

# CANEX AERIAL EXPLORATION LTD.

DIVISION OF CANADIAN EXPLORATION LIMITED

700 BARRARD BUILDING

VANCOUVER 5, B. C. CANADA

May 26, 1971.

File: 11-2-95

Mr. W. S. Laverty,  
11933 106th Avenue,  
Edmonton, Alta.

012904

Dear Mr. Laverty:

Please find enclosed a memorandum outlining the results of last season's geochemical survey on the Potato Hills property and the proposed program for the 1971 field season. Maps showing the soil sample results are attached.

Road conditions in the Potato Hills area are such that the work is not expected to begin until 15th June.

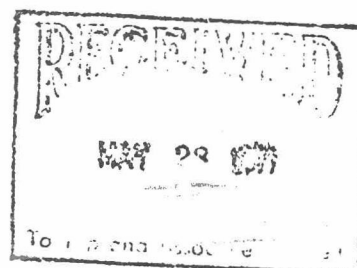
Yours very truly,

CANEX AERIAL EXPLORATION LTD.



W. S. Pentland,  
Project Supervisor.

WSP/mm  
Encls.



occurred as fairly coarse grained scheelite. In soil samples, the minus 80 mesh fraction is normally analyzed, but due to the coarse grained nature of the scheelite in the samples, it was decided to grind the whole sample to minus 200 mesh and re-analyze. The tungsten results of the minus 200 mesh samples proved to be much higher and less erratic.

The tungsten analyses show a broad moderate to highly anomalous area between lines 48+00S and 112+00S north of the baseline. The values in the anomalous area range from 5 ppm to 1500 ppm. The value distribution is relatively erratic within the anomalous area and there is some indication that a lineation of high values exist i.e. 3 or more values lie on a straight line. A possible explanation for the lineation, disregarding coincident, is pre-quartz vein faulting or fracturing, along zones of weakness, during cooling of the Potato Hill stock. The quartz veins where observed appear to be related to tension fracturing rather than to shearing (no offset of different sets of quartz veins).

The silver analyses ranged from 0.02 ppm to 12.34 ppm. Except for a small anomalous area in the vicinity of the Olive Crown Grant, the silver values are very low. A few slightly anomalous isolated values that appear to follow a lineation occur over the western portion of the stock as well as a few areas outside the northwest side of the stock. The anomalous values near the Olive claim are related to known vein type mineralization. There is no correlation between the tungsten anomalies and the silver distribution.

The gold analyses ranged from 0.02 ppm to 20 ppm. The distribution of high values (< 1 ppm) does not form any type of pattern except for a general concentration of higher values at the west end of the Potato Hill stock. This part of the stock may be part of the source area for the gold found in the Taylor placer on Dublin Gulch. It would be interesting to trench some of the highs in this area to determine if gold bearing veins are present.

There is no correlation between the tungsten distribution and the isolated high golds, unless it is a negative correlation. Both the gold and silver determination were made using the original minus 80 mesh fraction prior to grinding.

COSTS

Phase I

Cat D7E with rippers 299 gr. at \$35/hr.	7,000
Mobilization of Cat	1,000
Fuel	500
Camp set-up	1,000
Camp operation (1 mo.) 150 mandays @ \$10/day/ man	1,500
Transportation and airfare	1,300
Wages	
1 geologist at \$1,100/mo.	3,000
1 engineering tech. @ \$800/mo.	
1 student at \$500/mo.	
1 cook at \$600/mo.	
Sub-Total	<u>15,300</u>
15% contingencies	<u>2,295</u>
Total	<u>\$17,595</u>

Phase II

Diamond drilling (B.Q. wireline)1000' at \$12/ft.	12,000
Mobilization of drill	1,000
Assaying 100 samples at \$10/sample	1,000
Wages (same as above)	3,000
Camp Operation (1 mo.)240 mandays @ \$10/man/day	2,400
Transportation	<u>1,000</u>
Sub-Total	20,400
15% contingencies	<u>3,060</u>
Total	<u>\$23,460</u>
Total for Phases I and II -	<u><u>\$41,055</u></u>

DAH/mm

David A. Howard  
David A. Howard

occurred as fairly coarse grained scheelite. In soil samples, the minus 80 mesh fraction is normally analyzed, but due to the coarse grained nature of the scheelite in the samples, it was decided to grind the whole sample to minus 200 mesh and re-analyze. The tungsten results of the minus 200 mesh samples proved to be much higher and less erratic.

