N7 sandstone and olive grey 5Y 4/3 schist also greenish grey 5G 5/1 schist. CBA=CSA 80.
- 113.1-115.6 2.5m full rec.: fine granular and some banded schist, mainly altered to light olive grey 5Y 6/1 with relicts unaltered schist greenish grey 5G 5/1, some sedimentary bedded intervals with sandstone medium grey N6. CBA 0-30, contorted at base. Carbonate veins at 113.9, 114.05, 115.1, 115.4 each with light grey siliceous and/or feldspathic alteration margin.
- 115.6-115.75 0.15m full recovery: fault breccia, clasts of schist and sandstone to 1cm, light grey to greenish grey. Start of FAULT zone.
- 115.75-116.0 0.25m 0.1m recovery, 40%: gouge clay, schist chips, quartz chips. FAULT.
- 116.0-117.0 1.0m 0.85m recovery, 85%: FAULT breccia, large clasts of light grey banded schist CBA 0; 116.0-116.4, granular schist CBA 80; 116.4-116.7, alteration with carbonates CBA 45; 116.75-117.9. Gouge clay preserved 116.7-116.75 but lost at the other margins of the larger blocks total core loss 0.15m.
- 117.0-119.2 2.2m full rec.: light grey N7 altered schist CSA 0-10 laced with minor carbonate veins; some fuchsite (apple green) along stylolites. Large quartz blob at 118.0.
- 119.2-119.8 0.6m full rec.: light grey N7 altered schist, feldspathic and/or quartz alteration with fuchsite in stylolites, disseminated pyrite and magnetite and isolated larger magnetite crystals, more intensely laced with minor carbonate veins.
- 119.8-120.4 0.6m full rec.: light grey N7 altered schist and greenish grey 5G 5/1 granular schist CSA 30. Sparse network of minor carbonate veins, followed by light grey N7 and some fractured,

light olive grey 5Y 6/1 granular to stylolite laced 2-phase schist. Minor carbonate veins occur as a lacework in the more altered schist.

- 120.4-121.1 0.6m full rec.: light olive grey 5Y 6/1 schist, core broken, with stylolite network and harder altered schist with networks of minor carbonate veins; light grey N7, 120.4-120.5; 120.85-120.95.
- 121.1-121.5 0.4m full rec.: light grey N7 altered schist (2-phase quartz rich schist) CSA 0, minor carbonate veins; greyish orange pink 5YR 7/2.
- 121.5-121.8 0.3m full rec.: light grey N7 altered schist (feldspar and/or quartz) laced with 2-carbonate veins up to 1cm thickness with light olive grey fractured 2-phase schist.
- 121.8-124.3 2.5m full rec.: light grey N7 and light olive grey 5Y 6/1 altered 2-phase and granular schist with some relict greenish grey 5G 5/1 schist; 121.8-122.0, 123.6-123.75, 124.2-124.3. Minor carbonate vein networks principally 123.9-124.2.
- 124.3-125.5 1.2m full rec.: hard altered schist, light olive grey 5Y 6/1 to light grey N7 with carbonate quartz magnetite pyrite veins at 124.5 (2cm quartz mainly), 124.58, 124.85, 125.35; 1cm. The carbonates are light brownish grey 5YR 7/1 and white N9. The veins include bodies with brownish grey 5YR 4/1 mass colour in which magnetite altering to haematite dominates the colour. Minute metallic specks might be gold but more likely to be copper from the drillers grease. Some disseminated magnetite occurs in the altered schist. There is a network of minor greyish orange pink carbonate veins. CSA 70, CVA 70, VSA 90.
- 125.5-126.95 1.35m full rec.: greenish grey 5G 5/1 speckled to 2-phase feldspar chlorite schist with feldspar quartz alteration zones, light grey N7 about networks of minor greyish orange pink carbonate veins. The outer margins of the alteration are light olive grey 5Y 6/1 altered schist. There are also other minor veins.
- 126.85-128.2 1.35m full rec.: alteration feldspar and/or quartz rock speckled with carbonate, pale brownish grey

5YR 7/1 with relicts of 2-phase schist bluish to greenish grey 5B 6/1 to 5G 6/1, altering to light olive grey 5Y 6/1. Veins with quartz carbonate magnetite pyrite at 127.05, 127.1, 127.85.

