

**ASSESSMENT REPORT**

for the

**WORK PERFORMED**

on the

**MOM DISCOVERY**

**PLACER MINING**

**CLAIM**

**MARSH LAKE,  
YUKON TERRITORY**

**NTS 105 D/1**

**ZONE 8**

**6678700N, 5425000E**

**LATITUDE 60-15 N**

**LONGITUDE 134-15W**

**between**

**AUGUST, 1995**

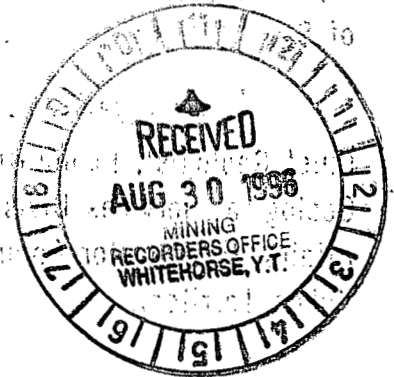
**AUGUST, 1996**

**WHITEHORSE MINING DISTRICT  
YUKON TERRITORY**

**JOSEPH A. J. CLARKE**

**MARSH LAKE, YUKON**

**AUGUST 07, 1996**



This report has been examined by  
the Geological Evaluation Unit under  
Section 41 Yukon Placer Mining Act  
and is recommended as allowable  
representation work in the amount  
of \$ 400.00.

*William LeBorgne*

*for* Chief Geologist, Exploration and  
Geological Services Division, Northern  
Affairs Program for Commissioner of  
Yukon Territory.

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P.O. BOX 2703  
WHITEHORSE, YUKON Y1A 2C6

## **INTRODUCTION**

This report describes the exploration work carried out on the placer claim Mom Discovery staked August 6, 1995. This work consisted of approximately 20 days of panning of creek gravel, test pitting by hand, the construction of a dredging pond, sluicing with a suction dredge, and geotechnical mapping. The prospector is waiting to have heavy mineral pan concentrates analyzed by a professional geologist when available. Results indicate that sufficient placer gold exists to allow profitable small to medium scale mining.

## **LOCATION, ACCESS, HISTORY**

The Mom Discovery claim is reached by a 15km dirt road starting at the Tagish Lake Campground. The road runs 8km on the east side of the Six Mile River and then turns north continuing 7km up Pennycook Creek. The road is in good shape for a 4x4 vehicle from early May until late June. Use is discouraged in the early spring or in heavy rains to prevent unnecessary rutting of the road.

Placer exploration dates to the turn of the century when miners were looking for free ground outside the of the Klondike. The first record of placer mining of Pennycook Creek was of two Chinese miners from 1900-1920's. A old cabin exists upstream of the Mom claim and evidence of old hand workings is common. Work by mechanical means has occurred in the late 1940's to the 1960's. Approximately 10% of the Mom claim has been opened by cat work in the late 1980's by others. Several creeks draining from Jubilee Mountain to the east contain placer gold as well as the creek at Black Mikes near the Yukon River Bridge

## **TOPOGRAPHY, CLIMATE, VEGITATION**

The topography of the immediate area consists of a 10% slope draining the west flank of Jubilee Mountain. Pennycook Creek cuts through gravel deposits formed from the outwash of Jubilee Mountain glaciers. Overlaying these gravels and mixed in with them are gravels from the larger valley glaciers.

The creek flows swiftly with a average drop of 100m every 1 km with a width of 1-2 m and a depth of 0.1-0.3 m. It has cut a valley with steep gravel banks approximately 40m deep and 50 m wide. Old stream channels are rare except were hand digging in the past has moved the stream. The gravel contains numerous boulders mixed in poorly sorted gravel. Creek flow is sufficient for mining from early May to late October.

The climate of the area varies from a high of +30C in the summer to lows of -40C during the winter. Typical are long hot summers (May to September) with up to 18 hours of daylight to moderate winters (October to April) with less than 7 hours of daylight.

Black spruce is the most common tree type on the property. These favor the NE side of valleys and are a common indicator of local permafrost. More exposed areas have a mixture of white and black spruce with occasional pine and aspen. Willows are abundant in the valleys and low areas.

## **REGIONAL GEOLOGY**

The geology of the Tagish/Marsh Lake area lies within the Intermontane Belt physiographic province. Rocks of the Cache Creek and Stikinia terranes from an complex assemblage intruded by later Cretaceous felsic bodies. Hydrothermal gold occurrences are noted on Jubilee Mountain and mesothermal Motherlode style listwanite gold occurrences exist at Atlin and to the north in the Cache Creek group. Boulders of all these groups occur in the gravels of Pennycook Creek.