The tungsten analyses show a broad moderate to highly anomalous area between lines 48+00S and 112+00S north of the baseline. The values in the anomalous area range from 5 ppm to 1500 ppm. The value distribution is relatively erratic within the anomalous area and there is some indication that a lineation of high values exist i.e. 3 or more values lie on a straight line. A possible explanation for the lineation, disregarding coincident, is pre-quartz vein faulting or fracturing, along zones of weakness, during cooling of the Potato Hill stock. The quartz veins where observed appear to be related to tension fracturing rather than to shearing (no offset of different sets of quartz veins).

The silver analyses ranged from 0.02 ppm to 12.34 ppm. Except for a small anomalous area in the vicinity of the Olive Crown Grant, the silver values are very low. A few slightly anomalous isolated values that appear to follow a lineation occur over the western portion of the stock as well as a few areas outside the northwest side of the stock. The anomalous values near the Olive claim are related to known vein type mineralization. There is no correlation between the tungsten anomalies and the silver distribution.

The gold analyses ranged from 0.02 ppm to 20 ppm. The distribution of high values (< 1 ppm) does not form any type of pattern except for a general concentration of higher values at the west end of the Potato Hill stock. This part of the stock may be part of the source area for the gold found in the Taylor placer on Dublin Gulch. It would be interesting to trench some of the highs in this area to determine if gold bearing veins are present.

There is no correlation between the tungsten distribution and the isolated high golds, unless it is a negative correlation. Both the gold and silver determination were made using the original minus 80 mesh fraction prior to grinding.

## COSTS

### Phase I

Cat D7E with rippers 299 gr. at \$35/hr.	7,000
Mobilization of Cat	1,000
Fuel	500
Camp set-up	1,000
Camp operation (1 mo.) 150 mandays @ \$10/day/ man	1,500
Transportation and airfare	1,300
Wages	
1 geologist at \$1,100/mo.	3,000
1 engineering tech. @ \$800/mo.	
1 student at \$500/mo.	
1 cook at \$600/mo.	
Sub-Total	15,300
15% contingencies	2,295
Total	<u>\$17,595</u>

# CANEX AERIAL EXPLORATION LTD.

DIVISION OF CANADIAN EXPLORATION LIMITED

700 BARRARD BUILDING

VANCOUVER 5, B. C. CANADA

September 21, 1971.

File: V-127.

Mr. W.S.Laverty,  
President,  
Connaught Mines Limited,  
P.O.Box 3854,  
Edmonton 41, Alta.

Dear Mr. Laverty:

We enclose herewith assay certificate covering samples from  
drill holes #1, 2 and 3 on the Potato Hills property.

. Yours very truly,

CANEX AERIAL EXPLORATION LTD.

*David A. Howard*

D.A.Howard.

DAH/mm  
Encl.

*Connaught*

RECEIVED FROM

Canex Aerial Explorations

SAMPLE NO.	GOLD OZ. PER TON	<del>SILVER</del> OZ. PER TON	Tungsten WO <sub>3</sub>			
29326	TR		.01	DDH #1	- 31-40'	
29327	TR		.01			
29328	TR		.01			
29329	TR		.01			
29330	TR		.01		-70-80'	
29331	TR		.01			
29332	TR		.01			
29333	TR		.01			
29334	TR		.07			
29335	TR		.05		-120-130'	
29336	TR		.01			
29337	TR		.01			
29338	TR		.09			
29339	TR		.02			
29340	TR		.01		-170-180'	
29341	TR		.01			
29342	TR		.01			
29343	TR		.01			
29344	TR		.01			
29345	TR		.01		-220-230'	
29346	TR		.01			
29347	TR		.065			
29348	TR		.01			
29349	TR		.43			
29350	TR		.13		-270-280'	
29351	TR		.01			
29352	TR		.01		290-300'	E. O. H.
29353	TR		.01	DDH #2	12-20'	
29354	TR		.05			
29355	TR		.01			
29356	TR		.01			
29357	TR		.01			
29358	TR		.01			
29359	TR		.01			
29360	TR		.065		80-90'	
29361	TR		.01			
29362	TR		.01			
29363	TR		.01			
29364	TR		.01			
29365	TR		.01		130-140'	
29366	TR		.01			
29367	TR		.01			
29368	TR		.01			
29369	TR		.01			
29370	TR		.01		180-190'	
29371	TR		.01			
29372	TR		.01			
29373	TR		.01			
29374	TR		.01			
29375	TR		.01		230-240'	
29376	TR		.01			
29377	TR		.01			