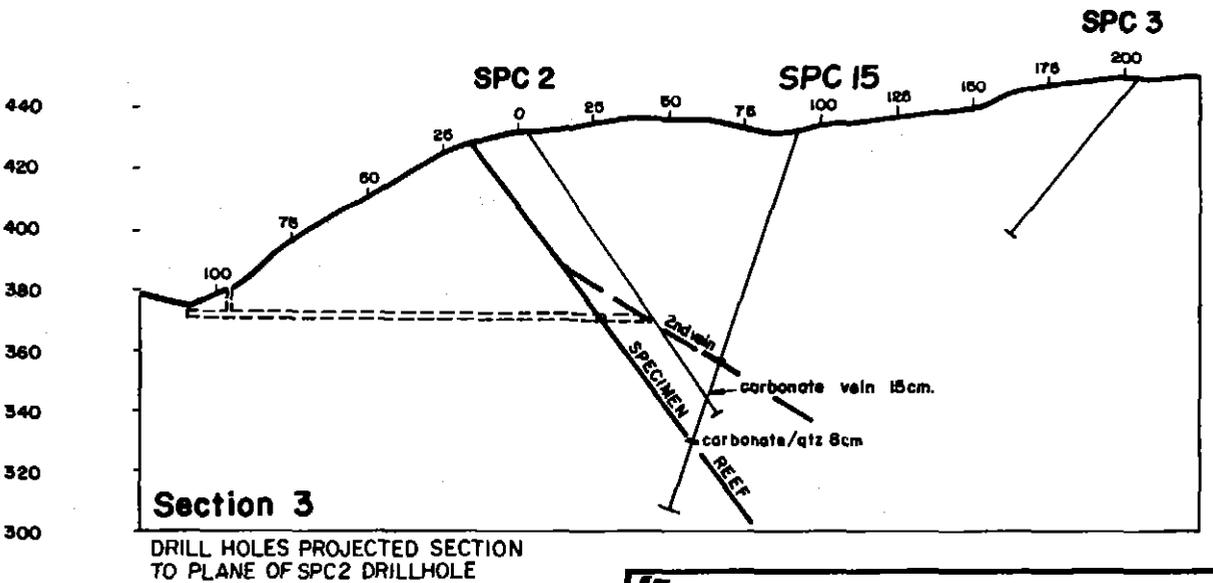
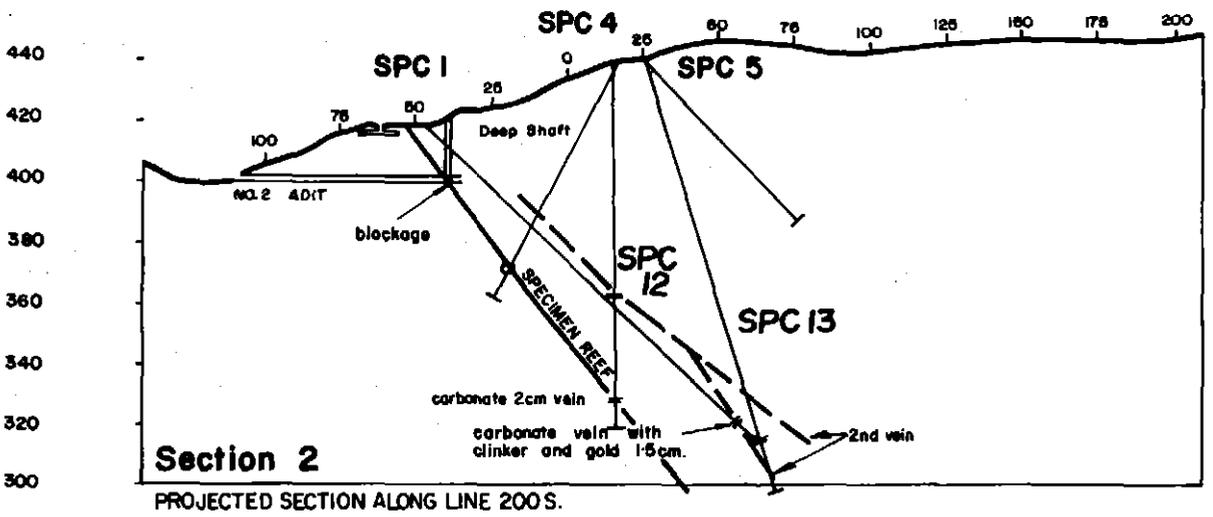
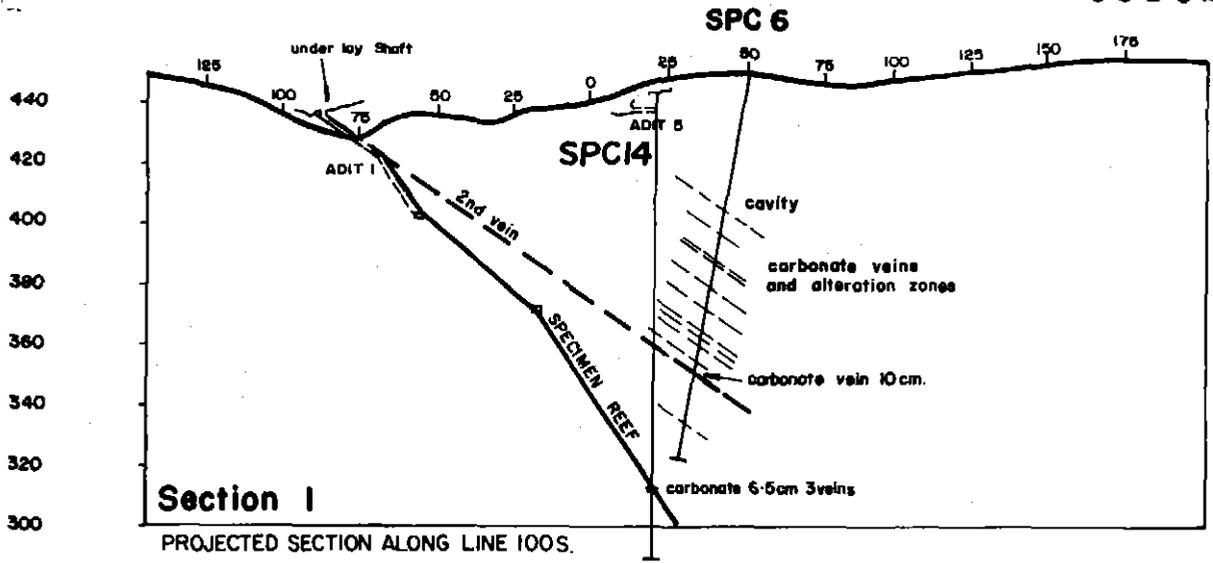
- 128.2-130.9 2.7m full rec.: chloritic 2-phase schist, dark greenish grey 5G 4/1 grading to bluish grey 5B 5/1 in feldspathic phase CSA 0-20 contorted at base. Ptygmatic quartz blobs.
- 130.9-132.8 1.9m full rec.: altered schist (feldspar quartz rock) light grey N7 to brownish grey and speckled with carbonate, minor relict schist greenish grey 5G 5/1. At 131.25 quartz carbonate magnetite pyrite vein, 30% magnetite some altering to haematite; 0.5-1.5cm. Minor white carbonate veins.
- 132.8-134.8 2.0m full rec.: 2-phase schist, greenish grey 5G 5/1, with quartz blobs and minor veins, without alteration.

