

MINERAL TITLES BRANCH
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**PROSPECTING REPORT
ON THE
BUCKHORN CLAIM GROUP**

(BUCKHORN, 351028; X.L.C.R., 351027; MOREEN FR., 351026)

GREENWOOD MINING DIVISION

**N.T.S. 82 E / 02E
LAT. 49° 5' 30" N
LONG. 118° 42' 30" W**

**OWNER: Gordon Richmond
OPERATOR: Gordon Richmond
REPORT BY: Gordon Richmond**

SUBMITTED DATE: January 16, 1998

CENTRAL SURVEY BRANCH
REPORT

25,346

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INTRODUCTION

(i) Location and access:

The Buckhorn claim group is situated to the south of the old Deadwood mining camp, and lies about 2.5 km due west of downtown Greenwood, B.C. Road access is by way of the Deadwood road, which intersects Highway 3 at the south end of downtown Greenwood. Follow Deadwood Road toward the city dump. Once up on Deadwood Flats, take a left turn on Goodeve Road (marked with sign). Follow Goodeve road, always keeping to the left, for 1.5 km. At this point, turn right on an old logging road, and travel about 1.0 km to reach the south boundary of the Buckhorn claim.

(ii) The claim group consists of 3 contiguous 2 post mineral claims (reverted Crown grants). They are: Buckhorn (L1107), Moreen Fr. (L1709), and X.L.C.R. (L1556S). The current tenure numbers for these claims are 351028, 351026, and 351027 respectively. These claims were obtained by the present owner in an auction of reverted Crown grants, September 1996.

These claims were originally located before 1900. The Buckhorn claim was Crown-granted in 1899. It seems that the bulk of underground development and production work was done between that time and 1913, when the Greenwood smelter was closed.

A search of the B.C. Ministry of Mines reports did not reveal reports of any visits to the property by the district geologist, or any records of production. It is the writer's opinion that the Buckhorn claim was leased by the operators of the Motherlode mine, and any production from it included with that of the Motherlode.