*avg .04*

*avg .012*

ASSAYER

*Geo. Spalding*

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED

SEP 1 0 1971

MARKETING

RECEIVED FROM

Canex Aerial Explorations

SAMPLE NO.	GOLD	SILVER	Molybdenum Tungsten					
	OZ. PER TON	OZ. PER TON	MoS <sub>2</sub>	WO <sub>3</sub>				
29378	TR	TR	.002	> .01	DDH #2 - 260-270'			
29379	TR	TR	TR	.01				
29380	TR	TR	.002	> .01				
29381	TR	-	.002	.01				
29382	TR	TR	.002	.01	DDH #3 - 22-30'			
29383	TR	TR	.002	> .01				
29384	TR	-	.002	.01				
29385	TR	TR	.002	> .01				
29386	TR	TR	.002	.05				
29387	.24	-	TR	> .01				
29388	TR	-	.002	.01				
29389	TR	-	TR	> .01				
29390	.06	-	.002	> .01				
29391	TR	-	.005	.01				
29392	TR	-	.005	> .01				
29393	TR	-	.002	.035				
29394	TR	-	.003	.02				
29395	TR	TR	.002	.01				
29396	TR	-	.002	.09				
29397	TR	-	.003	> .01				
29398	TR	-	.002	.01				
29399	TR	TR	TR	.06				
29400	TR	.02	.003	.01				
29401	TR	-	TR	> .01				
29402	.005	TR	TR	.01				
29403	TR	TR	TR	> .01				
29404	TR	-	.002	.06				
29405	TR	-	.002	> .01				
29406	.01	.02	.003	> .01				
29407	TR	-	.002	> .01				
29408	TR	TR	.002	.01				
29409	.005	TR	.002	> .01				
29410	TR	-	.002	> .01				
29411	TR	TR	.002	> .01				
29412	TR	TR	TR	.06				
29413	TR	-	TR	.01				
29414	TR	-	TR	> .01				

290-301' E.O.H

100-110'

150-160'

200-210'

250-260'

300-310'

340' - 347' - E.O.H

> Less Than

ASSAYER

Geo. Madelin

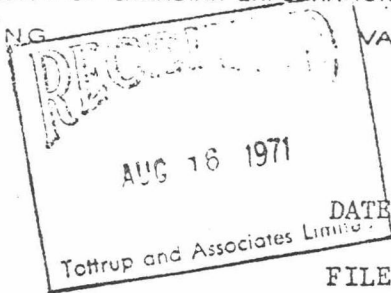
# CANEX AERIAL EXPLORATION LTD.

DIVISION OF CANADIAN EXPLORATION LIMITED

700 BARRARD BUILDING

VANCOUVER 5, B. C. CANADA

## MEMORANDUM



TO: File  
FROM: D. A. Howard  
RE: Property Report covering period June 17 to July 12, 1971.

DATE: July 20, 1971.  
FILE: V-127

### INTRODUCTION

Work on Venture 127 started on June 17th after a two-week delay caused by late break-up. Further delays after the camp was established were caused by the cat getting stuck enroute to the property.

Cat work commenced on June 22 and ended on July 8 for a total of 218 hours.

The program during the period included limited road building, trenching, geologic mapping and some sampling. Operations on the venture were suspended July 12, 1971, pending the results of the sampling.

### IMPRESSIONS AND RECOMMENDATIONS

Geologic mapping of the trenches shows that the entire geochem anomaly found in 1970 is underlain by the Potato Hill stock. The stock is composed of fine to medium grained biotite quartz monzonite to granodiorite.

In almost all of the trenches, the quartz monzonite is moderately to intensely weathered. The depth of weathering varies from 2 feet to over 12 feet and in a couple of cases the bottom was not reached. At this time it has not been determined what effect hydrothermal alteration has had on the weathering characteristics of the quartz monzonite. In general weathering appears to be more intense parallel to the veins, but there are several trenches which show weathered bands tranverse to the quartz veins. The weathered bands vary in width and are usually in contact with bands of slightly weathered quartz monzonite (slightly friable) which grade into very massive quartz monzonite. Where intensely weathered bands are in contact with massive quartz monzonite the contacts are very sharp and appear to parallel the major joint direction. There is no off-set of the tranverse quartz veins at the weathered-non-weathered contact which rules out faulting as a cause for the intense weathering.

