

W.A. No.

NAME El Alamein (Britain)

SUBJECT Reports

PROPERTY FILE

92HNE022-07

008430

Phone: Marine 2751

GUICHON MINE LIMITED

(Non-Personal Liability)

924/10w

124 Pacific Building
744 West Hastings Street
VANCOUVER, B.C.
Nicola B. C.
September 1st 1949.

Dr. J. S. Stevenson,
Bralorne B. C.

Dear John:

Thanks kindly for forwarding the geological sketch plan of the El Alamein property to Mr. Livingstone--he sent it over here yesterday.

This will indeed be of great assistance to us as a base map. I hope to attempt at an early date some detailed work to the southeast along the projected location of the shear zone.

When I was over at the property last week the river level was at a low point and I managed to get a look at several outcroppings which have at all other times this year been under water. Unfortunately there is a dip in the bedrock about where the shear zone should be located in the river bed, and this is gravel covered, but the rock is quite strongly sheared down river from this point, and there appears to be diorite showing on the up-river side of the shearing.

We have worked out a contract with the miners and they are hard at work. I was over for the ~~2~~ first three rounds, and the zone of high-grade stringers persisted to a strong shear on the right of the upper drift, and Mr. L. has informed me by phone that they have lost the high grade now, but are continuing on along this local break. When I last saw it the stringers were extremely rich--so I think he will be finding some more of these as he proceed along the faulted zone--particularly adjacent to the diorite--as you pointed out. They tried the mill last week, but an electric motor driving the ball mill failed, so they are once more delayed with the milling. I understand one of the Williams boys is going up to assist with the trial period on the mill.

Thank you most kindly for going to all the trouble and rush regarding your map--I know what this means when you are in the field, and moving around so much.

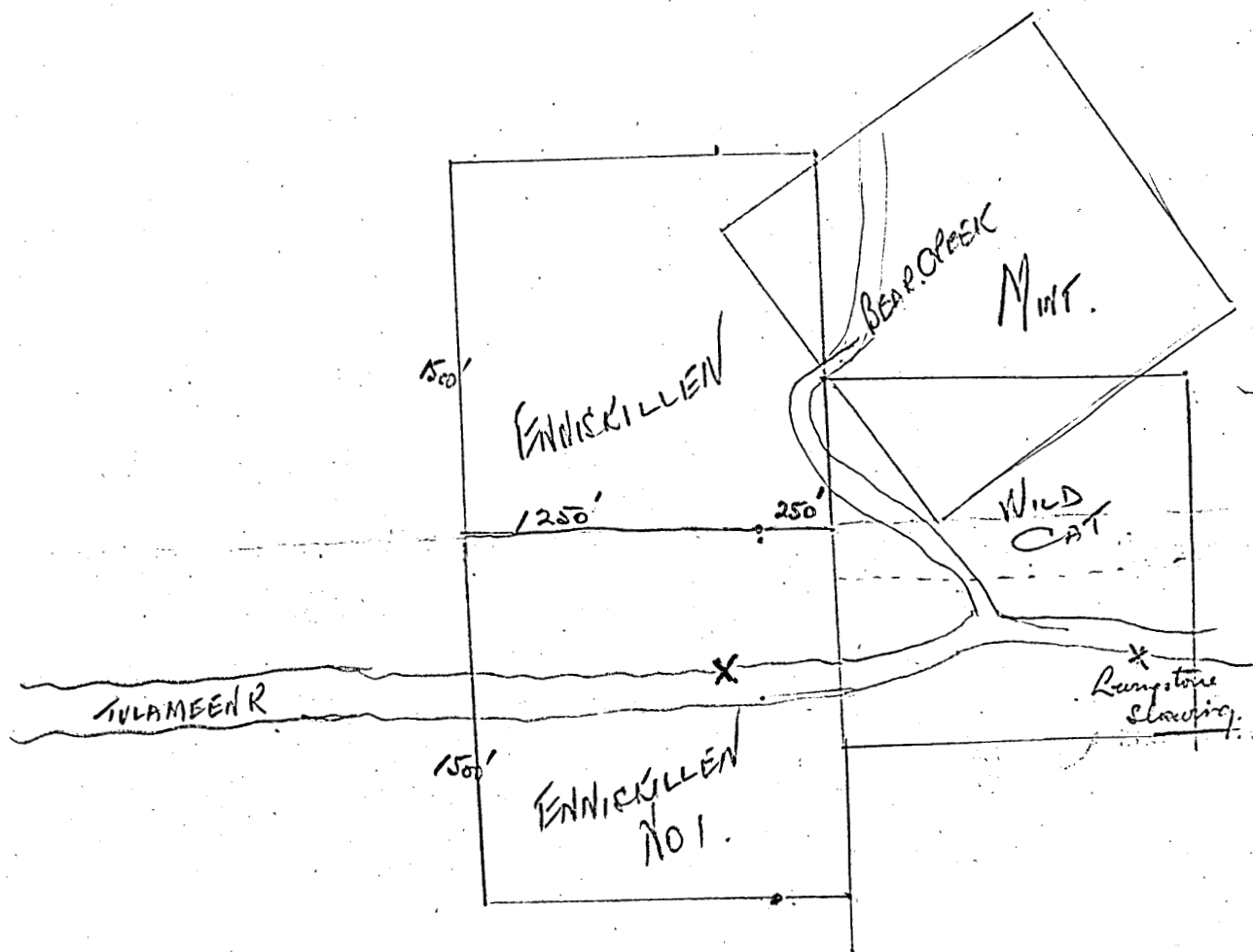
Hoping to see you at the mining convention, I am,

