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GEOPHOTO MINERALS REPORT 1970/95

PROGRESS REPORT ON PROSPECTS ON

THE BLUE TIER TINFIELD

E.L. 6/68 - N.E. TASMANIA

GEOPHOTO RESOURCES CONSULTANTS
BRISBANE, QUEENSLAND, AUSTRALIA

This report covers work carried out through September, October and November 1970 including scout geological work, cobra rock drilling and rock geochemistry.

The work was designed to evaluate the potential of various old mining properties and to determine their lateral extents.

NEW MOON MINE

The analysis of 16 Cobra rock drill dust samples and 50 rock-chip samples was carried out during September.

All samples were tested for tin and molybdenum.

The tin assays illustrated the patchy nature of the ore deposits of the "floor type" on the Blue Tier. High values, up to 5.6% tin, were dispersed through a large number of assays showing only trace or no tin.

The molybdenum results were generally disappointing showing only traces of molybdenum although several exposures about the mine workings show small blebs of molybdenite within greisenised granites.

No real control of the mineralisation is apparent from the

results but the tin values are widely dispersed over the mine area. An overall bulk grade of approximately 0.2% metallic tin is assumed from the results to date.

The area of tin granite is a small one. The contact with the porphyritic granites to the northeast, marked by a seam of pegmatite, appears to dip gently towards the northeast. The contact around the southern and western sides, although able to be established approximately, is not exposed for close examination. However there is sufficient evidence to suggest there exists here a domed structure which has been unroofed by the erosive action of the Moon and Hope Creeks. The tin granite could be part of a much larger body beneath the porphyritic granite cover.

This domed structure would be ~~conclusive~~ conducive to ore deposition acting as a trap for emanating mineralising solutions. This is proven by the existence of the Moon Mine on this site.

As such it offers good prospects of proving the existence of reserves sufficient to warrant exploitation as a low grade tin proposition in conjunction with other small orebodies on the Blue Tier.

Future work will be designed to test the orebody at depth and beneath the porphyritic granite cover.

A percussion drilling program is proposed, drilling to a grid on 100 feet centres to a depth of approximately 100 feet. This will be carried out initially over the tin granite outcrop (approximately 400 feet by 400 feet) but will later extend outwards to the porphyritic granite areas.

AUSTRALIA MINE, SUMMIT MINE, ETHEL PROSPECT AREA

This area of the Blue Tier in the past has not been adequately tested although there exists a large area of proven marginal values. The main work has involved trenching with rock sampling. Drilling by the Mount Lyell Mining and Railway Company was apparently not used to the best advantage in proving extensions of the Australia Mine orebody, drilling being on an angle parallel to the dip of the orebody.

Current work has involved the cutting of some 24,000 feet of line followed by cobra rock drill work and rock chip sampling. The work is still in progress at the time of writing and no results are at hand to date.

If the results of this program are encouraging a percussion drilling program could be commenced on similar lines to that proposed at the New Moon Mine.

CRYSTAL HILL MINE

An area about the old workings has been delineated for gridding and cobra rock drill work.

PERENNIAL MINE

The workings lying to the southwest of the Mt. Michael Mine are small in extent but warrant limited work in the way of cobra rock drilling and rock geochemistry.

LIBERATOR AND MT. MICHAEL MINES

Percussion drilling to a grid on 100 feet centres is to be considered for these prospects.

VEIN DEPOSITS

A geological investigation, with an appraisal of potential, was carried out on known vein deposits with particular emphasis being placed on the presence of wolfram, molybdenum and bismuth mineralisation in association with tin mineralisation.

These deposits, generally fissure fillings, can be reasonably expected to extend to depth, in contrast to the "floor" deposits. If veins, of sufficient width and number, can be established to exist at any one locality with high mineralised content, then these may present an economically exploitable proposition. A width of 10 feet is generally considered the minimum width for an orebody mined underground but a number of smaller veins of high mineral content could be worked at one locality. At the Aberfoyle Mine the average width of the veins worked is 20 inches and at the Story's Creek Mine 4 feet. However, the vein material at these mines is of high grade and as such this offsets the amount of dilution by wall rock which occurs during the mining operations.