## **EXPLORATION, WORK, AND RECOMMENDATIONS**

Initial work on the claim consisted of panning of creek gravel along the length of the claim. Test pits were dug to a depth of 1 m and run through a small plastic sluice. Qualitative results gave an average value of \$4/cubic yard. The gold consisted of small flat nuggets and flakes in the following amounts;

>20 mesh	10%
20-40 mesh	40%
40-80 mesh	30%
<80 mesh	20%

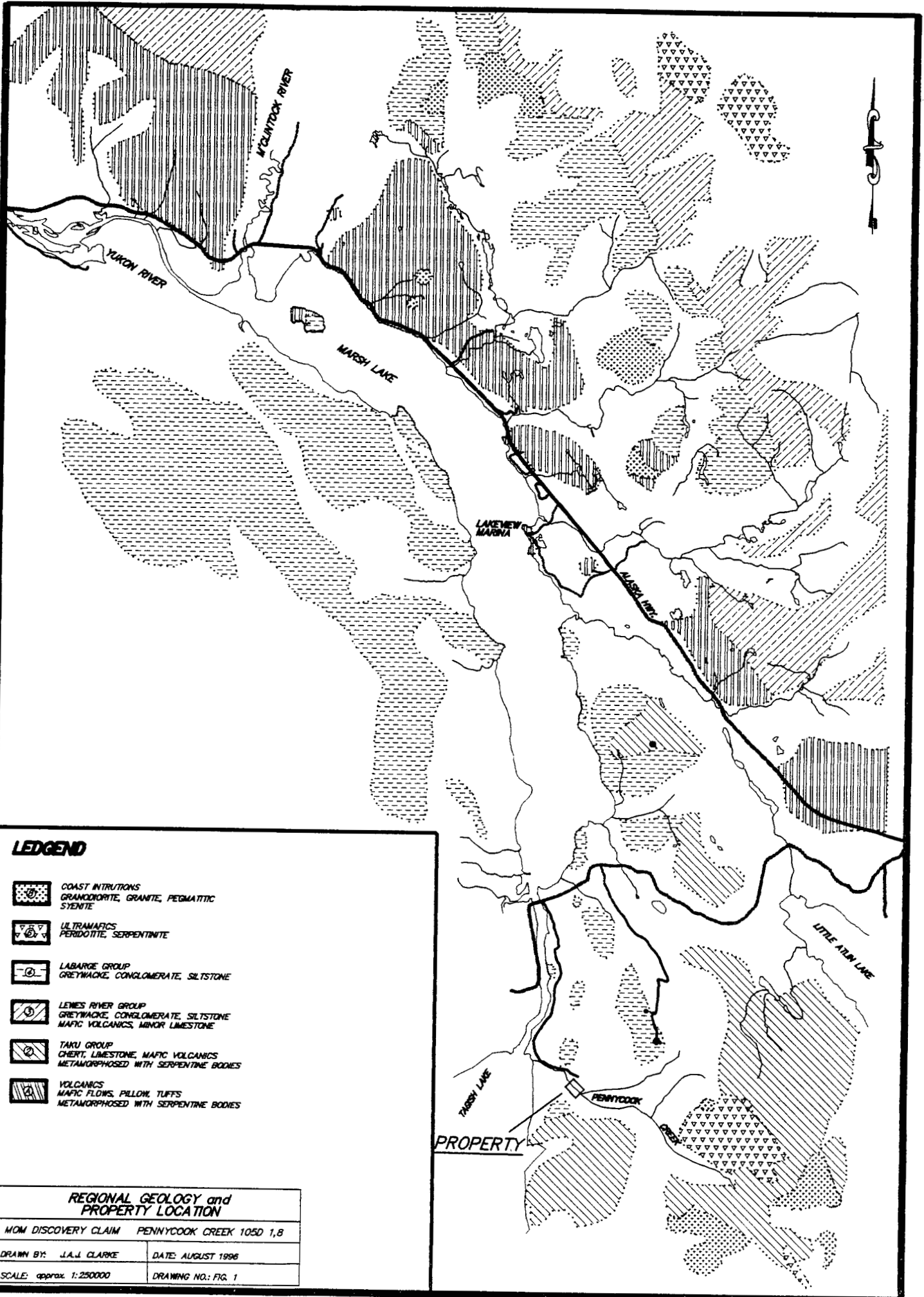
No gold has yet been found larger than 10 mesh. The gold is deep color and visually seems to be near 800 fineness. Values up to \$6/cubic yard occur under boulders and on older streambeds lying 1-2 m above the current creek level. The average value of bank gravel is approximately \$2/cubic yard.