Sincerely yours,

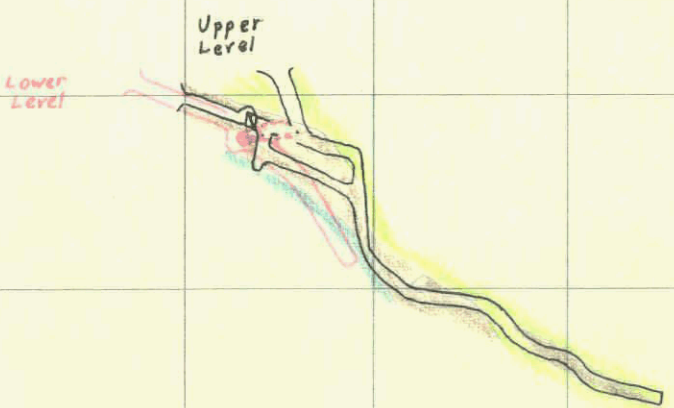
Alf. Allen

P.S. I'm my own
typist - hope you
can wade through it.
a.

This is a rough sketch of the approximate location of the claims drawn from memory. The showing is marked with an X.



W
N



SKETCH PLAN
EL ALAMEIN MINE
1" = 100'

Brunton-tape survey by G.E.P. Eastwood
Sept. 19 '59

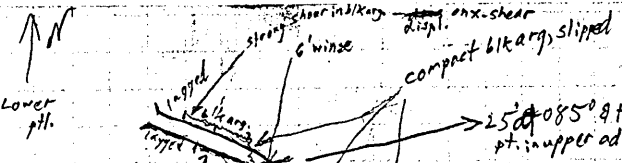
Drift widths not to scale.
Geology on upper level only

92HNE022

-  Diorite
-  Argillite
-  Greenstone

PROPERTY FILE

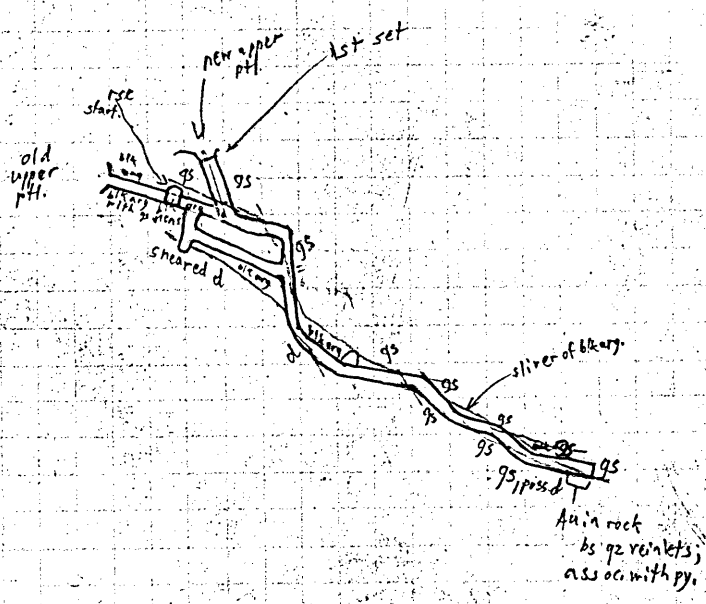
Sept. 19, 1958
 Oct. 1958
 Sample of best looking Au nr fce upper adit, sp. 250 of py-bearing rock nearby.



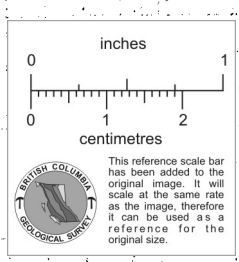
Veins in outer pt of adit mostly carb; scat'd py.
 sheared arg. 95, pass d.

Craig got his gold along here, according to HNM.

cheered-up rock appears to have been mostly d, but in outer pt. of adit the NE 3' of it is arg.



Au in rock
 by qz veinlets;
 also oc. with py.



92HNE022
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Dr. J. F. Walker,
Deputy Minister of Mines,
Buildings.

92H/10w

August 14

51

PROPERTY FILE

92HNE022 - 07

Re: El Alamein Mine, Tulameen

I am appending the requested notes on the above property in reply to a letter, dated August 11th and addressed to you, from Dr. R. C. Cragg, president of the company.

