

G65 No 1

REPORT ON
JONES DARWIN MINING
Mt. Lyell Mining & Railway Company
by
G. A. Douglas 31/8/1940

HO - 076

Rep on examination of country
in vicinity of Mt Darwin.
(Mt. Lyell M. & R. Co.)
by
C. A. Douglas 21/8/40.

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The Mount Lyell Mining and Railway Company Limited 171

Head Office:
COLLINS HOUSE
381 LITTLE COLLINS STREET
MELBOURNE

DUPLICATE

Jukes Darwin Q 65.58
Mining Field

QUEENSTOWN, TASMANIA

21st. August, 1940.

The General Manager,
Mt. Lyell M. & R. Co. Ltd.,
QUEENSTOWN.

MICROFILMED

Dear Sir,

I beg to submit the following report dealing with the examination of that part of the country in the vicinity of Mt. Darwin, bounded on the north by the Hal Jukes Section No. 5925-M, on the south by the Prince Darwin Section No. 3867-M, on the west by Section 2101-93-M and on the east by the Kelly Basin Railway line.

Work was started on 15th. April 1940, and completed on 7th. August, 1940.

Weather conditions were severe, though the work was not interfered with to any great extent on that account.

The terrain is rugged and mountainous. The slopes scarred by deep ravines and gullies, and in places covered with forest and dense scrub.

Old tracks were cleaned out and new ones cut where necessary.

From my observations I should be inclined to say that the area under review, has, in the past been thoroughly prospected. Wherever ironstained outcrops occur, either trenches have been cut across them, or at least some shots have been put in to test the occurrences. The extensive surface ^{leaching} which has taken place to a

depth of two or three feet or more, precludes the possibility of examining these outcrops without the aid of drills or explosives.

A number of old workings were examined and sampled, a list of which, together with a general plan of the district, accompanies this report..

The method of sampling, except where otherwise stated, was to cut with hammer and gad a groove along the wall of a crosscut or across the back of a drive.

The samples were then broken up and quartered down.

List of Workings examined:

Section

4615-M	Souter's Workings
"	Dillons No.1 Tunnel
4654-M	Pearce's Workings
4655-M	Mt. Darwin Pty.
3867-M	Prince Darwin
3107-M	Findon's (Trenches)
2101-93-M	Trench
5925-M	Hal Jukes.

It must be noted that none of the mineralised formations in this area have been tested at depth, and in most cases they have only been tested at one point.

Taking into consideration, however, the low values of the great majority of the samples taken, and the limited width of those bands which do carry an appreciable amount of copper, there is very little encouragement to pursue the investigation any further. Taking into consideration also the fact that access is so difficult, I have come to the definite conclusion, after carefully reviewing the position, that no further expenditure on the area is justified.

G.W. Douglas
Mt. Lyell Mining Pty. Co.

Attention is drawn to the following extracts from various geological reports:

These paragraphs, though shorn of their context, suggest that in various parts of the area there are deposits of ore of possible commercial value.

It seems desirable to place on record, that during the recent examination of the area, it was impossible to disclose any evidence to support such a view.

SECTION 4615-M, SOUTER'S WORKINGS - LOFTUS HILLS, 1914.

"In the crosscut about 15 feet east of the north-west drive is a seam of solid chalcopryite about 1 inch wide, succeeded by 12 feet of sulphidised and silicified schist showing a fair amount of copper. About 5 feet further to the east is a similar belt of sulphides about two feet wide. A sample taken over a width of 15 feet on this mineralised belt assayed 6% copper and 1-oz silver per ton".

SECTION 4615-M. DILLON'S NO.1 TUNNEL, LOFTUS HILLS, 1914.

"About 100 feet in, an ore body 28 feet wide was passed through. This is of exactly similar character to those met with in the other tunnels, namely pyrite and chalcopryite Mr. W.H.Taylor, who has had numerous assays made of these ore occurrences, states that this 28 feet will bulk 4% copper. Certainly the chalcopryite is plentiful in amount."

SECTION 4654-M. PEARCE'S WORKINGS, LOFTUS HILLS, 1914.

