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

DRIFFIELD CLAIMS - MCN's 1918 - 1923 INCLUSIVE
ANNUAL REPORT FOR PERIOD ENDING 28.04.89

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SUMMARY

Six MCN's (1918 - 1923) covering the Horseshoe Tin field 45km north west of Katherine are included in a Joint Venture (JV) Agreement between Billiton Australia and Denehurst Ltd. Billiton are Managers and Operators of the joint venture.

Gold and tin mineralisation are hosted in sedimentary rocks of the Early Proterozoic Tollis Formation which consist of volcanolithic greywacke, tuffaceous material and siltstone. Three stream sediment samples within the tenements have defined an anomalous lead, tin, arsenic zone. Elevated gold values, relative to background, between 0.85 - 1.65 ppb Au also indicate a potential gold-bearing zone. In-fill stream sediment sampling is presently underway to further define the anomalous zones.

C O N T E N T S

LIST OF FIGURES

1.0 INTRODUCTION

A Joint Venture Agreement between The Shell Company of Australia Limited and Denehurst Ltd comprises of six (6) mineral claims (MCN's 1918, 1919, 1920, 1921, 1922, 1923) within EL 1900. Billiton Australia - The Metals Division of The Shell Company of Australia Limited is Manager and Operator of the Joint Venture.

The tenements were granted on 28/1/88 for a period of five (5) years. The tenements are located within the abandoned Horseshoe Tin Field on the southern boundary of El 1900 (Figure 1). Access to the tenements is via a gravel road which branches off the Stuart Highway 3.5 Km north-west of the Edith River crossing (Figure 1).

The following report is a review of previous work, geological setting, exploration activity, and proposed exploration within the area.

2. PREVIOUS WORK

The Horseshoe Creek Tin Field was discovered and worked between 1902 and 1914. Small-scale mining was also carried out pre- and post- World War II (Robinson, 1988). Wandaroo Mining Corporation Pty Ltd and Austral Malay Tin Limited undertook a major testing programme on the alluvial tin potential of the area. Robinson (1988) estimated a resource of 1.5 million BCM grading 445 g/m^3 cassiterite.

3. GEOLOGY AND MINERALISATION

The tenements lie within a sequence of Early Proterozoic sedimentary rocks of the Tollis Formation. The dominant lithologies are interbedded volcanolithic greywacke, siltstone, phyllite, argillite and tuffaceous material.

Gold mineralisation is hosted in quartz-vein systems within the Tollis Formation.

Primary tin mineralisation is hosted in Tollis Formation as quartz- chlorite - kaolinite assemblages (Robinson, 1988). Whereas secondary tin deposits occur as colluvials and terrace deposits (Robinson, 1988).

4. WORK COMPLETED & RESULTS

A regional-scale stream sediment sampling programme has been carried out within EL 1900 in which three samples were taken within the MCN's (Figure 2 and 3). Samples were assayed for gold, copper, lead, tin, zinc, arsenic and tungsten.

Of the three stream sediment samples taken within the MCN's, gold ranged between 0.65 - 1.65 ppb Au (Figure 2). Lead, tin and arsenic were anomalous and are part of a larger north-west-trending tin anomaly east of the MCN's.

A regional aeromagnetic and radiomagnetic survey was also flown over the Driffield Creek and Horseshoe Tin Field area. However, no magnetic response was recorded over the MCN's.

5. PROPOSED WORK

In-fill stream sediment sampling is presently underway within the region in order to clearly define anomalous areas. This will be followed by detailed composite soil sampling, rock chip sampling and mapping over the anomalous zones.

6. CONCLUSION

The geology within the MCN's consists of Early Proterozoic sedimentary rocks of the Tollis Formation which is host to tin and gold mineralisation.

Reconnaissance stream sediment sampling within the MCN's has defined an anomalous lead, tin and arsenic zone coincident with a larger tin anomaly to the east. Gold ranges between 0.85 - 1.65 ppb Au which highlights a potential gold-bearing zone which is being tested.

In-fill stream sediment sampling is presently underway to further define the limits of the anomalous areas and will be followed by detailed mapping and sampling.

