MAR 20030001: SANDSWAMP

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ASSESSMENT REPORT

SANDSWAMP # 5 PROSPECT

LESTER BONNARD VANHILL 50%
BONNARD LESTER VANHILL 50%

METALLIC AND INDUSTRIAL MINERAL PERMIT
9300110003
NORTHERN ALBERTA

Twp. 71, Rge. 1, w 5th

Geographic Co-ordinates
55°06'45" to 55°12'01" N
114°00'00" to 114°09'17" W

NTS Map Area
83 O/1

Lester Vanhill
Box 215, Dapp AB. T0G 0S0

November, 2002

L. Vanhill

This Report is Dedicated
to
The Loving Memory
of

Bonnard Vanhill

My Dad,
Moose Hunting and Mining Partner
and Good Friend

"I'll Miss Him"

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SUMMARY

This Alberta Metallic and Industrial Mineral Assessment Work Report for Permit No. 9300110003 (Sandswamp # 5 prospect) is a report detailing the research and mineral exploration compiled for the Sandswamp # 5 prospect area. General background information pertaining to the Sandswamp # 5 prospect's location, accessibility, existing infrastructure, surface geology and previous mineral exploration are explained in the first part of this report. The next part details aspects of the 2001 mineral exploration program. This mineral exploration / testing program explored the placer mineral deposits of a preglacial Athabasca River channel. Specific testing sites were investigated for the presence of placer minerals. The results of this testing are explained in the conclusion and recommendations section of this report.

As detailed in the conclusions and recommendations the following results of the testing program were obtained. There is placer gold deposited in the old river channel. This gold is very fine in size but abundant. Testing showed considerable amounts of magnetic black sand deposited with the placer gold. The locations of this magnetic black sand and placer gold can be mapped using magnetic sensing equipment without causing any surface disturbance. This will save time in mining this deposit. The mineral deposit is shallow in depth compared to most placer deposits. This feature makes this deposit a good candidate for mining. The gold in this deposit can be recovered economically using modified placer mining procedures. All of the results of this exploration program suggest the placer gold deposit in this old river channel is worthwhile extracting.

1.0 INTRODUCTION

Sandswamp # 5 prospect is an area of Alberta registered under a "Metallic and Industrial Mineral Permit". The Sandswamp # 5 prospect has a placer mineral deposit* situated in a preglacial river channel of the Athabasca River. This placer mineral deposit was historically mined by hand methods, which proved the presence of placer gold in significant quantities. The main focus of this report is based on the 2001-testing program of this placer deposit and the information this testing program provided. Based on the Sandswamp # 5 prospect's location, existing infrastructure, surface geology and placer mineral deposit it has the potential to be a profitable area to mine.

2.0 LOCATION AND DESCRIPTION

2.1 Location in Alberta

Sandswamp # 5 is the name given to a mineral prospect, which is located in North Central Alberta. The Sandswamp # 5 prospect consists of a single Metallic and Industrial Mineral (M.A.I.M.) permit. This M.A.I.M. permit covers an area of 9,216 hectares (23,040 acres). The prospect encompasses all of Township 71, Range 1, west of the 5th meridian, which includes the town of Smith, Alberta 250 km north of the city of Edmonton (see Figure 1).

* A placer mineral deposit is a mineral deposit formed by mechanical concentration of mineral particles from weathered debris. The mineral concentrated is usually a heavy mineral such as gold or rutile (American Geological Institute, 387).

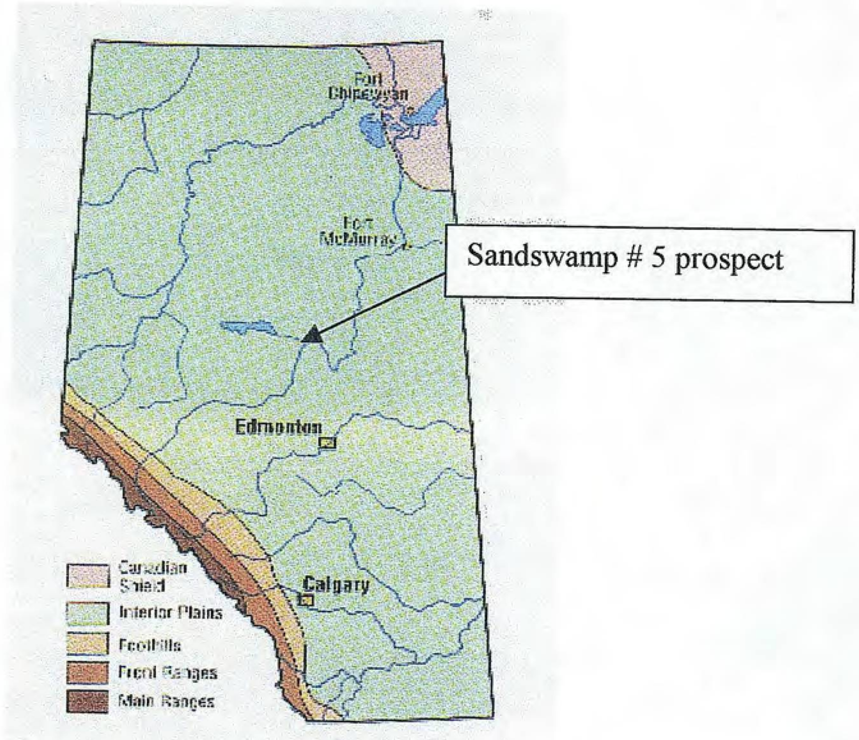


Figure 1: Geological Map of Alberta
(Source: Geological Wonders in Alberta)