The vein deposits on the Blue Tier carry several minerals in association with cassiterite. Common minerals are wolfram, molybdenite, chalcopyrite, pyrite and arsenopyrite. Bismuth, although not apparent in hand specimens, is present also. Fluorspar is often prominent in the association. The cassiterite is generally found in rich aggregates with coarse crystals up to 6 mm in size.

GOUGH'S VEINS

The Gough's Veins are located to the northeast of the Don Mine on a north facing slope on the east bank of the Tin Dish Creek. The veins appear from the dump material to be between 6 and 18 inches in width comprising of quartz and quartz-greisen and contained within porphyritic granites. No exposures could be seen but from the attitude of the trenches the veins appear to strike approximately N.E. - S.W. The veins carry rich pockets of coarse crystalline cassiterite with occasional bunches of wolfram. Samples G1 to G8 are representative of the material found on the dumps.

The general area about the veins was investigated. Isolated quartz "floaters" carried traces of wolfram, particularly towards the south approaching the Don Mine area. TD1 to TD6 are samples recovered from various veins in the Tin Dish Creek area but no further areas, carrying numerous veins as at Gough's Veins, were located.

LOTTAH MINE

The veins at the Lottah Mine strike 357° and dip 65° towards the west. The veins themselves are only up to 8 inches in width composed mainly of quartz and/or quartz greisen, but the porphyritic granite wall rock is greisenised or silicified and mineralised up to 18 inches on either

side of the veins. Cassiterite is conspicuous through much of the ore with minor amounts of wolfram, molybdenite, arsenopyrite and chalcopyrite. Well formed fluorspar crystals are apparent in some specimens.

Samples L1 to L8 were taken from the mine area.

FULL MOON MINE, HOPE CREEK

The veins strike 138°, dipping steeply to the southwest. The main vein of pegmatitic quartz appears to be up to 2 feet in width with altered mineralised granites extending some 4 to 6 inches on either side of the vein. The wall rock is a porphyritic granite. Here again, as at the Gough's Veins, the trenches are caved and there are no exposures available for examination although the workings, which include 8 shafts, extend over a strike length in excess of 600 feet. Other veins appear to have been worked by trenching in the close vicinity. The quartz and greisen from the dumps carry rich aggregates of coarse crystalline cassiterite along with molybdenite, chalcopyrite and fluorspar.

Samples HC1 to HC6 were taken from these dumps near the main workings. HC7 to HC11 were recovered from decomposed granites carrying small greisen veins and dumps to the south and east of the main workings. To the southwest veins, striking 348° and dipping westwards, are reported to carry

native bismuth. Small flecks of grey mineral with a dull metallic lustre could be seen in one specimen (HC12) but no positive indentification was made. Samples HC13 to HC16 were taken in the same area. HC17 and HC18 were samples taken to the southeast from small quartz-greisen veins striking 330°.

The area between the Lottah Mine and Hope Creek was covered but no veins of any interest found in this section.

NORTH LIBERATOR

Old reports indicate the existence of a 15 feet wide lode formation close to the North Liberator workings which is said to carry appreciable amounts of wolfram and cassiterite. To date this has not been located.

CONCLUSION

The limited number of samples recovered were analysed for Cu, Pb, Zn, Ag, Mo, Bi, Sn, W.

The results (see appendix) illustrated the 'bunchy' habit of particularly the Mo-Bi-W-Sn mineralisation.

Certain samples from the various localities assayed very high values of one or the other of these minerals but at no locality was the mineral content consistently high.

The veins rarely exceed 3 ft. 6 ins. (combined vein and mineralised wall rock) making it imperative that high values are consistently found to offset the dilution by wall rock in any ensuing mining operation.

At the Gough's Veins and Hope Creek the actual veins were not exposed, the estimation of vein width being made on examination of dump material.

The Gough's Veins warrant further attention on the basis of the two very high wolfram assays obtained from two rock samples and the insufficient information known about these veins. Gridding with a systematic soil geochemical program could be used to give some idea of the lateral extent of these veins.

