

000

MICROFILMED

DKS9

722001

GEOPHOTO MINERALS REPORT 1972/24

MEMORANDUM REPORT ON
GEOLOGICAL AND GEOCHEMICAL
INVESTIGATIONS ON THE
WOLFRAM CREEK PROSPECT
E.L.6/68, N.E. TASMANIA

PREPARED BY

GEOPHOTO RESOURCES CONSULTANTS

FOR

TEXINS DEVELOPMENT PTY. LTD.

I.R. MORTIMORE
NOVEMBER, 1972

CONTENTS

	<u>Page</u>
INTRODUCTION	1
GEOLOGY	1
GEOCHEMISTRY	3
CONCLUSIONS	3

APPENDIX

Geological Map, Wolfram Creek Prospect Drg. 1/181

Geochemical Laboratory Reports
Lab. Sheets Numbers 843/1, 843/2, 843/3, 866/1

INTRODUCTION

Reconnaissance work (Report 1970/74) carried out in the Wolfram Creek/Nevada Creek areas of E.L.6/68 late in 1970 outlined two areas of geologic interest which were recommended for follow-up detailed geological mapping and geochemical work (rock/soil).

These were the Lutwyche Prospect and its immediate surrounds and an area of approximately 40 acres covering a wedge of granitic rocks extending southwards from the main mass of biotite-muscovite granite which covers the northern limits of the Wolfram Creek/Nevada Creek area.

The ensuing work carried out on the Lutwyche Prospect is included in Report 1971/21.

This summary report deals with follow-up work on the second area which has been designated the Wolfram Creek Prospect.

The prospect lies some 8 miles inland from Beaumaris being reached by graded Forestry road to within $\frac{1}{2}$ mile and thence by old logging track following Wolfram Creek itself.

The initial work involved the gridding of the more prospective area with a total of 23,200 feet of line cut over an area of 2,400 feet by 1,600 feet.

GEOLOGY

Detailed mapping was completed late in 1971 and a map compiled carrying the more significant geological features of the area (see map inset).

Briefly, the Devonian granite, a biotite-muscovite granite/adamellite, is exposed in and between Wolfram Creek

and a small tributary entering from the north-west. This wedge is surrounded on three sides to the south by metasediments of the Silurian Mathinna Series comprising quartzites, siltstones, shales and mudstones. Outliers of these Mathinna Beds also rest on the intruded granites above the level of the creek to the north.

The granites, generally feldspathic and coarse grained (fine to medium grained close to contact), are characterised by the presence of abundant tourmaline. The latter often comprises 15%+ of the composition of the granite, found in radiating aggregates of columnar crystals to 2 cm. in length. Biotite and/or muscovite are often present as primary constituents of the granite. Pockets of pegmatitic material are a common feature of the contact zone carrying quartz, potash feldspar, biotite, muscovite, tourmaline, chlorite and fluospar.

The granite is generally well jointed and carries numerous quartz, quartz-greisen and biotite-muscovite greisen veins (to a maximum 2 feet thickness) as fracture fillings, the strike close to E-W. Tourmaline again is the chief mineral found within the gangue of quartz with arsenopyrite, pyrite and wolframite found in minor quantities.

The granite contact dips southwards at 10° to 25° (locally varying to 60°) beneath the overlying Mathinna Beds.

The latter have been thermally altered to hornfels near the contact but this zone is narrow, rarely exceeding 50 feet in width. Beyond, the sediments are generally spotted and micaceous giving way to basically unaltered rock types. Fracturing is complex, with veining common, often in contorted forms. These veins are generally thin (<1/4") and unmineralised.

004

GEOCHEMISTRY

The total grid was soil sampled on 200 feet spacings with analysis for Sn, W, Mo and Bi being run on each sample.

Further, a number (21) of cobra drill holes were drilled on scattered outcrops to a depth of 5 feet. A drill dust sample was recovered from each, representative of the total 5 feet. These were likewise analysed for Sn, W, Mo and Bi.