The mapped portion of the Potato Hill stock contains a well developed stockwork of quartz veins which range from hairline to 12 inches in width. It was impossible to determine the strike length of the veins due to overburden. The major trends of the veins are 70-80 degrees and 95-105 degrees with a few transition veins trending 80-95 degrees. A minor set trends 2-18°, but was only observed in a couple of trenches. Most of the veins are dipping steeply to southeast or southwest depending on the set. The vein spacing is variable, ranging from 2 feet to several tens of feet.

In most cases, the veins are enclosed by an alteration envelope that is intensely weathered to a limonitic sand and clay mixture. It is common to find trace amounts of scheelite in the weathered envelope. Whether the scheelite is indigenous to the envelope is questionable.

The tungsten mineralization appears to be restricted to the quartz veins. In the mapped area scheelite appears to be the most prominent tungsten mineral. Coarse-grained wolframite is present in concentrates (30-40%) from the Taylor placer, but at this writing the source is unknown. The scheelite in the quartz veins is fine to coarse grained (1 mm to 10 mm) and euhedral. A few boxworks are present in the more weathered veins indicating that some of the scheelite has been removed by solution. The scheelite appears to be distributed randomly throughout most of the quartz veins, although some veins are obviously higher grade as indicated by the assays.

Due to the irregularity of most of the trenches, it was impractical to cut channel samples. It was felt that a few samples of the vein material combined with the mapping would give a rough estimate of the expected grade for the deposits.

The following assays include grab samples, channel samples and character samples of bedrock.

	<u>Sample No.</u>	<u>Gold</u>	<u>Tungsten</u>	<u>Vein Trend</u>	<u>Type Sample</u>	<u>Location</u>
NW	29241	.005	.12	NW	18' channel	Trench #1
-	29242	.01	Tr	-	vein grab	Trench #1
-	29243	.02	Tr	-	wallrock grab	Trench #1
NE	29244	.01	.04	NE	vein grab	Trench #3
NE	29245	.05	.06	NE	vein grab	Trench #3
NE	29246	Tr	.01	NE	16' channel	Trench #7
NE	29247	Tr	>.01	NE	16' channel	Trench #7
NW	29248	Tr	>.01	NW	16' channel	Trench #12
NW	29249	Tr	>.08	NW	16' channel	Trench #12
NE	29250	Tr	.16	NE	vein grab	Trench #13
NW	29276	Tr	.60	NW	vein grab	Trench #15
NW	29277	.02	>.01	NW	vein grab	Trench #16
NW	29278	Tr	.43	NW	vein grab	Trench #12
NW	29279	Tr	.15	NW	vein grab	Trench #11
NE	29280	Tr	>.01	NE	vein grab	Trench #9

From the above it appears that the veins trending NW (95-105) consistently assay higher. Further sampling would be required to determine if this fact is statistically significant. There is a slight correlation between the number of veins exposed in a trench and the geochem values, but the positioning of the trenches with respect to the sample stations is not close enough for an accurate determination. There is probably a direct correlation between the assay values for the trenches and the geochem values, but a more detailed sampling program would be required to determine the exact correlation.

The indications from geologic mapping and sampling results are that the deposit will be too low grade to be economic. However, in view of the uncertain effects of the weathering which has taken place and the difficulty in obtaining good samples from the trenches, I feel that diamond

drilling should be done.

The potential tonnage is large and drilling appears to be the logical method of obtaining an accurate determination of the grade of the material at depth.

EXPLORATION WORK

Trenching

Approximately 21 trenches requiring 218 hours of cat time were dug. The trenches were tied into the geochem grid and geologically mapped. A few of the trenches were sampled by cutting channels. The remainder of the samples were collected along quartz veins to give an indication of their grade.

Due to the erratic distribution of tungsten values within the trenches, it was decided that a large scale sampling program was not in order.

Geologic Mapping

See geologic map.

EXPENDITURES

Expenditures from January 1, 1971, to May 31, 1971.

Geology and Engineering	\$ 458.00
Geochem	5,372.00
Sampling and Assaying	39.00
Camp operations	<u>172.00</u>
Total	<u>\$6,041.00</u>

Expenditures from June 1, 1971 to July 12, 1971.