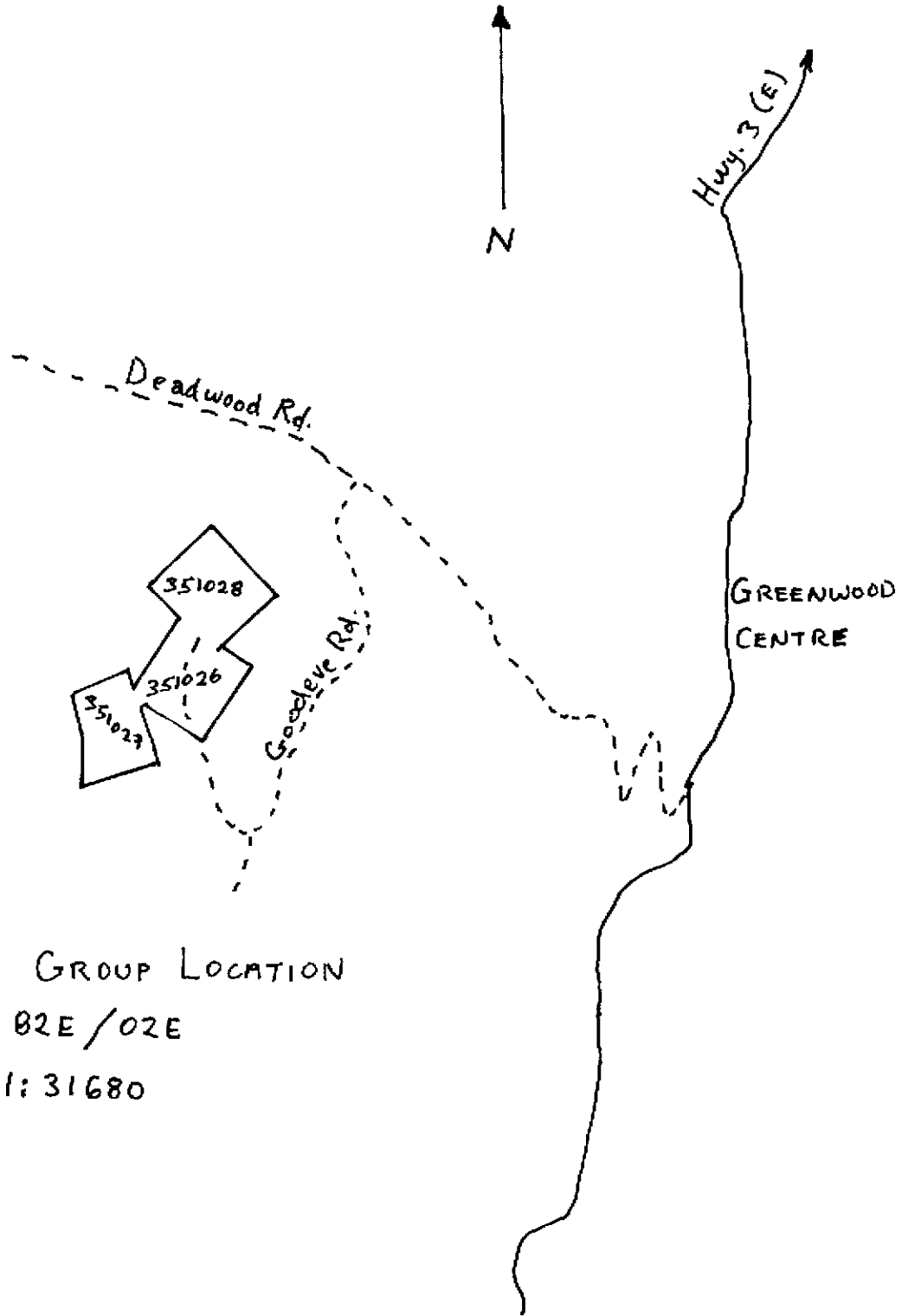
San Jacinto Explorations Ltd. conducted an I.P. survey in 1967, and Mascot Mines and Petroleum carried out percussion drilling in 1974.

The principal mineral commodity of interest in this area is copper. A small amount of gold occurs with the copper.

(iii) Summary of Work Done:

Work on these claims was carried out by the owner from July 4th to July 6th, 1997. Physical work consisted of bucking up dead trees that had fallen across the access roads within the claims. It was not necessary to cut any standing trees. Prospecting work consisted primarily of mapping surface features and old workings within the Buckhorn claim using hipchain and compass. The resulting map is plotted on a scale of 1:1000, and it is intended to serve as a base map for future work. A number of grab samples of mineralized rock were collected for assay to test the character of the mineralization. Small bulk samples (each about 25 kg) were collected from a spoil pile along trench T2, and from the dump adjacent to shaft #4 (see map).

(iv) The mapping work was limited to the Buckhorn claim and adjoining parts of the Moreen Fraction. Sampling was confined to the Buckhorn claim.



BUCKHORN GROUP LOCATION
02E/02E
1:31680

INTERPRETATION OF RESULTS

Since the majority of the work in the 1997 program was devoted to mapping, the resulting map and its descriptive notes makes up the bulk of this report.

Two assay certificates are included as appendices. The first certificate (Appendix II) relates to three grab samples collected on an initial visit to the Buckhorn claim in September, 1996. These were numbered GR-1-97 through GR-3-97 inclusive. GR-1-97 was a grab sample of calc-silicate skarn metavolcanic rock, intended to represent the average amount of visible sulfides in the exposures. GR-2-97 consisted of semi-massive sulfide from trench T1 (see map, Appendix I). This was a selected grab sample of high-grade mineralized skarn. GR-3-97 was taken from a weathered skarn outcrop on the ridge above trench T2 (see map, Appendix I). This sample contained visible pyrite, but no malachite or azurite stain.