I have reviewed my description of the property in the 1949 Annual Report, a progress report in the 1950 Annual Report, and a two-page report, dated December 12, 1950, by Alexander Smith, Consulting Geologist, and addressed to Dr. R.C. Cragg. A copy of the Smith report is in Mr. Mitchell's file No. 4/139.

At the time of my examination in July 1949, the underground workings consisted of an upper adit 25 feet long and a lower adit 50 feet long. As mentioned in the 1950 Annual Report, 267 feet of additional work has been done in the upper adit* and 84 feet in the lower adit. Several test holes also appear to have been driven from the drifts in these adits. Presumably this development work yielded 520 pounds of ore from which 65 ounces of gold was recovered. As no mention is made, in the 1950 Annual Report or Mr. Cragg's letter, of having found any encouraging bodies of ore as a result of this work, I would say that the possibilities of finding readily accessible ore where these adits were driven in the bluffs on the south side of the river have been adequately tested.

I am not quite sure about where the bulldozing and blasting referred to in Cragg's letter were done. I presume they were done on

*This may or may not be the upper adit referred to in the 1949 report, but as suggested by the sketch accompanying Smith's report may be a new adit near the shaft shown in Figure 11.

the north side of the river, from 100 to 350 feet downstream from the mill, in an attempt to find the extension of the mineralized shear on the north side of the "River fault". In his letter, Cragg mentions uncovering a strong shear zone, argillite seams, and mineralized "quartzite", but neither diorite nor gold. As the combination of diorite plus argillite appears to have been necessary for the formation of fractures and the precipitation of the gold of the high-grade pockets near the portals of the river-bank adits, the apparent lack of diorite in the ground uncovered by the 1951 stripping and blasting would suggest the faulted extension of the ore is not here and that work should be discontinued at this place. That the ore has been faulted is only a postulate, as nowhere has the ore been seen closer than 75 feet to the projected extension of the River fault.

The possibility of ore occurring in the extension of the ore zone northwesterly under the river towards the River fault has still not been explored. As may be deduced from the 1949 Annual Report two features make the section under the river attractive. First, the diorite appears to extend from the discovery outcrop in the river bank, northwesterly into the river, and secondly, the possibility exists that an increase in mineralization may be found at the intersection of the ore shear-zone and the River fault; this intersection is towards the middle of the river. The ore shear-zone and the River fault have never been seen in contact, and their relative ages are not known; it is therefore possible for them both to have been in existence when the important gold mineralization took place.

Exploration of the downward vertical extension of the ore near the portals of the two adits was recommended by Mr. Smith. He proposed that a 50-degree winze be started 50 feet in from the portal of the lower adit; in a slope distance of 55 feet this winze would be below the portal of the lower adit and about 40 feet back from the river bank. A report, dated July 18, 1951 by E.R. Hughes, Inspector of Mines at Princeton, indicates that the winze was started that month. This exploration is in the proper

Dr. J.F. Walker

- 3 -

direction, but it will not go far towards exploring the ground beneath the river bed.

Exploring the ground under the river would admittedly be difficult. It could perhaps best be done by diamond drilling from set-ups on the south side of the river behind a rock bluff about 100 feet upstream from the cable crossing at the ore shed. Because of the erratic nature of the gold, many short rather than a few long holes should be drilled. As the amount of fill in the river at this point is *unbroken*, difficulties in drilling because of gravel might be encountered and would add to the cost of drilling.

If Dr. Cragg wishes to discuss the property further, I would be glad to do so at any time in the next couple of weeks.

John S. Stevenson,
Geologist.

JSS/ob
Encl.

Sta	P	HT	HD	RT	vert ²	DEC	DEH	Elev.	HI	BS IC	Remarks
	Plan	Table	South	of Tulawan River	on Paces	Workings	Sept 20	1/5-9	FS	2956	= 2956
A1	A2	4.0	5.0	2.15	-24°10'	-8.0	-21'	2975	178'	FS	Elev A2 = 2975
	01	"	9.4	0.25	-29°15'	-3.6	-11.4	2974.6	65'	"	
	02	"	3.9	0.3	-13°00'	-6.6	-1.7	2949.3	28	"	
	03	"	3.7	.6	+20°30'	+8.8	19.1	2955.1	58	"	
	04	"	2.6	1.25	+05°30'	+13	14.4	2970.4	123	"	head of Paces by
	A3	"	4.2	1.62	+06°00'	+17	+16.8	2972.8	158	"	
	05	"	3.3	.55	+03°45'	+3.6	+3.9	2959.9	54	"	
	06	"	2.5	1.1	+04°15'	+8.1	+9.6	2915.6	108	"	
	07	"	9.4	0.9	-09°00'	-14.0	-19.4	2936.6	88	"	
	08	"	9.4	0.75	-10°00'	-15	18.4	2937.1	73	"	
	09	"	9.2	.45	-23°30'	-16.5	-21.7	2934.3	38	"	
	A4	"	6.5	0.90	+05°00'	+7.8	+5.3	2911.3	80	"	
	010	"	1.3	0.60	-03°30'	-3.7	-6.0	2950	59'	"	
A14	A1	"	6.6	0.90	-07°00'				967	BS	
	A5	"	2.5	.97	-01°00'	-1.7	-0.2	2961.1	↓		