End hole.

Assay notes: source Analabs report 236.1.08.06748; method 309; fire assay fusion; AAS finish, results in ppm.

Sample/depth	Au	Au check
SPC 15 80.5-81.0	<0.008	
SPC 15 81.0-82.0	<0.008	
SPC 15 82.0-83.0	<0.008	
SPC 15 83.0-84.0	<0.008	
SPC 15 84.0-85.0	<0.008	
SPC 15 85.0-86.0	<0.008	
SPC 15 86.0-86.9	<0.008	<0.008
SPC 15 87.3-87.6	<0.008	
SPC 15 88.8-89.5	<0.008	
SPC 15 89.5-90.5	0.010	
SPC 15 90.5-91.5	<0.008	

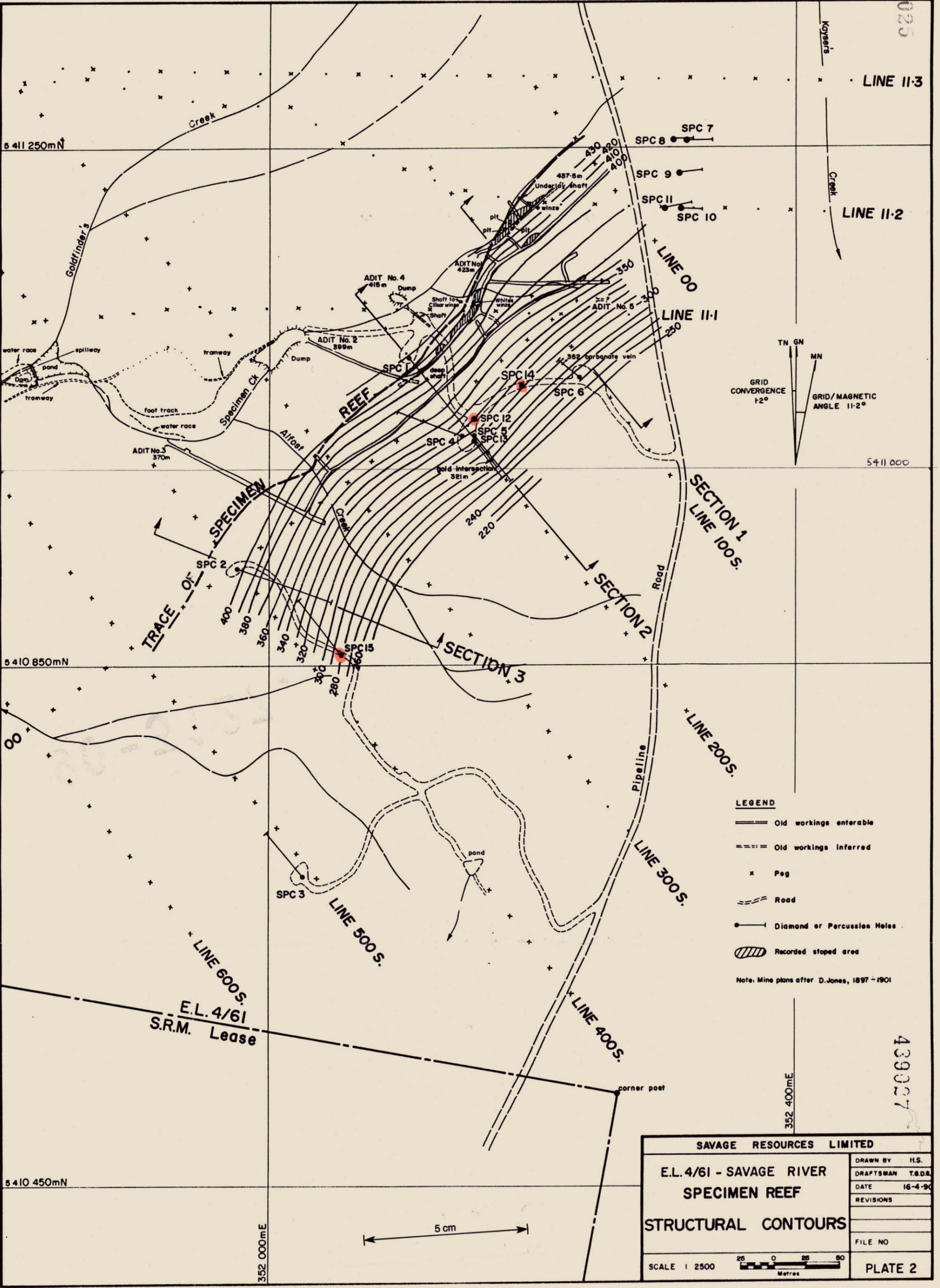
SPC 15	92.4-92.6	<0.008	
SPC 15	100.9-101.3	<0.008	
SPC 15	103.7-104.2	<0.008	
SPC 15	110.1-111.1	<0.008	
SPC 15	113.0-114.0	<0.008	
SPC 15	114.0-115.0	<0.008	
SPC 15	115.0-116.0	<0.008	
SPC 15	116.0-117.0	<0.008	
SPC 15	117.0-118.0	<0.008	
SPC 15	118.0-119.0	<0.008	
SPC 15	119.0-120.0	<0.008	
SPC 15	120.0-121.0	<0.008	<0.008
SPC 15	121.0-122.0	<0.008	
SPC 15	122.0-123.0	<0.008	
SPC 15	123.0-124.0	<0.008	
SPC 15	124.0-125.0	<0.008	
SPC 15	125.0-126.0	<0.008	
SPC 15	126.0-127.0	<0.008	
SPC 15	127.0-128.0	<0.008	
SPC 15	131.0-132.0	<0.008	
SPC 15	132.0-133.0	<0.008	