"The north drive is in the ore body for the whole distance at a point 30 feet from the main adit, a crosscut in an easterly direction 35 feet in length has been driven and is wholly in the ore body It has been shown that out of a total of approximately 200 sections there are only 10 which the writer can recommend as warranting the adoption of a progressive policy of development work. The most important of these contain the East Darwin ore body, which is shown on Sections 4615-M and 4655-M".

SECTION 3867-M. PRINCE DARWIN - LOFTUS HILLS, 1914.

"The whole length of this adit is in the ore body which contains an appreciable proportion of sulphides. The end is still in ore. No assays are available which represent the average along this adit, but samples are stated to have assayed as high as 7% copper, and 3-ozs.

of silver, and one dwt of gold per ton. The average certainly could not nearly approach this, and would, in the writer's opinion, be not higher than in the neighbourhood of 1/2..... This ore deposit is an important one but will, in the writer's opinion, prove to be of comparatively low value".

SECTION 3867-M. PRINCE DARWIN. W.H.TWELVETREES - 1900.

"The feature of this property is a large belt of hematite and magnetite traversing the section from N. to S., sometimes attaining a width of 200 feet. The large outcrop carries iron and copper pyrites, a little copper carbonate and some native copper..... The ore formation on the Prince Darwin is the most important on the field, and the task of exploring it should be taken in hand with earnestness".

SECTION 4615-M. SOUTER'S WORKINGS , MT. DARWIN, MAY, 1940.

Main Adit:

This was driven through grey schist highly silicious in places, carrying a small amount of iron pyrite. The copper values were extremely low.

East X-Cut:

The country passed through in this X-cut was similar to that met with in the main adit.

N.W. Drive:

This was driven in fairly soft schist and had apparently followed a small seam of chalcoppyrite.

North Contact Drive:

This drive is in soft grey schist and follows the contact with the hard red felsite. Very little mineral of any sort can be seen. The schist in these workings dips to the west at an angle of about 60°. The felsite at the contact dips to the east at an angle of about 90°.

SECTION 4615-M. SOUTERS WORKINGS - MT. DARWIN, 25TH.MAY, 1940.

Main Adit:

	<u>Cu.</u>	<u>Fe.</u>	<u>Ag.</u>	<u>Au.</u>
135-140	0.03	8.8	0.023	0.002
140-145	0.02	6.0	0.043	0.002
145-150	0.03	7.9	0.033	0.002
150-155	0.01	7.0	0.028	0.002
155-160	0.06	9.3	0.066	0.004

East X-Cut:

	<u>Cu.</u>	<u>Fe.</u>	<u>Ag.</u>	<u>Cu.</u>
0-5	0.04	3.1	0.136	0.009
5-10	0.04	5.9	0.085	0.005
10-15	0.04	5.8	0.056	0.003
15-20	0.06	6.4	0.014	Tr.
20-25	0.37	7.8	0.132	0.008
25-30	0.09	7.1	0.043	0.003
30-35	0.27	7.5	0.038	0.002
35-40	0.17	6.2	0.071	0.004
40-45	0.10	6.2	0.038	0.002
45-50	0.10	6.5	0.042	0.002
50-55	0.07	6.1	0.038	0.002
55-60	0.02	7.2	0.038	0.002
60-65	0.04	15.1	0.052	0.003
65-70	0.06			
70-75	0.04			
75-80	0.02			
80-85	0.03			
85-90	0.10			
90-95	0.03			
95-100	0.02			
100-105	0.02			
105-110	0.04			
110-115	0.03			

N.W. Drive:

0-5	0.04
5-10	0.06
10-15	0.05
15-20	0.15
20-25	1.17
25-30	0.07
15' Bottom	0.98

North Contact Drive:

0-5	0.05
5-10	0.12
10-15	0.05
15-20	0.05
20-25	0.08
25-30	0.04
30-35	0.05
35-40	0.06
40-45	0.05
45-50	0.05
50-55	0.05
55-60	0.06
60-65	0.05
65-70	0.06
70-75	0.07
75-80	0.03
80-85	0.03

SECTION 4615-M DILLON'S NO.1 TUNNEL, MT. DARWIN - JUNE, 1940.