REFERENCES

ROBINSON C.J. 1988. ASSESSMENT SUMMARY OF TENEMENTS HELD BE KEN DAY PTY LTD, NORTHERN TERRITORY. COPY HELD BY BILLITON AUSTRALIA, DARWIN.

AUSTRALIA 1:100 000
TOPOGRAPHIC SURVEY

KATHERIN
NORTHERN TERRITORY

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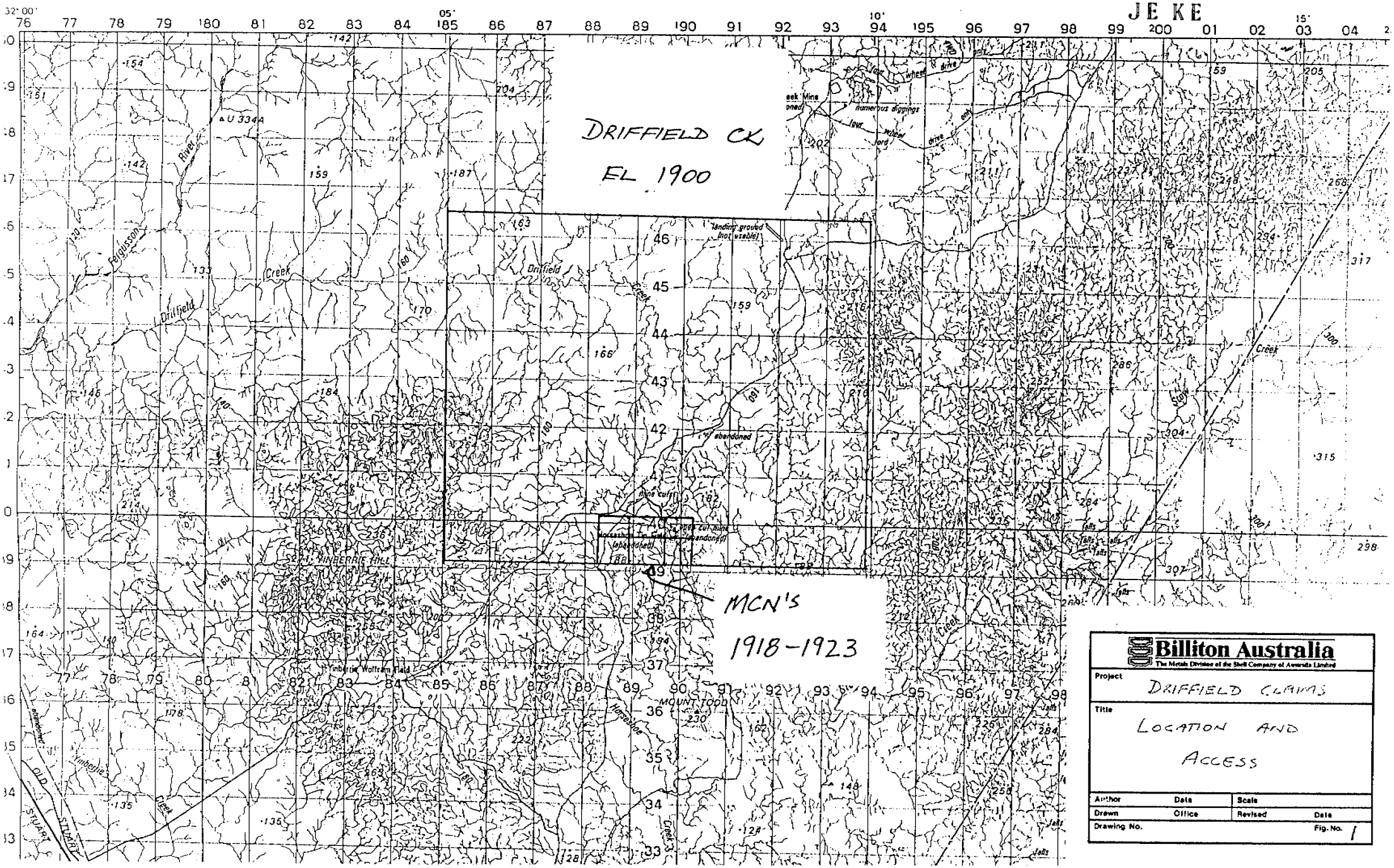