The Hope Creek area has been extensively worked for alluvial tin making any soil geochemical results unreliable. Earthmoving equipment will be needed in the preparation of drill sites at the New Moon Mine. At that time trenching should be carried out in the Hope Creek area with the view to exposing the veins for further inspection. Interesting values for copper, molybdenum, bismuth and tin from dump samples warrant further expenditure in this area.

DECEMBER 1970 IAN R. MORTIMORE

APPENDIX

1. Drawing No. 1/137

2. Sketch - Locations of old mining properties on the Blue Tier.

3. Lab Sheets 395/1, 395/2, 395/3
   483/1, 483/2

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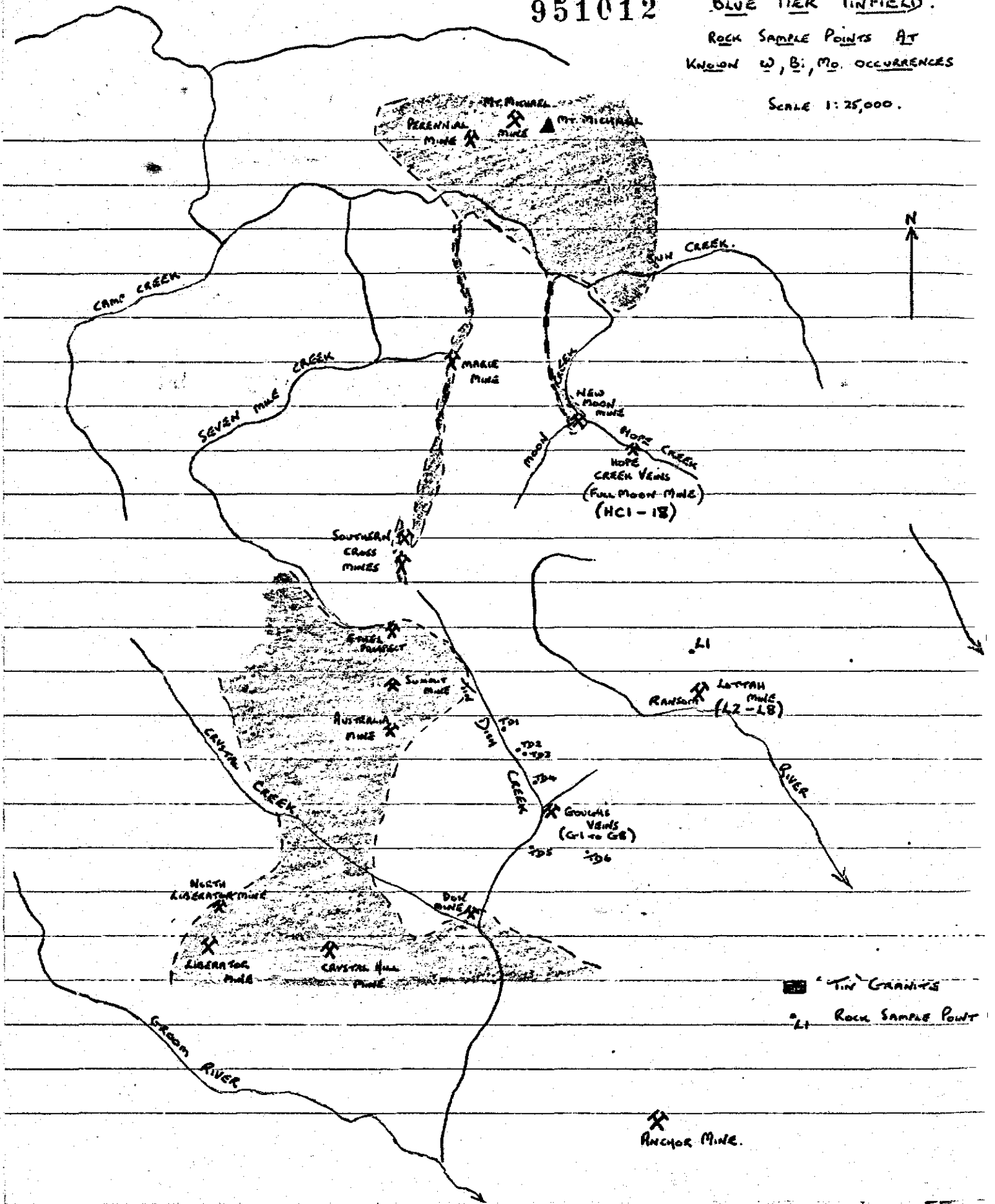
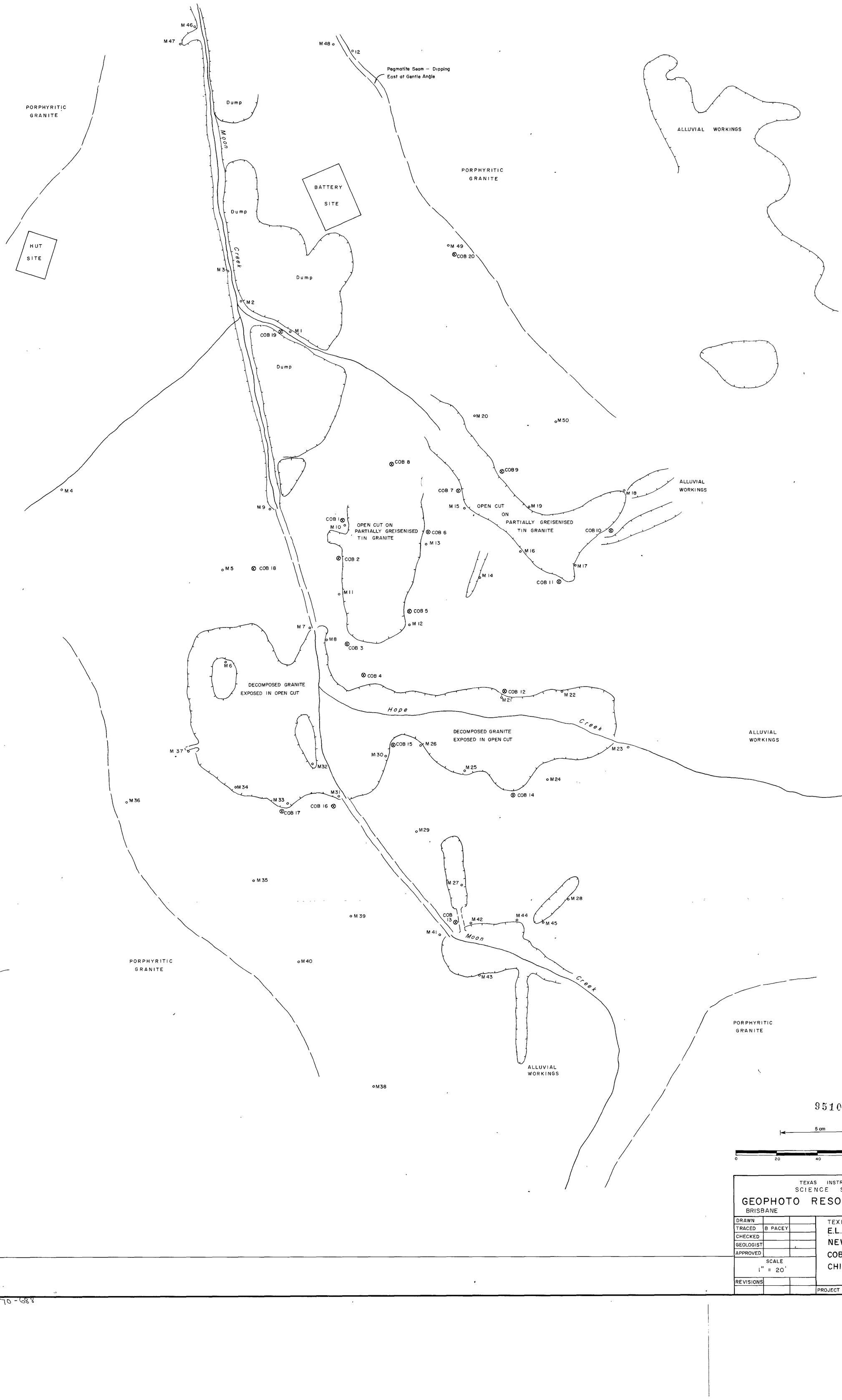
BLUE TIER TINFIELD.