The country passed through in this adit is of similar character to that met with in Souters Workings.

No.1 Tunnel:

	<u>Cu.</u>
90-95	0.10
95-100	0.09
100-105	0.30
105-110	0.08
110-115	0.27
115-120	0.05
120-125	0.08
125-130	0.31
130-135	0.45
135-140	0.30
170-175	0.07
175-180	1.71
180-185	0.35
185-190	0.10

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SECTION 4654-M. PEARCE'S WORKINGS, MT. DARWIN. JUNE, 1940.

Main Adit:

The first twenty feet are in green schist, after which, the grey silicious schist, which was encountered in the two workings already sampled, was met with.

Sampling was started at 410' from the portal and continued to 470'.

North Drive:

This drive starts at a point 450' from the entrance and is driven in a northerly direction in grey schist.

Sampling started at the intersection of the North Drive with the adit and was continued for a distance of 70', samples being taken across the back at every ten feet.

No further samplings of these workings was undertaken owing to the poor results already obtained.

Main Adit:

	<u>Cu.</u>
410-415	0.05
415-420	0.25
420-425	0.16
425-430	0.09
430-435	0.11
435-440	0.20
440-445	0.15
445-450	0.14
450-455	0.35
455-460	0.07
460-465	0.07
465-470	0.10

North Drive:

0-10	0.55
10-20	0.70
20-30	0.14
30-40	0.09
40-50	0.11
50-60	0.05
60-70	0.35

26th. July, 1940.

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SECTION 4655-M. MT. DARWIN PTY. MT. DARWIN - JULY 25TH. 1940.

In the bed of a creek which flows from west to east on this section, a small ore body has been disclosed. This appears to be a small local occurrence about four feet wide with a North Westerly strike.

Efforts to trace the continuation of this lode in either a northerly or southerly direction proved unsuccessful.

Samples taken gave as high as 18 dwts of gold and 4% copper.

An adit, further to the east and 20' lower, has been driven with the object of intersecting the ore body.

An examination of the underground workings failed to disclose anything of value.

A small seam in the south drive gave assays of 2.5% copper.

25th. July, 1940.

Main Adit:

190-195
195-200

Cu.
Tr.
Tr.

South Drive:

0'	2.42	8"
10'	2.72	12"
20'	0.65	12"
30'	0.06	6"

0008

SECTION 3867-M. PRINCE DARWIN - MT. DARWIN - 17TH. JULY, 1940.

The ore body on this section is situated on the western slope of the mountain and consists of a large deposit of magnetite and hematite about 200 feet wide and several chains in length.

An adit, starting in the almost vertical face of a cliff, has been driven in this formation in an easterly direction for a distance of 130 feet.

Main Adit:

Cu.

8th. July, 1940.

0-5	0.13
5-10	0.17
10-15	0.21
15-20	0.09
20-25	0.28
25-30	0.15
30-35	0.18
35-40	Nil
40-45	0.8
45-50	0.59
50-55	1.46
55-60	0.74
60-65	0.23
65-70	0.71
70-75	0.87
75-80	0.39
80-85	0.34
85-90	0.70
90-95	0.36
95-100	0.53
100-105	0.28
105-110	0.26
110-115	0.81
115-120	1.00
120-125	0.39
125-130	0.50

SECTION 3107-M. FINDON'S - MT. DARWIN - 28TH. MAY, 1940.

This section is situated on the plateau on Mt. Darwin south of the main ridge.

Several small trenches have been cut across a mineral bearing formation, consisting of felsite converted to a schistose chloritic rock.

The formation appears to be about twenty feet wide and contains a little copper and iron pyrite.

A sample taken from one of the trenches assayed 2.4% copper.

A bulk sample would not average as high as this.

SECTION 2101-93-M. MT. DARWIN - JULY, 1940.

This section is situated on Snake Spur on the western slope of Mt. Darwin.

A trench 200' long has been cut in a north-easterly direction up the spur to the conglomerate contact.

The rock in the S.W. end of the trench consists of felsite merging into a chloritic schistose rock, then into a cherty slate until the conglomerate is reached.