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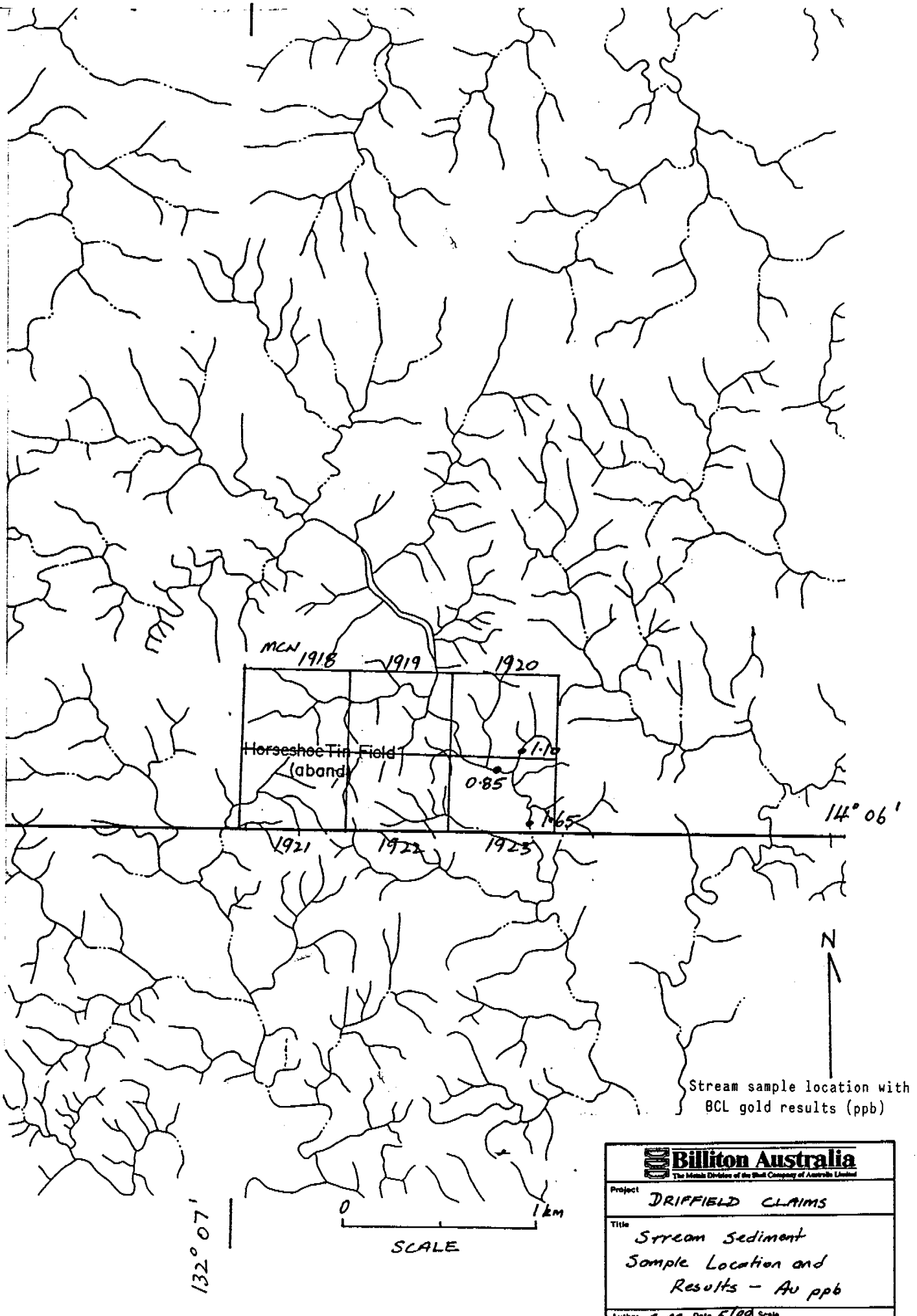
Project	DRIFFIELD CLAIMS		
Title	LOCATION AND ACCESS		
Author	Date	Scale	
Drawn	Office	Revised	Date
Drawing No.			Fig. No. 1