CONCLUSIONS

The intrusion of these granites has been characterised by pegmatitic-pneumatolytic and later high temperature hydro-thermal stages. In many such granitic intrusions, the conditions prevailing during these stages are suitable for the mobilisation and concentration of high temperature minerals such as tin and tungsten.

This can be seen in N.E. Tasmania at Constables Creek and the Blue Tier.

However, over the Wolfram Creek Prospect, although the geological indications are generally good, the limited geo-chemical work has failed to establish any values of significance to warrant further investigation of this area with view to its hard-rock possibilities.

The Cobra drill dust samples, although randomly rather than systematically recovered, failed to reveal any single intersection carrying economic values. Values varied to 0.15% Sn, 0.03% W, 70 ppm Bi and 10 ppm Mo.

005

Plots of data from the soil sampling programme (Mo, Bi, W) show a weak zone over the central portion of the granite area trending S.E. in the Silurian cover, but the values are so low as to not carry weight in any discussion of the significance of this trend.

Tin values (to 0.14%) were consistently found in soil samples over the whole area above both granite and meta-sediment.

This to some extent may be expected with the known connection these granites, locally called "tin granites", have with tin deposits, particularly eluvial/alluvial further to the north. Cassiterite can be found, on close examination, along many joint planes and in thin quartz stringers within the granites and well fractured sediments near contact areas of this biotite-muscovite granite mass in the St. Helens/Scamander area.

As these tin values stand, it would appear to be worthwhile to bulk test the soil cover to check its viability as an eluvial tin deposit since the soil values go around 1lb/cu. yd Sn over the whole area. From past experience, however, it has been found that these soil values for tin must be viewed with some suspicion. Procedures used in the preparation from a soil sample to the -20 mesh fraction for analysis appear to tend to result in a concentration of cassiterite and an overestimation of the tin content of the original soil sample. However, a check may be in order in this area.

I.R. MORTIMORE

006

722007

APPENDIX

GEOCHEMICAL LABORATORY REPORTS

GEOCHEMICAL LABORATORY REPORT

722008

FIELD SHEET No. 006973 PROJECT No. EL.6/68 - WOLFRAM CREEK

LAB. SHEET No. 843/1 SAMPLE TYPE SOIL PROFILE DATE 12th November, 1971.