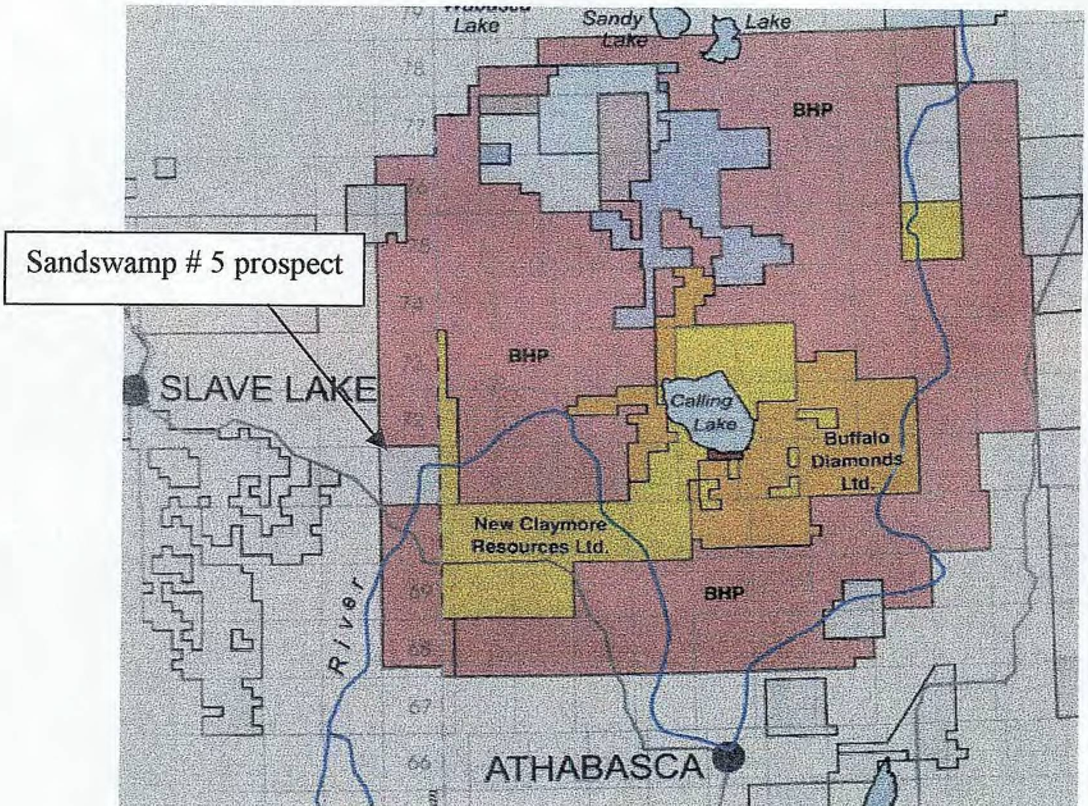
2.2 Official Description

Officially the Sandswamp # 5 prospect falls under M.A.I.M. permit # 9300110003. It is registered to Lester Bonnard Vanhill (50%) and Bonnard Lester Vanhill (50%), both of who reside in Alberta. The commencement date for this permit was November 1, 2000. All official records for this prospect are filed with Alberta Resource Development.

2.3 Location Compared to Diamond Exploration Area

The Sandswamp # 5 prospect is situated inside the "BHP Calling Lake Block"(see Figure 2). This means BHP Diamond holds permits on the lands bordering the north, south and east boundaries of this prospect. This is important because BHP Diamond staked the "Calling Lake Block" in hopes of finding and developing a diamondiferous kimberlite (BHP Diamond press release). Mineral indicators suggest a diamondiferous kimberlite is located within a rough 60 kilometres radius of Calling Lake, Alberta (Ryziuk, interview). The Sandswamp # 5 prospect is 45 kilometres from Calling Lake, Alberta. Although an extensive search is underway for this elusive "Calling Lake kimberlite", the source of the diamond indicator minerals has not been found yet (New Claymore Resource press release). A diamondiferous kimberlite is worth tens of millions of dollars depending on the grade of the diamonds. Based on location, the Sandswamp # 5 prospect could potentially hold one of these diamondiferous kimberlites.

Figure 2: "BHP Calling Lake Block"



BHP Diamond has optioned the land held by New Claymore Resources And Buffalo Diamond Ltd. as of Feb 22, 2002.
(Source: New Claymore Resources Claim Map: Feb 15, 2002)

2.4 River Descriptions

The main physical features of this prospect are the two large rivers, which join within the boundaries of the Sandswamp # 5 prospect. The Athabasca River and Lesser Slave River join near the town of Smith, Alberta and the former town site of Mirror Landing, Alberta. The Athabasca River is a high volume, deep channelled river, which is fed from mountain snowmelt and rain run off. In contrast the Lesser Slave River flows from Lesser Slave Lake and is a smaller volume river with a meandering channel. Both the Athabasca River and Lesser Slave River have several old dry channels, which were formed prior to glaciations. Even though the Sandswamp #5 prospect is within close proximity to the "BHP Diamond; Calling Lake Play", the mineral exploration activities of this Sandswamp # 5 prospect focuses upon the preglacial river channels of the Athabasca River and the placer (heavy) mineral deposits contained within them.

3.0 ACCESS AND INFRASTRUCTURE

3.1 Access

Year round accessibility of an exploration area is an asset to any exploration program. The majority of the Sandswamp # 5 prospect is accessible by roads, cut lines, rivers or train tracks. Road access to the Sandswamp # 5 prospect is via highway #2 North. The southwest portion of this prospect is accessible by gas field access roads, which start at the CNRL West Smith compressor site. The east portion of this prospect is accessible via highway # 2A, which runs north to the town of Smith, Alberta, before crossing the Athabasca River to continue northwest to the town of Slave Lake, Alberta. At the town of Smith, Alberta a Northern Alberta Railway line crosses the Athabasca River on a train bridge. This bridge can be used by ATV traffic at the driver's own risk but is not recommended. Cut lines are extensive within the Sandswamp # 5 area and are able to be utilized by most ATVs. From an exploration prospective, the ease of access to all parts of the Sandswamp # 5 prospect is an asset, as it allows for exploration activities year round.

3.2 Infrastructure

In addition to accessibility, local infrastructure is important to any ground based-exploration. The town of Smith, Alberta has a gas station, grocery store and small restaurant. This is beneficial to an exploration program because supplies can be purchased locally rather than imported in at higher costs. The nearest large town to this prospect is Slave Lake, Alberta, (60 km) which has all infrastructure including hardware, accommodations, hospital and aircrafts. The close proximity to Slave Lake, Alberta is an asset, which reduces travelling times and transportation expenses of such things as heavy equipment and repair parts. In the case of a medical emergency, the availability of aircraft and medical help is of great importance. Having infrastructure close to an exploration program saves costs and improves safety.