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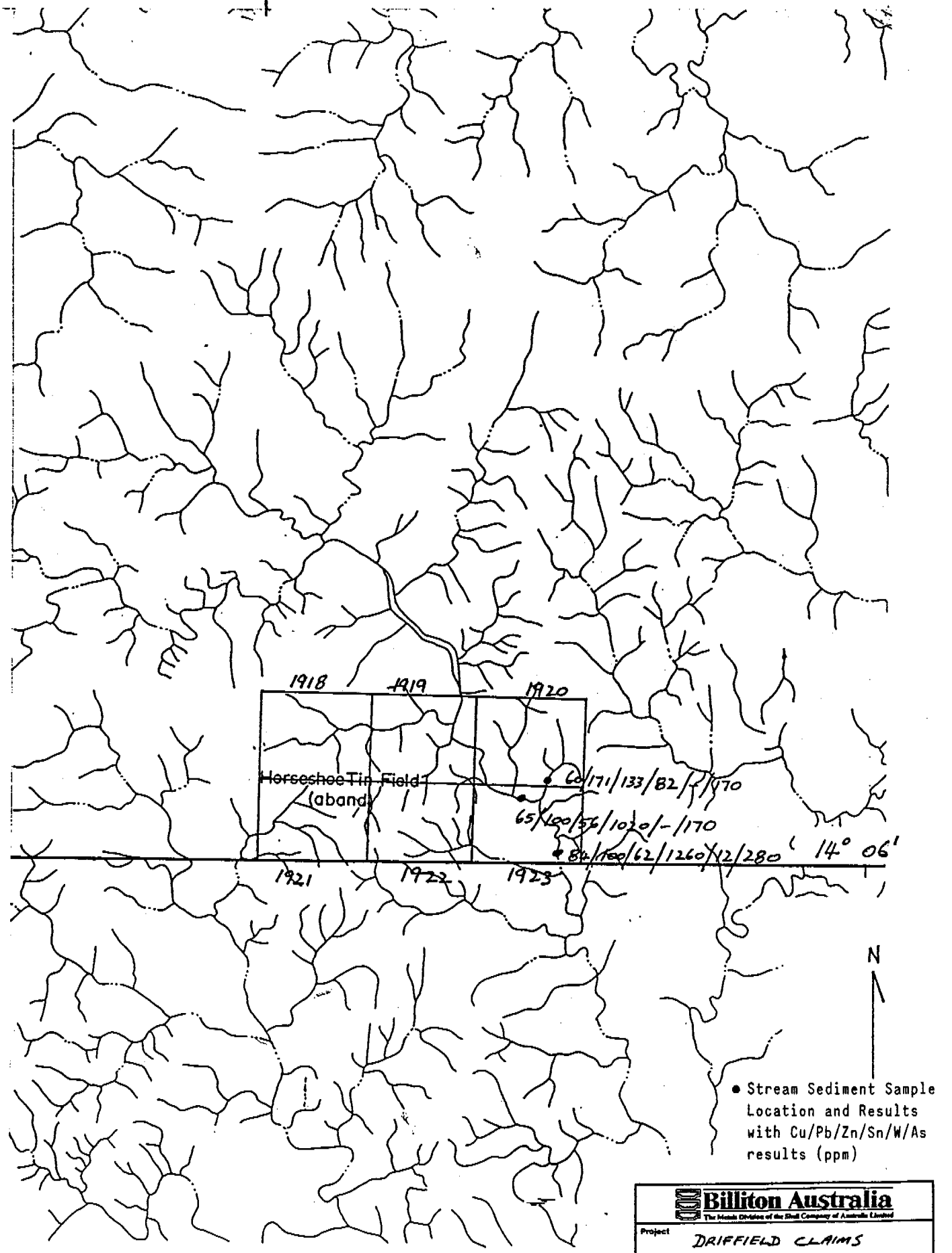
Project: DRIFFIELD CLAIMS			
Title: Stream Sediment Sample Location and Results – Au ppb			
Author: S.M	Date: 5/89	Scale:	
Drawn	Office	Revised	Date
Drawing No.			Fig. No. 2



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Project	DRIFFIELD CLAIMS		
Title	Stream Sediment Sample Location and Results Cu/Pb/Zn/Sn/W/As		
Author S.M.	Date 5/89	Scale	1:25000
Drawn	Office	Revised	Date
Drawing No.			Fig. No. 3