The assay results shown were obtained from samples chipped out of the side of the trench at every ten feet.

SECTION 2101-93-M. TRENCH - MT. DARWIN - 23RD. JULY, 1940.

Samples taken at approximately every ten feet starting from S.W. end of trench :-

	<u>Cu.</u>
0'	0.06
10'	0.03
20'	0.05
30'	0.03
40'	0.03
50'	0.42
60'	0.21
70'	0.06
80'	0.04
90'	0.04
100'	0.25
110'	0.08
120'	3.11
130'	0.08
140'	0.08
150'	0.08
160'	0.03
170'	0.02

SECTION 5925-M. HAL JUKES - MT. DARWIN - AUGUST, 1940.

This section is situated on the western slope of Mt. Darwin on the Inter-colonial Spur.

An adit has been driven in a north-easterly direction from the bank of the creek for a distance of 150 feet, which apparently did not go far enough to reach the mineralised zone. The oxidised capping of this zone extends for a distance of several chains north and south of the adit. The accompanying plan shows the mineralised areas, which can be clearly seen in the bed of the creek. The assay values shown were obtained from samples chipped out of the side of the drive at every five feet.

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SECTION 5926-M. HAL JUKES - MT. DARWIN - 25TH. JULY, 1940.

Samples chipped out of side of adit every five feet :-

<u>Lower Adit:</u>	<u>Cu.</u>
0'	0.07
5'	0.05
10'	0.04
15'	0.02
20'	0.23
25'	0.02
30'	0.03
35'	0.05
40'	0.06
45'	0.05
50'	0.06
55'	0.03
60'	0.07
65'	0.05
70'	0.03
75'	0.01
80'	0.02
85'	0.04
90'	0.03
95'	0.01
100'	0.04
105'	0.03
110'	0.03
115'	0.04
120'	0.01
125'	0.04
130'	0.01
135'	0.03
140'	Tr.
145'	Tr.
150'	Tr.

Samples taken in Creek

9th. August, 1940.

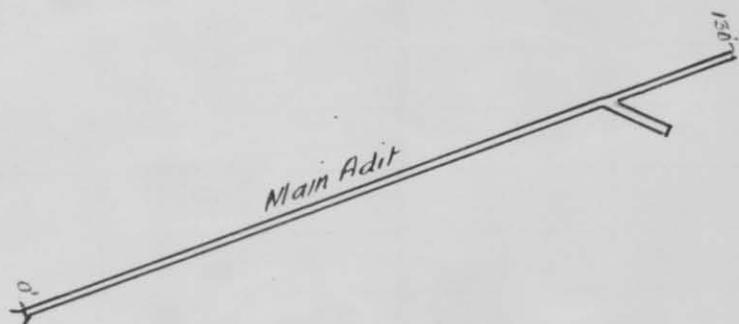
D-21	0.36
E-29	0.11
F	0.39
G	1.44

Portal Upper Adit:

2.09 Previous sample 2.5% Cu.

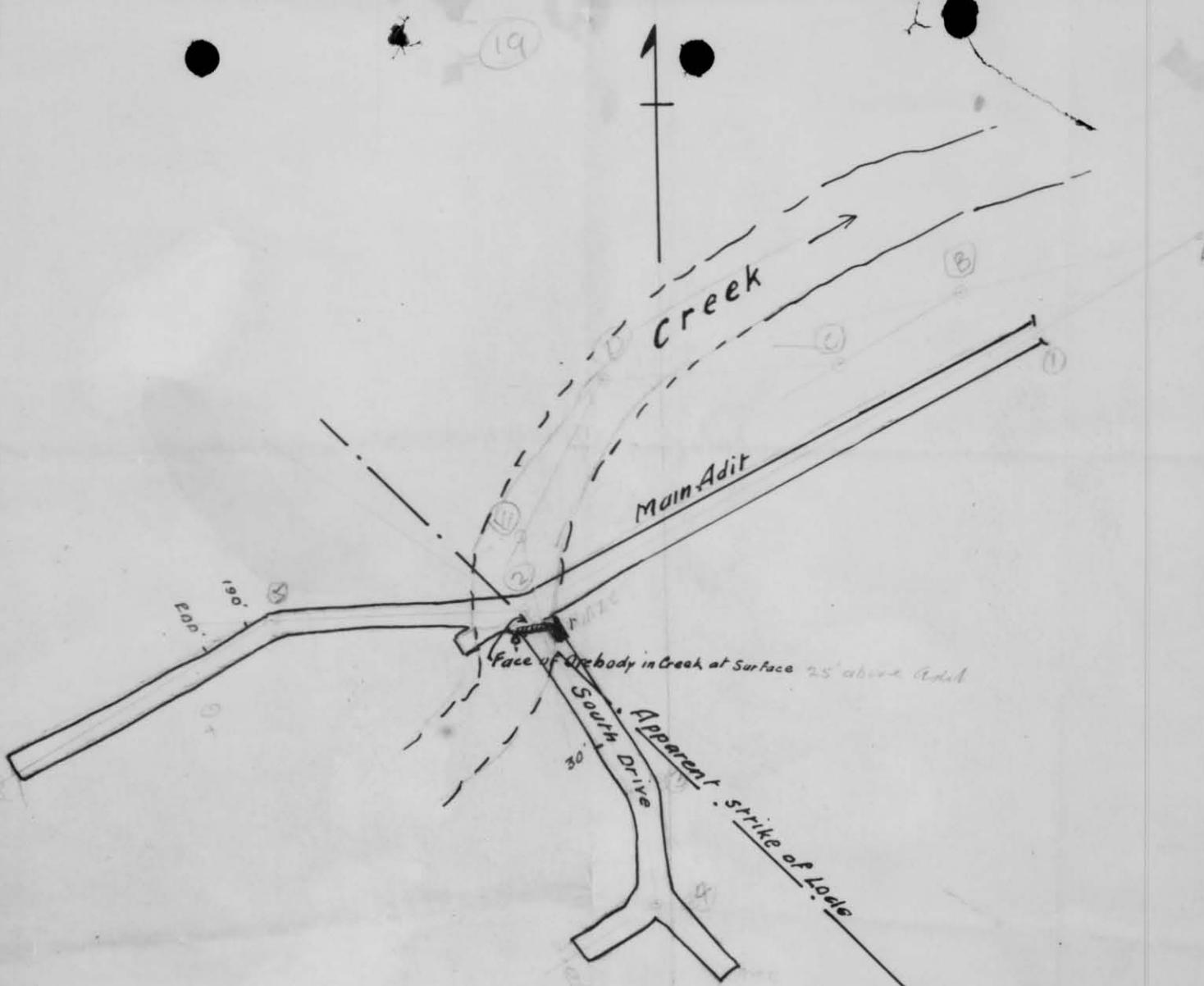
H. Douglas

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Sketch Plan.
Prince Darwin Copper Mining Coy
Section = 3867 M

549014



549015

5 cm

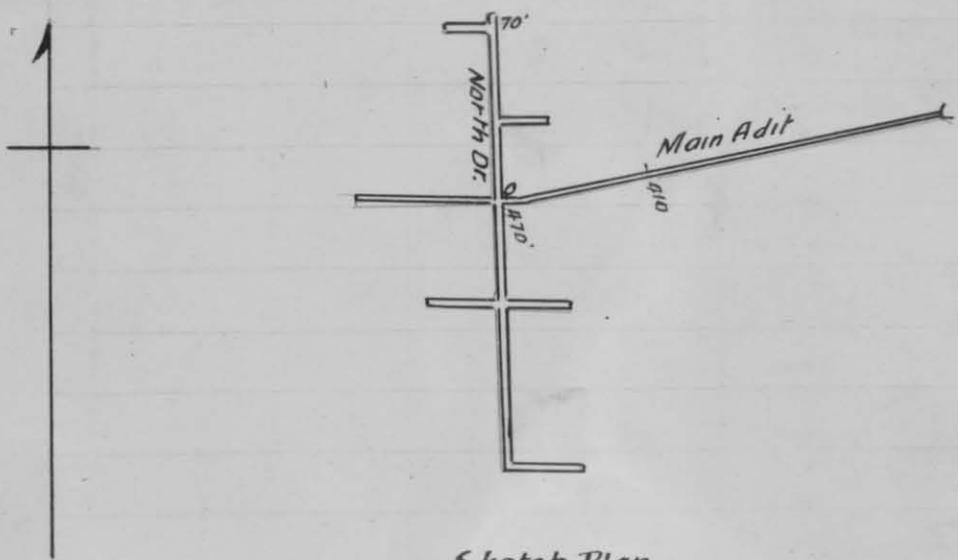
ME Darwin Pty.
Scale $\div 1" = 30'$

Compass Survey
G.A. Douglas June 1940

014

(16)