Work in the summer of 1996 consisted of re-digging by hand an old ditch diverting a small side stream into a 1980's open cut. A dam, 10 m long, 1m wide and 1m deep was built to form a dredging pond 10x10 m and 1m deep. Several small tailings ponds were build along an older backhoe trench running 100 m and draining into an old gravel pile. No water was seen to enter the creek.







Dredging was performed with a Keene Engineering 5" triple sluice suction dredge powered by a 8 hp Briggs and Stratton engine. It took several days to fine tune the dredge

and sluice to prevent jams and fine gold loss. The dredge is capable of moving 3-4 yards of gravel each hour. Appendix II gives a list of materials moved during exploration and mining.

Future work will consist of both exploration and a mining. Test pitting will continue upstream to locate areas of higher values. To facilitate future mining a better settling pond system will be constructed by connecting several old trenches and open cuts. The current dredging pond will be worked upstream to intersect a section of the old creek that has been drained by an existing diversion ditch. A small Kubota backhoe may be used in this work although handwork is efficient due to the previous cat work performed by others.



**LEGEND**

- 
 COAST INTRUSIONS  
 GRANODIORITE, GRANITE, PEGMATITE  
 SYENITE
- 
 ULTRAMAFICS  
 PERIDOTITE, SERPENTINITE
- 
 LABARGE GROUP  
 GREYWACKE, CONGLOMERATE, SILTSTONE
- 
 LEWIS RIVER GROUP  
 GREYWACKE, CONGLOMERATE, SILTSTONE  
 MAFIC VOLCANICS, MINOR LIMESTONE
- 
 TAKU GROUP  
 CHERT, LIMESTONE, MAFIC VOLCANICS  
 METAMORPHOSED WITH SERPENTINE BODIES
- 
 VOLCANICS  
 MAFIC FLOWS, PILLOW, TUFFS  
 METAMORPHOSED WITH SERPENTINE BODIES

**REGIONAL GEOLOGY and  
PROPERTY LOCATION**

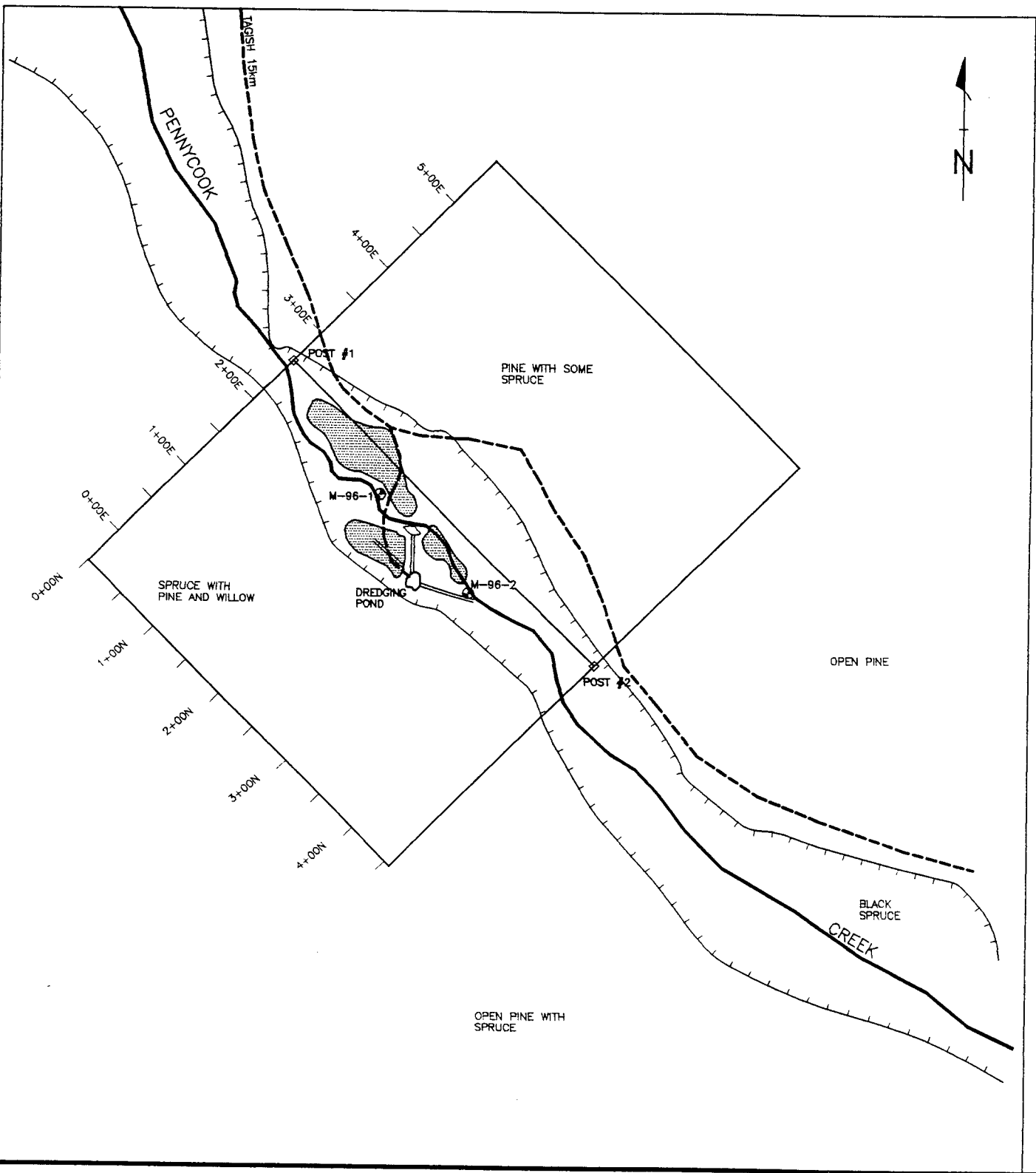
WOM DISCOVERY CLAIM PENNYCOOK CREEK 105D 1,8