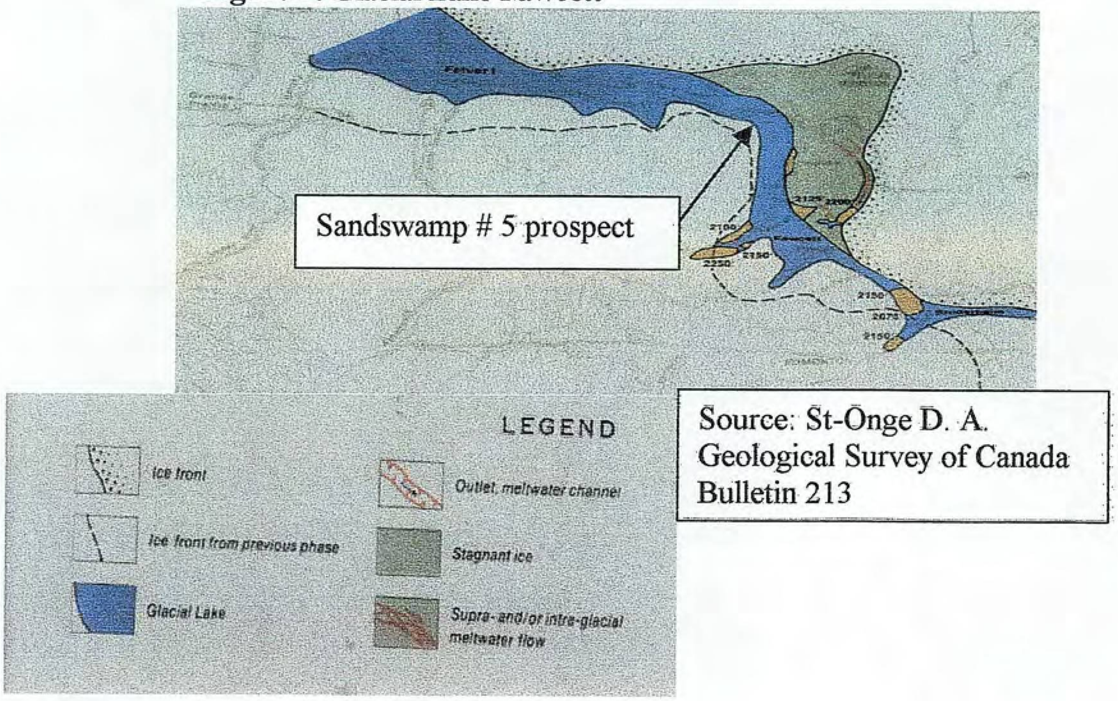
4.0 GENERAL SURFACE GEOLOGY

4.1 Glacial Till Deposit

The Sandswamp # 5 prospect has a typical Central Alberta surface geology. Most of the surface of the Sandswamp # 5 prospect is covered by glacial till, 540 m over bedrock (Shaw 6). This glacial till was deposited by retreating ice sheets, then reworked and redeposited by the water movements of the large Glacial Lake Fawcett (St-Onge, D. A.

7)(see Figure 3). These till deposits are significant enough to cover all large underlying bedrock formations.

Figure 3: Glacial Lake Fawcett



4.2 River Channels

The Athabasca River bed and Lesser Slave River bed are comprised of mud and clay in most parts, yet in a few notable areas the riverbeds are made up of well-rounded boulder sized rocks of the unconsolidated Empress formation (Hubensky, interview). Where the existing Athabasca River channel crosses one of these preglacial channels the riverbank becomes solid rock as opposed to the normal clay banks (Vanhill L., interview). It is possible to find various preglacial river channels by following these broad bands of gravel back from the river. On some gravel bars, which extend into the Athabasca River from these preglacial channels, thin layers of black sands* are prevalent during low water. These bands of black sands contain enough fine flood gold to be seen by the naked eye (Vanhill L. 9). The main mineral exploration of the Sandswamp # 5 prospect will focus on the exploration of the preglacial river channels and the placer deposits contained within them.

5.0 PLACER DEPOSIT OCCURRENCE

5.1 River Drainage Changes

The Sandswamp # 5 prospect has a significant placer mineral deposit. This deposit is situated on the west side of the Athabasca River, two kilometres south of the mouth of the Lesser Slave River. The area of this deposit has an interesting past based on direction of water flow. In Alberta most rivers flow somewhat near the path of their preglacial predecessors. The Athabasca River is an exception to that rule (St-Onge 7). Before the Wisconsin Ice Sheet, the preglacial Athabasca flowed northeast until it changed to a westerly direction at Smith, Alberta to drain into the Peace River. While the Wisconsin Ice Sheet melted, this preglacial valley of the Athabasca River became choked with sediments from the Swan Hills. With nowhere to drain, the waters of the Athabasca River backed up to create Glacial Lake Fawcett (see Figure 3). This large glacial lake, fed by ice melt waters, flooded a vast area covering Lesser Slave Lake to the west, the base of Pelican Mountains to the northeast and extended as far south as Bruderheim, Alberta. Eventually the waters of Glacial Lake Fawcett broke through the ridge of hills 25 miles northeast of Smith, Alberta (St-Onge "insert map"). As these waters flowed to meet Lake Athabasca north of Fort McMurrury, Alberta, they down cut the present day Athabasca Valley. It was during this time of rapid

*Black sands are sands consisting predominantly of grains of heavy, dark minerals (e.g. magnetite, rutile, garnets or basaltic glass), concentrated by water. It may yield valuable minerals.

water flow, that the Athabasca River left some of its old channels, which now lay away from the present day river. This change in water flow direction moved the Athabasca River from its old channel to its present channel.

5.2 Mineral Potential of Gravels

These old river channels consist of unconsolidated, rounded gravels and sand. The rocks are of the Empress formation, which were carried by water from the Rocky Mountains previous to glaciations. These Empress formation gravels are the same type of gravels being mined at Villeneuve, Alberta. There is currently a placer gold recovery operation operating at a Villeneuve gravel pit (Mossop 498). This operation is a sideline to normal gravel operations. The placer gold recovered from the Villeneuve gravel pits equals 0.22 to 0.575 grams of fine gold per ton of sand and gravel (Mossop 498). The Villeneuve gravel pit operation only washes the gravel from the top portion of its pits; the lower gravels are not washed due to elevated Iron stone concentrations (Vanhill Tour of Pit; 2002). Even though the lower gravels have higher gold concentrations they are not washed. Therefore the above stated gold concentrations are not a true representation of the true possible gold potentials of Empress formation gravels. In Alberta the Empress formation gravels of old river channels are known to be a sources of placer gold deposits.