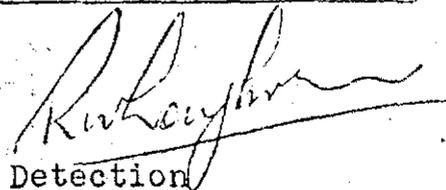
SAMPLE No.	LAB. No.	Mo ppm	Bi ppm	Sn %	W %				
00 + 00	71-K-1106	BLD	BLD	0.04	BLD				
00 + 02N	71-K-1107	BLD	BLD	0.04	BLD				
00 + 04N	71-K-1108	BLD	BLD	0.06	BLD				
00 + 06N	71-K-1109	BLD	BLD	0.06	BLD				
00 + 08N	71-K-1110	BLD	BLD	0.06	BLD				
00 + 10N	71-K-1111	BLD	BLD	0.03	BLD				
00 + 12N	71-K-1112	BLD	BLD	0.06	BLD				
00 + 14N	71-K-1113	BLD	BLD	0.06	BLD				
00 + 16N	71-K-1114	BLD	BLD	0.04	BLD				
00 + 18N	71-K-1115	BLD	BLD	0.04	BLD				
00 + 20N	71-K-1116	BLD	BLD	0.06	BLD				
00 + 22N	71-K-1117	BLD	BLD	0.06	BLD				
00 + 24N	71-K-1118	BLD	BLD	0.03	BLD				
02E + 00	71-K-1119	BLD	BLD	0.06	BLD				
02E + 02N	71-K-1120	BLD	BLD	0.04	BLD				
02E + 04N	71-K-1121	BLD	BLD	0.03	BLD				
02E + 06N	71-K-1122	BLD	BLD	0.03	BLD				
02E + 08N	71-K-1123	BLD	BLD	0.03	BLD				
02E + 10N	71-K-1124	BLD	BLD	0.02	BLD				
02E + 12N	71-K-1125	BLD	BLD	0.06	BLD				
02E + 14N	71-K-1126	BLD	BLD	0.02	BLD				
02E + 16N	71-K-1127	BLD	BLD	0.03	BLD				
02E + 18N	71-K-1128	BLD	BLD	0.06	BLD				
02E + 20N	71-K-1129	BLD	BLD	0.04	BLD				
02E + 22N	71-K-1130	BLD	BLD	0.04	BLD				
02E + 24N	71-K-1131	BLD	BLD	0.09	BLD				
04E + 00	71-K-1132	BLD	BLD	0.03	BLD				
04E + 02N	71-K-1133	BLD	BLD	0.03	BLD				
04E + 04N	71-K-1134	BLD	BLD	0.08	BLD				
04E + 06N	71-K-1135	BLD	BLD	0.06	BLD				
04E + 08N	71-K-1136	BLD	BLD	0.06	BLD				
04E + 10N	71-K-1137	BLD	BLD	0.06	BLD				
04E + 12N	71-K-1138	BLD	BLD	0.04	BLD				
04E + 14N	71-K-1139	BLD	BLD	0.06	BLD				
04E + 16N	71-K-1140	BLD	BLD	0.04	BLD				
04E + 18N	71-K-1141	BLD	BLD	0.02	BLD				
04E + 20N	71-K-1142	BLD	BLD	0.14	BLD				
04E + 22N	71-K-1143	BLD	BLD	0.08	BLD				
04E + 24N	71-K-1144	BLD	BLD	0.06	BLD				
06E + 00	71-K-1145	BLD	BLD	0.03	BLD				
06E + 02N	71-K-1146	BLD	BLD	0.06	BLD				
06E + 04N	71-K-1147	BLD	BLD	0.06	BLD				
06E + 06N	71-K-1148	BLD	BLD	0.04	BLD				
06E + 08N	71-K-1149	BLD	BLD	0.04	BLD				
06E + 10N	71-K-1150	BLD	5	0.03	BLD				
06E + 12N	71-K-1151	BLD	BLD	0.03	BLD				

METHODS:

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.

Mo, Bi by G.R.C. No. 2
 W by G.R.C. No. 4
 Sn by G.R.C. No. 5

B.L.D. = Below Limit of Detection



[Signature] Chief Chemist



008

GEOCHEMICAL LABORATORY REPORT 722009

FIELD SHEET No. 006973/4 PROJECT No. EL.6/68 - WOLFRAM CREEK

LAB. SHEET No. 843/2 SAMPLE TYPE: SOIL PROF. DATE: 17th November, 1971.