DRAWN BY: J.A.J. CLARKE

DATE: AUGUST 1996

SCALE: approx. 1:250000

DRAWING NO.: FIG. 1



- M-96-1 TEST PIT
- GRAVEL ROAD
- DIVERSION DITCH
- OLD WORKINGS
- CREST OF VALLEY



JOSEPH CLARKE  
 MOM DISCOVERY CLAIM  
 WHITEHORSE MINING DISTRICT

**PROPERTY  
 COMPILATION**



Appendix I

<b>MOM DISCOVERY</b>		1995/1996			
<b>In Place Hand Shoveling</b>		<b>Area</b>	<b>Cu. Yards</b>	<b>Value/cu. yd</b>	<b>Total</b>
(Wheelbarrowed from creek bank)		<b>M-96-1</b>	1	\$ 20.00	\$ 20.00
		<b>M-96-2</b>	1	\$ 20.00	\$ 20.00
<b>Tailings Pond Construction</b>		<b>Pond 1</b>			
(by hand)			4	\$ 20.00	\$ 80.00
(by suction dredge)			6	\$ 1.50	\$ 9.00
<b>Sluiced Gravel</b>					
(by hand shoveling)			5	\$ 20.00	\$ 100.00
(by suction dredge)			10	\$ 1.50	\$ 15.00
<b>Mapping</b>	0.5 days				\$ 75.00
<b>Report</b>	0.5 days				\$ 75.00
<b>Gas</b>	6 gallons				\$ 24.00
					<b>\$ 418.00</b>

**APPENDIX II**

**STATEMENT OF QUALIFICATIONS**

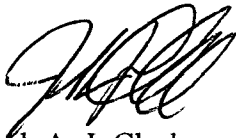
I, Joseph A. J. Clarke, of Marsh Lake Yukon Territory with mailing address of General Delivery, Whitehorse, Yukon hereby certify:

That I have graduated from the Haileybury School of Mines in 1985 with a diploma in Mining Engineering Technology;

That I have been engaged in prospecting in the Yukon on a full time basis since May of 1993 and have been engaged in prospecting and in the mineral industry for 12 years elsewhere in Canada;

That I have a commitment to prospect in a gentlemanly manner with respect for others who use the land for pleasure and livelihood.

Singed at Whitehorse, Yukon Territory on the 30 day of AUGUST, 1996.



Joseph A. J. Clarke

## **APPENDIX III**

### **ACKNOWLEDGMENTS**

The Listwanite-Lode Gold Association of British Columbia  
Ash and Arksey  
Geological Fieldwork 1989, paper 1990-1

Airborne EM and MAG Survey  
Jakes Corner Project  
DIAND Open File 1994 - 10 (G)  
by Dighem I Power

Notes to Prospectors - Jakes Corner  
Dighem Survey Interpretation  
DIAND Open File 1995 - 12 (G)  
by M.A. Power Msc, Amerok Geophysics

Geology of the Jakes Corner Geophysical Survey Area, Southern Yukon  
J.A. Hunt, C. Hart, and S. Gordey  
DIAND Open File 1995-5 (G)

Special thanks for geological discussions with the staff of the MDA and DIAND  
Whitehorse, Al Doherty and staff at Aurum Geological, Mike Powers of Amerok  
Geophysics, the staff of the Yukon Chamber of Mines and many local prospectors.

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