6.0 RELATED MINERAL EXPLORATION

6.1 Placer Gold Mining

The Athabasca River has been a historical source of fine placer gold and diamonds since early settlers first colonized its shorelines. According to a Smith, Alberta local, Bill

Willis, in accounts taken from an Athabasca River History book "Echoes along the Athabasca", the Sandswamp # 5 area has had small-scaled placer mining and mineral exploration operations ongoing for the last 70 years (170, 308). The most significant placer mining operations existed on the west side of the Athabasca River near the large island (Willis 170). An approximated 200 ounces of fine-sized placer gold was recovered from this one site (Willis 170). Several attempts have been made to rework this site. All attempts have failed due to an inability to handle the fine sized gold, which is the primary placer mineral of this deposit. Preliminary testing of the old placer mining area proved the presence of placer gold and that it is possible to recover this fine gold using modified placer mining procedures (Vanhill 4). Some local Alberta residents still mine flood gold from the gravel bars of the Athabasca River. These recent operations are on a small hobby scale and are restricted in size by Alberta Placer Mining Regulations. The Athabasca River has been a historical source of placer gold for many years and has the potential to continue to be so for many more years.

6.2 Diamond Exploration

In recent years the areas northeast of this prospect have seen extensive exploration in regards to the source of diamond indictor minerals. These minerals are primarily the Calling Lake "G9" and "G10" garnets. To date 66 "G10" garnets have been discovered on the shores of Calling Lake, Alberta (New Claymore Resources press release). G10 garnets are an associated mineral to diamondiferous kimberlites (Fipke, Gurney and Moore 28), (see Figure 4). The Sandswamp # 5 prospect preliminary testing showed significant amounts of dark red and light orange garnets appearing amongst the main placer deposit (Vanhill 7). Even though these garnets have been suspected of being diamond indictor minerals no lab results have been returned on them. The discovery of these garnets supports the possibility of a nearby diamondiferous kimberlite. Because of the diamond potential of the "BHP Calling Lake Block", areas surrounding the Sandswamp # 5 prospect are undergoing considerable diamond exploration activities. These activities by large exploration companies are encouraging and support the need for future mineral exploration of the Sandswamp # 5 prospect.

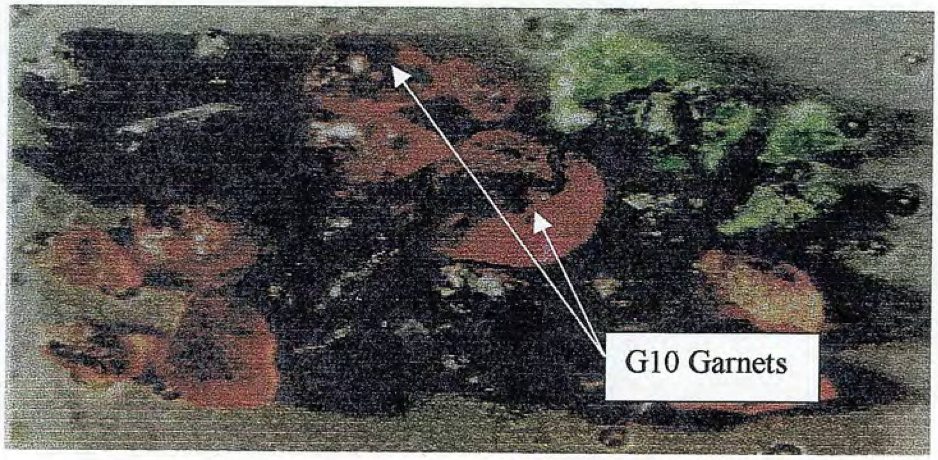


Figure 4 Photograph (25x) of diamond indicator minerals collected near the Point Lake, diamondiferous kimberlite, N.W.T. (Photograph by Julius Weber, N.Y.) (Source: Fipke, Gurney and Moore 84).

7.0 TESTING PROGRAM (2001)

The 2001 testing program of the Sandswamp # 5 prospect, set out to achieve information pertaining to four geological questions.

- Are placer minerals present away from the existing river channel?
- At what depth are these minerals deposited?
- Are there enough placer minerals present to warrant future exploration?
- Can these placer minerals be economically recovered from these deposits?

The most direct mineral exploration approach was used to answer all of these above questions.

7.1 Testing Program Overview

The most direct form of testing meant digging several test holes and washing the extracted material through a sluice box. In the area directly above the old mining site several test holes were dug to various depths of one to three metres. The extracted sands and gravels were washed through a small twelve-inch run sluice box. The sluice box recovered all heavy material and minerals such as gold and black sands, while at the same time releasing all light materials with the water. This light material was settled out of the water in a series of ponds designed to clean the used water. The amount of recovered heavy material answered the above questions. After testing was compete, all new test holes were refilled and reclaimed. The results from these tests are documented in the conclusions of this report.

7.2 Testing Location

The main exploration effort concentrated on "Test Site # 30". This test site is directly west of where the old mining activities ended. As the mineral deposit stretches to the west it became deeper. This is apparent because the old mining holes increase in depth as they move west and the holes were never backfilled. The old miners abandoned this deposit when it got below the two metres in depth. This is due to the fact that they had to remove all overburden by hand and two metres of material was too much for them to shovel out of the holes. These old mining holes lead to exploration of "Test Site # 30".

7.2.1 Advantages of Test Location

There were several advantages to testing "Test Site # 30". The old mining workings showed that there was a significant mineral deposit directly next to this site. People would not dig a network of two metre holes by hand if it did not pay (Vanhill, B. interview). This test site area was sparsely treed so no trees had to be logged and salvaged. The old mining holes acted as a secondary settling pond for the washing phase of testing, this helped to clean the wash water after it was used. A water supply was within a reasonable pumping distance. Water only had to be pumped 850' from a small creek to the test site. For these above reasons Test Site # 30 underwent the majority of the testing for the 2001, testing program.