4350
2230
2700

Sta	P	HT	LP	RT	Vert 10'	DEC	NEA	Elev	#D	Remarks
A7	022	4.0	3.6	.39	-0°30'	-2.5	-1.5	2872.5	29	Elev A7 = 2874
	024	"	5.1	1.5	-0°25'	-3.2	-0.6	2873.4	125	
	023	"	6.4	.85	0°00'	-2.2	-2.4	2871.2	85	
	025	"	5.1	1.4	0°00'		-1.6	2870.1	140	
	026	"	3.3	.86	-0°20'	-2.5	-2.0	2871.2	85	
	027	"	8.0	2.0	-0°20'	-1.2	-5.2	2868.8	200	
	029	"	3.4	.92	-0°25'	-3.9	-3.3	2870.7	91	
	028	"	6.9	2.22	-0°21'	-1.6	-4.5	2869.5	222	
	30	"	5.0	3.75	-0°40'	-11.4	-5.4	2868.6	374	
	31	"	2.2	2.2 1.55	-0°25'	-3.0	-2.6	2870.4	154	
	32	"	7.0	1.94	-0°10'	-.5	-3.5	2870.5	194	
	33	"	7.9	1.8	+1°30'	+3.0	+24.1	2908.1	172	
	34	"	8.0	1.95	+2°35'	+7.6	+7.2	2896.6	158	
	35	"	1.3	1.4 1.72	+2°40'	+6.7	+19.7	2913.7	102	
	36	"	3.3	.4	0°00'		-.6	2874.6	60	
	37	"	3.4	.77	+2°21'	+2	+3.6	2877.6	71	
	38	"	3.3	.6	-0°20'	1.2	4.9	2878.4	59	

Sta	D	HP	ILP	RF	WHT ¹	DEC	DEA	Elev	HD	Remarks
Δ7	038	4.0	2.4	.75	-0300	-3.9	-2.3	2870.7	74	Elev Δ7 = 2874
	040	"	3.6	1.12	+0945	+12.6	+19.0	2892.0	100	
	041	"	2.0	1.1	+0530	14.4	+16.6	2888.6	117	
	42	"	3.7	1.37	-0220	-5.8	-6.5	2869.5	130	
	43	"	3.0	1.86	-0230	-7.0	-6.0	2867.0	143	
	44	"	3.1	2.14	-0135	-5.9	-5.0	2862.0	211	
	45	"	4.2	2.7	-0125	-6.7	-7.0	2867.0	260	
	46	"	3.3	.7	+1630	+19	19.7	2892.7	64	
	47	"	4.2	1.7	+0715	+9.1	+20.2	2894.2	166	
1.1	1.8	4.0	2.3	.7	-2930	-20	-34.3	2921.7	54	Elev 1.1 = 2956
Δ8	048	"	2.4 2.4	1.61 2.00	-1920	-250	48.8	2873.2	143	2922 = Elev 1.8
	049	5.0	0.0	2.16	+0330	+13.2	+12.2	2924.2	712	
	050	"	2.2	2.4	+1220	+50.5	+46.3	2918.3	729	
	051	"	2.0	3.65	+2200	+12.6	+12.2	2941.2	740	
	052	"	1.0	4.0	+2210	+14.5	+14.3	3065	338	

Sta.	D	HT	HP	RT	Vertical	D.F.C	D.F.C	Elev.	HT	Remarks
18	53	4.0	8.4	2.4	+22°20'	+123	+121.6	2042.6	286	Elev. = 2922
	54	"	2.5	1.9	-12°00'	+85	+80.5	2002.5	267	
	55	"	4.3	1.6	-17°50'	-47	-47.3	2074.7	146	
	56	"	2.2	1.6	-10°25'	-22.7	27.5	2294.5	155	
	57	"	4.2	1.5	-12°00'	-34	-32.2	2822.2	147	
19	Δ1	4.1	9.1	1.6					BS	Elev. Δ3 = 2973
	58	"	6.4	0.9	+03°35'	+5.4	+3.3	2976.3	89	
	Δ9	"	3.4	0.93	-01°05'	-1.7	-1.0	2972	92	
19	Δ3	"	3.4	0.93	+00°15'				BS	Elev. Δ9 = 2972
	Δ10	"	3.1	.28	-10°30'	-5	-4	2968	27	
	Δ11	"	8.9	1.65	-04°00'	-11.5	-16.4	2955.6	162	
	059	"	3.7	0.61	+06°40'	+7.1	+7.5	2979.5	60	
	060	"	3.6	0.71	+07°00'	+2.5	+2.0	2975	70	
110	Δ9	4.0	3.1	.28	+10°05'				BS	Elev. Δ10 = 2960
	061	"	9.5	.74	-28°25'	-31	-26.5	2931.5	57	