5 cm

 INDUSTRIAL AND MINING INVESTIGATIONS PTY. LIMITED	
E.L. 4/61 - SAVAGE RIVER SPECIMEN REEF IN RELATION TO DRILLHOLES & WORKINGS	
DRAWN BY: H.B. DRAFTSMAN: T.G.D.S. DATE: April 90 REVISIONS:	FILE NO. PLATE 1
SCALE 1:2500 	

025



E.L. 4/61
S.R.M. Lease

LEGEND

- Old workings enterable
- - - Old workings inferred
- x Peg
- == Road
- Diamond or Percussion Holes
- ▨ Recorded stoped area

Note: Mine plans after D. Jones, 1897-1901

SAVAGE RESOURCES LIMITED	
E.L. 4/61 - SAVAGE RIVER SPECIMEN REEF STRUCTURAL CONTOURS	
DRAWN BY	H.S.
DRAFTSMAN	T.G.D.
DATE	16-4-90
REVISIONS	
FILE NO	
SCALE 1:2500	
PLATE 2	

439027

LEGEND

QUATERNARY:

Qa Alluvium

TERTIARY:

"BROWN PLAIN FORMATION"

Tus Poorly rounded oligomictic pebble to cobble gravel and sand.

Tvb Basalt

"BULLOCKS HEAD FORMATION"

Tmg Well rounded polymictic cobble gravel and sand.

PERMO-CARBONIFEROUS:

WYNARD TILLITE

C-Pwt Tillite, mudstone with ice-rafted clasts, sandstone and varved mudstone.

DEVONIAN:

MEREDITH GRANITE

Dmg Porphyritic granite, porphyritic microgranite, gneiss and quartz tourmaline rock.

PRECAMBRIAN:

"WHYTE GROUP"

COONAH FORMATION

Pos₂ Upper - greywacke and mudstone.

Pos₁ Lower - schistose quartzwacke and associated mica-chlorite pelites with some graphite schist; abundant quartz veins and minor green tuff

"BOMBY FORMATION"

Pbg₄ Greenschist, amphibolite and sandstone. Magnetite (indicated by horizontal bars). Magnetite (indicated by diagonal bars).

"TIMBS FORMATION"

Grey and green basal mudstone, lentic sandstone, phyllite, greenschist, amphibolite, turbidite sandstone, minor carbonate and magnetite near top. Divisions indicated:-

Pbg₃ Greenschist, turbidite sandstone, amphibolite and minor carbonate. Thinbedded sandstone at top.

Pbg₂ Quartz rich greenschist.

Pbg₁ Greenschist, grey and green phyllite and amphibolite.

Pbs Green and grey mudstone and minor turbidite sandstone.

"LONGBACK SUBGROUP"

Slate, dolomite; fragmental and massive volcanics. Divisions indicated:-

Plv₂ Turnerace Volcanics; mudstone, phyllite, green tuff with scattered pumice clasts, amphibolite and volcanic breccia.

Pld₂ Doodle Dolomite and Corinna Slate; dolomite common in the south only. Quartz veins and distinctive laminated texture common in dolomite; minor chert.

Plv₁ Biernata Volcanics; mudstone-like tuffs, breccia, massive volcanics (ignimbrite T), grey tuff with scattered pumice clasts (in north).

Pld₁ Savage Dolomite; slate expands at the expense of dolomite in the north. Distinctive dolomite textures include stromatolitic and brecciated stromatolitic dolomite and oolitic dolomite, chert.