180

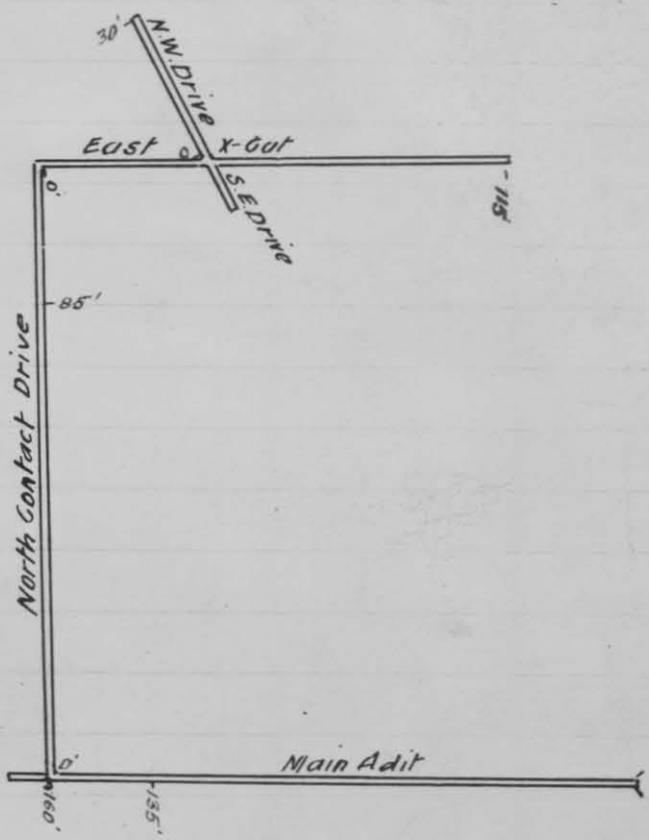


Sketch Plan

Pearce's Workings

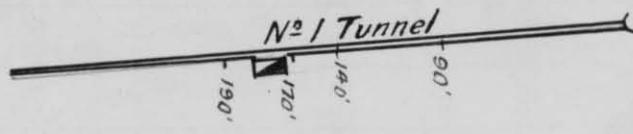
Section + 4654 M

S49016



Sketch Plan of Souters Workings
Section = 4615 M

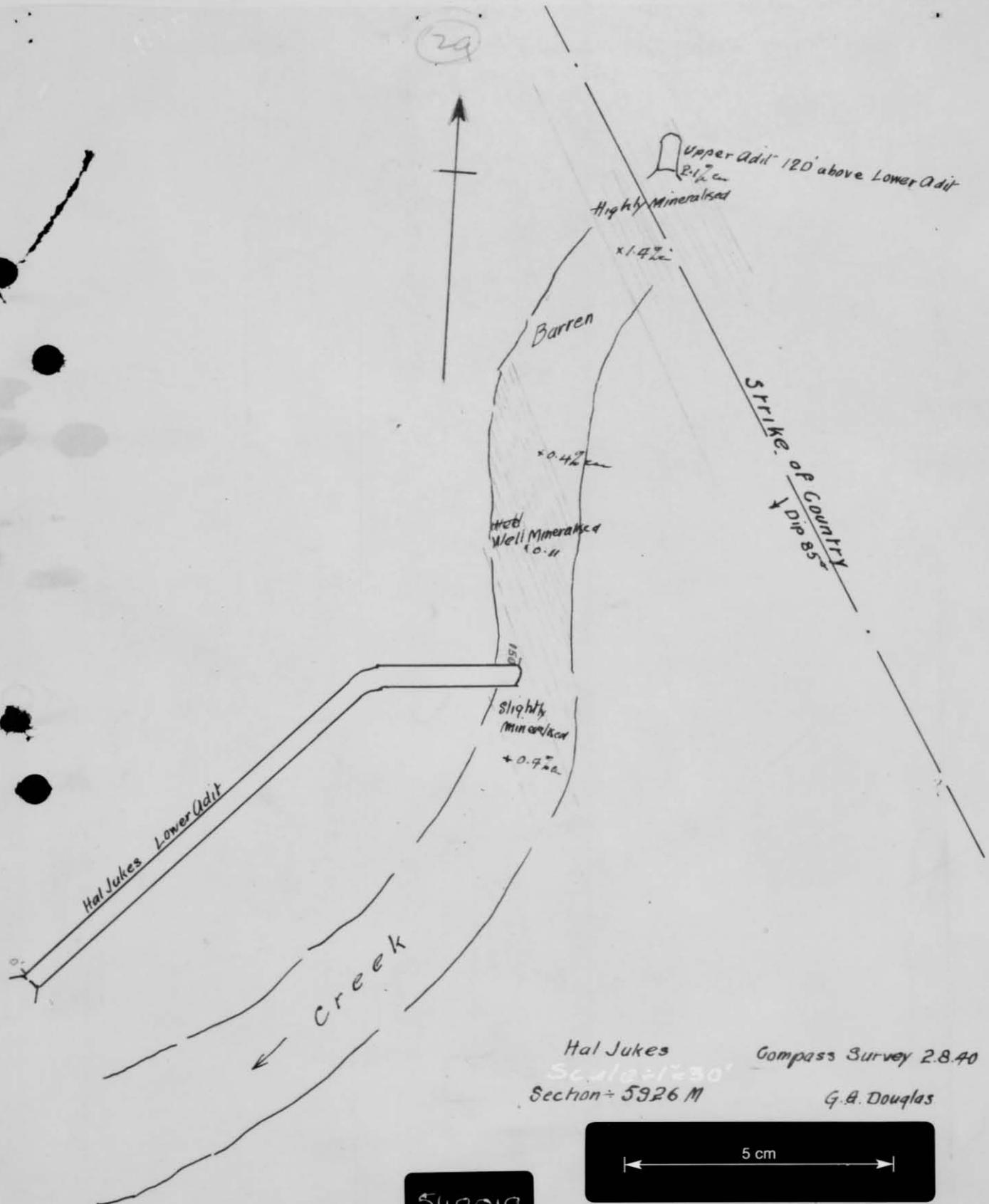
549017



Sketch Plan
Dillons Nº 1 Tunnel
Section = 4615 M

549018

29



Hal Jukes
 Section = 5926 M
 Compass Survey 2.8.40
 G.A. Douglas



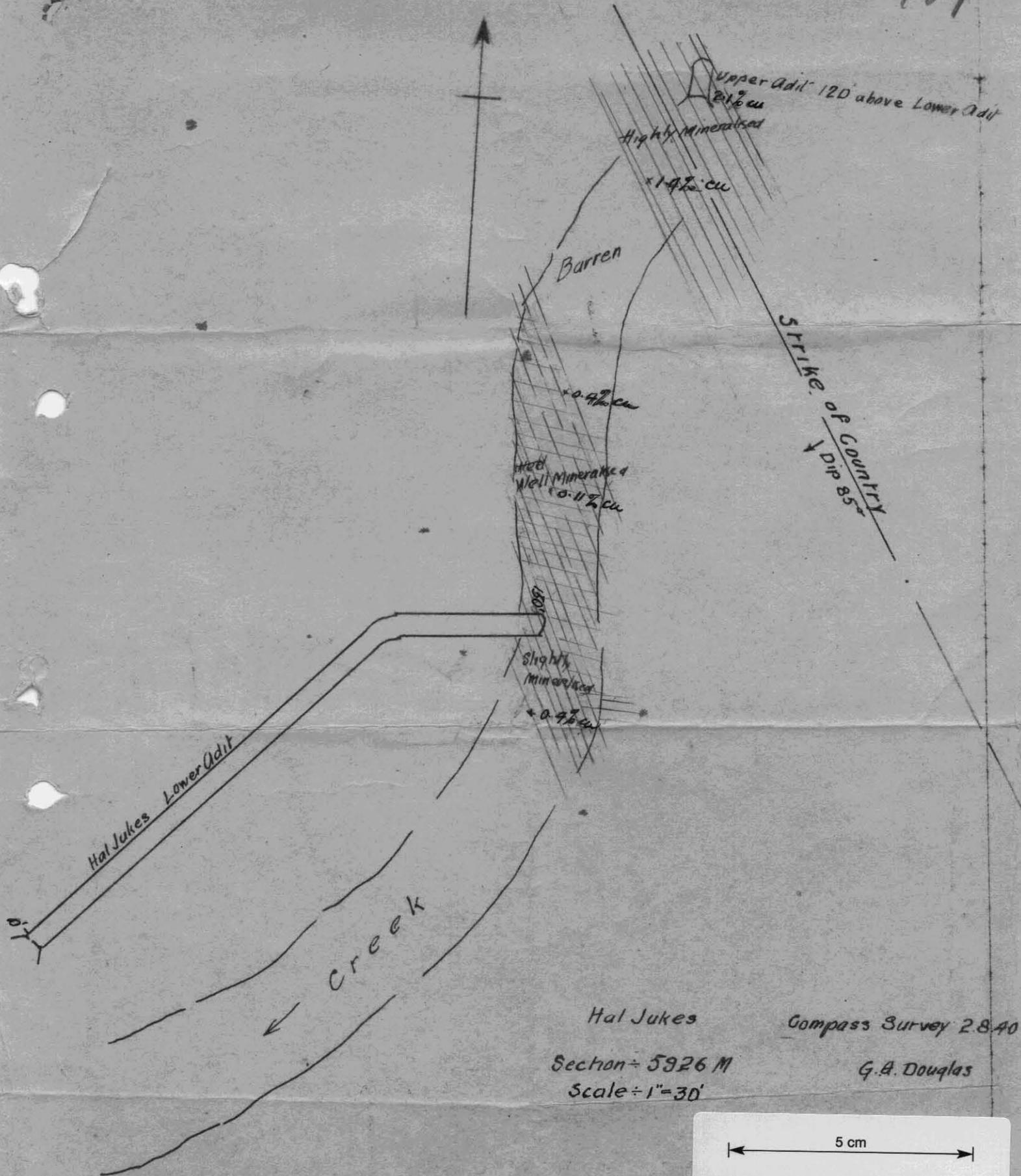
549019

018

29

549020

189