ROCK SAMPLE POINTS AT KNOWN W, Bi, Mo. OCCURRENCES

SCALE 1:25,000.





951013

5 cm

0 20 40 60 80 FEET

70-688

TEXAS INSTRUMENTS INCORPORATED
SCIENCE SERVICES DIVISION

GEOPHOTO RESOURCES CONSULTANTS
BRISBANE AUSTRALIA

DRAWN		
TRACED	B PACEY	
CHECKED		
GEOLOGIST		
APPROVED		

SCALE
1" = 20'

REVISIONS

TEXINS DEVELOPMENT PTY LTD
E.L. 6/68 N.E. TASMANIA
NEW MOON MINE AREA
COBRA HOLES AND ROCK CHIP SAMPLE POINTS

017

PROJECT | DRAWING NO 1/137

1/137

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GEOCHEMICAL LABORATORY REPORT 951014

FIELD SHEET No. 001416 PROJECT No.: EL. 6/68 - TEXINS - MOON MINE

LAB. SHEET No.: 395/1 SAMPLE TYPE: DRILL DUST DATE: 3rd September, 1970.

SAMPLE No.	LAB. No.	Mo ppm	Sn % 0.1%
MCOB 1	70-H-234	10	BLD
MCOB 2	70-H-235	10	BLD
MCOB 3	70-H-236	BLD	BLD
MCOB 4	70-H-237	10	BLD
MCOB 5	70-H-238	BLD	BLD
~~MCOB 6~~	70-H-239	BLD	0.19%
MCOB 7	70-H-240	10	BLD
MCOB 8	70-H-241	BLD	BLD
MCOB 9	70-H-242	10	0.05%
MCOB 10	70-H-243	10	BLD
MCOB 11		SAMPLE MISSING	
MCOB 12	70-H-244	10	BLD
MCOB 13	70-H-245	10	BLD
MCOB 14		SAMPLE MISSING	
~~MCOB 15~~	70-H-246	10	0.19%
MCOB 16		SAMPLE MISSING	
MCOB 17		SAMPLE MISSING	
~~MCOB 18~~	70-H-247	10	0.19%
MCOB 19	70-H-248	10	BLD
MCOB 20	70-H-249	10	BLD

METHODS:

Mo by GRC No. 2

Sn by GRC No. 6A

B.L.D.= Below Limit of Detection

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.

Ray W. Gerlyn

Chief Chemist

GEOCHEMICAL LABORATORY REPORT 951015

FIELD SHEET No. 001417 PROJECT No. EL. 6/68 - TEXINS - MOON MINE - BLUE TIER

LAB. SHEET No. 395/2 SAMPLE TYPE: ROCK DATE: 3rd September, 1970.

SAMPLE No.	LAB. No.		Mo ppm	Sn %
M 1	70-H-184		10	BLD
M 2	70-H-185		10	1.6%
M 3	70-H-186		15	BLD
M 4	70-H-187		10	BLD
M 5	70-H-188		10	BLD
M 6	70-H-189		BLD	BLD
M 7	70-H-190		10	BLD
M 8	70-H-191		10	BLD
M 9	70-H-192		BLD	0.60%
M 10	70-H-193		10	BLD
M 11	70-H-194		BLD	BLD
M 12	70-H-195		BLD	BLD
M 13	70-H-196		BLD	0.36%
M 14	70-H-197		10	BLD
M 15	70-H-198		10	BLD
M 16	70-H-199		10	0.05%
M 17	70-H-200		10	BLD
M 18	70-H-201		BLD	0.08%
M 19	70-H-202		10	BLD
M 20	70-H-203		BLD	0.71%
M 21	70-H-204		15	BLD
M 22	70-H-205		BLD	BLD
M 23	70-H-206		15	BLD
M 24	70-H-207		10	BLD
M 25	70-H-208		10	BLD
M 26	70-H-209		10	1.30%
M 27	70-H-210		10	BLD
M 28	70-H-211		10	BLD
M 29	70-H-212		10	BLD
M 30	70-H-213		BLD	0.19%
M 31	70-H-214		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.