Figure 5:
Washing sand and gravel with all terrain backhoe and 12" sluice box. Water supplied by 2" Honda HP pump; 850' pumping distance.
Bonnard Vanhill operating backhoe.

Photos taken by Lester Vanhill
July 2, 2001

Figure 6:
Gravel and sand from preglacial river channel being washed in sluice box. Backhoe attachment mounted a bombardier "S" series, tracked machine.
Located 350 metres west of the Athabasca River near Smith, Alberta.

7.3 Mineral Potential Assessment

The mineral potential of this deposit was calculated from the minerals recovered from the washed concentrate. One cubic metre of material was washed from each of the six test holes. This material sample was taken at a specified depth from each hole and sluiced separately (see Figures 5 and 6). After each cubic metre sample of material was washed, the sluice box was cleaned. All cleaned concentrates from each sample were screened down to sand-sized grains. The larger concentrates were stored for later use. The sand-sized material was panned down in a standard gold pan then placed in separate glass sample jars. Each sample jar was labelled with the test hole number, date and test depth of the sample. A comparison of the concentrate in each of these sample jars allowed for a determination of this deposit's mineral potential. An analysis of both fine and large concentrates answered the four geological questions listed at the front of this testing section.

7.4 Analytical Methods

The method of evaluating the gold concentration of each test hole was devised specifically for this testing program and was based on previous knowledge and experiences of the testing crew. The method used may be deemed unorthodox, but allowed for a reasonable assessment of the mineral concentration of the placer deposit.

The labelled glass sample jars of concentrate were transported to Bonnard Vanhill's residence, to have them evaluated. Each concentrate sample was washed through a "micron separator" three times. The retained gold was removed from the separator between each run and placed in a clean sample jar. The uncontaminated gold from each sample was allowed to dry for 24 hours then weighted with a RBCS gunpowder scale. The results from each sample were recorded and correlated to the appropriate sample hole location and depth of which the sample was taken.

During the separation phase it was apparent that very, very fine gold was not being retained in the separator, therefore all washed concentrates were mixed together and a tablespoon of mercury was added to the mixture. The mercury was allowed to gather all loose gold. The mercury ball was then removed and retorted in a homemade (but very safe retort). The recovered gold from the retort was cooled for 24 hours then weighted.

8.0 CONCLUSION

The 2001 summer testing program of the Sandswamp # 5 prospect produced informative results. The questions that were to be answered by this testing program are as follows:

- Are placer minerals present away from the existing river channel?
- At what depth are these minerals deposited?
- Are there enough placer minerals present to warrant future exploration?
- Can these placer minerals be economically recovered from these deposits?

The results of this testing program gave information to all of these above questions.

8.1 Mineral Presence and Depth

As suspected, the placer mineral deposit follows the old river channel. This old channel is visible from air photographs, which shows it running parallel to the existing Athabasca River for three kilometres. As the mineral deposit moves off of the existing Athabasca River it increases in depth. Testing proved that the placer gold runs in thin horizontal seams. These seams run deeper as the distance from the Athabasca River increases. Testing proved the presence of gold in all material washed but the highest concentrations were in two to eight centimetre thick clay-bound seams that ran at a depth of 1.5 metres plus. The digging depth limit of the backhoe was three metres but the gold bearing seams appeared to continue below that depth. The testing proved the presence and depths of the gold deposit.

8.2 Mineral Quantity and Recoverability

The second part of the testing program was to determine quantity and recoverability of the placer minerals. By washing the sand and gravel in a small sluice box designed similar to a regular sluice box, it was proved the fine placer gold could be recovered economically. The placer minerals recovered consisted mostly of fine gold. In the six samples washed, gold recovered was 0.25 to 0.75 grams per cubic meter of material (see Figure 7). Other minerals of interest recovered were deep red garnets, light orange garnets, fine-grained magnetite, and zircon. The amount of placer gold recovered from the samples washed warrant future exploration of this mineral deposit.

Figure 7: Test Hole Results

Test Hole No.	Test Depth	Gold per Cubic Metre	Material Composition
1	1.0-2.0 m	0.35 g	Sand and Silt
2	1.5-2.5 m	0.55 g	Sand and Gravel with Clay
3	2.0-3.0 m	0.60 g	Gravel with Clay
4	1.0-2.0 m	0.25 g	Sand and Silt
5	1.5-2.5 m	0.50 g	Sand and Gravel with Clay
6	2.0-3.0 m	0.75 g	Gravel with Clay

* In addition to the above list 0.45 grams of gold were recovered from the mercury retort.

Source: Vanhill, L., Logbook for Sandswamp # 5 Testing Program (2001).

9.0 RECOMMENDATIONS

The following recommendations are based on prior experience with placer gold recovery systems and information compiled on this subject since the acquisition of the Sandswamp # 5 prospect. The information obtained from testing and a general knowledge of mining equipment was used to formulate the following placer mining model suitable for the "Test Site # 30" deposit.

9.1 Locating Mineral Concentrations

There is sufficient gold in the "Test Site # 30" deposit to be economically viable if mined in a small-scale systematic fashion. It is recommended that this placer deposit be shot by ground magnetometers. The magnetometers will detect and map the locations of high amounts of magnetic black sands, which testing proved are deposited with the gold (Ryziuk interview). Then areas indicated to be high in magnetite by the magnetometers should be mined. This allows for areas with little mineral concentrations to be left undisturbed. Mineral extraction costs are reduced when non-profitable material is not sluiced.

9.2 Size of Mining Operation

The size of a mining operation has a direct effect on operation costs and the amount of mineral recovered. This mining should be keep to a small scale, meaning only one small D6 size cat (bulldozer) and one backhoe. This keeps fuel and equipment costs to a minimum, while still enabling the operation to wash 20-40 cubic metres of material an hour. At 30 cubic metres an hour, this operation is expected to recover 17.25 grams of gold per hour.

This amount equals one ounce of gold for every two hours of mining. A thirty-inch trommel would be beneficial in breaking the fine gold from the clays (Thomson 41). A trommel is designed to clean, screen and wash sands with a minimal amount of water when used in conjunction with a sluice box. This improves mineral recoverability and lowers water-handling costs. Because the washed gravel is piled separate with a trommel, it can be salvaged for road construction, improving access to the mining site. The proper selection of mining equipment enables a placer mining operation to be profitable.