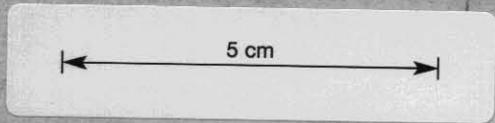
Hal Jukes

Compass Survey 2840

Section = 5926 M

G.A. Douglas

Scale = 1" = 30'



019

549021

(2) 67

memo to M. L. Wade

Scintillometer readings at Zindor's Prospect — 9/1/57

Background from Base Camp to region of Prospect .01 - .03

A station .015 - .02

A1 .005 - .01

Workings adjacent to A1 .015

A2 .01 - .025

A3 .01

Workings adjacent to A3 .015

A4 no reading

A5 .01

Workings adjacent to A5 .015

A6 .015 - .02

A7 .015 - .02

A8 - A12 inclusive no readings

A13 .01

B station .01 - .015

B1 no reading

B2 .005

B3 .005 - .01

B4 .015 - .02

B5 .015

B6, station C .01 - .015

B7, B8 ~~.015~~ no readings

B9 .015

B10 .01

020

549022

(2)

C1 .01 - .015
100 yards to N of C1 .015

C2 .01 - .015

C3 .01

C4 .015

Workings adjacent to C4 nil

C5 .015

C6 .015

C7 .01

C8 .01 - .015

C9 .015

C10, station D .015 - .02

D1 .015

D2 .01 - .015

K. C. Beck