Chief Chemist

Ray W. Gerbing

016

GEOCHEMICAL LABORATORY REPORT

951016

FIELD SHEET No.: 001417 PROJECT No.: E1.6/68

LAB. SHEET No.: 395/3 SAMPLE TYPE: ROCK DATE: 3rd September, 1970.

SAMPLE No.	LAB. No.	Mo ppm	Sn %
M 32	70-H-215	10	BLD
M 33	70-H-216	10	BLD
M 34	70-H-217	BLD	BLD
M 35	70-H-218	15	BLD
M 36	70-H-219	10	BLD
M 37	70-H-220	20	BLD
M 38	70-H-221	15	BLD
M 39	70-H-222	20	BLD
M 40	70-H-223	15	BLD
M 41	70-H-224	BLD	0.16%
M 42	70-H-225	10	5.6%
M 43	70-H-226	10	BLD
M 44	70-H-227	15	BLD
M 45	70-H-228	10	BLD
M 46	70-H-229	20	BLD
M 47	70-H-230	15	BLD
M 48	70-H-231	10	BLD
M 49	70-H-232	10	BLD
M 50	70-H-233	10	BLD

METHODS:

Chief Chemist

Ray W. Yerbury

012

GEOCHEMICAL LABORATORY REPORT 951017

FIELD SHEET No.: 001429 PROJECT No.: EL. 6/68 - TEXINS BLUE TIER TINFIELDS

LAB. SHEET No.: 483/1 SAMPLE TYPE: ROCK DATE: 26th November, 1970.

SAMPLE No.	LAB. No.	Cu ppm	Ni ppm	Co ppm	Pb ppm	Zn ppm	Ag ppm	Mo ppm	Bi ppm
G 1	70-K-2712	45	BLD	BLD	20	20	BLD	15	25
G 2	70-K-2713	15	BLD	BLD	10	60	BLD	10	30
G 3	70-K-2714	BLD	BLD	BLD	10	70	BLD	10	BLD
G 4	70-K-2715	10	BLD	BLD	10	10	BLD	BLD	10
G 5	70-K-2716	35	5	BLD	10	15	7	10	100
G 6	70-K-2717	15	5	5	15	65	BLD	20	5
G 7	70-K-2718	20	10	BLD	20	200	1	25	45
G 8	70-K-2719	10	10	5	30	175	2	20	35
TD 1	70-K-2720	20	10	5	20	205	1	20	40
TD 2	70-K-2721	20	5	BLD	20	95	BLD	15	10
TD 3	70-K-2722	5	5	BLD	15	60	BLD	15	10
TD 4	70-K-2723	10	BLD	BLD	40	15	4	BLD	35
TD 5	70-K-2724	10	5	BLD	10	25	BLD	10	10
TD 6	70-K-2725	5	BLD	BLD	10	35	BLD	BLD	BLD
HC 1	70-K-2726	6850	5	5	30	320	93	1925	2175
HC 2	70-K-2727	4050	5	BLD	15	135	55	1325	320
HC 3	70-K-2728	690	5	5	15	70	14	15	135
HC 4	70-K-2729	50	10	10	20	145	2	10	25
HC 5	70-K-2730	260	10	BLD	25	145	14	2100	320
HC 6	70-K-2731	110	10	10	25	210	2	30	40
HC 7	70-K-2732	60	15	15	45	125	1	20	20
HC 8	70-K-2733	BLD	5	BLD	10	5	BLD	BLD	BLD
HC 9	70-K-2734	20	5	BLD	50	10	BLD	10	30
HC 10	70-K-2735	2	5	BLD	50	10	BLD	10	5
HC 11	70-K-2736	10	BLD	BLD	10	50	BLD	15	10
HC 12	70-K-2737	2	5	BLD	10	5	BLD	BLD	235
HC 13	70-K-2738	10	5	BLD	40	45	BLD	10	30
HC 14	70-K-2739	2	5	BLD	25	40	BLD	10	5
HC 15	70-K-2740	2	10	5	25	20	BLD	10	10
HC 16	70-K-2741	2	5	BLD	30	10	BLD	BLD	5
HC 17	70-K-2742	10	5	BLD	15	70	BLD	15	BLD
HC 18	70-K-2743	15	5	5	20	85	BLD	15	10
L 1	70-K-2744	20	10	10	20	190	1	20	20
L 2	70-K-2745	60	10	10	20	145	BLD	20	20
L 3	70-K-2746	25	5	BLD	45	5	1	15	305
L 4	70-K-2747	40	5	BLD	10	BLD	1	15	115
L 5	70-K-2748	2300	5	10	25	100	15	30	45
L 6	70-K-2749	40	10	5	20	90	7	20	1125
L 7	70-K-2750	20	10	10	30	110	2	525	165
L 8	70-K-2751	10	BLD	BLD	50	20	30	10	4075