SAMPLE No.	LAB. No.	Mo ppm	Bi ppm	Sn %	W %				
06E + 14N	71-K-1152	BLD	BLD	0.06	BLD				
06E + 16N	71-K-1153	BLD	BLD	0.04	BLD				
06E + 18N	71-K-1154	BLD	BLD	0.04	BLD				
06E + 20N	71-K-1155	BLD	BLD	0.09	BLD				
06E + 22N	71-K-1156	BLD	5	0.03	BLD				
06E + 24N	71-K-1157	BLD	BLD	0.03	BLD				
08E + 00	71-K-1158	BLD	BLD	0.04	BLD				
08E + 02N	71-K-1159	BLD	BLD	0.06	BLD				
08E + 04N	71-K-1160	BLD	BLD	0.08	BLD				
08E + 06N	71-K-1161	BLD	10	0.02	BLD				
08E + 08N	71-K-1162	BLD	25	0.06	BLD				
08E + 10N	71-K-1163	BLD	BLD	0.06	BLD				
08E + 12N	71-K-1164	BLD	BLD	0.06	BLD				
08E + 14N	71-K-1165	BLD	10	0.02	BLD				
08E + 16N	71-K-1166	BLD	BLD	0.06	BLD				
08E + 18N	71-K-1167	BLD	BLD	0.06	BLD				
08E + 20N	71-K-1168	BLD	BLD	0.04	BLD				
08E + 22N	71-K-1169	BLD	BLD	0.08	BLD				
08E + 24N	71-K-1170	BLD	BLD	0.04	BLD				
10E + 00	71-K-1171	BLD	BLD	BLD	BLD				
10E + 02N	71-K-1172	BLD	BLD	0.04	BLD				
10E + 04N	71-K-1173	BLD	10	0.06	BLD				
10E + 06N	71-K-1174	BLD	5	0.08	BLD				
10E + 08N	71-K-1175	BLD	5	0.04	0.03				
10E + 10N	71-K-1176	BLD	BLD	0.03	BLD				
10E + 12N	71-K-1177	BLD	BLD	0.06	BLD				
10E + 14N	71-K-1178	BLD	BLD	0.04	BLD				
10E + 16N	71-K-1179	BLD	10	0.06	BLD				
10E + 18N	71-K-1180	BLD	BLD	0.06	BLD				
10E + 20N	71-K-1181	BLD	BLD	0.04	BLD				
10E + 22N	71-K-1182	BLD	BLD	0.04	BLD				
10E + 24N	71-K-1183	BLD	BLD	0.06	BLD				
12E + 00	71-K-1184	BLD	BLD	0.04	BLD				
12E + 02N	71-K-1185	10	BLD	0.02	BLD				
12E + 04N	71-K-1186	BLD	BLD	0.04	BLD				
12E + 06N	71-K-1187	BLD	BLD	0.04	BLD				
12E + 08N	71-K-1188	BLD	BLD	0.03	BLD				
12E + 10N	71-K-1189	BLD	BLD	0.06	BLD				
12E + 12N	71-K-1190	BLD	BLD	0.04	BLD				
12E + 14N	71-K-1191	BLD	BLD	0.04	BLD				
12E + 16N	71-K-1192	BLD	BLD	0.03	BLD				
12E + 18N	71-K-1193	BLD	BLD	0.03	BLD				
12E + 20N	71-K-1194	BLD	BLD	0.04	BLD				
12E + 22N	71-K-1195	BLD	BLD	0.06	BLD				
12E + 24N	71-K-1196	BLD	BLD	0.03	BLD				
14E + 00	71-K-1197	10	10	0.04	BLD				

METHODS:

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.



R. W. Bayliss
Chief Chemist

GEOCHEMICAL LABORATORY REPORT

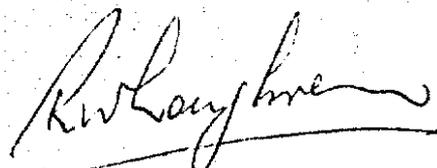
722010

009 FIELD SHEET No. 006975 PROJECT No. EL.6/68 - WOLFRAM CREEK
 LAB. SHEET No. 843/3 SAMPLE TYPE: SOIL PROFILE DATE: 17th November, 1971.

SAMPLE No.	LAB. No.	Mo ppm	Bi ppm	Sn %	W %				
14E + 02N	71-K-1198	BLD	BLD	0.03	BLD				
14E + 04N	71-K-1199	BLD	BLD	0.03	BLD				
14E + 06N	71-K-1200	BLD	BLD	BLD	BLD				
14E + 08N	71-K-1201	BLD	BLD	0.04	BLD				
14E + 10N	71-K-1202	BLD	BLD	0.03	BLD				
14E + 12N	71-K-1203	BLD	BLD	0.02	BLD				
14E + 14N	71-K-1204	BLD	BLD	0.04	BLD				
14E + 16N	71-K-1205	BLD	5	0.03	BLD				
14E + 18N	71-K-1206	BLD	BLD	0.04	BLD				
14E + 20N	71-K-1207	BLD	BLD	0.03	BLD				
14E + 22N	71-K-1208	BLD	BLD	0.06	BLD				
14E + 24N	71-K-1209	BLD	BLD	0.03	BLD				
16E + 00	71-K-1210	BLD	5	0.04	BLD				
16E + 02N	71-K-1211	BLD	10	0.06	BLD				
16E + 04N	71-K-1212	BLD	BLD	0.03	BLD				
16E + 06N	71-K-1213	BLD	5	0.06	BLD				
16E + 08N	71-K-1214	BLD	5	0.03	BLD				
16E + 10N	71-K-1215	BLD	BLD	0.06	BLD				
16E + 12N	71-K-1216	BLD	BLD	0.04	BLD				
16E + 14N	71-K-1217	BLD	BLD	0.04	BLD				
16E + 16N	71-K-1218	BLD	BLD	0.03	BLD				
16E + 18N	71-K-1219	BLD	BLD	0.04	BLD				
16E + 20N	71-K-1220	BLD	BLD	0.03	BLD				
16E + 22N	71-K-1221	BLD	BLD	0.04	BLD				
16E + 24N	71-K-1222	BLD	BLD	0.04	BLD				