Geology and Engineering	\$1,500.00 est.
Surface Prospecting	6,975.00
Sampling and Assaying	120.00
Camp operations (includes camp set-up and pro- visioning)	3,700.00 est.
Transportation	<u>800.00</u>
Total	<u>\$13,095.00</u>

Total for period January 1, 1971 to July 12, 1971 - \$19,136.00.

DAH/nzn

D. A. Howard  
D. A. Howard

# CANEX AERIAL EXPLORATION LTD.

DIVISION OF CANADIAN EXPLORATION LIMITED

700 BARRARD BUILDING

VANCOUVER 5, B. C. CANADA

August 12, 1971.

File: 11-2-95.

Mr. W.S. Laverty,  
President,  
Connaught Mines Limited,  
P.O. Box 3854,  
Edmonton 41, Alta.

Dear Mr. Laverty:

Please find enclosed a memorandum outlining the results of this year's exploration to date on the Potato Hills property. Also included is a set of geologic maps of the trenches and a trench location map plotted on the geochem base map.

Further work on the property, which will include diamond drilling, is expected to start in the near future.

We wish to thank you for the prompt return of the Consent to Assignment agreement to us.

Yours very truly,

CANEX AERIAL EXPLORATION LTD.

*D. A. Howard*

D.A. Howard,  
Geologist

DAH/mm



7' CONNAUGHT MINES Ltd.  
Potato Hills Tungsten Prospect.

INTER OFFICE MEMO

CYPRUS EXPLORATION CORPORATION LTD.

VANCOUVER OFFICE

Date: August 30, 1970

To: J. B. P. Sawyer

From: C. C. McFall

Subject: August 6 Visit to Potato Hills Tungsten Prospect

Location: 13 miles northwest of Elsa, Yukon Territory at  $62^{\circ} 02' N$  and  $135^{\circ} 45' W$ .

Ownership: Conrad Provencher (60%) of Whitehorse  
John Boyce (40%) of Mayo, Y. T. and Haney, B. C.  
but under option to Connaught Mines Ltd., 11933-106 Avenue  
Edmonton, Alberta; phone 403-452-1800

Claims: 116 contiguous, unpatented claims of unknown standing but reportedly good through June 1970. One crown granted claim, Olive (lot 11, group 1054) which is inside this block of claims still belongs to the original prospector's heirs

Geology: Schists and quartzites have been intruded by the Potato Hill granodiorite to quartz monzonite stock, which is  $3\frac{1}{2}$  miles long NE-SW and though it averages  $\frac{1}{2}$ -mile wide, it narrows considerably to the southwest. Gold in quartz stringers in the schists parallel to and near the northwest edge of the stock and scheelite and minor wolframite mineralization in quartz veinlets and in some disseminated crystals in the stock have caused commercial gold-tungsten placers in gulches draining from the northwest edge of the stock and non-commercial tungsten placers on the southeast side of the stock.

Topography: The stock supports a ridge at 4000 to 4600 feet elevation. The metamorphics generally have been eroded into valleys 2500 to 4000 feet elevation, although the top of the Potato Hills is metamorphics at slightly above 5000 feet elevation.

Glaciation: Perhaps very importantly the stock has stood above the level of the ice for all or at least most of the glacial advances with minor mountain glaciers near the peak of Potato Hills.

Residual partly decomposed granodiorite: The stock is mantled with this regolith perhaps, as has been estimated, averaging 10 feet thick. This material is stained faintly light brown.

Previous work: <sup>In 1968</sup> Provencher dug pits near a hand-dug trench apparently dating from World War I. Only two of these pits reached bedrock but all encountered decomposed granitic rock containing fragments of quartz vein with scheelite. Ten samples from these pits were assayed; one ran 0.12%  $WO_3$  and the other nine contained only a trace. Great Plains Development Company Ltd. of Canada did considerable trenching near the northwest edge of the stock at Dublin Gulch in 1968. R. J. Cathro of Vancouver took 56 samples from these trenches that averaged 0.042%  $WO_3$  (\$2.22 at present price of \$53 per 20-pound unit) Cathro reported on this work to the claim owners October 1, 1968 and summarized that report for Connaught on

## Potato Hills Memo- C. McFall

March 9, 1970. R. J. Hilker of Whitehorse made a brief helicopter visit to the property July 29, 1969 and reported to the claim owners the possibility of milling the residual material over 200 acres of the 1370-acre stock.