9.3 Water Use

A key part of any placer mining operation is the usage of water for washing material through the sluice. The water needed for this operation can be pumped 300 metres via a two-inch, high-pressure Honda pump from a small muskeg fed stream. Once the water has been used at the mining site, it should be recycled from the settling pond back to the sluice. For economical reasons, water recycling should be done by a three-inch trash-pump. The trash-pump* can withstand the internal wear associated with pumping sand-particle laden water and a three-inch size has enough capacity to supply the suggested operation. By recycling the wash water, the two-inch supply pump would only be used to fill the settling ponds and supply make-up water lost to evaporation. This method eliminates the need to dispose of dirty wash water. Proper water usage decreases operating costs and reduces environmental impact.

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* A trash-pump is designed to pump dirty water. Because it has low internal tolerances a trash pump is not capable of pumping at high pressures. Therefore a trash pump cannot pump fluid up hill for great distances.

10.1 Statement of Expenditures

The expenditures listed in the following pages were incurred during the exploration activities carried out on this permit area during the two-year period for which this assessment work applies. The costs listed for each aspect of the exploration program are based on reasonable industry standards, rental rates for similar equipment or true costs incurred by the parties involved. No fuel costs are listed; as for fuel costs are included in mileage costs or hourly rates of equipment where applicable. The construction of the specialized equipment was deemed necessary to fulfill requirements set forth by the Slave Lake Forestry Office. As a condition of MME approval, all work done on this site had to be carried out by an ATV backhoe, no such device could be reasonably hired so the contraption was custom built just for this exploration program. The cost of constructing the above mentioned specialized equipment was verbally approved as an exploration cost by Alberta Resource Development. All industry standard costs were compiled from previously submitted assessment reports. The total exploration expenditures amount to $18,680. The dispersal of exploration expenditures is listed below.

10.2 Dispersal of Expenditures

The dispersal of exploration expenditures are to be allocated to the following portions of land within township 71, range 1, west of the 5th meridian in order to maintain them in good standing for the next two year assessment period for this permit. "All portions of Sections 3,4,9,10,15,16,21,22,28 and 33". The remaining excess amount of $5880 shall be credited towards Sections 10 and 15, for the following assessment period. 830/1

STATEMENT OF EXPENDITURES
MAIM PERMIT # 9300110003

Description	Cost ($)	Total Cost ($)
MME Permit:		
Fee	100	
Application Prep.	400	
Visit to Forestry (Slave Lake)		
1 day x 2 people	350	
Mileage @ $0.50/km	250	
ATV (4x4 Quad) @ $100/day	50	
		1150
Specialized Equipment Construction:		
ATV Backhoe:		
Hydraulic modifications	1000	
Metal and Pins	800	
Gearing and Machining	800	
Welding consumables	300	
6 days x 2 people @ $350/day	2100	
6 days x shop fee @ $200/day	1200	
Mileage @ $0.50/km	400	
		6600
Prospecting and Hand Sluicing:		
(4 days x Rate per day)		
1 person @ 150/day	600	
ATV (Honda Trike) @ $60/day	240	
Pump @ $30/day	120	
Sluice & Equip. @ $50/day	200	
Hose @ $10/100 ft/day	40	
Mileage @ $0.50/km	500	
		1700
Test Hole Sluicing:		
(5 days x Rate per day)		
2 people	1750	
Pump	150	
Sluice & Equip.	250	
900 ft of 2" hose	450	
ATV Backhoe $75/hr x 8hr/day	3000	
Food & Accommodation	900	
Chain Saw @ $20/day	100	
ATV (4x4 Quad) @ $100/day	500	
		7100

Mobilization In and Out:		
500 km round trip		
Mileage: Dodge ¾ ton 4x4		
and Trailer $1.10/km	550	
Mileage: GMC ¾ ton 4x4		
@ $0.50/km	250	
		800
		$ 17,350
Report Preparation:		
One Person @ $200/day x 3 days	600	
		600
Office Charges, Administrative, General:		
Maps, Reports, Publications, Photographs	200	
Office / Computer Consumables	80	
Computer Usage	100	
Telephone / Cell Phone	150	
Office Overhead	200	
		730
Total		$ 18,680

I certify that these expenditures are valid and were incurred in conducting assessment work for the above listed permit.

Signed: [redacted]

JShkrobot.

JOYCE MAY SHKROBOT
(Commissioner for Oaths)
expires: May 10, 2004

Qualifications

I, Lester Bonnard Vanhill of Box 215, T0G 0S0 of the town of Dapp, in the Province of Alberta hereby certify:

1) That I am a Geological Technology Student of N.A.I.T. (Completion Date: April 30, 2003)

2) That I have conducted Placer Mining, Placer Prospecting and/or Placer Claim Staking in the Yukon Territory of Canada. (1994, 1995 and 1999)

3) That this report is based upon a review of available published and unpublished reports and/or information pertaining to the Sandswamp # 5 Prospect and surrounding area.

4) That I held a contract position as Geological Technician at Ashton Mining of Canada Inc. Northwest Territories / Nunavat field camp during the 2002 summer field season.

5) That I hold a valid Alberta Mineral Exploration Licence, Alberta Mineral Exploration Permit, Alberta Recreational Mining Licence and A Northwest Territories Region Prospector's Licence.

6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing from the 1st Day of November, 2002.

[redacted]

Lester B. Vanhill

This 15th day of January, 2003

Work Cited

Alberta Energy. Exploring for Minerals in Alberta. Edmonton: The Alberta Department of Energy, 1999.

BHP Billiton Diamond Inc. BHP Diamond Inc. Enters Alberta. News Release: August, 2001.

Fipke, Gurney and Moore. (Bulletin 423), Diamond Exploration Techniques Emphasising Indicator Minerals Geochemistry and Canadian Examples. Ottawa: Geological Survey of Canada, 1995.

Hubensky, T., Geology Instructor, N.A.I.T., Edmonton. Personal interview, February, 2002.

Mossop, G. and Irina Shetsen. Geological Atlas of the Western Canada Sedimentary Basin. Alberta: Alberta Research Council, 1994.