METHODS:

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.


 R. W. Laybourn
 Chief Chemist

GEOCHEMICAL LABORATORY REPORT 722011

FIELD SHEET No. 006981 PROJECT No. EL.6/68 - WOLFRAM CREEK AREA

LAB. SHEET No. 866/1 SAMPLE TYPE. DRILL DUST DATE. 21st December, 1971.

010

SAMPLE No.	LAB. No.	Sn %	W %	Mo ppm	Bi ppm					
COBRA 1	71-M-166	0.08	BLD	BLD	BLD					
COBRA 2	71-M-167	0.08	BLD	BLD	BLD					
COBRA 3	71-M-168	0.02	BLD	BLD	5					
COBRA 4	71-M-169	0.13	BLD	10	20					
COBRA 5	71-M-170	0.04	BLD	10	5					
COBRA 6	71-M-171	0.15	BLD	BLD	5					
COBRA 7	71-M-172	0.02	BLD	BLD	15					
COBRA 8	71-M-173	0.11	BLD	BLD	10					
COBRA 9	71-M-174	0.04	BLD	BLD	5					
COBRA 10	71-M-175	0.08	BLD	BLD	BLD					
COBRA 11	71-M-176	0.11	0.03	10	20					
COBRA 12	71-M-177	0.06	BLD	10	15					
COBRA 13	71-M-178	0.13	0.03	10	20					
COBRA 14	71-M-179	0.02	0.02	10	25					
COBRA 15	71-M-180	0.10	0.03	10	70					
COBRA 16	71-M-181	SAMPLE MISSING								
COBRA 17	71-M-182	0.10	BLD	BLD	5					
COBRA 18	71-M-183	0.13	BLD	BLD	5					
COBRA 19	71-M-184	0.06	BLD	BLD	BLD					
COBRA 20	71-M-185	0.06	0.02	BLD	5					
COBRA 21	71-M-186	0.13	BLD	BLD	BLD					

METHODS:

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.