Sta	R	HT	HP	RP	Vert L ^s	DEC	DEA	Fluv	#D	Remarks
Δ 10	062	4.0	2.5'	9.8	-24°20'	-36.0	-26.3	2931.7	81	Flow Δ 10 = 2968
	063	"	3.6	1.18	-20°50'	-37.1	-41.7	2926.3	99	
	064	"	2.5'	7.07	-09°00'	-16.6	-11.1	2953.9	104	
	065	"	4.4	1.4	-07°45'	-12.8	-19.2	2948.8	137	
	066	"	3.4	.84	-03°20'	-4.9	-4.3	2963.7	23	
	067	"	3.2	.52	-02°30'	-2.3	-1.5	2966.5'	52	
	068	"	3.8	.36	-13°10'	-8.0	-7.8	2960.2	34	
	069	"	2.8'	1.57	-01°10'	-3.2	-2.0	2966	156	
	070	"	2.6	11.5'	-08°00'	-16.0	-14.6	2953.4	113	
	071	"	4.4	1.14	-20°55'	-37.8	-38.2	2929.8	99	
	072	"	3.8	2.3	-26°25'	-91.5'	-91.3	2871.7	125	
Δ 11	Δ 9	3.7	8.9	1.75'	+07°30'	+72.8	+17.4		171	Flow Δ 11 = 2955.6
	073	"	3.3	11.5'	+10°00'	+8.6	+9.0	2964.6	49	
	074	"	3.6	7.8	-03°40'	-5.1	-4.8	2950.8	79	
	075	"	2.6	1.21	-03°00'	-6.8	-5.7	2949.9	119	
	076	"	3.7	.62	-17°35'	-18.8	-18.8	2956.8	54	

SUB 30° 15' 003 - 33° 55'

204

5

6

7 - 33.2

8 + 4.0

9 37° 15'

10 31° 00'

A₂ → A₁ = 11

30 15

① - 243.60

2879.6
3.7
2883.3

② 33.2
14

③ 33.3
+ 5.3

2884.2
3.5
2887.7

2884.7
3
2887.4

2884.2
3.5
2887.7
6.2
291.5

④ 27.7
6.6
1.1

⑤ 79.6
3.6
83.2
5.2
78.0

⑥ 33.2
4.3
78.9

⑦ 3.6
+ 3.1
34.6
- 6.0
28.6

⑧ 3.6
44.0
43.6
9.0
108.6

⑨ 23.2
3.5
79.7

⑩ 33.2
3.3
79.9

3879.6
28.6

2879.6
38.6
2918.2

EL ALAMEIN 1960

Elev. base of mill assumed from Stevenson's map 2888' REMARKS

Δ	Θ	H.I.	H.P.	R.I.	VER. \angle	V	ΔE	ELEV.	H.D.	REMARKS
1	01	3.6	✓	56	+10° 45'	8.4	+8.4	2888	46'	EL A1 = 2878.6'
"	02	3.6	5.2	.65	+0° 00'	-	-1.6	2878.0	65'	
"	03	"	✓	1:19	+30° 40' 30° 45'	7.8	+7.8	2887.4	119'	
"	004	"	3.5	.40	-	-	+1	2879.7	40'	
"	05	"	4.3	.80	-	-	-7	2878.9	80'	
"	06	"	3.3	.90	-	-	+3	2879.9	90'	
"	07	"	6.0	2.20	+20° 15'	31.0	+28.6	2909.2	217'	
"	08	"	9.0	1.90	+13° 45'	44.0	+32.6	2918.2	180'	
"	09	3.7	✓	1.15	+7° 00'	14.0	+14.0	2897.2	113'	
A2	A2	"	✓	7.20	+0° 45'	1.0	+4.7	2882.3	720'	EL A2 = 2884.3'
A2	A1	3.5	3.0	7.20	0° 15'	8	? -	? 2881.5	720'	
	011	"	6.2	1.79	-	-	-2.7	2881.5	179'	
	012	"	6.6	.90	-	-	-3.1	2881.7	90'	
	013	"	5.2	1.38	-	-	-1.7	2882.5	138'	
	014	"	6.5	.23	-	-	-3.0	2881.3	23'	

→ 30° 15'

015

34° 05'

(1) 31° 20'

$$\begin{array}{r} 3.5 \\ + 1.9 \\ \hline 5.4 \\ - 2.4 \\ \hline \end{array}$$

(2) 31° 35'

$$\begin{array}{r} 3.5 \\ + 2.8 \\ \hline 6.3 \\ - 1.7 \\ \hline \end{array}$$

(3) 31° 20'

$$\begin{array}{r} 3.5 \\ - 3 \\ \hline 0.5 \\ - 1.5 \\ \hline \end{array}$$

(4) 35'