Mussieux, Ron, and Marilyn Nelson. A Traveller's Guide to Geological Wonders in Alberta. Edmonton: The Provincial Museum of Alberta, 1998.

New Claymore Resources Ltd. BHP Billiton Options Calling Lake Diamond Properties, Alberta. News Release: Mar 12, 2002.

New Claymore Resources Ltd. Alberta (North) Mineral Claim Map. February, 2002.

Ryziuk, B., Vice President of Exploration, New Claymore Resources Ltd., Edmonton. Personal interview, February, 2002.

Shaw, J., and R. Kellerhals. (Bulletin 41), The Composition of Recent Alluvial Gravels in Alberta River Beds. Edmonton: Alberta Geological Survey, 1982.

Smith Half Century Plus Historical Book Committee. Echoes Along the Athabasca River. Edmonton: Smith Half Century Plus Historical Book Committee, 1984.

St-Onge, D.A. (Bulletin 213), Sequence of Glacial Lakes in North-Central Alberta. Ottawa: Geological Survey of Canada, 1972.

Thomson, R.F., L.P. Van Kalsbeek. Yukon Placer Mining Industry 1991-992. Whitehorse: Indian and Northern Affairs Canada, 1993.

Vanhill, B., Owner of Sandswamp # 5 prospect, Alberta. Personal interview, January, 2002.

Vanhill, L., Field Book for Sandswamp # 5 prospect. Alberta: Vanhill, 2000-2001.

Vanhill, L., Owner of Sandswamp # 5 prospect, Alberta. Personal interview, Ongoing.

Bibliography

Alberta Energy. Exploring for Minerals in Alberta. Edmonton: The Alberta Department of Energy, 1999.

BHP Billiton Diamond Inc. BHP Diamond Inc. Enters Alberta. News Release: August, 2001.

Black, J. Gold Prospectors Handbook. USA: Ames,1980.

Chesterman, C.W., National Audubon Society Field Guide to North American Rocks and Minerals. New York: Knopf, 1979.

Fipke, Gurney and Moore. (Bulletin 423), Diamond Exploration Techniques Emphasising Indicator Minerals Geochemistry and Canadian Examples. Ottawa: Geological Survey of Canada, 1995.

Hubensky, T., Geology Instructor, N.A.I.T., Edmonton. Personal interview, February, 2002.

Jarvie History Book Committee. Jarvie our Continuing Legacy. Jarvie, Alberta: Jarvie History Book Committee, 1984.

Mossop, G. and Irina Shetsen. Geological Atlas of the Western Canada Sedimentary Basin. Alberta: Alberta Research Council, 1994.

Mussieux, Ron, and Marilyn Nelson. A Traveller's Guide to Geological Wonders in Alberta. Edmonton: The Provincial Museum of Alberta, 1998.

New Claymore Resources Ltd. BHP Billiton Options Calling Lake Diamond Properties, Alberta. News Release: Mar 12, 2002.

Ryziuk, B., Vice President of Exploration, New Claymore Resources Ltd., Edmonton. Personal interview, February, 2002.

Shaw, J., and R. Kellerhals. (Bulletin 41), The Composition of Recent Alluvial Gravels in Alberta River Beds. Edmonton: Alberta Geological Survey, 1982.

Smith Half Century Plus Historical Book Committee. Echoes Along the Athabasca River. Edmonton: Smith Half Century Plus Historical Book Committee, 1984.

St-Onge, D.A. (Bulletin 213), Sequence of Glacial Lakes in North-Central Alberta. Ottawa: Geological Survey of Canada, 1972.

The American Geological Institute. Dictionary of Geological Terms. New York: Bates and Jackson, 1984.

Thomson, R.F., L.P. Van Kalsbeek. Yukon Placer Mining Industry 1991-992. Whitehorse: Indian and Northern Affairs Canada, 1993.

Vanhill, B., Owner of Sandswamp # 5 prospect, Alberta. Personal interview, January, 2002.

Vanhill, L., Field Book for Sandswamp # 5 prospect. Alberta: Vanhill, 2000-2001.

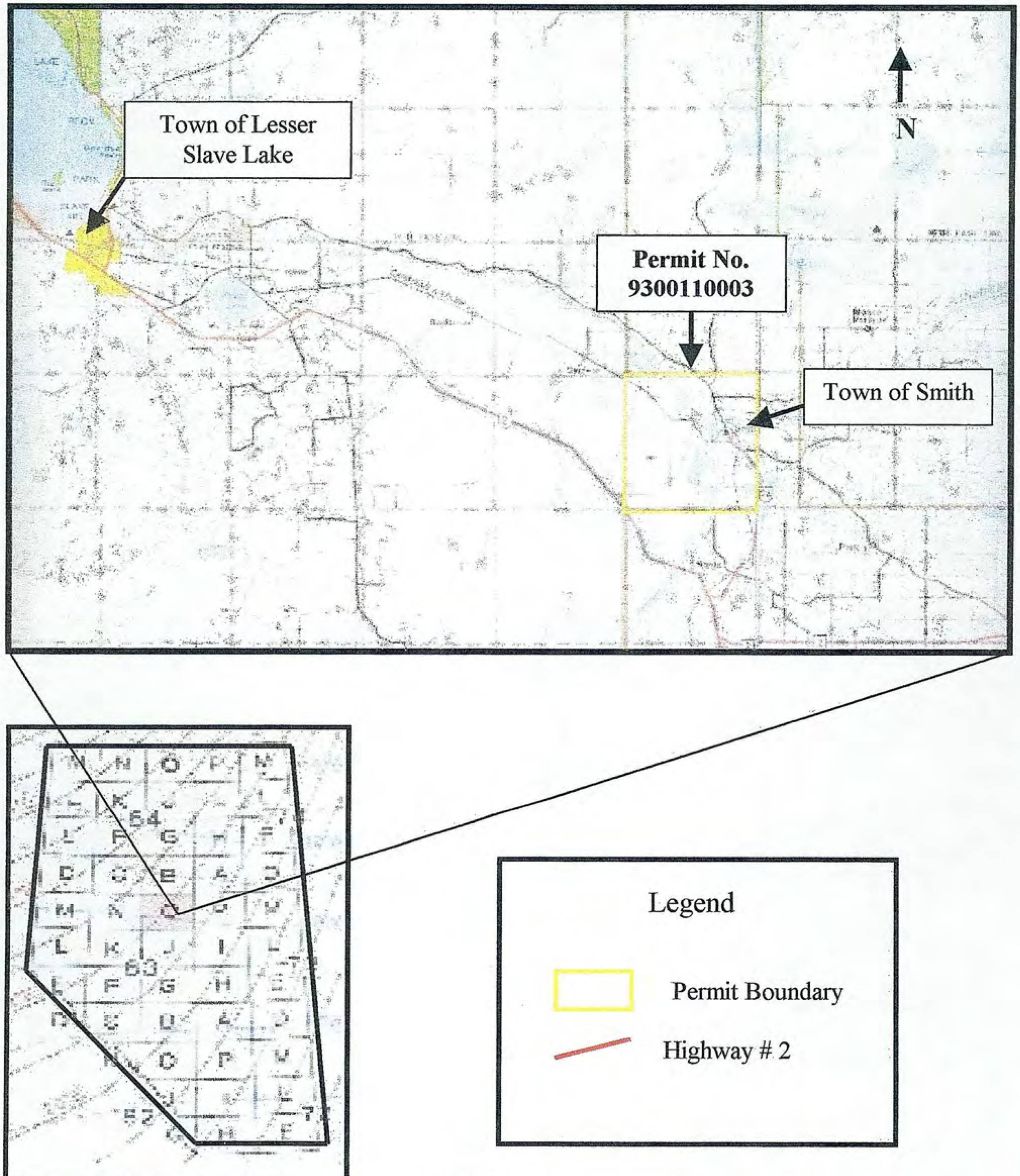
Vanhill, L., Owner / Prospector of Sandswamp # 5 prospect, Alberta. Personal interview, ongoing.