Mo, Bi by G.R.C. No. 2

W by G.R.C. No. 4

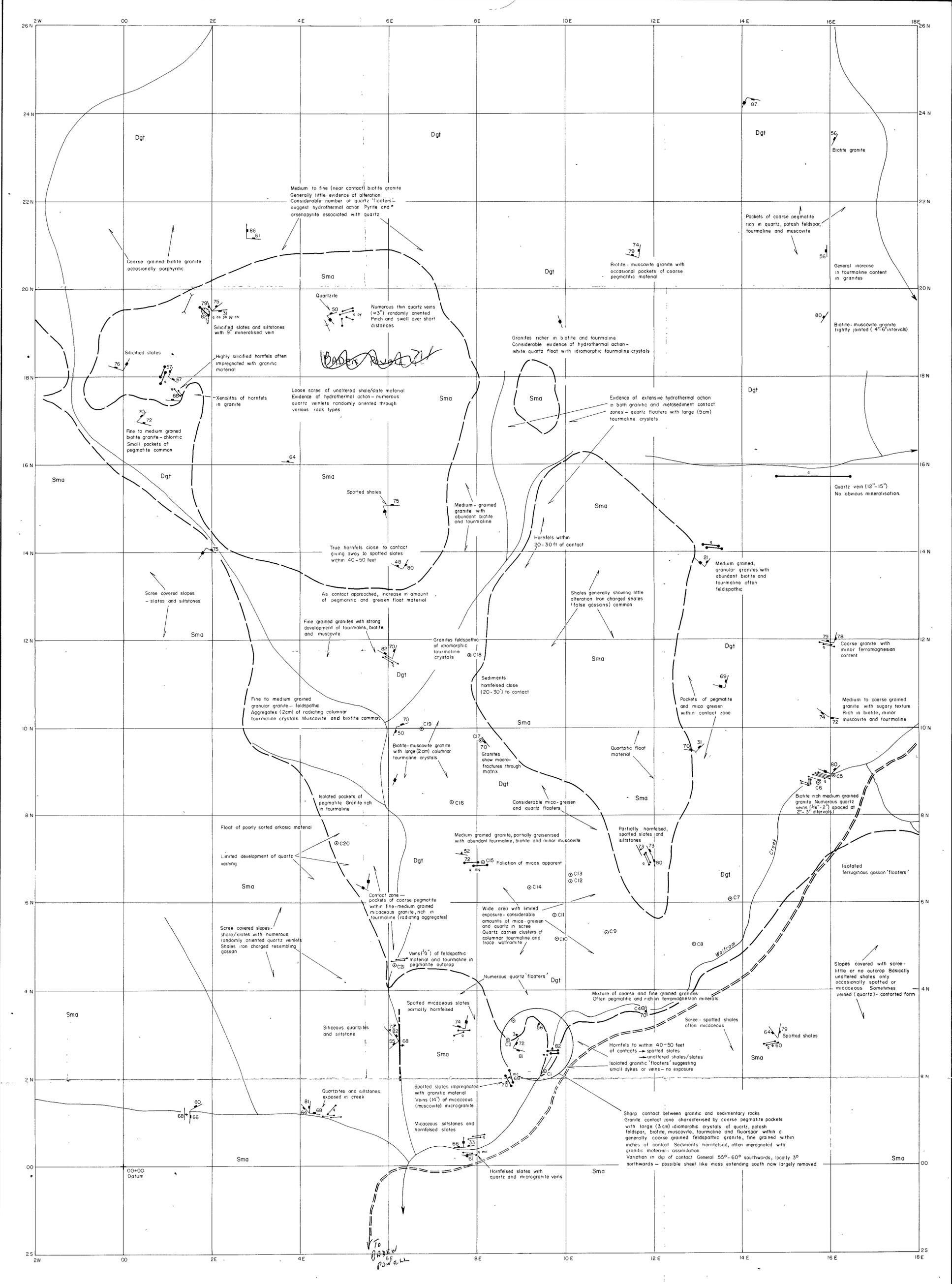
Sn by G.R.C. No. 5

B.L.D. = Below Limit of Detection

Chief Chemist

Ray W. Gerdner





Scale: 100 Feet to 1 Inch

722012

TEXAS INSTRUMENTS INCORPORATED 72-907

GEOPHOTO RESOURCES CONSULTANTS
SYDNEY AUSTRALIA

TEXINS DEVELOPMENT PTY. LTD.
E.L. 6/68 NORTH EAST TASMANIA
WOLFRAM CREEK PROSPECT
GEOLOGY

PROJECT 6/68 AUTHOR I Mortimore DATE May 1973 DWG No 1/181

LEGEND

Silurian Mothina Beds Sma Shales, slates, siltstones and quartzites

Devonian Tin Granite Dgt Biotite-muscovite granite/adamellite

Strike and dip of strata

Strike and dip of strata-vertical

Strike and dip of foliation

Strike and dip of joints

Strike and dip of joints-vertical

Fault, dashed where indefinite

Contact, dashed where indefinite

Vein or dyke

Veinlet

Creek

Track

Trench

Open cut

○ C12 Cobra drill hole location with hole number

q - quartz ch - chalcopyrite
 mc - microgranite pb - galena
 mg - mica-greisen py - pyrite
 as - arsenopyrite w - wolframite

Scale: 100 Feet to 1 Inch

0 100 200 300 400 Feet

0 50 100 Metres

5 cm