(5) 31° 40'

$$\begin{array}{r} 3.5 \\ + 4.7 \\ \hline 8.2 \\ - 7 \\ \hline + 1.2 \end{array}$$

(6) 35° 30'

$$\begin{array}{r} 3.5 \\ + 11.9 \\ \hline 16.4 \\ - 5 \\ \hline 11.4 \end{array}$$

A	Ø	H.I.	H.P.	R.I.	VER F	V	ΔE	ELEV.	H.P	REMARKS.
Δ 2	015	3.5	✓	49	30° 50'	3.3	+3.3	28876'	+9'	EL. Δ2 - 2884.2
	016	"	4.9'	35	-	-	-1.4	2882.9'	35'	
	017	"	31	.40	-	-	-1.6	2882.7'	40'	
	018	"	52	.56'	-	-	-1.7	2882.5	56'	
	019	"	38	.68'	-	-	-1.3	2882.7 2804.9	68'	
	020	"	56	.84	-	-	-2.1	2882.7	84'	
	021	"	70	.99	+1° 05'	+1.9	-2.4	2882.9	99'	
	022	"	70	1.26	+1° 15'	+2.8	-7	2883.1'	126'	
	023	"	70	1.28 ⁵⁸	1° 05'	+2.0	-5	2883.8'	158'	
	024	"	57	1.13	-	-	-3.2	2887.1'	143'	
	025	"	70	1.90	1° 25'	+4.7	+1.2	2885.5	190'	
	026	"	56	1.36	-	-	-2.1	2882.2	136'	
	027	"	50	1.41	5° 15'	12.9	+11.4	2895.7	138'	
	028	"	43	1.20	-	-	-8	2883.5'	120'	
	029	"	51	.83	-	-	-1.6	2882.7	83'	
	030	"	57	.81	-	-	-2.2	2882.1	81'	

Fort Camp,
University of British Columbia,
Vancouver 8, B.C.,
October 15, 1960.

Dr. D. E. Myers,
Dean of Applied Science,
University of British Columbia,
Vancouver 8, B.C.

Dear Dr. Myer:

In compliance with the University of British Columbia calendar regulations for the year 1960-1960, I hereby submit the accompanying essay, El Alamein Gold Prospect, in partial fulfilment of the requirements for students in Second Year Applied Science.

Yours truly,

Stephen K. Nelson

92HNE022
PROPERTY FILE

EL ALAMEIN GOLD PROSPECT

An ^Essay submitted during the Second Year
of the Course ^{IN} Applied Science at the
University of British Columbia

October 15th, 1960.

STEPHEN KENNETH NELSON

PROPERTY FILE

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EL ALAMEIN GOLD PROSPECT

PREFACE

Employed by the British Columbia Department of Mines and Petroleum Resources as a geological field assistant during the summer of 1960, the writer was based for a period of two months at El Alamein¹ camp. At that time exploration was in progress in the form of trenching and diamond drilling. The ^writer had the opportunity to inspect the mill, adits² and ^{gold-bearing} gold-bearing ore, and also rocks in the neighbourhood of the property. Knowledge of the history of the gold prospect and of prior operations on the property was gained both by reading and personal communications.

1 The name of the mining company obviously originates from the town of El Alamein in Egypt, site of a crucial World War Two battle. The gold prospect itself has also come to be known as "El Alamein", as "El", translated from Arabic into English means "The." The writer will therefore refer to the company and the gold prospect as "El Alamein" and not as "The El Alamein".

2 An ^{adit} adit is an underground excavation with only one portal. A tunnel has two portals.

It is the special request of the party, who is at present engaged in further development of El Alamein, that all material contained in this essay be kept completely confidential.

The writer is extremely grateful to Dr. G. E. P. Eastwood for his valuable assistance in the preliminary stages of the writing of this report. Discussions with Mr. N. H. Mackenzie, Dr. R. C. Cragg, Mr. V. Golden and local residents of the Tulameen district were also very helpful.

Introduction

Several reports¹ have been written on the Wildcat claim and on the El Alamein gold prospect. The men who compiled these reports were geologists and thus were interested principally in the geology of the adits and surrounding area. The intermittent search for gold on this particular section of the Tulameen River during the past century has a fascinating history - a history which has never been completely collected and organized. The main objective in the writing of this report therefore was to compile in chronological order all the scattered fragments of this history. The geology of the area will also be discussed, but in a very condensed and simplified manner.

Location and Topography

El Alamein gold prospect is on the Wildcat Crown granted mineral claim which straddles the Tulameen River 16 miles westerly from Princeton, British Columbia. The workings are located on the banks of the Tulameen River, 660 feet downstream from the mouth of the Lawless Creek.