Hilker estimated 6,223,000 tons at 0.14%  $WO_3$  in this surficial layer over this 200 acres. At present prices 0.14%  $WO_3$  is worth \$7.42/ton. Hilker's six samples assayed Trace, 0.14, Trace, 0.02, 0.06, and 0.14.

I took an eight-pound sample of the residual material (about one-half mile south of the helicopter landing site where Hilker sampled) and Coast Eldridge reported 0.32%  $WO_3$  which is \$16.96/ton. Eight samples of the bedrock that I took in the dozer trenches that Cathro sampled all were assayed at "trace". These samples averaged about five pounds.

Conclusion: The bedrock at Potato Hills seems unprospective but the 10 feet or so of regolith on the stock is at least locally tungsten ore. Further sampling of this regolith seems in order.

CYPRUS EXPLORATION CORPORATION, LTD.

510 WEST HASTINGS STREET  
VANCOUVER 2, BRITISH COLUMBIA  
TELEPHONE: 683-9304

May 11, 1970

Mr. Michael Cholach,  
Connaught Mines Limited,  
11933 - 106th Avenue,  
EDMONTON, Alberta

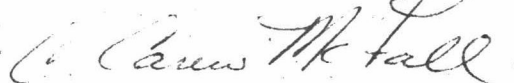
Dear Mike:

Thank you for letting us have a look at the enclosed reports on your Potato Hills tungsten prospect. We would like to arrange a visit to the property during the summer. We will be quite interested to learn of any further data obtained in the meantime.

Sorry I kept these reports so long should the delay in returning them inconvenience you.

Yours very truly,

CYPRUS EXPLORATION CORPORATION, LTD.



C. Carew McFall

CCMcF/jel

Encl.

# Connaught Mines Limited

11933 - 106 AVE., EDMONTON, ALBERTA

'95 -> CCM -> file

Mailing Address  
P.O. BOX 3854  
EDMONTON 41, ALBERTA  
TELEPHONE (403)482-4451

June 24th., 1970

Cyprus Exploration Corp. Ltd.,  
822 - 510 West Hastings Street,  
Vancouver, B.C.

Dear Sir:

Re: Potato Hills Prospect  
Sixty Mile Prospect

Please be advised that we have received offers from two major mining companies in relation to the captionally noted properties, these offers will be considered at a Board of Directors Meeting on July 7th., 1970.

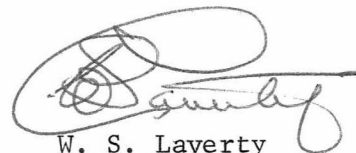
As you had expressed an early interest in these properties, we feel it only fair we should advise you of the foregoing, in the event you may wish to submit an offer. Should you decide to make an offer, we would respectfully ask that it be in our hands not later than July 4th., 1970.

I might state here that no further work has been done on the Sixty Mile property since the visit of Dr. C. McFall.

Thank you.

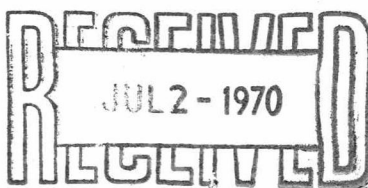
Yours very truly,

CONNAUGHT MINES LTD.



W. S. Laverty  
President.

WSL\*ga



Refy 2/7/70

CYPRUS EXPLORATION CORPORATION, LTD.

510 WEST HASTINGS STREET  
VANCOUVER 2, BRITISH COLUMBIA

TELEPHONE: 683-9304

*File*

July 2, 1970

Mr. W. S. Laverty,  
President,  
Connaught Mines Ltd.,  
11933 - 106th Avenue,  
EDMONTON, Alberta

Dear Sir:

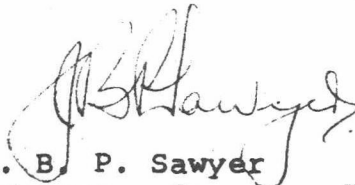
We acknowledge receipt today of your letter of June 24th regarding your Potato Hills prospect and Sixty Mile prospect, and wish to thank you for your consideration in advising us of your Company's progress on these properties.

We have, as you know, given some consideration to both of these prospects and wish to advise now that Cyprus Exploration Corporation would not be prepared to undertake any further work on them at this time.

We thank you for giving us the opportunity to consider these and trust that your future programs on them will be successful.

Yours very truly,

CYPRUS EXPLORATION CORPORATION, LTD.



J. B. P. Sawyer  
Manager - Canadian Exploration

JBPS/jel