The second assay certificate, (Appendix III), relates to two small-scale bulk samples, each comprising about 2/3 of a 20-litre pail. The sample labelled "T2 berm" was collected from a spoil pile forming a berm along the northeastern side of trench T2 (see map). Small scoops of material were collected at numerous points along the trench. This material consisted of broken rock derived from the trench. It is predominantly metavolcanic skarn of intermediate to basic composition. Some metasediments may be present. Large lumps of rock with conspicuous mineralization were excluded from the sample in an effort to avoid bias. The sample labelled "Main Shaft Dump" was collected in a similar fashion by digging small pits at numerous sites on the top and flanks of the dump adjacent to Shaft #4 (see map). No effort was made to exclude conspicuously mineralized material from this sample, as there is practically none to be seen here. Most of the material in the dump has a heavy coating of dust which conceals its mineral content. This rock is also skarn, with a minor amount of diorite intrusive.

The purpose of taking such samples was to determine if the stockpile material at the site contained sufficient metal values to warrant shipping it to a concentrator. As of October, 1997, the T2 berm sample had a combined copper/gold value of about \$13 per short ton and the Main Shaft Dump sample had a combined copper/gold value of about \$10 per short ton. *In view of the relatively small quantity of material on hand, it is the writer's opinion that it is uneconomic to ship it to a concentrator at this time.*

The assay lab was requested to make a table concentrate of the "T2 berm" material, which is much less weathered than that from the main shaft dump. The rock was ground to 90% -150 mesh, and concentrated on a shaker table. This procedure concentrated the gold by a factor of 18 in the concentrate versus the tails, and copper by a factor of 11.6. This suggests that about 2/3 of the gold occurs as inclusions within sulfide minerals, mainly pyrite and chalcopyrite, with the remainder being free. It is interesting to note that the "tails" gold concentration from "T2 berm" is greater than that in the original assay. I would attribute this to the so-called "nugget effect", and it serves as a reminder that many samples must be taken to get a statistically-reliable average.

Further work is clearly required, but it appears possible that a simple gravity-concentration system could be used effectively to produce a combined copper-gold concentrate of sufficient grade to make shipment profitable. It would be necessary to develop a greater reserve before the cost of such a system could be justified. Future work on this property should be concentrated on determining the extent of the mineralization in an effort to establish an ore reserve.

DESCRIPTIVE NOTES FOR APPENDIX I

This map is based on a hipchain and compass traverse of portions of the Buckhorn claim (tenure no. 351028) and Moreen Fraction (tenure no. 351026) made July 4 - 6, 1997. The location of the claim boundaries relative to roads, etc. is adopted from a map accompanying Assessment Report #5023 (June, 1974). The Buckhorn location line is plotted from data in the survey notes of June, 1898 by C.A.E. Shaw, P.L.S. The 60' shaft and discovery post adjacent to the Buckhorn location line are also plotted from these notes. If this shaft is in fact actually one of the others located on the map, then the claim boundaries could be mis-plotted by as much as 100 metres. The original claim posts and / or the 1898 survey hubs could be difficult or impossible to find. It should be possible to solve this problem by further careful mapping of the course of the creek in the claim area, and of the region between the creek and trench T2.

The following features are numbered in the order in which they were encountered on traverse:

Shaft #1:

Two-compartment shaft inclined at -65° . It is filled with broken rock and is flooded to within 2 metres of surface. It is surrounded by a flat-topped berm of waste rock about 1m in depth, which exhibits pervasive epidote alteration, and traces of malachite and azurite.

D.D.H. #1:

Located 15 m southeast of Shaft #1, -45° at azimuth 260° . "A" size casing protrudes from ground. This hole is not apparently mentioned in any of the assessment reports that were read by the writer.

Cat Trench T1:

Upper (easternmost) end of trench is 10 m from D.D.H #1 at 260° . The trench is 19 m long by about 4 m wide, and 0.5 - 1.0 m deep. Its long axis runs at 250° . Its western end intersects cat trench T2 at a point 7.7 m from the northwest end of the latter. D.D.H. #1 may have been spotted to test the depth extent of chalcopyrite mineralization in cat trench T1.