1 M. S. Hedley, Tulameen Area: Briton, British Columbia Department of Mines - 1937;

A. Allan, El Alamein, 1948;

J. S. Stevenson, El Alamein, British Columbia Department of Mines, 1949 - P. 124 - 129.

Figure 1 Location Map of El Alamein Gold Prospect

The topography consists of steep rock bluffs followed by gravel benches on the south bank of the river, and of heavily overburdened hillside on the north bank. The property, which is $4\frac{1}{2}$ miles upstream from the Tulameen Post Office, is reached by a logging road that parallels the Tulameen River on the north bank.

Mining History

The first men to take gold from the vicinity of El Alamein were the Chinese. As early as 1860, the Chinese were reported to have recovered placer gold from the south bank of the river. Overall production was estimated to have been valued at 38,000 dollars. It is reported that these

placer miners also recovered platinum, but unlike gold, the value of platinum fluctuated greatly in the early days and was usually low. The Chinese workmen did, however, collect and save the platinum in a lard pail and used this heavy weight for a very efficient doorstop. Possessing maps of the camp building locations, descendants of these Chinese are reported to have found much of the platinum.

In 1904, Billy Briton of Tulameen, British Columbia, staked the Wildcat mineral claim which lies in the valley bottom and whose western boundary is 500 feet above the mouth of Lawless Creek. Although Briton at this time had probably seen gold on the surface in limestone veinlets, little interest was shown in the development of the mineral claim.

In 1934, Joe Paquette of New Westminster, British Columbia, staked lode and placer claims on the continuation of the ore-bearing structure to the south and south-east of the Wildcat claim. A slide in 1937 exposed showings of free gold on the river bank. Briton, however, not wanting anyone to destroy his showing of gold by driving adits into the bluff face, for many years would not consider entering into business transactions. The Wildcat claim was surveyed in 1940 and shortly thereafter was Crown granted. Several years before his death in 1955, Briton made Luke Kirby of Copper Mountain, British Columbia, his agent to arrange for the sale of the property.

~~Shortly after in 1947,~~ Mr. W. A. Livingstone of Vancouver, British Columbia, obtained an option ^{in 1947} on the Wildcat claim and on adjacent lode and placer claims. Development of the property was then started in earnest. El Alamein Mines

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Limited, a private company, was incorporated, with Livingstone being the President and Managing Director of the company. Under the terms of an agreement Briton was now paid 10,000 dollars in cash for the Wildcat claim while Kirby was given shares in the newly incorporated company. Work was then begun on two adits which were driven into the rock bluffs above the river. An ore shed was constructed at the foot of the bluffs.

Figure 2 Adits and ore shed. View from north bank showing adit portals and ore shed - Note steeply tilted rock bluffs.

In the spring and summer of 1949, a 10 ton pilot mill was constructed directly across the river from these workings. A cable crossing over the river connected the two operations and at times, 12 to 15 men were employed by the company. After a few tons of ore had been processed, the mill operations were

stopped because too much gold was being lost in the tailings.

Figure 5 Mill on north side of Tulameen River

Production in 1949 was 40 ounces of gold. The owner reported platinum in the veins, but random samples assayed were found to contain none.

Following Livingstone's death early in 1950, Dr. R. C. Cragg of Vancouver, British Columbia, became the ^Mana-
ging Director of El Alamein Mines (1950) Limited. By the summer of 1950 the main face in the upper adit had been driven 284 feet from the portal while the main face in the lower adit was 157 feet from its portal. A third adit was driven on the same level as and approximately 50 feet east of the existing upper adit.

A winze sank in 1951, connecting the upper and lower levels, greatly improved the ventilation in the adits. On the north side of the river, 275 to 375 feet east of the mill, a bulldozer was used to excavate overburden from the river bank in fruitless search for the extension of the minera-

lized zone. There was no production in 1951. In the fall of the same year, largely due to managerial problems, El Alamein Mines (1950) Limited went into bankruptcy. During the four years of activity the various investors had sunk more than 100,000 dollars into El Alamein.

Figure 4 Plan view of El Alamein adits. Note that draft widths are not to scale. Geology on upper level only. Traced from Brunton - tape survey by G.E.P. Eastwood, September 19, 1959.

Mr. V. Golden of Vancouver, British Columbia, bought out the bankrupt company and thus became the sole owner of El Alamein gold prospect. Again the property ^{laid} idle for

several years. Then in 1958 Mr. N. H. MacKenzie of Vancouver, British Columbia, obtained an option on Faquette's claims. That summer he diamond drilled in an attempt to locate other pockets of gold-bearing ore through analysis of the recovered core. Three holes were drilled into the top of the rock bluffs to a total depth of 400 feet. The following summer ~~that time~~ on the Wildcat claim, Mackenzie drilled two additional holes below adit level. He also prospected the adits. Nothing significant was reported in either seasons of exploration. This summer Mr. MacKenzie obtained the option from Mr. Golden to drill on the Wildcat claim. The terms of the agreement specified that should Mr. MacKenzie locate sufficient ore to warrant further investment, he would then build a 20 to 25 ton mill while being given a share of the profits. Together with Mr. L. McKinnon of Vancouver, British Columbia, Mr. MacKenzie drilled both on the surface and in the adits. On the north bank of the river, downstream from the mill, an excavation was carried out using dynamite and ground sluicing. The reason for this work will be discussed in the section following.