METHODS:

Cu, Ni, Co, Pb, Zn, Ag by GRC No. 1
Mo, Bi by GRC No. 2
W by GRC No. 4A
Sn by GRC No. 6A
B.L.D. = Below Limit of Detection

for Chief Chemist

013

GEOCHEMICAL LABORATORY REPORT 951018

FIELD SHEET No.: 001429 PROJECT No.: EL.6/68 - TEXINS/BLUE TIER TINFIELD

LAB. SHEET No.: 483/2 SAMPLE TYPE: ROCK DATE: 26th November, 1970.

SAMPLE No.	LAB. No.	Sn %	W ppm
G 1	70-K-2712	0.36%	BLD
G 2	70-K-2713	0.08%	BLD
G 3	70-K-2714	0.05%	BLD
G 4	70-K-2715	BLD	7.95%
G 5	70-K-2716	0.08%	6.40%
G 6	70-K-2717	BLD	BLD
G 7	70-K-2718	0.43%	BLD
G 8	70-K-2719	0.32%	BLD
TD 1	70-K-2720	0.32%	BLD
TD 2	70-K-2721	0.14%	BLD
TD 3	70-K-2722	0.08%	BLD
TD 4	70-K-2723	0.92%	BLD
TD 5	70-K-2724	0.08%	BLD
TD 6	70-K-2725	BLD	BLD
HC 1	70-K-2726	0.19%	BLD
HC 2	70-K-2727	5.60%	BLD
HC 3	70-K-2728	0.90%	BLD
HC 4	70-K-2729	0.08%	BLD
HC 5	70-K-2730	0.10%	BLD
HC 6	70-K-2731	0.71%	BLD
HC 7	70-K-2732	0.05%	BLD
HC 8	70-K-2733	2.20%	BLD
HC 9	70-K-2734	0.10%	BLD
HC 10	70-K-2735	0.08%	BLD
HC 11	70-K-2736	BLD	BLD
HC 12	70-K-2737	0.32%	1200
HC 13	70-K-2738	1.26%	BLD
HC 14	70-K-2739	BLD	BLD
HC 15	70-K-2740	0.05%	BLD
HC 16	70-K-2741	BLD	BLD
HC 17	70-K-2742	0.16%	BLD
HC 18	70-K-2743	BLD	BLD
L 1	70-K-2744	BLD	BLD
L 2	70-K-2745	0.16%	BLD
L 3	70-K-2746	7.60%	BLD
L 4	70-K-2747	BLD	4500
L 5	70-K-2748	0.10%	BLD
L 6	70-K-2749	1.15%	BLD
L 7	70-K-2750	BLD	BLD
L 8	70-K-2751	BLD	BLD

METHODS:

D Longhurst

for Chief Chemist