Cat Trench T2:

Oriented at 140° , parallel to the trend of the ridge crest; it forms a slight bench in the slope of the ridge. Overall length of T2 is 70 m.

Shaft #2:

Basically a round pit about 6 m across and 3-4 m deep. Some traces of timbering.

Shaft #3:

Vertical timbered shaft, depth unknown; with remains of a hoisting tripod. Sloughed in or backfilled to within 2 m of present surface.

P.P. #1:

A small round pit, no more than 3 m deep, with no indication of timbering, hence "prospect pit #1".

Shaft #4 (Main Shaft):

Clearly this shaft was the major underground access for the development work and / or production that took place prior to 1913. It is a vertical, two-compartment shaft, with board lagging. It is backfilled with waste to within 3 m of surface. Two 2" air lines protrude from the shaft. Wooden timber foundations of a head frame and compressor house remain. An irregularly-shaped dump about 45 m long by 14 m wide extends to the south and east of the shaft. The average depth of this dump is 3 m. This amounts to a volume of 1890 cubic metres, with a calculated weight of 4700 tonnes (assuming a specific gravity of 2.5 for broken rock).

Trench T3:

Situated directly across the access road from the southern end of the main shaft dump; it is about 3 m wide by 2 m deep by at least 20 m long. The spoil piles appear to be mostly earth. This trench is sloughed in; and is heavily overgrown with small trees.

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STATEMENT OF COSTS

Work period July 4th to July 6th, 1997.

Field work, prospecting, bush cutting, sampling	300.00
3 days meals and accomodations at 75.00 per day	225.00
Transportation to and from location	121.66
Assays	133.22
Report preparation	<u>130.00</u>
Total	\$909.88

AUTHOR'S STATEMENT OF QUALIFICATIONS

I declare that I hold a Bachelor of Science degree in Geology from the University of British Columbia (1979), and that I was subsequently employed in that capacity. I am currently self-employed as a wellsite geologist based in Calgary, Alberta.

(signed)

A handwritten signature in black ink that reads "Gordon Richmond". The signature is written in a cursive style with a large initial 'G'.

Gordon Richmond



TERRAMIN RESEARCH LABS Ltd.

Job No: 96-352

Client: Gordon Richmond
Project:

Sample Number	Au ppb	Ag ppm	Cu %	Pb ppm	Zn ppm
GR-1- 97	926	5.70	2.1	1	49
GR-2- 97	8640	11.0	9.4	2	90
GR-3- 97	234	0.52			



TERRAMIN RESEARCH LABS Ltd.

Job No: 97-177

Client: Gordon Richmond
Project:

Sample Number	Au ppb	As ppm	Cu ppm
T2 Berm	590	5	3900
Main Shaft Dump	206	5	3700

After Tabling

Sample Number	Au ppb	Au oz/ton	Cu %
T2 Berm Conc	12990	0.378	2.80
T2 Berm Tails	720	0.021	0.24

	Au ppb	As ppm	Cu ppm
MAIN SHAFT DUMP	206	5	3700

	Au ppb	Ag ppm	Cu %	Pb ppm	Zn ppm
GR-1-97	326	5.70	2.1	1	49
GR-2-97	2640	11.0	3.4	2	90