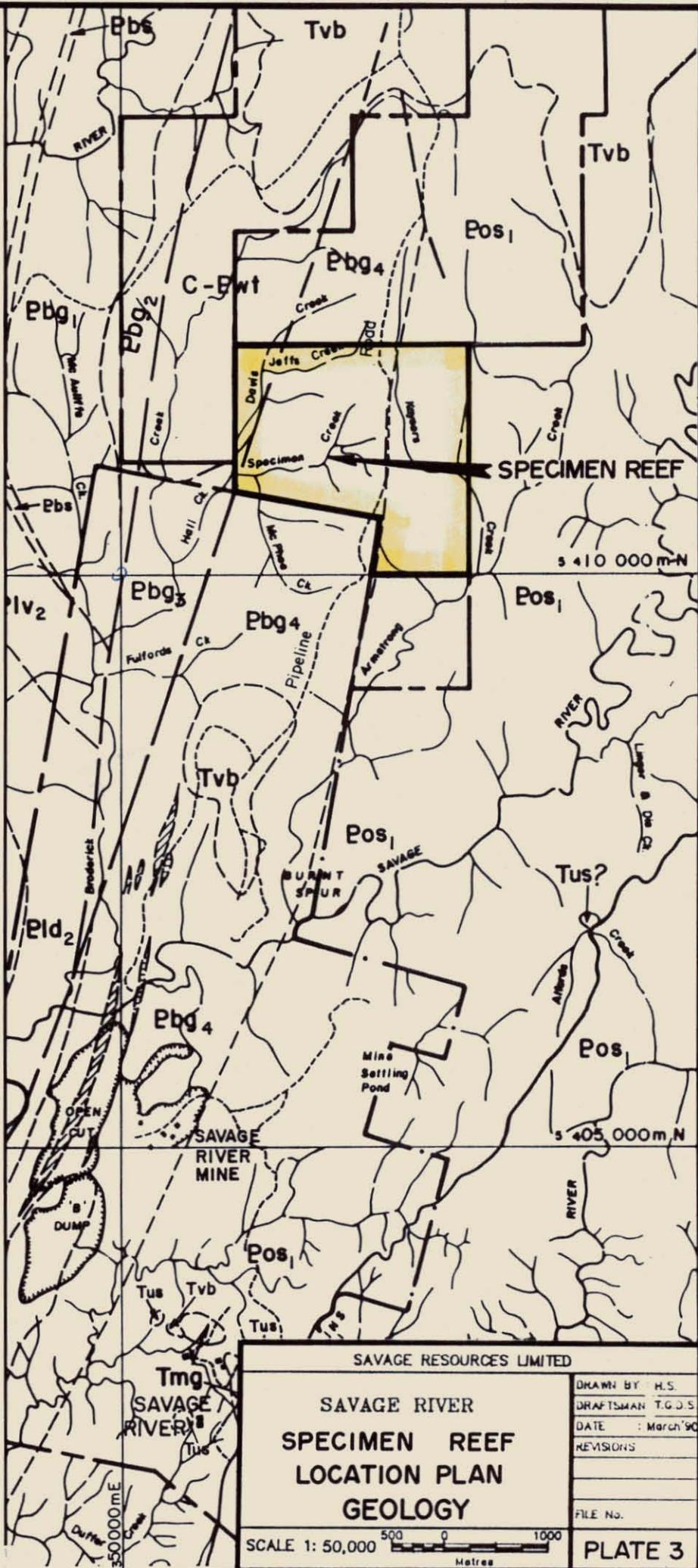
"MOUNT DONALDSON FORMATION"

Pdp Black phyllite and sandstone/conglomerate; resistant sandstone beds indicated.

ROCKY CAPE GROUP

Prp Slate and sandstone; prominent sandstone beds indicated.

Prs



SAVAGE RESOURCES LIMITED

SAVAGE RIVER SPECIMEN REEF LOCATION PLAN GEOLOGY

DRAWN BY H.S.
DRAFTSMAN T.G.O.S.
DATE : March '90
REVISIONS

FILE No.

PLATE 3

SCALE 1: 50,000 500 0 1000
Metres

5 cm