The sequence of events at El Alamein during the months of August and September 1960 is quite intricate. Mr. MacKenzie left the property at the beginning of August. Mr. McKinnon, ^{through an} ~~then~~ on agreement with Golden, remained at El Alamein camp to act as caretaker. In the third week of August, 1960, Golden sent out a geologist, Mr. R. Steiner of Vancouver, British Columbia, to map the geology of the adits. Scouring of the adit walls, an essential prerequisite for underground mapping, apparently has revealed veins rich in gold.

As the terms of the option given by Golden to MacKenzie, did prove to be unsatisfactory, the agreement was terminated in the third week of September, 1960. On the 30th day of September, a meeting of the various investors in El Alamein was held in order to discuss the future of the gold prospect. In the event that it is decided upon to continue development of the gold prospect, the following operations will be carried out. First, a bridge will be built across the Fulameen River connecting the ore shed and adits on the south bank with the mill and road on the north side. Second, the adits will be improved by replacing the existing timber and by building new ore bins. Third, mapping of the adits will be completed. Fourth, ³thres tons of ore, selected at random throughout the adits, will be shipped in all probability to Trail, British Columbia, for refining. Fifth, if the ore ^{does} ~~proved~~ ^{not} to be rich, the existing mill at El Alamein will be ~~re-~~designed and enlarged to a capacity of 40 to 50 tons of ore per day. Mining operations could then be resumed.

General Geology

The rocks of the area are volcanics and sediments believed to be of Triassic age (approximately 2,000,000 years old). The oldest rocks in the vicinity of the mine are argillite⁵² and rhyolite⁶³. In time, these two rocks were tilted steeply by earth movements and more rock was forced up bet-

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Argillite - a black rock formed from mud under the action of heat and pressure.

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Rhyolite - a light green volcanic rock containing fragments thrown out of volcanoes.

ween the argillite and rhyolite known as diorite⁴. Following the emplacement of the diorite, further earth movements caused slippage along both the rhyolite-diorite contact and the diorite - argillite contact. This slippage has produced zones of broken rock throughout the bluffs. Downstream from the argillite there are outcrops of greenstone⁵ containing bands of argillite. Greenstone also outcrops on the north bank of the river a few hundred feet downstream from the mill. A white rhyolite is found upstream from the mill on both sides of the river.

The geological mapping of the area indicates a fault⁶ which roughly parallels the Tulameen River, crossing the river a short distance upstream from the mill location. Calculations were made in order to locate the diorite - argillite contact on the north side of this fault and thus another possible ore-bearing body. Overburden was removed to a depth of 8 feet in the underground sluicing operation. As solid rock had not been reached at this depth, the operation was abandoned. The work done in 1951 on the north side of the river was a crude and unsuccessful attempt to locate the same ore-bearing structure that was sought this summer.

(For map showing surface geology and topography refer to Appendix⁷.)

7 4

Diorite - a dark green rock which has solidified from molten rock below the surface of the earth.

8 5

Greenstone - a medium to dark green rock whose origin maybe either partly sedimentary or partly volcanic.

9 6

Fault - a fracture in the earth's crust along which there has been relative movement parallel to the fracture.

Economic Geology

The before mentioned zones of broken rock contain narrow veinlets of calcite¹⁰⁷ and quartz erratically mineralized with gold. The area has been mapped in detail in order to bring out all of the structural features of the geology that may control the ^{OCCURRENCE} occurrence of gold-bearing veinlets. They usually range in thickness from 1 inch to 6 inches and in length from 1 foot to several feet. Previous to 1950, gold-bearing veinlets had been found only in the broken zones which is exposed in the bluffs. Cragg is reported to have found gold in the lower adit approximately 100 feet from the portal.

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Calcite - a white mineral composed of calcium carbonate.

Conclusions

Mining and milling has been carried out at El Alamein but the pattern of occurrence of the gold-bearing ore is not completely understood. What the future holds for El Alamein is difficult to say. It is rather ironic to note, however, that the Chinese, with their crude sluice boxes and other simple equipment, recovered gold valued at 38,000 dollars while El Alamein Mines Limited using modern equipment and methods recovered only 105 ounces of gold valued at approximately 3,700.00 dollars. Thus, it would appear to the writer that excessive amounts of money have been invested for extremely small returns to the various investors in El Alamein gold prospect.

REFERENCES

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- 3 Hughes, E. R. El Alamein, Queen's Printer, Victoria, British Columbia 1950 (B.C. Department of Mines - Annual Report to the Minister of Mines, 1950)
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