APPENDIX

Figure 9

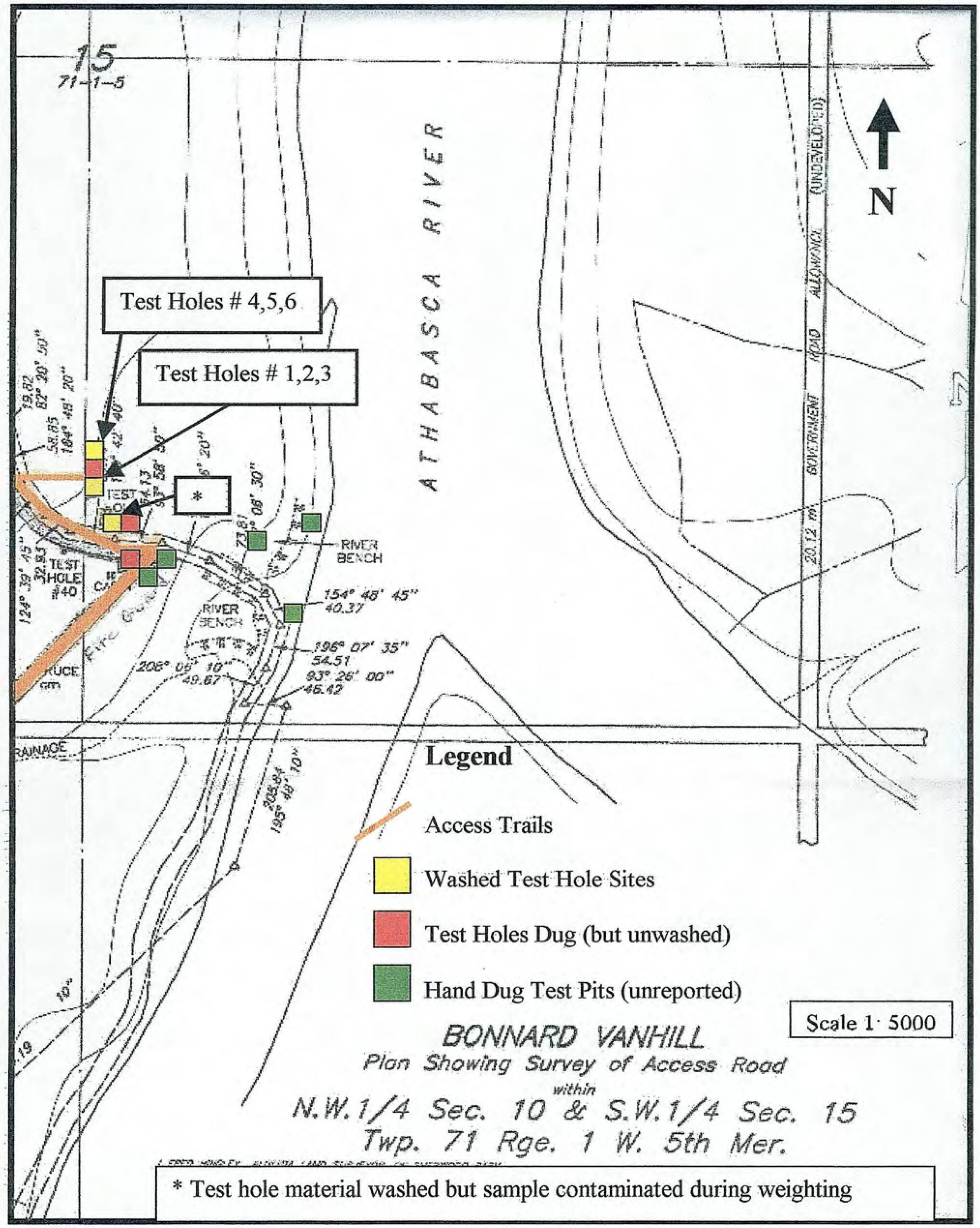
PHOTOGRAPHS OF INTEREST

Location of Metallic & Industrial Minerals
Permit No. 9300110003



Insert page # 1
For Assessment Report

Location Map of Test Hole Sites (Assessment Report No. 20030001 – Sandswamp)



PHOTOGRAPHS OF INTEREST

Bonnard Vanhill mounting mustang hoe to "S" series Bombardier J5 Bombardier with Jin-poles lifting backhoe into place.

Start of a Test Hole # 30, 1m wide

Bonnard Digging Test Hole on fire-guard (not washed)

Feeding small sluice by hand from backhoe bucket.