	Au ppb	Ag ppm	Cu %	Pb ppm	Zn ppm
GR-3-97	234	0.52	-	-	-

	Au ppb	As ppm	Cu ppm
T2 BERM	590	5	3900

	Au ppb	Au oz/ton	Cu %
T2 BERM conc.	12990	0.378	2.80

	Au ppb	As ppm	Cu %
T3 BERM tails	720	0.021	0.24

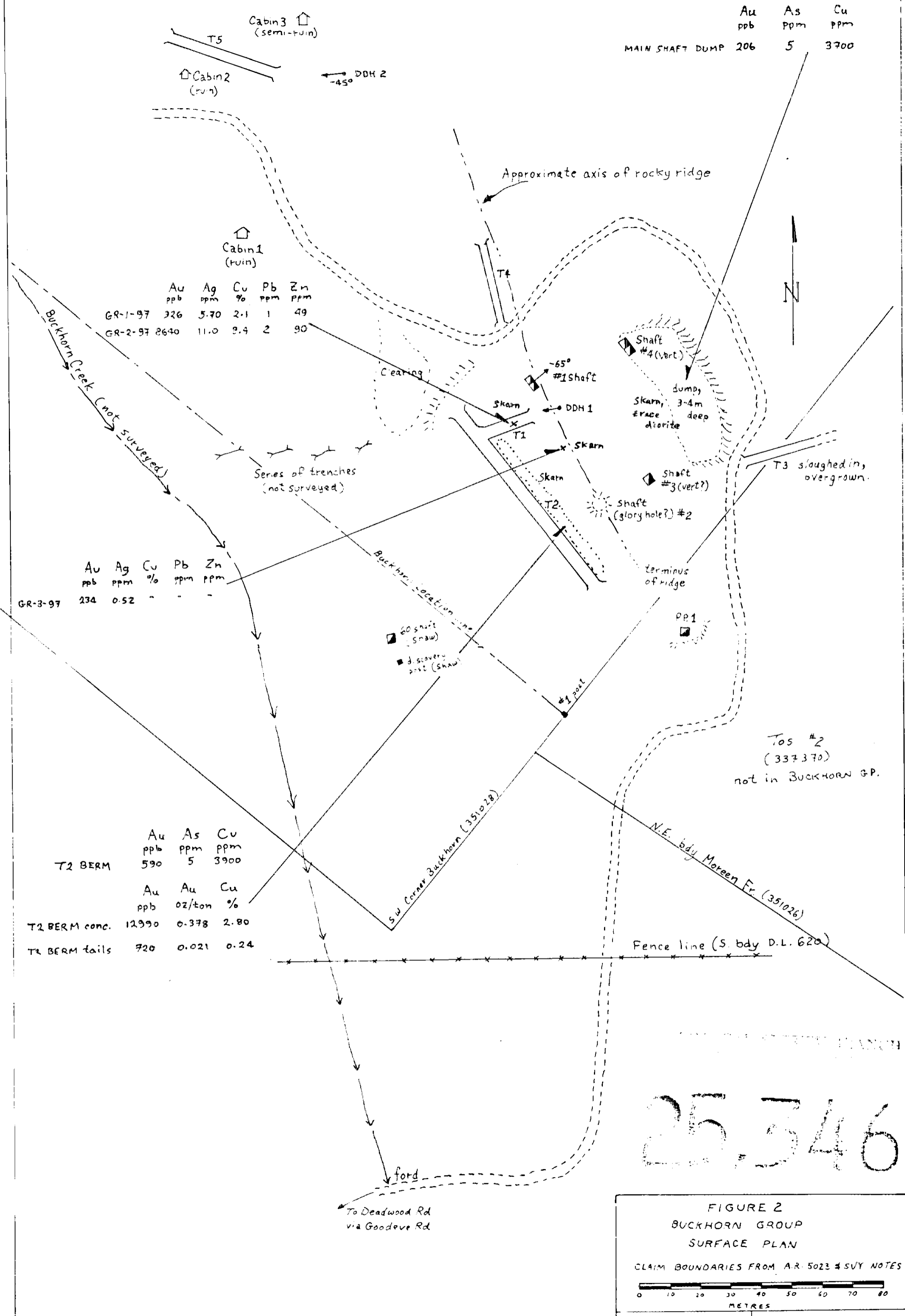


FIGURE 2
BUCKHORN GROUP
SURFACE PLAN
CLAIM BOUNDARIES FROM A.R. 5023 & SVY NOTES

0 10 20 30 40 50 60 70 80
METRES

October 1997 G. Richmond